



DISCOVER DEQ

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY NEWSLETTER



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West Monroe projects high-tech and green

West Monroe Mayor Dave Norris has a vision of his city's future, and it's a green vision. Norris, with help from the Louisiana Department of Environmental Quality, is working on some high-tech solutions to his city's environmental issues.

West Monroe sits astraddle the Sparta Aquifer, the most important water resource in northeast Louisiana. The underground river was showing signs of stress in the form of saltwater intrusion in drinking water wells. The demand on the aquifer, both agricultural and industrial, was threatening a drinking water source which provides all or most clean drinking water in the area and is vital to agricultural needs in a 16-parish swath of northeast Louisiana, including the cities of Monroe, West Monroe and Ruston.



From left, LDEQ Office of Environmental Assessment Administrator Jonathan McFarland, LDEQ Secretary Dr. Chuck Carr Brown, LDEQ Special Advisor to the Secretary Bijan Sharafkhani, West Monroe City Engineer Robbie George and West Monroe Mayor Dave Norris visit the solar farm at the city's Sparta Reuse Facility.

In 2000, a large-scale state-funded study of the Sparta showed the outflow (pumpage) from the Aquifer exceed the inflow (recharge) by approximately 17 million gallons per day (MGD). As a result, water levels in the Aquifer were dropping, in some parts of the study area, by annual amounts of two feet or more, with the level in one well in Lincoln Parish falling 129 feet (an average of 3.2 feet per year) since it was drilled in 1958. "Cones of depression," areas of extremely high pumpage, existed in locations in Lincoln and Jackson Parishes, but the most serious "cone of depression" centered in western Ouachita Parish.

Mayor Norris and staff took a look at what industries were drawing the most water from the aquifer. The answer was simple: the city's largest industry and employer, Graphic Packaging Company, was using around 10 million gallons of clean water a day for use as process water in the company's food grade paper manufacturing operation. What if at least some of that water could come from another source? What if the city could treat sewage water to an acceptable standard for use at the plant?

That was the hurdle, Norris said. "It has to be treated to EPA drinking water standards because it is used in a process to manufacture food packaging," he said. But could it be done? The answer was "yes." Not only could it be done, it could be done in a

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West Monroe City Environmental Manager Terry Emory, left, narrates a slide presentation about the Sparta Reuse Facility as West Monroe Mayor Dave Norris, standing second left, and LDEQ Secretary Dr. Chuck Carr Brown, center, listen with other city and LDEQ personnel and members of the press.



West Monroe City Environmental Manager Terry Emory, third from left, explains how a part of the water treatment process works as, from left, LDEQ Office of Environmental Assessment Administrator Jonathan McFarland, LDEQ Secretary Dr. Chuck Carr Brown, LDEQ Special Advisor to the Secretary Bijan Sharafkhani listen.

high-tech fashion that would benefit the city in multiple ways. With help from a \$6 million loan from the LDEQ Clean Water Revolving Loan Program, the Sparta Reuse Facility was built. The \$20.5 million facility is state-of-the-art, and uses two 50-acre aeration ponds fed by 10 pumps as part of a Dissolved Air Flotation process. The process begins a treatment regime that includes Pressurized Granular Activated Carbon filtering and, finally, chlorine gas injection. The resulting product meets EPA drinking water criteria. The city now provides five million gallons of the recycled water each day to Graphics Packaging. That replaces water the company was formerly drawing from the aquifer. USGS monitoring wells have shown water levels in the Sparta Aquifer are rebounding in the West Monroe area.

LDEQ Secretary Dr. Chuck Carr Brown visited the Sparta Reuse Facility Feb. 15. Norris told the secretary that West Monroe has a permit to discharge up to seven million gallons of treated sewage to the receiving waters of the state, but because of the effectiveness of the Sparta Reuse Facility, the city discharges only .47 million gallons a day on average.

“That’s a win-win in my book,” Brown observed.

Here is the cherry on top: an LDEQ CWRLF grant of \$1,541,300 helped pay for an 880 panel solar array that produces 300 kilowatts of electricity to help power the wastewater treatment plant. Installation of the array was completed at the end of 2017, and the solar farm, believed to be the largest in Louisiana, is operating and providing electricity to the treatment plant.

“This is a glimpse of the future,” Brown said as he toured the solar farm. Right on cue, the sun broke through the haze, and the electric registers responded with a loud, rising hum – the sound of progress.

For more information, visit www.westmonroe.com.



Powerful pumps are used in the aeration process at the Sparta Reuse Facility in West Monroe.



Chuck Carr Brown, Ph.D.

Message from the Secretary *Chuck Carr Brown, Ph.D.*

On Feb. 15, I visited the Sparta Reuse Facility in West Monroe. This wastewater treatment plant uses several processes to clean wastewater to EPA drinking water standards. It sends the cleansed water to a local paper plant where it is used in the process of making food grade packaging. In turn, this saves water from the Sparta Aquifer, which had become stressed by agricultural and industrial demands. The Sparta Reuse Facility was partly funded by LDEQ's Clean Water Revolving Fund (CWRF) loans of about \$6 million.

The aquifer is a drinking water source. To protect that natural resource is something to brag about. But there's more.

Attached to the wastewater treatment plant is a solar farm. The city received a \$1.5 million grant from LDEQ's CWRF (green project category), to help pay for the 880 panel solar array. Installation was finished in February. The panels are expected to save the city more than 20 percent on the water treatment plant's

electric consumption. That's not the only benefit from the solar farm. The sun-generated electricity is clean, and the solar process does not produce greenhouse gases.

On a hazy day in late winter, I walked among the expansive banks of solar panels. I was pleased to find a piece of the future right there in Ouachita Parish. When the sun suddenly peered through the clouds, the hum of the electric registers announced that the solar panels were doing their job. I couldn't help but think that a lot more people will be hearing that hum in the coming years as this technology spreads to other large applications. I'm glad LDEQ is able to use the CWRF to seed the growth of non-hydrocarbon energy sources. They have to be part of the mix going forward. There's still room for oil and gas and, yes, coal, but there is a spot for solar too -- a sunny spot.

West Monroe's mayor and city government are to be commended for planning and carrying out the Sparta Reuse Facility project. The mayor has expressed interest in using the treatment plant's additional capacity to expand its service area and consolidate sewer systems in western Ouachita Parish. When you consolidate services, you reap savings of scale. It's much more efficient to treat large amounts of sewage in one large treatment plant rather than pump it to multiple small plants.

Another thing this north Louisiana city is doing is constructing greenways to link their three city parks, farmer's market, schools, playgrounds, city hall and neighborhoods. The greenway incorporates low-lying areas prone to flooding. Open areas are being created in order to allow vegetation to reclaim the sites. This will reduce the impact of future flooding. Walking and biking trails will also thread through the greenways.

Because greenways don't accelerate drainage the way rooftops do, the receiving streams that border the greenway won't be getting as much non-point runoff. Vegetation absorbs a substantial amount of runoff. With more people walking, fewer cars are being driven. That helps with ozone and other air quality issues.

The best thing about greenways is that they improve the quality of life by fostering a community identity and allowing people to meet their neighbors, all while improving the health of the environment.

The future does look bright, but there is much to be done in the present if we are to get there. We all need to do our part.

Let's have another great month and remember to be safe in everything you do.



LDEQ staff discusses latest handheld equipment in support of air monitoring mission



LDEQ Environmental Scientist William Felicien explains the capabilities of the Gasmeter DX4040 portable gas analyzer as videographer Emily Barlett films.

There are many tools at LDEQ's disposal for use in the field when there's a release of toxic or potentially toxic constituents into the atmosphere. Those tools vary from handheld devices to fixed air monitors to a mobile laboratory. While each brings its own unique set of capabilities, all are employed for the same mission: to characterize what might be in the air at a given location at a given time.

The instruments are very technical in nature, but the department recently posted a video to its YouTube channel in order to help members of the public understand the basic capabilities and limitations of each instrument.

Hosted by Administrator of the Emergency and Radiological Services Division, Jeff Dauzat, with the assistance of environmental scientists Kevin Borne and William Felicien, the video provides a snapshot of the handheld devices, touching on what they do in support of LDEQ's air monitoring mission.

The equipment has several uses, for both routine air monitoring capabilities and for sudden or long-term emergency response situations that may involve an unusual release into the air. In the video, Borne and Felicien display the AreaRAE multi-gas monitor, FLIR thermal imaging camera, Gasmeter DX4040 portable gas analyzer and an air collection canister – known as a Summa canister. Each device can work individually or in conjunction with the other devices depending on the nature of the situation.

Borne, a supervisor with the Emergency Response section, began with an overview of the AreaRAE device, focusing on its implementation in the air monitoring mission. "These units are capable of detecting up to five threats – VOCs, which are volatile organic compounds, combustibles or flammable vapors, toxic gases including ammonia, sulfur dioxide and chlorine, and oxygen levels."

Felicien, an environmental scientist in air monitoring, presents the FLIR thermal imaging camera – a key addition to LDEQ's arsenal of handheld devices for use in the field. The FLIR camera's forte is locating tiny, hard to see cracks in pipes and tanks, which can help LDEQ staff with an initial determination as to the location and/or cause of a particular air release. He then explains the functionality of the Gasmeter DX4040 portable gas analyzer, touching on its unique properties in measuring gas emissions. "With this instrument, numerous compounds can be identified simultaneously," Felicien said. These are highly technical devices that are effective for getting a better picture on what constituents may be present in the air.

Felicien ended the segment with a description of the summa canister and its multifaceted capabilities. As both a handheld air sampling tool for field use, the canisters are also static units that can be set on a shelf inside an air monitoring station or inside the MAML where they will accept and contain samples on a continuing basis. That information is then fed into the MAML or air monitoring station's equipment for analysis. Handheld canisters used out in the field are typically sent to a lab for content analysis.

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The devices serve to expedite LDEQ's air monitoring mission by providing the most up-to-date equipment using the latest technology available.

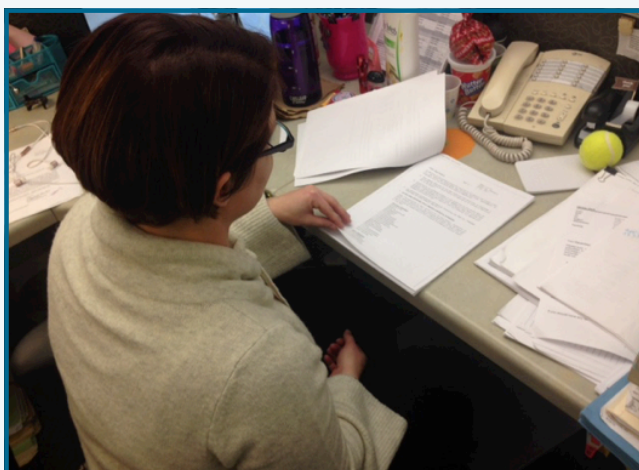
"Depending on the nature of the situation, these instruments could be used individually or they could work together as a group to provide us a better idea of what's happening with the air to give us a better handle on how to protect human health and the environment," Dauszat said.

To view the video on LDEQ's YouTube channel, please visit: <https://www.youtube.com/watch?v=Ti0w99fvDwg>.

What does the permitting process entail?

While no two Louisiana businesses operate under the exact same conditions, many have one thing in common: if they introduce pollutants into the environment as a part of their normal course of operations they will need to be permitted by the Louisiana Department of Environmental Quality (LDEQ). Indeed, some businesses will need more than one type of permit, depending on what they do and what they discharge or emit. Being properly permitted ensures that the business is operating under regulatory requirements that are protective of human health and the environment.

LDEQ's permitting functions fall under LDEQ's Office of Environmental Services. This Office's divisions and the permits they issue are categorized by media – water, air and waste (solid and hazardous). The criteria for each type of permit will vary based on any number of factors. Those factors may include consideration of the type and amount of discharges and emissions and potential effects the permitted activities may have on the environment.



Christy Clark, senior staff scientist with the Water Permits Division, examines a water discharge permit modification.

Individual permits issued by the LDEQ require a permit application. Once received by LDEQ, the permit application is sent to the Public Participation and Permit Support Group for review. Upon verification that the fees and application requirements are in place, the application will be deemed "administratively complete" and forwarded to the appropriate division (air, water, or waste) for review.

When it reaches the appropriate division within the Office of Environmental Services, the application will be assigned to an environmental scientist who acts as the permit writer. This person will conduct a technical evaluation of the application. Depending on media, applications may also be evaluated by engineering and/or geology staff. This review will include a consideration of the potential and actual environmental impacts of the activities for which the permit is sought. For major types of permit actions, this review will include evaluation of an Environmental Assessment Statement, a document submitted by the applicant that discusses issues such as alternative projects, alternative sites and mitigating measures.

The permit writer's review process is a methodical one, and turnaround time from receipt of the complete application to the issuance of a final decision can vary greatly depending on the type of application under consideration. In addition, the processing time may be extended if the permit is slated to go out for public comment. The process may be further lengthened if the draft decision is subject to EPA review. The total review time for an application may, however be shortened if the applicant

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Clean Air Corner

Sign up for EnviroFlash for free air quality notifications.

Sunny summer weather is right around the corner, and with it comes conditions that are conducive to ozone pollution.



One way you can prepare for this is to know about your air quality. LDEQ offers a free automatic notification, EnviroFlash, that

delivers local air quality information to you in a timely and convenient manner. The EnviroFlash alert system can deliver information to you on your phone or via email. Once you subscribe, you will receive current information about the air quality.

When the ozone level is high, or if the particle pollution is expected to be high, EnviroFlash sends an Air Quality Awareness alert with AQ information and appropriate actions you can take. The system is also set up to send you notifications of unusual events, such as fires, that might affect your air quality.

To stay better informed about ozone, particulate pollution and other air quality matters, the Louisiana Department of Environmental Quality encourages the public to sign up for the EnviroFlash system in their area: Baton Rouge, Shreveport, New Orleans, Alexandria, Lake Charles, Monroe, Thibodaux or Lafayette or on the LDEQ website, www.deq.louisiana.gov/enviroflash.

These are the Web addresses to sign up statewide:

<http://batonrougearea.enviroflash.info>

<http://shreveportarea.enviroflash.info>

<http://alexandriaarea.enviroflash.info>

<http://lakecharlesarea.enviroflash.info>

<http://monroearea.enviroflash.info>

<http://thibodauxarea.enviroflash.info>

<http://lafayettearea.enviroflash.info>

For more information on current air quality, go to the LDEQ website, <http://airquality.deq.louisiana.gov/> and the interactive EPA website: www.airnow.gov.

chooses to have consideration of their application expedited. This will require that the applicant pay the additional cost associated with LDEQ personnel working overtime on the expedited review. These permits do, however, remain subject to the same rigorous review and public participation requirements as permits going through the normal process.

With respect to public participation, a public comment period is required for many types of permit applications. A public hearing may also be held in order to offer citizens a public setting (such as a community town hall or school gym) in which they may provide comments. At the end of the comment period, issues raised by the commenters will be considered and addressed by LDEQ in a response that accompanies the final permit action. A Basis for Decision document may also be prepared. This document includes an explanation as to why the permit or permit modification has been granted or denied.

Since permits differ based on media and type of facility, each will employ a different set of technical criteria for issuance. These criteria must be properly addressed by the permit applicant. "The applicant may be asked to submit any information that may be deficient or lacking in the (permit) application." Corbet Mathis, air permits environmental chemical specialist-advanced, said. For solid waste permits, the facility's application itself will essentially become the permit. Accordingly, "the solid waste permit must match the facility's processes and everything is generally pre-approved before they can begin operating," Audrey Hall, solid waste environmental scientist supervisor, said.

While many permit applications are submitted by companies who enlist consultants who are very familiar with the process, a few applications will be found deficient upon the initial review. "The quality of the application is the most important thing," Nora Lane, environmental scientist and permit writer for the Hazardous Waste Division, said. "A well-prepared application will make the writer's job easier."

The law and regulations also exempt certain facilities from permitting requirements. In hazardous waste, there are several exclusions and exemptions, "Lane said. "That is, if certain materials are managed in a certain way, they must follow conditions of the exclusion and they do not require a permit. For solid waste, there are some exceptions where a business may not need a permit, as some types of waste are either exempt, or not subject to solid waste permitting requirements," Hall said. "However, not having a permit is not the same as being unregulated. Many materials, activities and facilities are still subject to LDEQ regulations, even if they don't require a formal permit to govern their activities."

For more information on permits, please go to: <http://deq.louisiana.gov/subhome/land>.



LDEQ hosts job shadowing to introduce students to scientific careers



LDEQ Secretary Dr. Chuck Carr Brown, welcome the students from Scotlandville High School and Bright Horizon School to the job shadowing event.

Outreach to students is an important part of the LDEQ mission. In February, students from Scotlandville High School and Bright Horizon School of Baton Rouge came to DEQ for a job shadowing event.

LDEQ Secretary Dr. Chuck Carr Brown and Deputy Secretary Denise Bennett welcomed the students and talked to them about how LDEQ functions and what kind of jobs are available at the agency.

A panel discussion ensued and involved LDEQ staff talking about their educational backgrounds, career paths, current job and recommendations to students interested in pursuing engineering or science careers. Environmental scientists Vennetta Hayes, Delveccio Brown, Ngozi Asonye, Sonja Lloyd, Doug McCurry, Coty Rabalais, Hassan Ghosn and Miriam Tullier talked with the group.

After the panel discussion, the group toured the Emergency Response Vehicle and the Mobil Air Monitoring Lab, known as the MAML, and learned about their capabilities in detecting pollutants and identifying environmental concerns. Environmental Scientists Kevin Borne, Christian Flucke, Randy Creighton and David Wagenecht explained the vehicles to the students.

MAML, and learned about their capabilities in detecting pollutants and identifying environmental concerns. Environmental Scientists Kevin Borne, Christian Flucke, Randy Creighton and David Wagenecht explained the vehicles to the students.



Students from Scotlandville High School and Bright Horizon School visited LDEQ for job shadowing day.



David Wagenecht, LDEQ environmental scientist, talks to students from Bright Horizon School and explains the Mobile Air Monitoring Laboratory (MAML) to them.



Mardi Gras and King Cake at LDEQ

The 8th floor was abuzz with activity and tables full of cakes for the King Cake contest. Eleven employees brought in what they hoped would be the best King Cake. There were filled, fruit, cream cheese, turtle, boudin king cakes and more.

The tasting drew much interest and everyone voted on which King Cake was the best. Finally, when the votes were counted, the reigning queen of the King Cakes, Kathy Rogers, won again with her Turtle King Cake from Oak Point Market in Central. Second place, with a Pecan Praline King Cake from Mary Lee Donuts was Jerry Lange. Third place was garnered by Nicki Loupe with a Gentilly King Cake from Rouses.

All three received certificates, and Kathy won a Mardi Gras Mask. A good time was had by all.



Dewayne Stepter escorts 2018 King Cake winner, Kathy Rogers as Judy Schuerman looks on.



LDEQ employees taste and vote on the best king cakes.



ChemFriends returns in Ascension Parish

This year, a modified version of ChemFriends became a traveling show. After a one-year hiatus because of the 2016 flood, the event, an educational day for Ascension Parish middle school students, returned. The traditional site for the event, the Gonzales Civic Center, flooded and is unable to host events. On Feb. 7, seventh grade students visited Dutchtown and Gonzales Middle Schools, and on Feb. 8, students visited Central and St. Amant Middle Schools. In addition to the host schools, seventh grade students from Prairieville Middle, Lowery Middle, Galvez Middle and Lake Middle Schools participated in the mobile version of ChemFriends.

LDEQ has participated in ChemFriends since it began in 1997, and this year was no exception. LDEQ volunteers presented a demonstration known as “kitchen chemistry.” Approximately 1,700 students participated in the event this year. Students were divided into teams to compete against each other. The object of the competition was to determine whether the pH of common kitchen items like orange juice, lemon juice, dish washing detergent and ammonia indicate a base, an acid or neutral substance. The team who got the most correct answers won.

ChemFriends is an opportunity for middle school students to encounter science in a more hands-on way. Students rotated from one station to another in 15 minute cycles. “We encounter chemicals all around us every day,” LDEQ Environmental Manager Linda Piper said. “It is so exhilarating when the students get to learn about chemistry in such a “hands-on” fashion and thoroughly enjoy the competition. Great exposure to STEM (science, technology, engineering and math)!”



LDEQ volunteers for Chem Friends, L to R, Deidre Robinson, Mintia Canelas, Perry Fontenot, Linda Piper, Mia Townsel, Curt Auzenne and Connie Payne.



Left to right: Environmental Scientists Perry Fontenot and Curt Auzenne are joined by Environmental Manager Linda Piper as they demonstrate the concepts of pH with kitchen chemistry at ChemFriends.



LDEQ On The Move



FEMA hosts a Radiological Emergency Preparedness exercise controller training at LDEQ Headquarters Feb. 22. The course prepares participants to control the flow of the scenario events to ensure a nuclear event exercise is conducted in accordance with exercise objectives and extent of play.



Stafford Wood, owner of Covalent Logic, presents advanced training on website management to LDEQ content managers.

EPA Region 6, LDAF and LDEQ Nonpoint Source group meet to review programs



Left to right – Anthony Suttice, EPA Region 6; Crisalda Adams, manager of LDEQ’s nonpoint Source Pollution Group; Melissa Benfer, EPA Region 6 and Brad Lamb, EPA Region 6 work together to maximize the effectiveness of the nonpoint source program.



Members of LDEQ’s Nonpoint Source Group, LDAF, and EPA Region 6 wait for the start of a presentation.

Once a year, the LDEQ Nonpoint Source Program (NPS) and Louisiana Department of Agriculture and Forestry (LDAF) have an extended review conducted by EPA Region 6, to review the goals and accomplishments of the program. This year, the Clean Water Action Program review was hosted by LDEQ. The topics of discussion during the four day meeting included areas of success in 2017, areas that need improvement, special projects, watershed implementation plans and NPS Management Plan, reporting and tracking, and collaboration and partnership.



Who's Who At LDEQ?



Jerry Lang - Manager – Emergency and Radiological Services Division

Lang, a resident of Denham Springs, graduated from LSU in 2004 with a B.S. in renewable natural resources. He worked as research associate for LSU from 2004 to 2007 before moving to private industry as a supervisor in Research and Development from 2007 to 2010.

Lang then worked at Louisiana Department of Wildlife and Fisheries as a fisheries biologist responding to the aftermath of the BP oil spill of 2010. He then moved to LDEQ in July 2014 to work in the Water Surveys section until March 2015, whereupon he transferred to the Emergency Response section. He was promoted to Supervisor in Nov. 2015. He is currently the supervisor of the section. His hobbies include saltwater fishing and raising beef cattle.

Kelly O'Neal – Environmental Scientist IV - Hazardous Waste Enforcement

O'Neal is a graduate of Spring Hill College in Mobile, Ala, where she completed a bachelor's degree in biological sciences. She has worked for LDEQ for ten years in the Enforcement Division.

She worked in the Water Enforcement Section for four years before serving as circuit rider for LDEQ's Southeast Regional Office. O'Neal has worked in the Waste Enforcement Section for the past six years.



Jackie Millet – Environmental Scientist Staff – Water Surveys

Millet graduated from LSU with a biology degree and began her career with LDEQ in May 2007 at the lab. When it closed, she moved to headquarters for three months to work in the newly formed DEAR (Data Evaluation, Assessment and Reporting) section to review contract lab data.

From there, she moved to the Water Surveys section, where she has worked for eight and a half years as an environmental scientist III. Last September, she was promoted to environmental scientist staff.



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Louisiana Department Of Environmental Quality's Fourth Quarter Summaries

Fourth Quarter 2017 Enforcement Actions:

<http://deq.louisiana.gov/page/enforcement-actions>

Fourth Quarter 2017 Settlement Agreements:

<http://deq.louisiana.gov/page/enforcement-division>

Fourth Quarter 2017 Air Permits:

<http://deq.louisiana.gov/page/permits-issued-by-calendar-quarter>

Fourth Quarter 2017 Water Permits:

<http://deq.louisiana.gov/page/lpdes>

Fourth Quarter 2017 Solid and Hazardous Waste Permits:

<http://deq.louisiana.gov/page/waste-permits>

