



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:

BP Agreement	1
enHance Profile	4
Join enHance	7
WaterFest	9
UST Conference	11
Madison County Earthquake	12

Mississippi Department of Environmental Quality Environmental News

VOLUME 12 ISSUE 6

JULY 2015

Mississippi Reaches Landmark Agreement in BP Oil Spill Disaster Case

On July 2 Governor Phil Bryant and Attorney General Jim Hood announced that Mississippi had reached an agreement in principle with BP to settle claims related to the 2010 *Deepwater Horizon* disaster. The settlement will bring approximately \$1.5 billion in additional relief to Mississippi over the next 17 years. Combined with \$659 million in early funding, Mississippi is receiving a total of nearly \$2.2 billion in compensation.



July 2 press conference with Attorney General Jim Hood, Governor Phil Bryant, and Gary Rikard, MDEQ Executive Director.

“Mississippi suffered tragic losses as a result of the BP oil spill. Eleven men died, including four Mississippians,” Gov. Phil Bryant said. “For months, we battled to protect our shorelines and the unique ecosystems and natural resources of our beautiful Gulf Coast from millions of gallons of oil and chemicals.

“And for years, we have worked diligently to pursue all legal recourse and rightful compensation resulting from this disaster. Today is a victory for Mississippi and a victory for a treasured way of life on the Gulf Coast,” Gov. Bryant continued.

Under the \$1.5 billion agreement in principle with BP, Mississippi will receive approximately \$183 million in Natural Resource Damage Assessment payments and approximately \$582 million in Clean Water Act penalties under the RESTORE Act. Mississippi will also receive \$750 million in economic damages.

Attorney General Jim Hood stated, "Our office recovered about seven times more than the initial projections for economic damages. We worked well with other states and all of the cities and counties on our Coast to build an outstanding economic damages model."

"This agreement means we can continue to move forward with efforts to restore and enhance our natural resources. MDEQ is committed to ensuring that the public has meaningful input on the final terms of the settlement and the proposed restoration actions," said Gary Rikard, MDEQ Executive Director.

Breakdown of New Agreement in Principle

The \$1.5 billion agreement in principle includes:

- ▶ Approximately \$183 million in Natural Resource Damage Assessment payments, to be paid over 15 years, which will be used primarily for environmental restoration;
- ▶ Approximately \$582 million in Clean Water Act penalties under the RESTORE Act. These funds will be paid over 15 years and used primarily for environmental projects, research and economic development;
- ▶ \$750 million in economic damages paid over 17 years as a result of Mississippi's own lawsuit against BP. Mississippi is scheduled to receive a payment of \$150 million in 2016 and equal yearly payments of \$40 million from 2019-2033. The funds will be available for appropriation by the Mississippi Legislature.

Breakdown of \$659 Million in Early Funding

- ▶ \$112.557 million in Natural Resource Damage Assessment Early Restoration payments;
- ▶ \$106 million in early RESTORE Act payments;
- ▶ \$356 million in National Fish and Wildlife Foundation payments;
- ▶ \$85.168 million in initial response payments.

More comprehensive information and analysis can be found in an article from Gary Rikard at www.restore.ms.

2015 Settlement	Previously Allocated	TOTAL	
Natural Resource Damage Assessment \$183 Million	Natural Resource Damage Assessment Early Restoration \$112.557 Million	\$2.174 Billion	
RESTORE Act \$582 Million	RESTORE Act \$106 Million		
Economic Damages \$750 Million	National Fish and Wildlife Foundation \$356 Million		
	Initial Response \$85.168 Million		
+		=	<i>Making Mississippi Whole</i>

Natural Resource Damage Assessment Early Restoration \$79.67 Million Committed		National Fish and Wildlife Foundation \$40.4 Million Committed		
Phase I				
Artificial Reef Habitat Restoration \$2.6 Million	Oyster Cultch Restoration \$11 Million	Coastal Streams Initiative \$2.631 Million	Coastal Bird Stewardship \$1.604 Million	Coastal Preserves \$3.3 Million
Phase III				
Hancock County Marsh Living Shoreline \$47.17 Million	Infinity Science Center \$10.4 Million	Reef Fish Assessment \$4.6 Million	Invasive Species Management \$2.676 Million	Marsh Restoration \$22 Million
Popp's Ferry Causeway Park \$4.7 Million	Pascagoula Beachfront Promenade \$3.8 Million	Planning		
		Mississippi Coastal Restoration Plan \$3.6 Million		
<i>Making Mississippi Whole</i>				

enHance Profile – Mississippi Lignite Mining Company

The Mississippi Lignite Mining Company in Choctaw County joined the enHance program in 2015 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.

1. Why did Mississippi Lignite Mining Company apply for the enHance program?

The enHance program is a natural fit with our corporate environmental philosophy and is an excellent way for our environmental program to be recognized.

2. How is membership beneficial for your company?

Our business partners are increasingly requiring environmental excellence from companies they partner with. The recognition received through the enHance program highlights our stewardship philosophy.



A dragline at the mine taken at sunrise.

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

As large scale surface miners, we impact a large footprint within the landscape. Our reclamation practices are cutting edge and have resulted in post-mining landscapes that have been proven to be more productive than their pre-mine counterparts. We have reconstructed a perennial stream



Deer crossing a reconstructed stream.

that has been reconnected to its floodplain for the first time in 100 years, thereby allowing natural stream-flow dynamics to return. We are actively restoring Northern Bobwhite Quail into the reclamation to foster a rebound in quail population that has been depressed due to decades of land-use change that occurred before mining began in the area. We are actively engaged in waste reduction, improving fuel efficiency, and eliminating the use of hazardous solvents. More recently, we have begun converting all of our HID lamps on our drag-line and electric shovel as well as in our shop to LED fixtures in order to promote energy efficiency.

Why?

Mississippi Lignite Mining Company believes we offer a service to our community by providing high-paying jobs and increasing our local tax-base. The energy provided by the adjacent coal-fired power plant is low-cost and benefits our state by promoting competitive energy prices that stimulate additional job growth. Beyond the moral obligation to operate in an environmentally responsible fashion, we owe it to our employees, the community, the shareholders, and the people who receive electricity produced from our coal to provide a sustainably produced product. When mining is complete, we will have mined and reclaimed approximately 5,000 acres of land. Our goal is to leave the environment in better shape than we found it.



A quail being released.

4. Would you recommend enHance to others?

Absolutely!

5. Tell us about your company and what you produce.

Mississippi Lignite Mining Company is a subsidiary of The North American Coal Corporation and mines lignite which is a low-grade form of coal that is plentiful in the State of Mississippi. Mine development of the Red Hills Mine (RHM) began in 1998 with commercial lignite delivery commencing in 2002. Annual production is approximately 3.6 million tons-per-year, requiring the mining and reclamation of approximately 100 acres of land annually. The mined lignite fuels an adjacent 440 megawatt power plant. MLMC was the first surface lignite mine operating in Mississippi.

Our mining method involves the removal of six different lignite seams by the removal of the overburden and inter-burdens separating the seams. The non-coal materials are removed by a combination of truck and shovel operations, dozer push operations and an 82 cubic yard dragline. In general, the truck and shovel operations remove the overburden to the first lignite seam. Eight hundred and fifty horse power class dozers sequentially uncover the next three lignite seams by pushing overlying overburden into the preceding pit. The last two seams are uncovered by the dragline. As lignite seams are exposed, they are recovered using a 22 cubic yard track hoe or a surface miner to load 165-ton end dump trucks for direct delivery to the power plant or RHM's two coal stockpiles.

Reclamation and re-vegetation operations involve hauling and grading oxidized overburden to a gently rolling approximate original contour, respreading the overburden landscape with four-feet of oxidized material, stabilizing drainage bottoms, seeding of spring grasses and winter grains to stabilize the reclaimed landscape and seeding loblolly pines and mixed hardwoods to achieve the desired post-mine forest land use. We offer tours and visitors are always welcome (weather permitting). If you're interested in touring our operations, please call 662-387-5400.



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@deq.state.ms.us.



enHance hosts an annual training workshop and awards luncheon along with other educational opportunities throughout the year.

Optimizing Operations through E3 Energy Efficiency and Waste Reduction Opportunities

When:
July 30, 2015

8:00 Registration
9:00—3:00 Program

Where:
**Toyota Motor
Manufacturing
Blue Springs, MS**

Who:
Managers and Staff from
Environmental & Safety,
Maintenance,
Engineering,
Production

Cost:
There is no charge.
Lunch provided
by WESA.
Limited enrollment.



Presented by:
**Toyota Motor Manufacturing
and the enHance Stewardship Program**

Learn:

- **How Toyota has reduced energy usage and earned the Energy Star award**
Kevin Bell, Toyota
- **Energy savings opportunities and incentives that are available through the local utility**
David Sparks, Chad Wilson, TVA
- **About upcoming changes to the ISO 14001 standard for environmental management**
Tim Johnson, Toyota
- **Options for reducing solid waste going to the landfill**
Mark Williams, MDEQ Linda Mitchell, Miss. State Univ.
- **About free on-site assessments to reduce waste and energy**
Mary Jean Gates, enHance Stewardship Program

See on-site environmental and energy projects.

Click [here](#) to Register.

or contact

Mary Jean Gates

maryjeangates@bellsouth.net

662-846-0448



WaterFest 2015

The annual WaterFest event at the Ross Barnett Reservoir was again a huge success reaching more than 2,500 people. For more information about WaterFest and the Rezone initiative, go to <http://rezonate-ms.org>.





EPA Green Infrastructure/Low-Impact Development Workshop

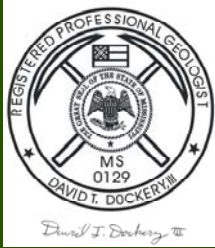
On July 15 and 16, the U.S. Environmental Protection Agency, in cooperation with MDEQ, the Mississippi Department of Marine Resources, the Mississippi Chapter of the American Planning Association (MAPA), and Allen Engineering and Science, Inc. will conduct a workshop that will focus on water quality and non-point source pollution management practices utilizing Low Impact Development and Green Infrastructure techniques. To register for this free event, go to: <https://www.eventbrite.com/e/epa-lid-and-green-infrastructure-workshop-tickets-16904205935>.

UST Conference

MDEQ is hosting an Underground Storage Tank Owner/Operator Conference on August 19, 2015, at the Sparkman Auditorium located at the Mississippi Agricultural and Forestry Museum, 1150 Lakeland Drive, Jackson. The conference will begin at 10:00 a.m. and conclude at 3:00 p.m.

The conference will cover various topics including the new UST federal regulations, re-development opportunities, cleanup of petroleum contamination, working with environmental consultants, success stories of the Mississippi Groundwater Protection Trust Fund, a question and answer session, and much, much more. All UST owners and operators are encouraged to attend this conference, to learn, and meet the MDEQ staff.





ANOTHER CANTON EARTHQUAKE

David T. Dockery III, RPG and Barbara Yassin, Office of Geology

On Monday June 29, 2015, David Dockery received a call from his sister-in-law, Ida Marshall, at Lake Caroline in Madison County, reporting that she heard a “boom” like an explosion at 8:23 am and then the house shook and rattled the furniture. Patsy Turner Benson of Madison reported to the *Madison County Journal* that the Monday morning earthquake “felt like a wrecking ball hit the house, and it knocked it off the foundation. That was freaky bad!” (Michael Simmons, 7/1/2015, 6:00 PM). This 3.2 magnitude earthquake was the third earthquake for the area in a period of two months. Others also reported hearing a boom associated with the June 29 event. According to a U.S. Geological Survey website, residents of Spokane, Washington, reported “booming sounds” in a series of earthquakes that unnerved the city in 2001. The earthquakes, like those in Canton, were shallow, which probably contributed to the noise. The booming sounds are caused by higher-frequency vibrations, which do not reach the surface in deeper earthquakes. Sometimes the earthquakes boom even when no vibration is felt.

Figure 1 shows the location of the June 29 earthquake near the epicenter of the first earthquake, also of a 3.2 magnitude, that occurred on May 2, 2015. Figure 2 shows the number of responses to the earthquake recorded on the U.S. Geological Survey earthquake website. Figure 3 is a seismogram of the earthquake recorded by Louis Lyell on the seismograph at his home on Old Canton Road in Jackson.

The Canton earthquakes are a natural phenomenon associated with a buried fault identified in the cross section in Figure 1. All three earthquakes cluster around that fault. Will there be other earthquakes to follow?—we can’t say. Some sixteen earthquakes have occurred over the period of a year in Greene County, Alabama.

Canton, Mississippi
 May 2nd & June 29th 2015,
 Earthquakes with Cross-Section

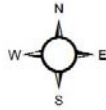


Figure 1

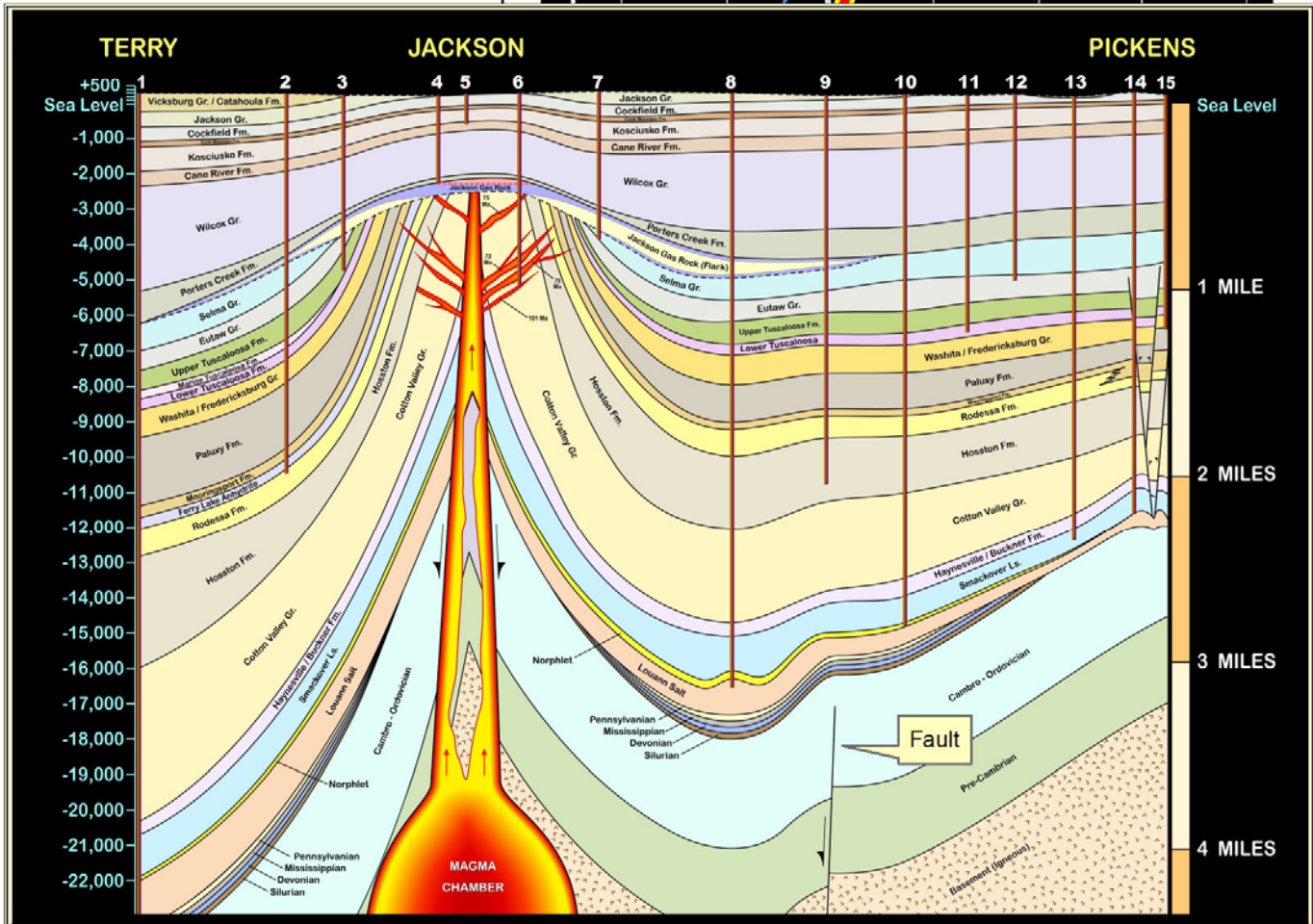
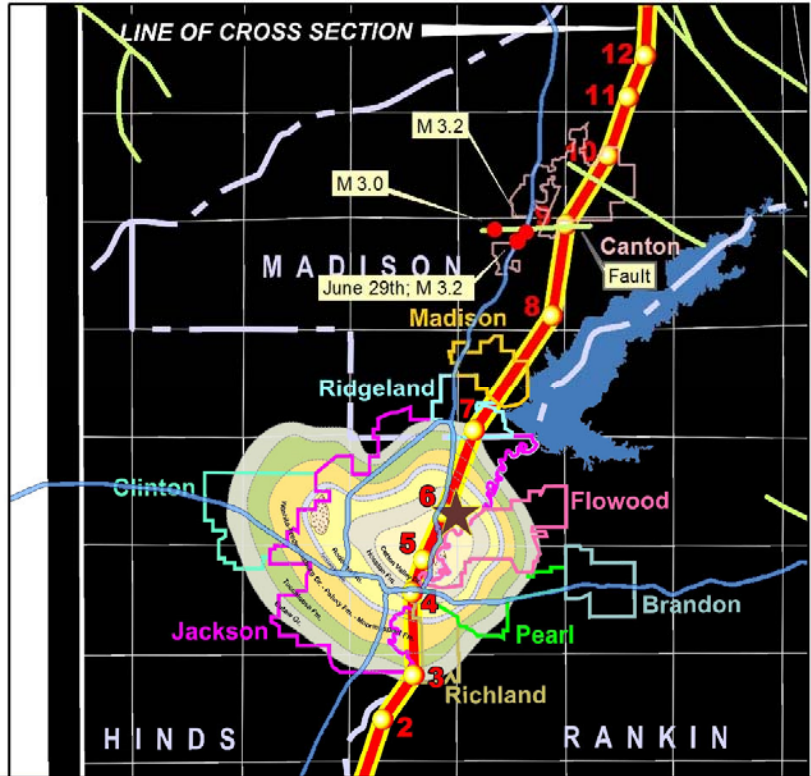
- Epicenters (uncertainty ~4 km horiz.)
- fault
- Interstate Highway

Figures from Steve Walkinshaw and Candy Goolsby published in Dockery, 2008, "Office of Geology Cross Section of Jackson Defines Inactive Volcano:" Environmental News, July 2008, v. 5, issue 7, p. 4.

GIS by Barbara Yassin, MDEQ 6/29/2015

Epicenter and Cross Section Location Map

5 2.5 0 5 Miles



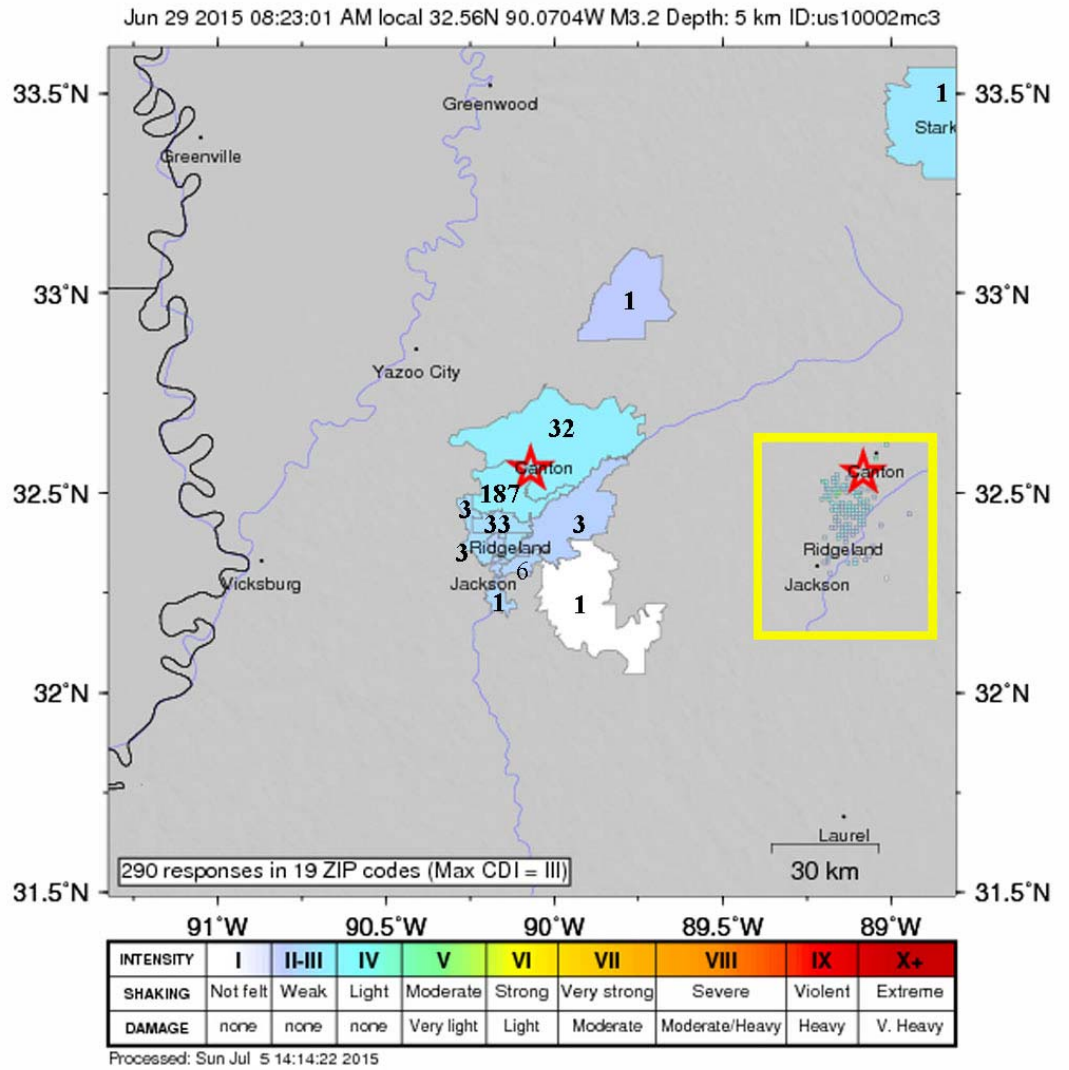


Figure 2. USGS Community Internet Intensity Map, Mississippi, June 29, 2015, 08:23:01 AM local time. Responses by Zip Code: Madison 39110, 187 responses; Ridgeland 39157, 33 responses; Canton 39046, 32 responses; Jackson 39213, 3 responses; Brandon 39047, 3 responses; all others 1 response. The yellow-bordered insert at right gives the locations of 238 responses in 131 blocks, most of which are south of the epicenter (red star). The maximum reported intensity for the event was V.

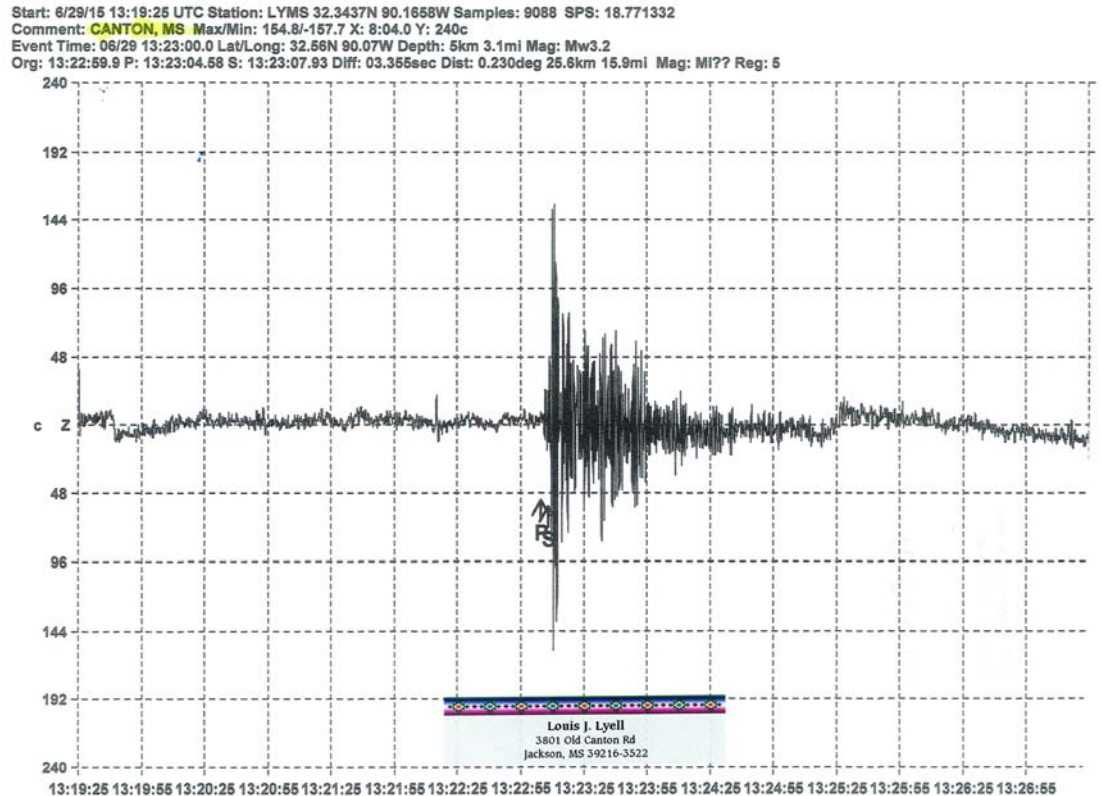


Figure 3. Seismogram of the Canton earthquake recorded by Louis Lyell's seismograph at his home on Old Canton Road in Jackson, Mississippi.

On the same day as Canton's June 29 earthquake, a 3.8 magnitude earthquake at a depth of 3.1 kilometers shook Greene County, Alabama, at 1:44 a.m. The epicenter was some 12 miles northeast of Eutaw (Figure 4). This earthquake was the latest in a cluster of sixteen seismic events to strike that county since November of 2014. Sandy Ebersole of the Geological Survey of Alabama was quoted by Melissa Brown of AL.com (posted June 30, 2015) as saying, "These earthquake clusters or swarms are very rarely followed by a large magnitude earthquake." Ebersole also said, "The cause and location of the earthquakes is several kilometers below the earth's surface.... We have previously mapped subsurface faults in Greene County, and thus far our interpretation of these earthquakes is that they are an expression of movement along these faults." Most earthquakes of the 2015 cluster occurred within a Precambrian graben as shown by parallel green fault lines in Figure 5.

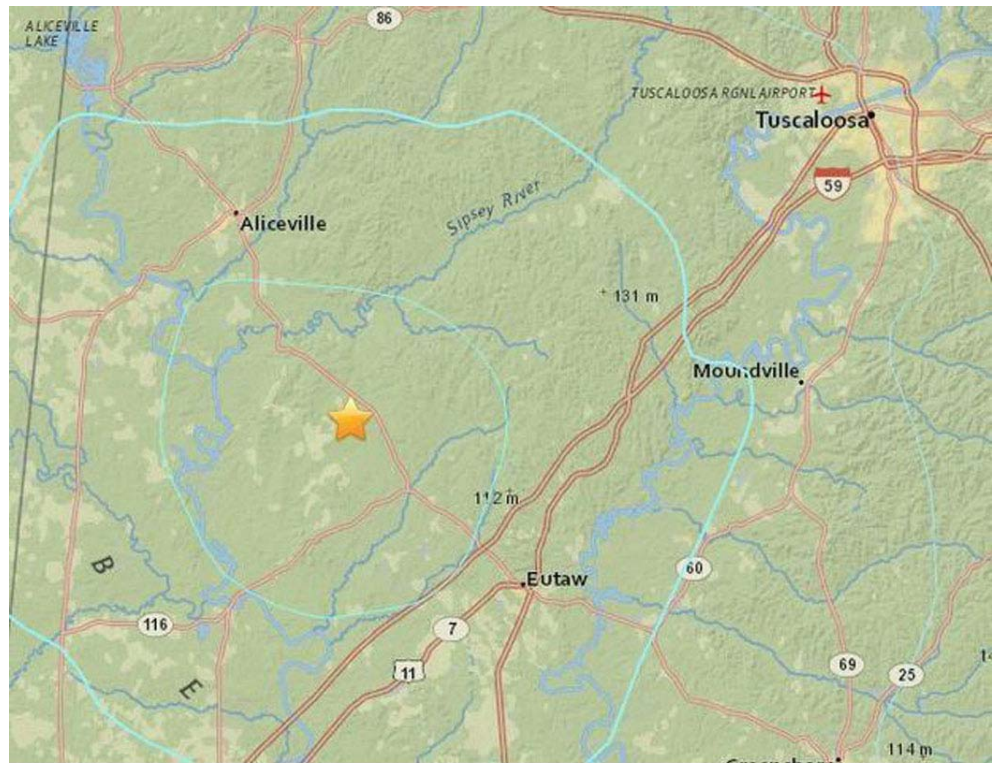


Figure 4. Location (star) of the Greene County, Alabama, June 29, 2015, earthquake (3.8M).

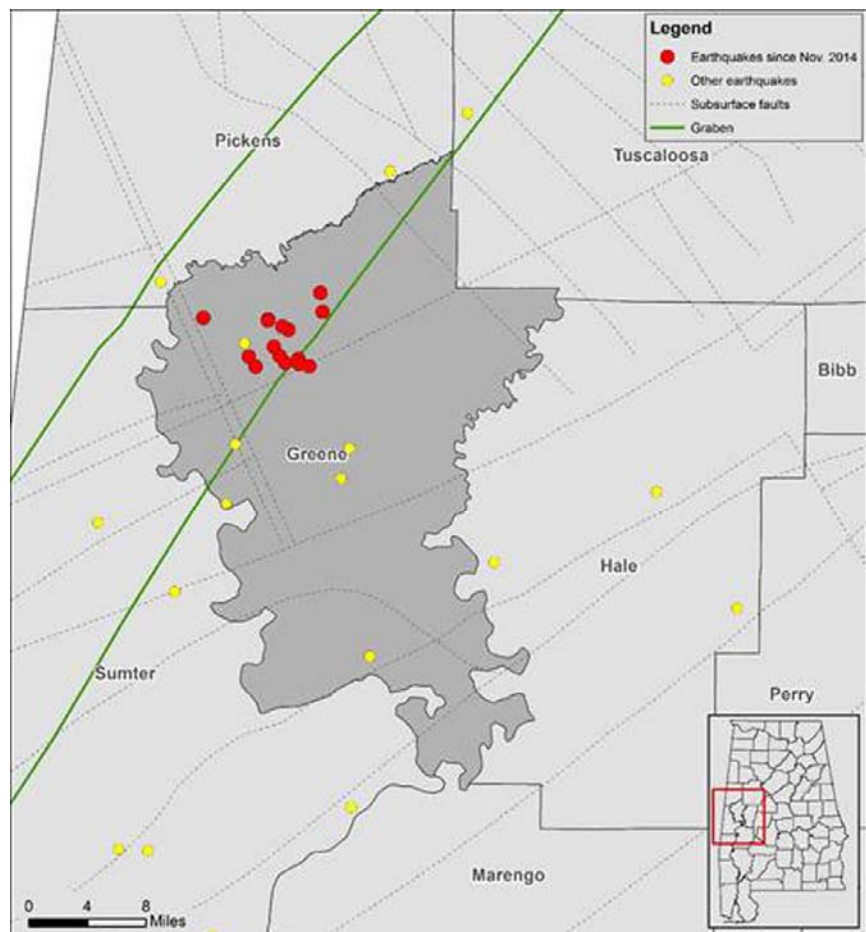


Figure 5. Location of recent Greene County, Alabama, earthquakes associated with a Precambrian graben as outlined by bounding faults in green.

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.

CONNECT WITH MDEQ



MDEQ SOCIAL MEDIA

MDEQ on Facebook

<http://www.facebook.com/pages/MDEQ/118172664880239?v=wall>

Follow MDEQ on Twitter
@MDEQ



**Mississippi Department of Environmental
Quality**

Post Office Box 2261

Jackson, Mississippi 39225

601-961-5171

www.deq.state.ms.us

PICTURE OF THE MONTH

Taken by Ethan Mayeu,
Environmental Compliance and Enforcement
Division.

A White-Marked Tussock
Moth caterpillar taken in
Warren County.

