Mississippi Department of Environmental Quality

Environmental News

VOLUME 12 ISSUE 9 NOV 2015

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.

INSIDE THIS ISSUE:

Gov. Bryant Announces Four NFWF Projects

Gov. Phil Bryant announced on November 10 that the National Fish and Wildlife Foundation (NFWF) has awarded a third round of projects to the State of Mississippi totaling almost $30 million. These four projects bring the total to more than $68 million in restoration and planning projects awarded to the state through the Gulf Environmental Benefit Fund.

NFWF's Gulf Environmental Benefit Fund (Gulf Fund) was created as part of the settlement between the U.S. Department of Justice, BP, and Transocean to resolve certain criminal charges against both companies in relation to the *Deepwater Horizon* oil spill. Under the allocation formula and other provisions contained in the plea agreements, a total of $356 million will be paid into the Gulf Fund over a five-year period for conservation projects in the State of Mississippi. Projects are designed to remedy harm or reduce the risk of future harm to natural resources that were affected by the 2010 oil spill.

"These projects were directly shaped by the public's input received as part of our planning efforts, and they will help the entire Mississippi Gulf Coast enhance and restore habitat, improve water quality, and study ways to increase oyster production," Gov. Bryant said. "Additionally, they will strengthen the partnerships among state and federal agencies and nonprofit organizations working together to improve the natural resources that are essential for recreational and commercial use that are vital to the Gulf Coast's economy and quality of life."

The four Mississippi projects are:

- **Habitat Restoration: Federal Lands Program – Phase I ($9,905,300)**

The project will enhance and restore habitat on federal lands including restoration of over 30,000 acres through invasive species removal, forest thinning, and prescribed burns.

The Mississippi Department of Environmental Quality (MDEQ), the U.S. Fish and Wildlife Service, the National Park Service, and the U.S. Forest Service will direct this effort.

- **Habitat Restoration and Conservation in Turkey Creek ($7,536,400)**

This project seeks to conserve important habitat and enhance water quality in the 30,000 acre Turkey Creek watershed in Harrison County through habitat conservation and restoration along with stream restoration. MDEQ will partner with the Land Trust for the Mississippi Coastal Plain, the Mount Pleasant United Methodist Church Environmental Ministries, the North Gulfport Community Land Trust, the Turkey Creek Community Initiative, the Turkey Creek Watershed Team, and the USDA Natural Resources Conservation Service in carrying out these project activities.

- **Oyster Restoration and Management ($11,780,000)**

This project seeks to improve oyster populations and sustainability by conducting several studies to better understand why oyster populations are not more resilient and how productivity can be improved. MDEQ will partner with the Mississippi Department of Marine Resources for this project.

- **Design Challenge for Improvement of Water Quality from Beach Outfalls ($544,600)**

Under the terms of this project, MDEQ will host a design challenge to address the water quality impacts of beach outfalls on the Mississippi Sound. Individuals and teams will compete to create innovative solutions for untreated storm water and it is expected that the winning design will be implemented at a larger scale across the Mississippi Coast.

"The selection of these projects involved more than a year's worth of planning, significant public engagement, and the forging of partnerships with a variety of groups," said Gary Rikard, MDEQ Executive Director. "All of that effort will result in the implementation of projects that will benefit the Coast and its residents for generations."

More detailed information about these projects can be found at www.restore.ms. Access www.nfwf.org/gulf for more information about the Gulf Benefit Fund.

Governor's Task Force to Host Irrigation and Water Conservation Summit

The Governor's Delta Sustainable Water Resources Task Force will host an Irrigation and Water Conservation Summit at the Capps Center in Stoneville on Tuesday, December 15 from 10:00 a.m. until 2:30 p.m. The event will begin with a General Session followed by four Breakout Sessions, each with five concurrent presentations. Producers, landowners, consultants, natural resource professionals and other interested parties may choose which presentation to attend during each Breakout Session. After the second Breakout Session, another General Session will be held as lunch is served before resuming Breakout Sessions at 1:00 p.m.

The initial General Session will include introductory remarks by Kay Whittington, Director of the Office of Land and Water Resources at the Mississippi Department of Environmental Quality. Whittington will discuss the Volunteer Metering Program and Task Force progress. Dr. Jason Krutz, Mississippi State University Irrigation Specialist, will present results from the 2015 MSU RISER Program during lunch.

The four breakout sessions will include the following presentations on ways to better manage water resources to achieve both personal water management goals and regional goals for more efficient water use and reduced groundwater pumping:

- Alternate wetting and drying in rice production.
- Groundwater modeling to evaluate potential solutions to sustain groundwater supplies for irrigation.
- Computerized hole selection.
- More efficient and effective surface water use throughout the Delta.
- Irrigating sealing soils.
- Effectively using soil moisture sensors.
- Case study of Louisiana's Red Bayou Surface Water Irrigation Project.

- NRCS irrigation management practice incentives
- Recharging the aquifer with direct injection.

Breakout Session speakers will include professionals from Mississippi State University, USDA Agricultural Research Service, USDA Natural Resources Conservation Service, YMD Joint Water Management District, Delta Plastics, the Mississippi Department of Environmental Quality, U. S. Geological Survey, and the Louisiana NRCS office. Farmers will also be coupled with several speakers to share their experiences related to the subject matter being discussed. All Breakout Sessions will be offered twice during the day.

Lunch will be provided to those attending the event, but no registration is required. All producers, landowners, consultants, natural resource professionals and other interested parties are welcome to attend.

The Task Force, which includes 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 the Mississippi Department of Environmental Quality, was formed to develop and implement actions to sustain water resources for agriculture, fisheries, and wildlife in the Delta.

Dr. Jason Krutz speaking at 2014's Irrigation Summit.

Gulf Coast Ecosystem Restoration Council to Meet in Mississippi

On Wednesday, December 9 at 10:00 a.m., the Gulf Coast Ecosystem Restoration Council (Council) will meet to vote on approval of the *Initial Funded Priorities List* (FPL) and the Spill Impact Component Rule (Rule), pursuant to the Resources and Ecosystems Sustainability, Tourist Opportunities, and Revived Economies of the Gulf Coast States Act of 2012 (RESTORE Act).

U.S. Secretary of Commerce Penny Pritzker, Chair of the Council, will preside over the meeting, and Governor Phil Bryant will be in attendance as a Council member and host of the meeting. Council representatives from the other Gulf States and participating federal agencies will be in attendance. The public is invited to attend this open meeting as well as an open house at 9:00 a.m. The meeting will take place at the Mississippi Coast Coliseum and Convention Center in Biloxi.

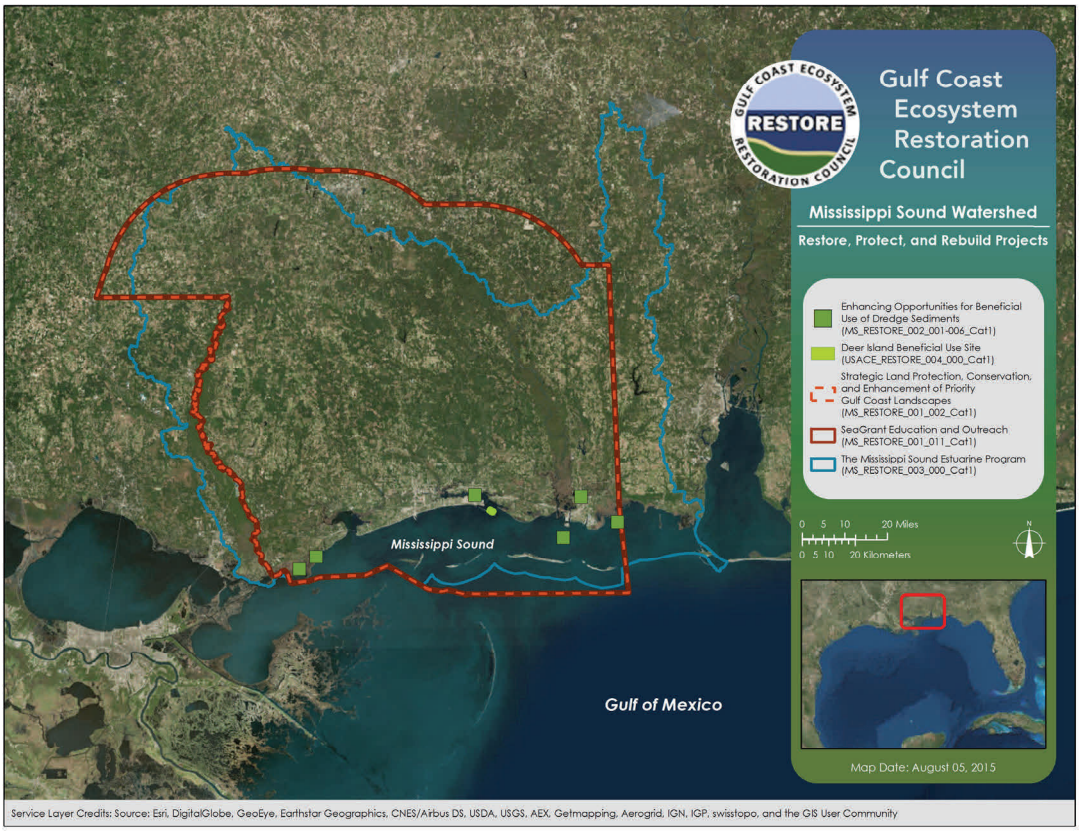
Meeting materials, including the meeting agenda, the FPL, the Rule and the "Response to Public Comments" documents will be available beginning December 1, on the Council's website: www.RestoreTheGulf.gov.

Using funds from the settlement with Transocean Deepwater Inc. for initial investments, the Council is seeking to address critical needs of 10 key watersheds across the Gulf to help restore the region's ecosystem and strengthen economic resilience. Projects and programs in the FPL will help to revitalize the region through skills training for local communities, improvements in water quality, and habitat restoration critical to juvenile fish and endangered birds and sea turtles.

The draft FPL was made available for public and Tribal comment on August 13, and comments were accepted through September 28. In August and September, the Council held public engagement meetings in each of the five impacted Gulf States and a Tribal engagement session in New Orleans to ensure the public and the Tribes had an opportunity to submit input on the draft FPL. In addition, the draft Spill Impact Component Rule was made available for public and Tribal comment on September 28 and comments were accepted through October 29.

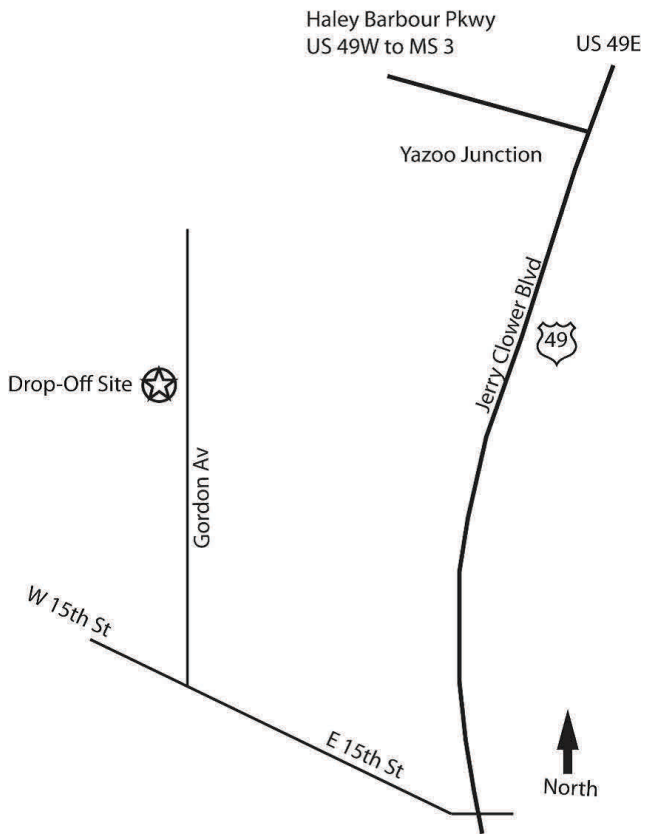
The Council received more than 16,000 comments by mail, online, and during the engagement meetings. The final versions of the FPL and the Rule incorporate changes made in response to these comments. The public will have an opportunity to offer comments on future Council actions at the December 9 meeting.

Advance registration for the meeting is not required, but appreciated. To confirm attendance, email RestoreCouncil@restorethegulf.gov. For more information about the upcoming meeting, visit the Council's website, RestoreTheGulf.gov.



Pesticide Disposal Event Scheduled For December 16

Mississippi farmers with waste agricultural pesticides are invited to take part in a waste pesticide disposal event to be held on Wednesday, December 16, from 8:00 a.m. to 3:00 p.m. at the former Tal Port building located at 2003 Gordon Avenue in Yazoo City.



The one-time event offers farmers a no-cost, environmentally safe way to dispose of leftover pesticide products through a licensed contractor.

No drop-offs before or after the designated times are allowed. There is no charge to Mississippi farmers, but farmers are responsible for safely transporting waste pesticides to the collection site. Waste pesticides include leftover, cancelled, or otherwise unusable products such as insecticides, herbicides, fungicides, and plant growth regulators. No rinsates or pesticides in bulk containers will be collected.

A licensed hazardous waste contractor will be on hand at the collection site and will collect, analyze, and dispose of or recycle the products out of state according to environmental laws.

The program is coordinated by the Mississippi State University Extension Service with funds made available through the Mississippi Department of Environmental Quality and the Mississippi Department of Agriculture and Commerce.

MDEQ Offers Municipal Officials Workshop at DSU

MDEQ's Office of Community Engagement Small Business Environmental Assistance Program hosted a Mississippi Municipal Environmental Education Workshop on October 7 at Delta State University. The workshop was held to enhance the environmental awareness and stewardship of municipal and elected officials and provide them with tools to maintain compliance with environmental laws and regulations. Presentations and panel discussions covered a wide range of topics including community recycling programs, the development of adequate solid waste management systems, public water system resiliency and sustainability tools, funding opportunities and redevelopment strategies, and environmental compliance issues.

The workshop brought together presenters from state and federal agencies and various MDEQ programs such as Dr. Mukesh Kumar, JSU Department of Urban and Regional Planning; Lisa Cooley, Keep Cleveland Beautiful Coordinator; Brad Jones, Greenville Public Works Director; Gregory Greene, Leflore County; Jason R. Barrett, MSU Center for Government & Community Development; Duncan Welch, Mississippi State Department of Health; Jim Gebhardt, EPA; Melissa Collier, MDEQ Office of Community Engagement; Michelle Burns, MDEQ Environmental Operator Trainer; Dennis Kelly, MDEQ Asbestos and Lead Division; Tony Caldwell, MDEQ SRF Program; Trey Hess, MDEQ OPC Groundwater Assessment and Remediation Division; Mark Williams, MDEQ Solid Waste; and, Cassandra Johnson, MDEQ Office of Community Engagement.

NetDMR Training Offered

To comply with the NPDES e-Reporting rule, MDEQ has implemented the use of EPA's NetDMR for the submittal of Discharge Monitoring Reports (DMRs). Any permittee in the State of Mississippi that is required to submit DMRs, in order to demonstrate compliance, must begin submitting DMRs electronically no later than December 20, 2016. To help with the transition, several training classes are being offered throughout the state.

Classes are limited to 25 people, and registration is required. To register, please contact Annette Brocks at 601-961-5252 or by email at Annette_Brocks@deq.state.ms.us.

In an email, please include name, phone number, and the class to attend. If more than one person is attending from a company, each person must register separately.

Class # 14
Date: December 2, 2015, 1:00 pm–4:00pm
Location: McLendon Library, Media Center Classroom # 4, Hinds Community College, Raymond.

Class #15
Participants need to bring their own laptops
Date: December 15, 2015, 8:30-11:30am
Location: The University of Mississippi-Tupelo Campus, Banquet Room, 1918 Briar Ridge Road, Tupelo.

Class #16

Participants need to bring their own laptops
Date: December 15, 2015, 1:30pm-4:30pm
Location: The University of Mississippi-Tupelo Campus, Banquet Room, 1918 Briar Ridge Road, Tupelo.

For any questions or additional information, please contact Kayra Johnson, Data Administration Branch, at 601-961-5106 or via email at Kayra_Johnson@deq.state.ms.us.

Class #17
Participants need to bring their own laptops
Date: December 16, 2015, 8:30-11:30am
Location: The University of Mississippi-Tupelo Campus, Banquet Room, 1918 Briar Ridge Road, Tupelo.

Class #18
Participants need to bring their own laptops
Date: December 16, 2015, 1:30-4:30pm
Location: The University of Mississippi-Tupelo Campus, Banquet Room, 1918 Briar Ridge Road, Tupelo.

Class # 19
Participants need to bring their own laptops
Date: January 20, 2016, 8:30-11:30am
Location: MDEQ offices, 515 East Amite Street, Jackson.

Class # 20
Participants need to bring their own laptops
Date: January 20, 2016, 1:30-4:30pm
Location: MDEQ offices, 515 East Amite Street, Jackson.

Class # 21
Date: January 26, 2016, 8:30-11:30am
Location: Delta State University, Ewing Hall Room 238, Cleveland.

Class # 22
Date: January 26, 2016, 1:30-4:30pm
Location: Delta State University, Ewing Hall Room 238, Cleveland.

Class # 23
Date: January 27, 2016, 8:30-11:30am
Location: Delta State University, Ewing Hall Room 238, Cleveland.

Class # 24
Date: January 26, 2016, 1:30-4:30pm
Location: Delta State University, Ewing Hall Room 238, Cleveland.

Class # 25
Date: February 17, 2016, 8:30-11:30am
Location: MDEQ Offices, 515 East Amite Street, Jackson.

EXPLODING SHELLS

David T. Dockery III, RPG, Office of Geology

The title is not about military ordnance; it is about the damage caused to scientific specimens--fossil shells exploded slowly from within due to crystal growth and expanding matrix. Examples can be found in the collection of fossil shells from the Moodys Branch Formation in Mississippi, which were illustrated in Mississippi Geological Survey (now MDEQ Office of Geology) Bulletin 120 (Dockery, 1977). Subsequent to the publication, the shells were preserved in specimen-sized zip-lock plastic bags, placed in a metal cabinet, and stored in a building lacking climate control. Changing temperature and humidity, even within sealed zip-lock bags, can cause fossil shells to absorb moisture. Moisture reacts with pyrite (iron sulfide) within the shell's internal matrix (seafloor sediment that filled the shell), producing sulfuric acid and various hydrated sulfates, which expand and "explode" the shell. This malady is known as pyrite disease and affects fossil shells, fossil bones, and carbonized plant remains. Fossils are important in surface geologic mapping, stratigraphic correlations, mineral and petroleum exploration, and in scientific research on ancient life, climate, sea level, ocean currents, environments, and plate tectonics (movement of the continents).

Fortunately, most of the fossil shells figured in Bulletin 120 were preserved in good condition. Examples of two specimens that exploded are shown below. Figure 1 illustrates four side views of a figured specimen (in Bulletin 120) of the rare gastropod *Platyoptera extenta* from the Moodys Branch Formation in Jackson that is still beautifully preserved. Figure 2 shows a figured specimen of the same species that exploded while in storage. Figure 3 shows images of a figured specimen of *Architectonica bellistriata* as it was when originally photographed and as it is today as an exploded shell.

Figure 1. *Platyoptera extenta* (Conrad *in* Wailes, 1854), Height 40 mm, Width 29.5 mm, Moodys Branch Formation (Late Eocene), Town Creek locality, Jackson, MS, (figured in Dockery, 1977, Plate 4, figures 13A, 13B).

Figure 2. *Platyoptera extenta* (Conrad *in* Wailes, 1854), Height 35 mm, Width 25 mm (as originally measured), Moodys Branch Formation, Town Creek locality, Jackson, MS, (figured in Dockery, 1977, Plate 4, figures 2A and 2B).

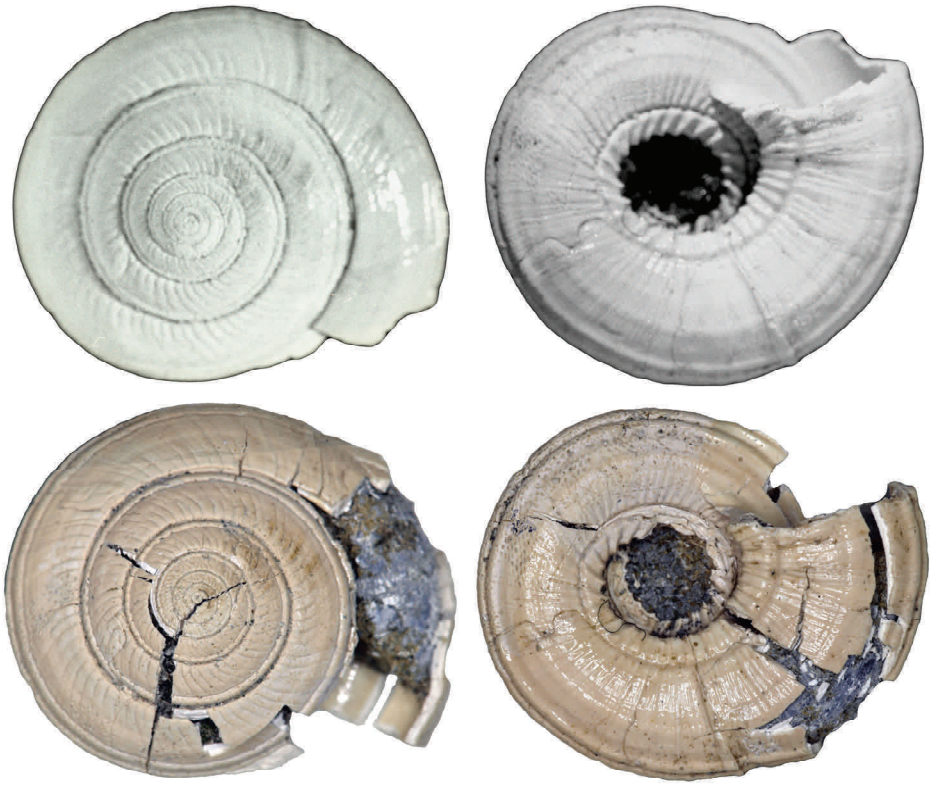


Figure 3. *Architectonica bellistriata* Conrad *in* Wailes, 1854, Height 11 mm, Width 21.5 mm, Moodys Branch Formation, Town Creek locality, Jackson, MS, figured in Dockery, 1977, Plate 1, figures 18A, 18B; as illustrated in 1977 at top, and recent picture at bottom.

The Family Architectonicidae contains a group of marine gastropods commonly known as staircase shells or sundials. The name is derived from the Latin word *architectus*, meaning master-builder. Members of this group have a larval shell that coils upward (toward the apex) and adult whorls that reverse direction and coil downward around a hollow conical axis called the umbilicus.

The umbilicus has the staircase appearance, which rivals the work of any master-builder. Two species of *Architectonica* live off the American coast today in warm temperate to tropical waters: *Architectonica nobilis* Röding, 1798, and *Architectonica peracuta* (Dall, 1889). The Moodys Branch Formation at Jackson contains four species of this genus as illustrated in Bulletin 120. Fossils from the Moodys Branch Formation are of interest to scientists worldwide. For this reason, the fossil Architectonicidae shells of Bulletin 120 were re-photographed with a Nikon D5500 camera, an AF-S VR Micro-Nikkor 105 mm lens, and lens-mounted ring lights. Two pictures were required of each specimen to fit the whole shell within the picture frame. These images were merged and appear in figures 4 and 5.

Figure 4. *Architectonica bellistriata* Conrad *in* Wailes, 1854 (top and middle), Height 13 mm, Width 22.5 mm, Dockery, 1977, Plate 1, figures 19A and 19B, at middle, Height 11 mm, Width 20 mm, Dockery, 1977, Plate 1, figure 17; *Architectonica billmoorei* Dockery, 1977 (bottom), Height 7 mm, Width 17.5 mm, Dockery, 1977, Plate 2, figure 4.

Figure 5. *Architectonica ornata jacksonia* Palmer, 1947 (top), Height 10.5 mm, Width 19 mm, Dockery, 1977, Plate 2, figures 3A and 3B; *Architectonica meekana subsplendida* Palmer, 1947 (middle), Height 9.5 mm, Width 22 mm, Dockery 1977, Plate 2, figures 1A and 1B; *Architectonica alveata* (Conrad, 1833) (bottom), Height 11.5 mm, Width 24.5 mm, Dockery, 1977, Plate 3, figures 1A and 1B.

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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PICTURE OF THE MONTH

Picture taken by MDEQ's Richard Ball of an unexploded 1944 60mm mortar that was found at a Formerly Used Defense (FUD) site, Camp Van Dorn in Centreville, by a land-owner plowing his field. The CERCLA Branch of GARD works with the U.S. Army Corps of Engineers and the Department of Defense to identify unexploded ordnance and remediate FUDs.