



DISCOVER DEQ

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY NEWSLETTER



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DEQ secretary and executive staff reach out to employees

DEQ Secretary Chuck Carr Brown brought his one-to-one style to town hall meetings with agency employees in southwest Louisiana on June 23. Accompanied by his full executive staff, Dr. Brown dropped in first at the Southwest Regional Office in Lake Charles and then at the Acadiana Regional Office in Lafayette a couple of hours later.

Following introductions all around, Dr. Brown talked about the agency's core values, what he expects from DEQ employees and his philosophy of service.

"Who determines compliance? We do," Dr. Brown said. "That's the attitude we have to take."

At the same time, the guiding principles of DEQ are service to the public and sound decision making rooted in science, he said. He wants employees to display ethical behavior, to use equipment efficiently and effectively, be accountable, to take pride in the work they perform. The agency must value diversity, he said.



Members of DEQ's executive staff speak with Lake Charles regional office employees.

Dr. Brown gave the group a short synopsis of the impact of recent actions by the legislature. DEQ will benefit from a bill that raised fees the agency charges for permits, inspections and other services. "The last eight years we have lived off our savings," Dr. Brown said. "We need those increases to fulfill our mission to the state."

Once the increases have been in place long enough to generate a return, Dr. Brown said, he is going to look at adding some employees. He wants to get the agency back nearer to the size it was before going from more than 1,000 employees to 677 employees in the last 10 years. Those extra hands will be needed, he said, to help him reach his goals.

Addressing illegal dumps and looking at appropriate levels of financial assurance for landfills, modernizing equipment so employees can use notepads and up-to-date equipment to collect data in the field and communicate back to the office, are all

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Dr. Chuck Carr Brown addresses DEQ staff at the Acadiana Regional Office.

on the list of things Dr. Brown aspires to achieve. The agency will also redouble its efforts to get the waste tire problem under control, he said. "We are going to fix this program," he said. Having good communications from the field, using the employees expertise and an open door policy to the executive staff will be essential to accomplishing his goals.

One step that Dr. Brown mentioned in the upgrading of the agency is the recreation of the Office of Environmental Assessment. He said the office is being put back together now, but actual work in the office will begin next fiscal year.

"We are putting this office back carefully in a way that makes sense," Karyn Andrews, undersecretary said.

Employees peppered Dr. Brown with questions about training, enforcement methods, equipment issues, vehicle replacement and many other relevant topics.

All members of the executive staff were able to interact with the employees, to answer questions from employees and to assure them that the lines of communication from them to management were open.

DEQ encourages residents to properly dispose of storm debris

The Louisiana Department of Environmental Quality encourages residents in areas affected by storms to collect trash and debris and place them curbside for proper disposal. Household chemicals can become hazardous in storm-damaged homes.

Examples of materials that may need special disposal or recycling include electronics, batteries, computer hardware, paint, cleaning products, solvents and lawn and garden products. Materials should be sorted curbside to help expedite cleanup efforts.

Segregate all wastes generated into five categories:

- Vegetative yard waste (tree limbs, leaves, etc.)
- Household chemicals, paint, herbicides, pesticides, caustic and flammable liquids (keep these items separated and in their original containers)
- White goods (refrigerators, washers, dryers, stoves and similar appliances)
- Electronic appliances (computers, laptops, televisions, stereos, etc.)
- All other solid, nonhazardous wastes/debris (building materials, furniture, etc.)

When placing these wastes at curbside for pickup, keep each group separated from the other. Where possible, residents should mark containers clearly before placing them out for disposal. Ensure that food is removed from freezers and refrigerators before placing them curbside.

For more information on re-entry, please go to the DEQ website and view the flood re-entry fact sheet, <http://www.deq.louisiana.gov/portal/portals/0/news/pdf/Floodre-entryfactsheet.pdf>



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DEQ Secretary Dr. Chuck Carr Brown

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

We are a month into hurricane season, and we have already seen some tropical activity in the Gulf of Mexico. LDEQ is prepared if emergency conditions arise in Louisiana. I met with the Governor and the Unified Command Staff at GOHSEP on June 17 and shared hurricane preparation information with other agency heads and key support staff.

As the season reaches its peak, I want to make sure that every employee is informed and prepared. Check out the LDEQ website – <http://www.deq.louisiana.gov> – to find some tips for pre-storm preparation, what to do during and after an event.

As a storm makes landfall, the agency may be called upon to assist with spills and other environmental emergencies. After the winds subside, the agency is a key player in cleanup efforts. LDEQ has a playbook, the DEQ Natural Disaster and Catastrophic Event Response Plan that ensures that we stand fully ready to respond.

I visited Washington, D.C. at the beginning of the month meeting with a National Energy Board. While there, I also met with EPA Administrator Gina McCarthy and Region 6 Director Ron Curry who happened to be in the capital at the same time.

The Administrator and I discussed issues of mutual concern such as the Clean Power Plan, issues peculiar to Louisiana, new rules and the necessity of working together in a cooperative and supportive spirit. On June 21, I took members of my executive staff to Dallas to meet their EPA Region 6 counterparts. Assistant Secretary Lourdes Iturralde, Assistant Secretary Elliott Vega and Deputy Secretary Denise Bennett made the day visit to Region 6 Headquarters and had a very productive meeting.

The legislature has finally concluded a marathon series of sessions, including a planning session, two special sessions and a regular session. The bill that will undoubtedly impact the agency the most was our fee bill. It passed both houses and was signed by the governor, authorizing the agency to increase the fees it charges for permits and services. It's not an across the board increase. Charges for some services that the agency was providing at a loss will be adjusted to reflect actual expense and may go up substantially. All services will increase somewhat. This will allow us to continue to operate without taking general fund monies and to add a few more employees as the agency moves toward right-sizing to meet increased workloads.

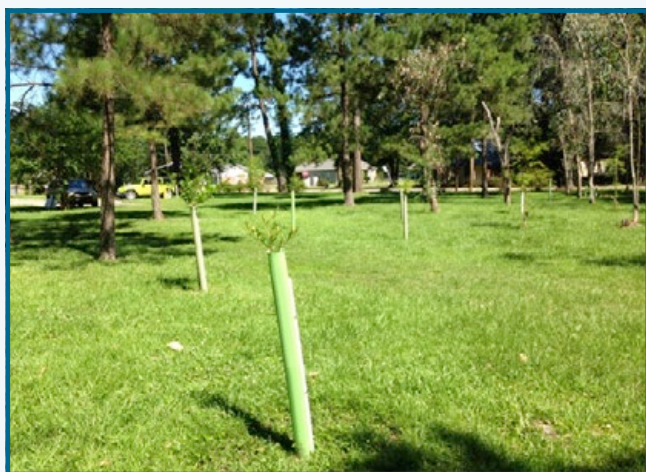
The legislature also authorized the reorganization of LDEQ. We will resurrect Environmental Assessment as a separate office within the agency. We are in the process of scouting a physical location to house the new office in the Galvez Building. We are looking at which divisions will be included in the office. The timing of the restructuring is linked to the implementation of the bill which will not be in effect until the next fiscal year begins.

June was a busy month. July is shaping up to be just as busy. Take care working in the heat and stay safe. As always, I appreciate the good work you all do.



Trees remove contamination from groundwater in Livingston Parish

Did you know that planting trees can remove pollutants from groundwater? That trees can break down and remove certain contaminants from soil and groundwater? It's called phytoremediation, and it's been proven an effective, natural method of bringing a once-blighted area back into environmentally friendly use.



Seedlings are planted in "growth tubes" as a way to stimulate healthy root systems that will in turn rebuild the soil ecology and facilitate new tree growth. Tree species involved in the process include sycamore, sweet gum, oak, willow, poplar, cypress, cottonwood and pine.

One site employing phytoremediation is the former Combustion, Inc., site in Livingston Parish. On June 8, DEQ, potential responsible parties and contractors made an annual visit to the site to take a look at its progress.

Listed as a superfund site in 1990 by the EPA, the location was once a waste oil reclamation facility from the mid-1960s until 1985. When the oil industry went bust in the early 1980s, the facility changed ownership and was eventually abandoned, leaving behind abandoned drums, waste oil, boilers, asbestos piping and other contaminants on the property – as well as oily water disposed of in at least three adjacent ponds.

In the ensuing years, DEQ and EPA evaluated a series of ecological studies and remediation plans from arborists, engineers, geologists, hydrogeologists and ecologists to address the ground water and soil contamination found at the site. From those evaluations, phytoremediation with monitored natural attenuation was selected as a viable plan.

Under phytoremediation, specific trees are selected and are strategically planted on the site, with careful attention to root system growth and habit. "As the root system grows, it absorbs groundwater and serves as a natural pump-and-treat system, and the root system allows for microbial activity which aids in the breakdown of contaminants," said Scott Courtright, site arborist with Toxicological and Environmental Associates Inc. "As biomass grows, the tree's root system creates a habitat where contaminants are decayed or removed from the land through transpiration and natural attenuation, which in turn improves the soil and groundwater conditions."

The project is unique in that it not only adds to the property's aesthetic value, it uses the trees' natural root system as a nature's vacuum of sorts as the roots absorb and eliminate the constituents of concern in the soil. Over time, the natural process remediates, or removes, much of the contamination, eventually bringing the site back up to environmentally sound conditions.

The site arborist hired by the potentially responsible parties (which consist of the companies that sold the oil to the site owner) inspects the trees monthly to ensure the process is working properly.

And the process continues to adapt and evolve as dictated by some of the struggling areas on the property, where traditional phytoremediation methods have not been as effective.

In order to boost those areas, a test plot was initiated in 2014 on a portion of the property where highly compacted soils cover a deeper groundwater location. Since typical tree rooting is much harder to initiate there, the test plot involved the planting

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of sweet gum and cypress trees utilizing a new technology – known as engineered phytoremediation. This technology uses the patented TreeWell® units to focus root development to deeper target zones where constituents of concern are located.

Soil conditions at the site are compacted with little porosity, which limits the development of tree roots into the deeper targeted zone. Engineered phytoremediation forces the roots downward toward the target zone, which facilitates communication between the root system and the groundwater. “Many of the trees have grown exponentially in recent years, so the healthy trees we see here are indicators of a healthy root system,” Courtright explained.

Gravel covers the base of those trees to keep the TreeWell® unit bags in place to seal off any opportunity for surface hydration of the root systems. This ensures that the trees are thriving on groundwater only. Additionally, several PVC pipes around the base of each of these trees serve as fertilizer input portals, aeration points and data collection points.



Site Arborist Scott Courtright (left) explains the phytoremediation test area at a sweet gum tree as DEQ Environmental Scientist Todd Thibodeaux (right) looks on.

While sampling data from the site continues to show low levels of contamination, sampling at the adjacent former pond area (where a great deal of oily product and rubbish was deposited) has seen results indicating “non-detect,” meaning that constituents of concern are minimal, non-existent or below the remediation standards.

This bodes well for the site as a whole. “At the former pond site, EPA is currently reviewing the latest data under a request to delist that section as a superfund, as the data has consistently met groundwater Risk Evaluation/Corrective Action Program (RECAP) standards,” Todd Thibodeaux, DEQ environmental scientist, said. Pending a complete site review from EPA, arborists, scientists and concerned parties are expecting that the entire site is close to being completely turned around in the next couple of years.

But it’s the trees that have done the heavy lifting, and the process will be a win-win as the natural ecology ultimately replaces a former environmental eyesore.

DEQ conducts watershed investigations in northern Louisiana

One of DEQ’s responsibilities is to enforce the Clean Water Act. That means being sure our state waterways are clean and free of pollutants and any hazardous or potentially hazardous constituents. This entails identifying sources of pollution in our watersheds through watershed based investigations.

Every two years, DEQ submits an Integrated Report on the status of Louisiana waters to the U.S. Environmental Protection Agency for review and approval. Once approved by the EPA, the Integrated Report serves as a guide for DEQ to conduct activities to bring any impaired watersheds back to their designated uses (such as swimming, fishing, and fish and wildlife propagation).

Although, the primary focus of watershed investigations is on unauthorized dischargers, the investigations are multi-media. Identifying all dischargers and discharge points is crucial. Dischargers must be permitted and up to date on their discharge

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monitoring reports, if required. DEQ environmental scientists review a comprehensive map of the watershed to pinpoint discharge points. Next, they canvass the watershed to identify businesses, organizations, and facilities discharging wastewater and/or storm water without a permit.

“The identification process is important so that DEQ can track the sources of the impairment and work to bring those waterways back up to their proper environmental and recreational designated uses,” DEQ Staff Environmental Scientist John Posey, said.



DEQ Staff Environmental Scientist John Posey documents the location of a potential water discharge pipe in a canal next to a church in Richland Parish. The canal feeds into Turkey Creek, so its discharge could play a role in the watershed's current impairment.

The effluent, or discharge, is also examined for compliance with environmental regulations; and for proper maintenance. Those discharges could play a role in the cause of any impairment.

The latest Integrated Report indicates the need for a watershed survey in the Turkey Creek headwaters subsegment in Richland and Franklin parishes and in the Bayou Macon subsegment in Richland, Franklin, Madison, Catahoula, East Carroll and West Carroll parishes. These areas currently being examined by DEQ's Northeast Regional Office based in West Monroe.

Turkey Creek begins just northwest of the Poverty Point Reservoir in Richland Parish and extends south to lower Franklin Parish. The watershed is currently experiencing low dissolved oxygen numbers that negatively impact its designated use for fish and wildlife propagation. The area is primarily woods and farmland.

The Bayou Macon watershed consists mostly of farmland and hardwood rural areas from Arkansas to Sicily Island in Catahoula Parish. The bayou currently has a fish and wildlife propagation impairment due to low dissolved oxygen, turbidity and chlorides. There is a primary contact recreation impairment due to fecal coliform bacteria.

Posey is one of nine inspectors in DEQ's northeast regional office who have been investigating the watersheds to identify dischargers. In fact, all of DEQ's regional offices are conducting similar surveys in the watersheds within their respective jurisdictions.

Posey often wears many hats, and has experience investigating oil, gas or chemical spills, fish kills, complaint calls, hazardous waste issues and other related incidents that may arise. But the bulk of his time is spent evaluating the water quality in the region, conducting inspections, and assisting in the training of the inspectors and reviewing their data.

A site inspection begins with a check of the watershed map to see if the facility has an agency interest number. “We'll then visit the site to evaluate the discharge and attempt to speak with the owner in order to inform them of the regulations and the steps required to get them into compliance,” Posey explained. In some situations, dischargers will need a discharge permit for sewage and other types such as a multi-sector general permit for storm water.

DEQ personnel keep their conversations with business owners and dischargers professional and informational. Some business owners may not be aware of the regulations and may refuse to apply for a permit since they have never had to do so in the past. Environment and topography changes can spark changes in local, state and federal regulations.

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Bayous, canals, ditches and feeder streams can form or alter in size, location and direction over time. When this occurs, those feeder waterways can become direct conduits to larger waterbodies in the watershed. As those changes are evaluated, DEQ must ensure that all organizations and businesses having a discharge that impacts the watershed have the necessary permit in order to continue legally operating their discharge. This puts everyone on the same level playing field to ensure everyone operates under the proper permit.

In the event a site owner claims to have a discharge that operates under the purview of the city or parish, the DEQ inspector will then verify the business' status. If necessary, a notice of deficiency will be submitted to the responsible party. This notice allows the business 30 days to respond regarding their permit status.

By July 1, identities and locations of all dischargers and potential dischargers in the Turkey Creek headwaters and Bayou Macon subsegments are expected to be compiled, and the compliance effort will continue. While it's a comprehensive undertaking, the ultimate goal is to get Louisiana's waterways off the impaired water bodies list so that citizens, birds, aquatic life and animals can fully enjoy the aesthetic, natural and recreational benefits those watersheds have to offer.

For more information, stop by DEQ's website at: <http://www.deq.louisiana.gov/portal/PROGRAMS/Water.aspx>.

Behind the Scenes: The making of the MAML video

The Mobile Air Monitoring Laboratory, known at DEQ as the MAML, is an important tool in the fight for better air quality in Louisiana. Dr. Chuck Carr Brown, DEQ secretary and Greg Langley, press secretary and his team, Tim Beckstrom, Emily Barlett and intern Lara Harrison, went on location to make an informal video with useful information about the importance of the MAML and how it works.

The crew traveled to DEQ's warehouse in Port Allen to shoot the video. The final product is posted on the DEQ website, Facebook page and on the YouTube channel. For the video, Dr. Brown explained the state-of-the-art technology and why it has been a reliable component in DEQ's air monitoring mission for years and why it is important to know about it. Dr. Brown explained that the MAML gathers and assesses air samples to determine what types of chemicals are present in the air at a given location. He demonstrated how the gas chromatograph/mass spectrometer works, along with the meteorological mast, and how those components work together to gather air samples and analyze them for the presence of any constituents of concern.



DEQ Communications team prepares to shoot the MAML video.

The MAML video is one of a series of videos which impart important information about DEQ, plus the agency's functions and responsibilities. In order to see the videos, you can go to the DEQ website, www.deq.louisiana.gov; the Facebook page, www.facebook.com/LouisianaDEQ, or the YouTube channel. More titles will be added in the future as the communications team selects new topics for videos.



Enviroschool Teaches Campers at Angles Camp



Linda Brown Hardy with DEQ (left) shows campers Enviroscape model.

The more than 113 campers at Angles Summer Camp were excited to see DEQ's Linda Brown Hardy and Greta Flowers arrive. Hardy and Flowers were there to show amazing things like kitchen chemistry and Enviroscape. The campers range in age from pre-K to high school- and were anxious to see the demonstrations that Hardy and Flowers had brought with them.

Hardy used the Enviroscape model to show the campers how polluting our water affects the environment. The model shows how cows grazing in the pasture by the lakes pollute the water with their wastes. Hardy demonstrated that placing a fence in the pasture between the cows and the lakes would be one solution to the problem. She also showed how some cars and tractors pollute the air with gas and oil. The campers were very interested in learning about preventing pollution!



DEQ Environmental Scientist Greta Flowers (left) demonstrates kitchen chemistry to the campers.

The campers were equally excited about Flowers' demonstration, an experiment involving cabbage juice. LDEQ calls it kitchen chemistry, and it helps students and campers to learn more about the pH of the items they use regularly in the kitchen. Is it an acid or a base? Purple cabbage juice was put into several test tubes (because it is a neutral substance) and everyday products added to the tubes change the color to indicate an acid or a base. Some of the household products were baking soda, dish washing water detergent, lemon juice and even Sprite. The kids loved seeing how each product reacted differently to the cabbage juice and guessing what each product would do. The cabbage juice color changed right before the campers' eyes; the experiment demonstrated whether the product was an acid or a base. After campers saw the experiment and the model, they all left with goodie bags from LDEQ. At the end of the day, the campers departed with a better knowledge of everyday things and how the environment works. The goal was to make science fun – and it was!

For more information on Enviroschool and other educational opportunities from DEQ, please go to www.deq.louisiana.gov/enviroschool.



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Who's Who At DEQ?



Mike Algero – Administrator – Inspection Division – Office of Environmental Compliance

Algero joined the DEQ in 1989 as an air inspector in DEQ's Southeast Regional Office. During his 27 year career with DEQ, he has gained experience as an inspector, supervisor, manager, and administrator in the Inspection Division. While growing up in New Orleans, Algero attended Holy Cross High School and earned a Bachelor of Science in geology from Tulane University in 1986. Algero currently resides in Mandeville with his wife, Leslie, and their four children.

Paige LeBlanc – Environmental Project Specialist in Contract Management Office of Management and Finance

LeBlanc received a Bachelor of Social Sciences from Louisiana State University in 2013. Prior to working at DEQ, she was a child welfare specialist for the Department of Children and Family Services. LeBlanc is from Denham Springs.



Nathan Prince – Environmental Scientist – Emergency Response – Office of Environmental Compliance

Prince grew up in a tiny town in northern Michigan and graduated from Lake Superior State University in 2008 with a Bachelor of Science in biology. He then went to graduate school at LSU for forestry which led to a job with the Natural Resources Conservation Service-U.S. Department of Agriculture in northern California for two years. He was an environmental consultant for farmers and ranchers. Prince returned to Baton Rouge in 2012 to work as a construction supervisor. In February 2016, he returned to his passion of natural resources as an Emergency Responder with DEQ. Prince likes all things outdoors.



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Louisiana Department Of Environmental Quality's Second Quarter Summaries

Second Quarter 2016 Enforcement Actions:

<http://www.deq.louisiana.gov/portal/DIVISIONS/Enforcement/EnforcementActions.aspx>

Second Quarter 2016 Settlement Agreements:

<http://www.deq.louisiana.gov/portal/DIVISIONS/Enforcement/SettlementAgreements.aspx>

Second Quarter 2016 Quarter 2014 Air Permits:

<http://www.deq.louisiana.gov/portal/tabid/2922/Default.aspx>

Second Quarter 2016 Quarter 2014 Water Permits:

<http://www.deq.louisiana.gov/portal/tabid/2899/Default.aspx>

Second Quarter 2016 Solid and Hazardous Waste Permits:

<http://www.deq.louisiana.gov/portal/divisions/wastepermits.aspx>

