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LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY NEWSLETTER

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Unmanned Aircraft Systems are the latest addition to LDEQ's environmental protection mission

Unmanned Aircraft Systems (UASs), also known as drones or UAVs, have entered the mainstream as part of the latest development in electronics as their popularity continues to expand across the world. While their uses are varied, many agencies are looking at the aircraft systems as a component to support their respective organization and mission. In LDEQ's case, the three UASs currently employed by the department have proven to be vital additions to the environmental protection mission.

A recent video produced by LDEQ's Communications section touches on the use of the UAS, its capabilities and its critical role in protecting Louisiana's unique environment.

Jason Smith, manager for LDEQ's Unmanned Aircraft Systems Program, demonstrates the operation of a UAS in downtown Baton Rouge.

As demonstrated by Jason Smith, manager for LDEQ's Unmanned Aircraft Systems Program, the UAS has a wide array of capabilities that allow it to view areas that are difficult to access by foot, boat, car or all-terrain vehicle.

The department's uses for the UAS are varied. Recently, one was deployed to fly over a section of the Mississippi River to document an oil spill that occurred near the French Quarter. Another time, a UAS allowed responders to view a flooded field in St. Landry Parish. In these instances, the UAS records the event in both still images and video which can be used for environmental protection and emergency response tasks.

Because of this unique aerial advantage, UASs are currently being utilized in nearly every facet of the department's mission. This includes surveillance, enforcement, permit support documentation, waste and landfill inspections, illegal dumping of chemicals, oil or waste tires, as well as general emergency response functions involving facility discharges, trail derailments, truck accidents, oil spills and investigations of unusual events.

UASs are some of the latest instruments available in LDEQ's environmental protection mission. Used in a variety of situations, the aircraft are commonly used

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for emergency response situations where an oil or chemical spill has taken place, or where flooding or fire prevents the safe passage of a boat or vehicle into the site to assess the conditions.

Additional UASs are on the horizon, and their future capabilities are expected to include a thermal camera, air monitoring and air sampling functions, a multispectral camera, optical gas imaging (for detection of leaks) and LIDAR (Light Detection and Ranging).

"The UAS gives us a unique advantage in that we can deploy the aircraft to an array of locations to cover an array of environmental concerns," Smith said. "For example, UAS footage from a recent flood event in St. Landry Parish involving an oil tank gave the department that extra oversight capability that allowed us to get an aerial view as to the extent of the flooding. This played a key role in the subsequent investigation."

To view a video on the operation of the UAS, please visit ***https://www.youtube.com/watch?v=QtO-PaOz4q0***.

LDEQ is proud to be a part of the "Beat the Heat LA" campaign this summer

Louisiana Department of Environmental Quality is joining other state agencies in a campaign to remind all Louisianans to take extra precautions to stay safe in the soaring temperatures this summer and to make certain that no children are left unattended in hot vehicles. According to national statistics, an average of 37 children die each year from being left unattended in vehicles. Between 1998 and 2018, 744 children died, and in Louisiana, there were 27 pediatric vehicular heatstroke deaths during this time.

In only 10 minutes, a vehicle can heat up 20 degrees and top 110 degrees Fahrenheit on days when it is only 60 degrees outside. Heat stroke begins when body temperature reaches 104 degrees. With that in mind, it is important to realize heat stroke can take place when the outside temperature is as low as 57 degrees. Additionally, cracking the windows or not parking in direct sunlight does not make a car significantly cooler. Heat stroke deaths have occurred even when vehicles are parked in the shade.

Join us in our quest to "Beat the Heat LA" and keep our children and pets safe this summer. It only takes a second to look before you lock.

What can you do?

- Never leave a child or pet alone in a motor vehicle.
- Make a habit of checking your back seat.
- When strapping a child into a car seat, leave a reminder like a cell phone or even your left shoe in the back with them.
- If you see a child or pet unattended in a vehicle, call 911.
- After parking your car, lock it. Children who get inside an unlocked vehicle can become trapped. Roughly 30 percent of heat stroke deaths occur because the child got in the car without a caregiver's knowledge and couldn't get out.
- If you suspect you have heat exhaustion, move to a cooler location, lie down, loosen your clothing, sip water, and apply cool, wet cloths to as much of your body as possible.
- If you suspect you or someone else has heat stroke, call 911 immediately. This is a medical emergency. Move the person to a cooler environment and use cool cloths or run a bath to reduce the person's body temperature. Do not give the person any fluids.

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Message from the Secretary

Chuck Carr Brown, Ph.D.

On July 12, I toured the Port of New Orleans. Some of the tour took place on the Mississippi River as I rode aboard one of the port's response crafts. I quickly learned north and south are not real directions on the Mississippi in New Orleans; it's upriver and downriver only.

Looking at some of the docks and storage warehouses the Port operates brought back memories of Hurricane Katrina when I was an assistant secretary at LDEQ. When the electricity went out, so did the refrigeration for the warehouses. By the time floodwaters were finally drained from New Orleans and power was restored to the city, the perishable items stored in the warehouses were well past spoiled. It was one of LDEQ's post-storm tasks to figure out how to dispose of the spoiled cargo. We wound up refreezing it before transporting it to a proper disposal facility.

Deputy Secretary Denise Bennett and I listen as Michelle Ganon, Port NOLA Vice President for public affairs, makes a point during a short cruise aboard the Port's response vessel, MV Gen. Roy S. Kelley.

Things are happier on the river now, but the Port still has some shared interests with LDEQ. Their commitment to renewable energy is one. I saw two of their electric vehicles (EVs) parked at charging stations next to the Port's offices. The Port is not the end-point for cargo, it's a distribution and collection point. To get cargo to or from the Port, diesel or gasoline vehicles are used. Through the Port's "Clean Trip" program, haulers have replace older, less efficient trucks with newer models that emit less air pollution.

Since December 2016, the program has resulted in the replacement of 37 trucks with less polluting vehicles. Emission savings are impressive. The Port claims reductions of 90 percent in air pollutants over the old trucks, carbon dioxide reductions of 247 tons per year, fine particulate matter reduction of 2.38 tons per year and nitrous oxide (NOx) reduction of 48.4 tons per year. That all helps the fight for cleaner air in Louisiana.

The Port tour was an eye-opener. If you haven't visited the Port's facilities at 1350 Port of New Orleans Place (near Mardi Gras World), it's worth a side trip next time you are in New Orleans.

The Emergency Response section and volunteers from other areas at LDEQ joined a hurricane preparation drill with EPA at Joint Emergency Services Training Center (JESTC) in Zachary July 16-18. The drill was designed to sharpen response and communication skills in the wake of a hurricane's passage. Drills like this one are just one way LDEQ works to be ready for a big storm. As we enter the peak of the hurricane season, you as individuals need to be equally diligent in getting ready for a possible storm. The Governor's Office of Homeland Security and Emergency Preparedness has a site that has a great deal of information on how to be prepared. Check out ***http://www.getagameplan.org/***, to get some ideas on what to add to your emergency bag, evacuation tips and information on weather and traffic conditions. Keep a written list of your supervisors and co-workers numbers handy in the event technology throws a curveball and those numbers cannot be accessed via your phone. Know your evacuation routes and have your family's safety plan well-rehearsed and ready to put into action, should the need arise.

A final note. We are stronger together than the sum of our individual strengths. Let's work together to get our jobs done and communicate up and down the supervisory structure. As always, stay safe out there.

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Reboot the Commute! event to be held August 1

Join us in our efforts to ReBoot the Commute! Wednesday, August 1, in the Lobby of the Galvez Building, 11a.m. to 1:30 p.m.

LDEQ headquarters is collaborating with the Capital Region Planning Commission (CRPC), Louisiana Department of Transportation and Development (LaDOTD) and other agencies and local employers to reduce traffic congestion and improve Baton Rouge metro area air quality. Commuter Krewe is a ride matching database that will help you find others who live and work near you to share your commute. When you share a ride, you can lower your costs, save time and lessen the traffic congestion we experience in our region. Now with an emergency ride home option, the rideshare program is better than ever.

LDEQ is hosting a kick-off event in the lobby of the Galvez building 11 a.m.-1:30 p.m. Wednesday, Aug. 1. A Commuter Krewe representative will be onsite to answer questions about the new program and help employees get signed up.

According to the American Automobile Association's 2017 Edition of "Your Driving Costs," the average cost of owning and operating a small sedan in 2017 is $6,354 per year, and a medium SUV is $9,451 per year. These numbers are based on 15,000 miles of driving annually. With one more person in your vehicle splitting the cost of gas, your commute costs can be cut in half. Add another person, and now you're only paying a third of what you normally pay driving solo!

The Commuter Krewe is an easy-to-use, web-based rideshare application that allows you to create a commute profile and find carpool matches. Use Commuter Krewe to search for other employees who live near you, have similar schedules and lifestyle preferences. Whether you carpool five days a week or one – it all helps!

Sign In/Join:

If you are already a Commuter Krewe member, sign in at ***www.CommuterKrewe.la*** to check your "Profile" to make sure you've included your organization's name, so your department receives credit for the trips you make.

If you are not a Commuter Krewe member, sign up by going to ***www.CommuterKrewe.la*** and click the join button at the center of the page. Again, be sure to include LDEQ in your profile.

Be sure to share your greener trips by posting your photos and comments on Facebook, Twitter and/or Instagram using #CommuteReBOOT and #CommuterKrewe.

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LDEQ hosts Water Quality Trading Stakeholder meeting

There's an element of good old fashioned bartering built into LDEQ's water quality trading (WQT) plan that is under development at the agency now. The idea is to emulate the successful air quality trading plan that is based on reductions in carbon emissions to the atmosphere. Only with water, the credits would be based on reductions of parameters such as nutrients (nitrogen and phosphorus) that can negatively impact quality.

You earn credits for the reduction, and those credits can be banked, traded or sold. By giving the environmentally beneficial action an economic value, the action is encouraged. It's a simple idea, but one that is complex in its execution. That's apparent even now, in the pilot phase of the project.

LDEQ Secretary Dr. Chuck Carr Brown opens the meeting.

At the July 10 Water Quality Trading Stakeholder meeting, Dr. Amanda Vincent, Environmental Scientist Manager in the Office of Environmental Assessment's Water Planning and Assessment Division, welcomed nearly 40 attendees. Partifipants were from a variety of groups, including parish water quality offices, environmental law groups, environmental lobbying groups, environmental service groups, oil and chemical membership groups and government agencies.

Dr. Amanda Vincent speaks to the meeting attendees.

"This is an opportunity for us to hear from you," Vincent told the group. The hour-and-a-half session moved quickly as the group discussed basic oxygen demand, dissolved oxygen, nutrients, and temperature as trading parameters and sought to define a credit unit.

Trading ratios came into the discussion when the group briefly debated what could be traded and how to apply for credits used as offsets to ensure an overall benefit to the State's water quality. All agreed that the goal of the meeting was to identify sustainable gains in water quality through the use of trading credits. LDEQ Secretary Dr. Chuck Carr Brown emphasized that in his opening remarks.

"If we drop those levels, I want to make sure we maintain those goals," Brown said.

The next Water Quality Trading Stakeholder Meeting will be at 9:30 a.m. Monday, Aug. 27, at 602 North 5th St., Galvez Building Conference Center, Oliver Pollock Room (C111), in Baton Rouge. Anyone interested in water quality trading is invited to attend. RSVP at ***WQ.Standards@la.gov***.

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The Babin Method

The mission of the Radiological Emergency Planning and Response (REP&R) Program at Louisiana Department of Environmental Quality is to protect the health and safety of the public and environment in the event of a radiological incident. In order to fulfill this mission, the REP&R program is responsible for developing and maintaining the Louisiana Peacetime Radiological Response Plan for potential incidents at nuclear power plants affecting the citizens and environment of the state of Louisiana.

A critical part of the Radiological Response Plan is the monitoring of the radiation levels being released by a power plant in the event of an accident. In a radiological incident where the radiation levels reach the Environmental Protection Agency's Protective Action Guide's exposure levels, certain actions may be required. If it is an emergency at a nuclear plant, LDEQ helps parishes and local government in determining their emergency response actions by forming a protective action recommendation (PAR). A PAR is advice given to the local government about the emergency measures it should consider to avoid or reduce exposure of the public to radiation. In certain situations, the PAR includes the evacuation of an impacted area.

John Babin

When the LDEQ receives notification of an incident at a nuclear plant, an accident assessment team is sent to the plant's Emergency Operations Facility (EOF). With plant personnel, it calculates potential radiological doses to the public. Air monitoring field teams are dispatched to monitor the 10-mile zone surrounding the facility to obtain the levels of radiation present. Historically, LDEQ operated a methodology that involved using information provided by the nuclear plant and merely verifying their model. Now LDEQ has implemented the use of the Babin method, named after its creator John Babin, an environmental scientist at LDEQ. In the event of an emergency, LDEQ's scientists have been looking for a way to calculate potential radiological doses to the public by using data independent of that from the nuclear plant. The Babin method is a way to go from being 100 percent reliant on the nuclear plant for dose assessment calculations to being able to independently collaborate with the nuclear plant using our source data gathered from the field.

"Using field teams to verify the nuclear plant's data is standard procedure across the nation; however, we are taking it even further with this method by creating a RASCAL (Radiological Assessment System for Consequence Analysis) source term that not only replicates the field team measurements at the specific location, but additionally provides a dose projection throughout the impacted area," Babin said.

The Gaussian method, used prior to the Babin method, required that perpendicular distances and coordinates be determined for field team locations, which was very difficult to accomplish, with little room for error. The Babin method allows the team to plug in geographic information system coordinates and the program provides all of the angles and perpendicular distances needed automatically, reducing the chance of human error while expediting the process. This allows the field team to provide a validation of the information received from the nuclear plant in a much more efficient and effective way. Additionally, in the event of an unknown or unmonitored release due to the unexpected failure of a stationary stack monitoring system onsite at the nuclear plant, LDEQ's team can quickly generate a release term based on field team data. This further overcomes the limitations of relying solely on a nuclear plant's data.

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The Babin method works in conjunction with the current standard tool used by the Protective Measures Team of the U.S. Nuclear Regulatory Commission's Operations Center, RASCAL, used during a radiological incident or emergency to predict radiation outputs. The difference between the Babin method and RASCAL is the origin of the data. The data from the nuclear plant used in RASCAL is theoretical data based on what is happening at the nuclear plant, whereas in the Babin method, field teams are using actual data collected on the ground outside the facility. LDEQ runs both methods for comparison and to highlight any significant discrepancies.

"We now have a more independent way of verifying what the nuclear plants say than ever before. Before we would go in and essentially copy what they were doing to verify their reports," said Michael McMahon, environmental scientist and partner in the development of the Babin method. "Now, as a state, we can give more significant verification of who needs to evacuate and who is going to be affected in a way not entirely dependent on what the nuclear plant provides us. Our calculation of what we see out in the field is more robust than the RASCAL model alone and therefore more protective of the public." McMahon said.

For more information on the Babin method, please contact environmental scientists John Babin or Michael McMahon at ***John.Babin@la.gov*** or ***Michael.D.McMahon@la.gov.***

For more information on what to do in the event of a radiological incident, please refer to the information issued by the nuclear power plant nearest you. You can find links to each on the LDEQ website by visiting ***https://bit.ly/2L3sGbX***.

Camp Challenge – A Bright Light in the Summer

LDEQ volunteers pose with Watty and some of the children from Camp Challenge

For 16 years, LDEQ volunteers have helped campers make crafts from recycled materials at Camp Challenge, the Lion Club's camp in Leesville. LDEQ volunteers make the four-hour drive to Leesville and the camp to spend a morning of craft-making and encouragement. This camp is a bright light in the summer for more than 100 children and young adults because Camp Challenge is dedicated to giving a summer camp experience to children who have a form of cancer or chronic hematological disorders, such as sickle cell anemia.

The camp serves children 6-18 years old and their siblings. Camp Challenge is open to all children who reside in Louisiana and is free for all campers. It offers them an opportunity to experience camp activities such as swimming, canoeing, crafts and fellowship. Lunch is always a big event with good food and much dancing, followed by FOB – which means "Flat On Back" or nap time. Many of the volunteer counselors were campers themselves, and many others come back every year. The weeklong event is headed by the Rev. Father Tony Richard of New Orleans, affectionately known as "Snoop Dog" to the campers.

These volunteers aren't the only ones from LDEQ who help the kids at Camp Challenge. LDEQ employees help fund Camp Challenge when they check the "From the Heart" box when they donate blood. When employees mark that box, the Blood Center donates money to help Camp Challenge provide services.

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Campers get set up to make craft ornaments at Camp Challenge.

LDEQ volunteer, Deidre Robinson, holds up samples of the ornaments crafted by the campers.

LDEQ personnel organize the trip, pick an environmentally friendly craft, and work, dance and eat with the campers. This year's theme was "Christmas in July" and campers made two Christmas ornaments out of bathroom tissue rolls and craft paper.

Many LDEQ volunteers return year after year to see the children and their progress. Each volunteer, as well as each camper, has a camp name such as "Secret Squirrel," "Mis' Behavin," "Faolan," and "Tinkle Bell."

Volunteers consider it a privilege to interact, help bring joy and assist kids battling blood disorders such as cancer, sickle cell anemia, lymphoma and aplastic anemia. Camp Challenge will always be, and has been, an endeavor fully funded by financial donations and volunteers. Camp Challenge is funded by donations from individuals and companies. It also receives money from various organizations that put on fundraisers for the sole purpose of funding the camp. Camp Challenge is a grassroots nonprofit organization.

If you would like to donate to Camp Challenge and help these kids have a camp experience, go to the website ***www.campchallenge.org.***

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Photo courtesy of BREC
Signage at the park warns against mowing or spraying activities

Photo courtesy of BREC
An educational display explains the watershed buffer area at Howell Road Community Park in Baton Rouge

Watershed Buffer Management project in place at Howell Community Park in Baton Rouge

As a result of the Great Flood of 2016 that impacted much of the Baton Rouge area the Baton Rouge Recreation Department (BREC), recently implemented grow zones in several of their parks. Howell Park Community Parks in northern Baton Rouge is one of the parks.

The park, renovated last spring, was seriously impacted from the flood, so BREC initiated a comprehensive planting effort to bring the habitat and soil back to environmentally sound conditions. The effort will help to curtail erosion and facilitate drainage around the property.

"We are seeing positive results now from our watershed buffer management project at Howell Community Park, which flooded in 2016. We have planted 'grow zones' throughout the park to help with water retention and stormwater management," BREC Naturalist Amanda Takacs said.

With more than 114 acres, the park is one of the oldest and busiest parks in the BREC system, so it's critical that the site is maintained. Wildflowers have been planted throughout the area, and several "do not mow" warning signs and descriptive display boxes have been posted to inform the public about the sensitive aspect of the project.

Wildflower planting is the key effort. Flowers are abundant now, and blooming varieties include varieties such as switch grass, black-eyed Susan, little bluestem, purple coneflower, coreopsis and Indian blanket flower. "We also carved out a pond to help with flood abatement and planted a pollinator garden in partnership with the school right next to the park to add habitat value," said Takacs.

A little over an acre of native flowers has been planted at the park so far, and five acres of further planting is projected. As a pilot study, the current plan includes the initiation of a controlled burn at the planting site within three to five years. "This will serve to regenerate the area and infuse nutrients back into the soil so that a long-term revitalization of the park can be established," said Takacs.

For more information on the project as well as other flood recovery projects at BREC, visit: ***http://www.brec.org/index.cfm/page/FloodRecovery***.

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Louisiana Rural Water Association Conference held in Lake Charles

For the 18th year, the Louisiana Rural Water Association (LRWA) held its annual conference in Lake Charles. The conference offers training and continuing education units (CEUs) for participants.

LDEQ employees participate in this conference in a variety of ways. They teach classes and monitor the classes. Additionally this year, LDEQ had two exhibit booths. One was for the Drinking Water Protection Program (DWPP), and one was for the Small Business Assistance Section.

LDEQ staff man booths at the LRWA Conference. (L to R) Mary Gentry and John Jennings, DWPP staff, Marissa Jimenez, Linda Piper and Jeff Jackson, Small Business Assistance Program.

Richard Scott Blackwell

Blackwell elected to radiactive waste disposal oversight panel

Richard Scott Blackwell, Emergency and Radiological Services Division Radiation Licensing Section Supervisor with LDEQ's Office of Environmental Compliance, has been elected to serve a two-year term as Chair of the Central Interstate Low-Level Radioactive Waste Commission.

Blackwell previously held the position of vice-chair of this commission.

LDEQ is a member of this four-state compact which also includes Arkansas, Oklahoma and Kansas. The commission is responsible for reviewing and approving export waste applications submitted by low-level radioactive waste generators wanting to dispose of their wastes.

The compact states do not have a disposal site within the four-state boundary jurisdiction and must transport waste to states that have authorized disposal facilities. The compact was started in 1985 as a result of the Low-Level Radioactive Waste Policy Act.

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Who's Who At LDEQ?

Amanda Daniel – Environmental Scientist Supervisor, Northeast Regional Office

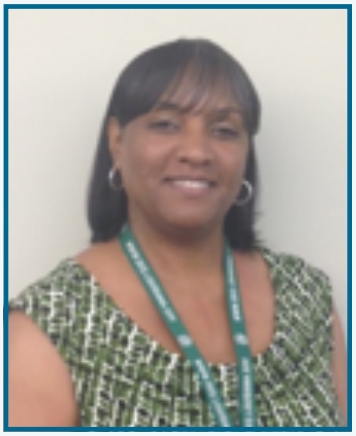
Originally from West Virginia, Daniel received a Bachelor of Science degree in wildlife and fisheries resources management and a minor degree in communication studies from West Virginia University in May 2002.

She moved to Louisiana in January 2003 to attend the University of Louisiana Monroe, where she received a Master of Science degree in biology, with a concentration in ornithology and herpetology, in August 2005. Daniel began her career at LDEQ in October 2005 as an environmental scientist, working mostly in Solid and Hazardous Waste for the last 12 years. She was promoted to environmental scientist supervisor in June 2017.

Daniel is a marathon runner, triathlete, certified personal trainer and run coach. She loves to travel and enjoys cooking and baking.

Natresha Y. Duncan – Administrative Assistant, Water Planning and Assessment Division

Duncan earned an associate degree in nursing as a Licensed Professional Nurse (LPN) from Delta College, immediately after she completed another degree in pharmacy tech with Virginia College. She worked for the Louisiana Department of Health since 2004 in the Office of Behavioral Health. Duncan recently joined LDEQ's Water Planning and Assessment Division as an administrative assistant.



Jeremy Moore – Environmental Scientist Staff, Northeast Regional Office

Born and raised in northeast Louisiana, Moore earned B.S. in biology with a minor in chemistry from the University of Louisiana at Monroe. He started work at the Louisiana Department of Transportation and Development in March 2003 as an Environmental Impact Specialist and transferred to LDEQ as an Environmental Scientist III in June 2006 working primarily in water.

Moore was recently promoted to the Environmental Scientist Staff in water at the Northeast Regional Office in December 2017.

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Louisiana Department Of Environmental Quality's Second Quarter Summaries

Second Quarter 2018 Enforcement Actions:
http://deq.louisiana.gov/page/enforcement-actions

Second Quarter 2018 Settlement Agreements:
http://deq.louisiana.gov/page/enforcement-division

Second Quarter 2018 Air Permits:
http://deq.louisiana.gov/page/permits-issued-by-calendar-quarter

Second Quarter 2018 Water Permits:
http://deq.louisiana.gov/page/lpdes

Second Quarter 2018 Solid and Hazardous Waste Permits:
http://deq.louisiana.gov/page/waste-permits