Hurricane Laura barrels into Louisiana taking a devastating toll

Hurricane Laura made landfall in Southwest Louisiana, Cameron Parish, 35 miles east of the Texas Border as a Category 4 hurricane at 1 a.m. Thurs., Aug. 27. Laura was one of the most powerful hurricanes to strike the Gulf Coast in decades. With it came a swath of destruction and catastrophic damage. Cameron and Lake Charles felt the full force of the storm.

Thousands of residents in its path are dealing with widespread power outages and disrupted water systems and are struggling to cope with the damage during a pandemic. There is help on the ground to assist those affected. To assist with the restoration of power, according to the Edison Electrical Institute, more than 20,000 utility workers from 28 states, Washington D.C., and Canada were either staged in Louisiana or traveled here to help. Crews from Entergy, Georgia Power, Mississippi Power, Alabama and Orlando Power are on the ground. Louisiana sends its personnel to help others, and it is reciprocal. The restoration of the water systems is a major concern.

LDEQ is air monitoring and assisting with flyovers. LDEQ liaisons are contacting parishes to see what assistance they need, teams are performing facility damage assessments and monitoring Waste Water Treatment Plants, and the work is ongoing. Visit hurricanelaura.la.gov for more Hurricane Laura updates.
Message from the Secretary
Chuck Carr Brown, Ph.D.

It comes as no surprise that I am addressing you about a tropical storm in August. What's different is how this one arrived in Louisiana. First we had Hurricane Marco. It basically spared us as it approached the Louisiana Coast. For a while, it seemed like the state had dodged a bullet. There was another storm, however, named Laura.

By the time Laura made landfall near Cameron south of Lake Charles, it was a 150 mph monster. When you consider what could have happened if the storm surge predictions had come true, you have to feel a little bit lucky. Only a little, though, because this storm ravaged the western part of Louisiana. It destroyed houses, knocked down trees, flooded streets and caused at least 13 deaths. That's not lucky.

Laura brought Louisiana wind and water, fires and destruction. LDEQ has to deal with all those things in one way or another. The biggest task, the cleanup, is underway, but damages stretch from the coast to the state line with Arkansas. Debris removal, cleanup of spills and repair of damaged equipment will take months. Our staff has performed superbly so far, but we can’t let up. The road ahead is long and challenging. Stay motivated, stay alert, stay safe. Hurricane season is not over – there is at least one system out in the Atlantic as you read this. It's a marathon, and we have to keep moving until we reach the finish.

During all this hurricane response and all your regular duties, you also have to remember COVID-19 is still a concern. We have seen improvement in Louisiana, but it’s still lingering. Wear a mask. Maintain social distancing. Wash your hands frequently or use hand sanitizer. Don’t gather in large groups. No handshaking. We have been doing this for a while now; you know what you need to do.

Lastly, but just as important, be mindful of safety hazards as you go about your work. If you are a field responder, you’ll be seeing many, many hazards in the environment that weren’t there last week. Don’t drive into deep water. Avoid electrical lines and wires if you are not sure they are turned off. Know that broken limbs can fall on you or your vehicle in the lightest breeze. Watch out overhead. Stay alert. Don’t get distracted.

Let’s all be careful and all be patient. Be sure to practice courtesy and good customer service when you deal with someone outside the agency, whether it’s an official or a member of the public. I had a bad experience with customer service recently, and it is not something you forget. We’re all a little stressed right now with the storm and COVID-19. Put that aside when you are dealing with folks outside the agency. Be professional. Let them come away from talking with LDEQ feeling like their concern was taken seriously and they were treated with respect.

I promise you this will all be over, and we will all get back to some normalcy eventually. Stay safe!
LDEQ’s Electronic Data Management System Redesign Project underway

In August 2006, fourteen years ago, the Louisiana Department of Environmental Quality (LDEQ) rolled out a state-of-the-art public records database called Electronic Data Management System (EDMS). EDMS was added to the LDEQ website, making it possible for employees and the public to access records electronically. Before the EDMS system was instituted, a public records request or a visit to the public records room was required.

While EDMS has become a convenient tool for the public and the agency alike, it needs some modernization. The EDMS Redesign Project is underway, which will provide an easier, faster and more comprehensive experience for searching LDEQ public records. The priorities for the upgraded EDMS are:

- Easy, intuitive screens, incorporating modern, user interface features
- Simplified searching for documents
- Submittal search capability
- New MyEDMS feature allowing users to save searches and manage alert notifications
- GIS mapping tool
- Better functionality for public and LDEQ users

These new features will be implemented as they become available and will simplify the process of locating documents via the search tool.

“We, at LDEQ, are very excited to bring our Electronic Data Management System into the future,” LDEQ Undersecretary Karyn Andrews said. “When we first introduced EDMS in 2006, it was state-of-the-art technology that provided the public with easy access to LDEQ’s public records. We are redesigning it to remain in the forefront and better serve the state of Louisiana.”

It is important to get feedback and suggestions from users to ensure the best result in the redesign. To that end, a survey was made available to users from July 22 to Aug. 7. The survey covered all aspects of the EDMS system and asked for opinions, interest levels, recommendations and comments about functionality, the layout of information and users’ suggestions on what they would like to see.

Some of the comments from anonymous users were:

- “I am surprised that there are ways to improve upon EDMS, as it is already such a well-formatted, easy-to-use website. I am most excited about the email alerts and mapping features, which should enhance my research greatly.”
- “The current EDMS is the most user-friendly state database I have seen across multiple states. I think it is really well done and would hate to see it turn into something like TCEQ’s document search.”
- “I look forward to using the upgraded system. It looks much more user friendly.”

Overall, the survey responses are positive, with an average of 74.75% agreement or interest on all rating questions about the proposed new features. Some other suggestions gleaned from the survey are:

1. “Facility name would be helpful.”
2. “LAD or LAN number, these are used by EPA as identifiers.”
3. “AI, date range, media type.”
4. “Date of the document would probably be helpful.”
5. “If date scanned could be a range of dates would be good.”

Continued on page 4
6. “Facility Type.”
7. “Enforcement action numbers would be helpful when searching.”
8. “Maybe any ties to previous historical Agency Interest numbers when a new one has been created by mistake, or facility still exists but has moved. It would be a “merger” value, I think?”
10. “For Air Permits - Some way to link the main document (i.e., initial submittal) with all subsequent submittals, public notice, public comments, and eventual permit.”

As the Redesign Project continues, we will feature the changes and how they will affect the user. To access EDMS got to https://www.deq.louisiana.gov/page/edms.

EDMS Redesign Survey Results

There were 491 respondents to the survey; 339 were LDEQ employees, and the remaining respondents were public users and parish, state and federal employees and others.

Document Search Features

70% Quick Search – search via one or multiple AIs without additional filters
57% On Quick Search screen – the ability to include documents for AI within a specified mile radius
73% Agreed that the new layout for displaying search results provided the necessary information
87% Thought the ability to refine search results by selecting filters

Advanced Search Screen

79% Agreed that the ability to “toss across” search criteria would meet requirements of their search
80% Agreed that a keyword search would enhance their search capabilities
81% Agreed on the proposed layout of the information
82%+ Agreed the refining search results on the AI lookup screen would enhance the ability to search
80%+ Would likely use checkboxes and the AI screen to add other AIs in the search

MyEDMS

71% Would likely use a save searches and my saved searches feature
65% Would use an email notification feature when new documents went into EDMS on a saved search

Mapping Feature

72%+ Would use a visual map of AIs in EDMS
Volunteer to participate in a litter cleanup event near you

Litter is a pervasive problem in Louisiana. Throughout the year, as we look for ways to chip in to beautify our environment, a litter cleanup event offers a great opportunity to lend a hand. It also serves as a great way to accomplish a worthwhile task while maintaining a level of safety and social distancing during the COVID-19 pandemic.

Making a difference is everyone’s responsibility. Various organizations and non-profit groups hold litter cleanup events throughout the year across the state, offering everyone the chance to take tangible, swift action against litter by making a difference.

The annual Great American Cleanup, hosted by Keep America Beautiful, is one of the country’s largest community improvement events. Activities center on an array of beautification efforts, tree and flower planting, park improvements, trail building, graffiti removals, waste tire removals, Main Street rehabilitations, litter pickups and other activities scheduled in advance of the tourism/vacation and festival season.

Keep Louisiana Beautiful hosts or supports a majority of the state’s cleanup events, so please check the affiliates on their website for any volunteer opportunities in your area: https://keeplouisianabeautiful.org/our-story/affiliates.

In addition to picking up litter from roadways and waterways, volunteers have also assisted with closing illegal dumping sites, restoring playgrounds, removing waste tires and junk cars, removing batteries, planting trees and flowers, painting and renovating homes, collecting used clothing for reuse, and recycling plastic, metal, electronics and newspapers.

According to Keep Monroe Beautiful, the Great American Cleanup has involved an estimated 3 million people volunteering more than 6.7 million hours to clean, beautify and improve 17,000 communities during 30,000 events all over the country.

For more information on how you can conduct your own cleanup or register for an event, visit the Keep America Beautiful site: https://kab.org/programs/great-american-clean-up/event.

Continued on page 6
Nearly every city or parish in the state has a Keep America Beautiful affiliated organization, or independent litter abatement group, and below is just a partial contact list. Please check your local government for information on events or programs that may not be listed here.

In light of the ever-changing health-related guidelines regarding COVID-19, please be sure to double-check the status of any event in which you wish to participate, as information and scheduling are subject to change. Note: Contacts may have changed by the time of this printing.

**Abbeville**: http://cityofabbeville.net/

**Abita**: http://www.keepabitabeautiful.com/#xl_xr_page_contact

**Ascension**: http://www.ascensionparish.net/keep-ascension-beautiful/

**Baton Rouge**: www.kbrb.org/

**Bossier**: https://keepbossierbeautiful.com/

**Concordia**: https://www.facebook.com/saveconcordiaparish/

**DeRidder**: https://www.cityofderidder.org/160/Keep-DeRidder-Beautiful

**DeSoto**: http://www.desotoppj.com/media/keep-desoto-beautiful-parishwide-cleanup


**Eunice**: https://www.facebook.com/KeepEuniceBeautiful/

**Hammond**: www.hammond.org/?tribe_events=keep-hammond-beautiful-14


**Lake Charles**: https://www.cityoflakecharles.com/department/board.php?structureid=68


**Livingston**: http://www.keeplivingstonbeautiful.com/

**Mandeville**: https://www.facebook.com/Keep-Mandeville-Beautiful-198592733486229/


**Natchitoches**: https://www.facebook.com/KeepNatchitochesBeautiful/

**Orleans**: https://www.facebook.com/keepnolabeautiful/


**Slidell**: https://www.keepsidellbeautiful.org/


**St. Martin**: https://www.facebook.com/pages/category/Community-Organization/Keep-St-Martin-Beautiful-17301833397925/

**St. Mary**: https://www.facebook.com/pages/category/Government-Organization/Keep-St-Mary-Beautiful-581085142029651/

**St. Tammany**: www.KeepStTammanyBeautiful.org

**Tangipahoa**: https://tangipahoa.org/government/public-works/keep-tangipahoa-beautiful

**Terrebonne**: http://keeperrebonnebeautiful.org/


**Vernon**: https://www.facebook.com/keepearveronparishbeautiful

**Washington**: http://www.washingtonparishalerts.org/keep-washington-parish-beautiful.html

**West Baton Rouge**: https://www.facebook.com/KeepWestBatonRougeBeautiful/

**West Feliciana**: https://www.facebook.com/groups/1665387367012106/

**West Monroe**: https://www.facebook.com/keepwestmonroebEA%20061311493492006/
LDEQ holds blood drive amid COVID-19 pandemic

In conjunction with The Blood Center, Louisiana Department of Environmental Quality (LDEQ) hosted a blood drive for employees on Aug. 3 and 4. Employees made appointments online to ensure social distancing at the time of donation. Everyone wore a mask, and hand sanitizer was readily available to ensure COVID-19 safety standards were met.

LDEQ’s blood drive chairwoman, Minta Canelas, plans two blood drives a year for LDEQ staff. The goal is to have at least 20 employees donate blood each day of each drive. If that goal is met it assures that, LDEQ employees will receive blood assurance for an entire year. Employees can donate blood in their name, a family member’s name or for anyone that requires blood. Employees can also donate blood for Camp Challenge, the Lions Club Camp. When a blood donation is made for someone else, the Blood Center will send that person a monetary amount to be used as the person chooses.

The fall blood drive was a success. LDEQ had 41 donors and three deferrals, and The Blood Center collected 44 units of blood. The goal of 20 units each day with a total of 40 for both days was met.

The United States has a constant and ongoing need for blood and platelet donations, whether we find ourselves in a health pandemic or not. “Maintaining an adequate blood supply is vital to public health. Blood donors help patients of all ages – accident and burn victims, heart surgery and organ transplant patients and those battling cancer and other life-threatening conditions,” FDA officials said in a recent statement. Moreover, the American Red Cross estimates that every two seconds, someone in the U.S. needs blood.

According to the Food and Drug Administration (FDA), the COVID-19 pandemic has caused unprecedented challenges to the already low U.S. blood supply. Donor centers have experienced a dramatic reduction in donations due to the implementation of social distancing and the cancellation of blood drives. The FDA reports that there are no confirmed reports of coronaviruses being transmitted by blood transfusion anywhere in the world and strict additional safety measures have been installed at the blood collection sites for donors and staff.

LDEQ is proud of the staff that participated in the drive and donate regularly. More donations are continuously needed, and we hope everyone realizes the important role they play when they donate. It may seem like a small way to help during the pandemic, but you could also be saving someone’s life, which is never a small thing. Thanks to everyone who donated.
Pontchartrain Conservancy curtails pollution through derelict crab trap removals

Marine debris is an unfortunate byproduct of our reputation as a Sportsman’s Paradise. It is important to identify and eliminate any form of waste that might be impacting our waterways before it poses a greater threat to our environment.

The Pontchartrain Conservancy’s Derelict Crab Trap Removal Program strives to do just that; removing derelict crab traps, a destructive form of marine debris.

The Conservancy initially became involved in the removal program in 2016. The Conservancy and its partners have since pulled more than 13,815 derelict crab traps (amounting to approx. 79 tons of waste) from the Lake Pontchartrain basin.

As a non-governmental organization, the Pontchartrain Conservancy’s mission is to drive environmental sustainability and stewardship through scientific research, education and advocacy. A 501(c)(3) non-profit organization, the Conservancy consists of a board of directors representing Basin parishes and regulatory agencies, with the Louisiana Department of Wildlife and Fisheries (LDWF) as a key partner. Funding for the derelict crab trap removal program is derived in part from the LDWF, as well as a marine debris removal grant from the National Oceanographic and Atmospheric Administration.

Blue crab traps are rectangular wire cages around 24 inches x 24 inches x 16 inches and made of metal, coated with vinyl. Derelict crab traps (called “ghost traps”) are any traps that have become abandoned, lost or discarded in waterways. Causes typically include theft, vandalism, float lines being cut by passing boat propellers and relocation during storms or high water events.

The traps are not only a hazard to boaters and fishermen. Derelict crab traps also cause harm through “ghost fishing,” a destructive process whereby traps undergoing degradation lure in fish and crabs that die and perpetually re-bait the trap. If left unattended, a cycle ensues that creates a detriment to the marine population.

During the process of locating and retrieving the traps the Pontchartrain Conservancy has released thousands of crabs, along with many birds, mammals and turtles caught in derelict crab traps. Data derived from trap retrievals during 2017-18 reveal that there

Continued on page 9
are approximately between 42,592 and 60,660 visible (floats attached) derelict crab traps remaining in the Lake Pontchartrain Basin. Many more are present – either visible or below the surface – in the Louisiana Coastal Zone, making this an important issue.

“In 2020, we removed 27,695 pounds of marine debris from the Pontchartrain Basin and recycled 11,460 pounds of that with our project partner, EMR Group,” said Adam Songy, a coastal scientist with the Pontchartrain Conservancy.

“By accelerating removal, we hope to target the inventory of derelict traps in Louisiana waters, shed light on the harm being caused by derelict crab traps, and develop methods that other groups can utilize to remove this harmful marine debris,” Pontchartrain Conservancy Executive Director Kristi Trail said.

Tons of vinyl-coated wire and Styrofoam (used as floats) have been removed from Louisiana waters, in an attempt to prevent ecological harm, such as death or reduced fitness to the resident aquatic species and wildlife.

In order to facilitate efficient removal, the Pontchartrain Conservancy periodically recruits volunteer boaters who are experienced and familiar with the local waterways. Results so far have been significant, and plans continue to grow and develop as needs arise. In 2017, a larger boat was contracted, which expanded the capacity for trap pickups by removing up to 175 traps per trip – sometimes making two trips per day. This proved significant, as smaller boats used by volunteer owners can typically only hold 25 to 40 traps per trip.

“All of our funding that is obtained for the derelict crab trap removal program is used strictly for that program, and a portion of it is used to contract out commercial vessels,” Songy noted. Larger vessels, such as a thirty-foot crab boat, allow for fewer trips the volunteers have to take during the removal process.

The Pontchartrain Conservancy has documented their derelict crab trap removal efforts and project evolution in several reports on their website. A description of the derelict crab trap removal program is also available on their site at [https://scienceforourcoast.org/pc-programs/coastal/derelict-crab-trap/](https://scienceforourcoast.org/pc-programs/coastal/derelict-crab-trap/).

Before 2018, Louisiana law required that derelict traps be crushed and disposed of on the same day of retrieval. This restriction prevented LDWF from adapting the program for one that fostered trap resale, recycling or reuse. So to add some flexibility to the program, House Bill 799 (sponsored by Rep. Raymond Garofalo) became law in May 2018, allowing LDWF the authority to determine the disposition of abandoned traps.

In 2019, the Pontchartrain Conservancy was still required to crush derelict traps, as LDWF had yet to develop an alternative program for disposal. The Pontchartrain Conservancy subsequently partnered with EMR Metal Recycling to collect and recycle a large portion of the material at no cost to the Conservancy. This resulted in the recycling of 14.3 tons of derelict crab traps in 2019 --- metal tonnage that was kept out of landfills.

Continued on page 10
The Pontchartrain Conservancy wants to acknowledge that their success in the program was made possible by their partnership with the Louisiana Department of Wildlife and Fisheries, NOAA Marine Debris Program, Jefferson Parish, Valero Energy Foundation, EMR Group, Pontchartrain Institute of Environmental Sciences, Stantec, Coypu Foundation, South Shore Bait and Marina and Fort Beauregard Marina Estates.

For more info on the program, please visit https://scienceforourcoast.org.

Clean Cities Coalition honors Ann Vail with Benjamin Watson Leadership Award

Ann Vail, coordinator for Louisiana Clean Fuels (LCF), was honored by her peers, virtually, with the Clean Cities Coalition Benjamin Watson Leadership Award. This award recognizes initiative, willingness to help and inspiration.

The Benjamin Watson Inspirational Award is an award presented by the Clean Cities Coordinator Council each year to the coordinator who provides inspiration and motivation to other coordinators and strives to create a fun, engaging and unified team spirit within our program. The award is named after Benjamin Watson, a founding member and long-time coordinator of Kansas City Regional Clean Cities.

Vail, and Louisiana Clean Fuels, have worked closely with LDEQ on the Alternative Fuels Pathways project, promoting compressed natural gas (CNG), liquefied natural gas (LNG), propane, electric and other environmentally friendly fuels. LCF is a resource for alternative fuel information and education.

Vail, who also has been honored by being inducted to the Clean Cities Hall of Fame, has provided outreach to other coalitions, almost 100, sharing opportunities for growth innovative ideas and collaboration.

“Ann is the kind of person who is ready to help at a moment’s notice,” wrote one colleague who nominated Vail. “She is always ready with a warm smile and a genuine willingness to help.”

In one such initiative, begun during the COVID-19 pandemic, Vail took the initiative to coordinate webinars among coalitions that engaged stakeholders around the country and kept them informed. This initiative is a one-stop-shop to help coordinators promote and inform events. The webinars cover a wide variety of important topics ranging from electric vehicle charging infrastructure to propane school buses.

“This award means a lot to me as it is from my peers in Clean Cities,” Vail said. “I’ve never worked with a more passionate, fun and knowledgeable group of people, and I am truly honored.”

LDEQ congratulates Ann Vail on her award and dedication to improving the environment.
Louisiana Clean Fuels Seeks Nominations for the Katry Martin Award

Awards Ceremony to be held November 5, 2020, at the LCF 20th Anniversary Gala and Annual Clean Fuel Leader Awards

Every two years, LCF honors one person whose kindness, positive attitude and passion for alternative fuels sets them apart from their peers. The award’s namesake, Katry Martin, served as the Executive Director of St. Landry Parish Solid Waste. Under his leadership, St. Landry Parish was the first landfill in Louisiana to successfully commission, operate and monetize Environmental Attributes. While many others talked about the merits of carbon offsets, St. Landry Parish planned and executed. Additionally, St. Landry Parish was one of the first to build, own and operate a Renewable Natural Gas (CNG) Project at the landfill. This project is the template for smaller RNG (CNG) Projects on a global basis. Katry was revered for being a visionary who was also able to take his ideas and put them into practice.

LCF awarded Katry and St. Landry with the Innovative Project award at our 15th Anniversary Celebration in 2015, something that he was extremely proud of. Anyone who met him knew him to be a kind, humble, and passionate man who was responsible for dreaming up and making St. Landry’s groundbreaking RNG facility a reality. Katry passed away on October 10, 2017, after a brief battle with cancer. The Katry Martin Award serves as a chance for LCF to honor his legacy and recognize his contributions to alternative fuels.

LCF is asking for nominations of one individual in Louisiana whose character and contribution to Clean Cities, alternative fuels, petroleum and/or emissions reduction honors the legacy and spirit of Katry Martin. Nominations for the 2020 Katry Martin Award are due Friday, September 4, 2020.
2020 Louisiana Environmental Conference and Trade Fair postponed to 2021

The 2020 LA Environmental Conference and Trade Fair has been rescheduled to March 17-19, 2021, in Lafayette. The Louisiana Solid Waste Association (LSWA) and the Louisiana Department of Environmental Quality (LDEQ) have continued to monitor and evaluate the spread of COVID-19 and the concerns of all involved with the conference. The health and safety of attendees, speakers, exhibitors and staff are our top priorities, and as such the decision was made to move the date of the conference.

The decision was made after consulting with LSWA Officers/Board Members and LDEQ Secretary Chuck Carr Brown, as well as a number of exhibitors, attendees and others. Everyone agreed that rescheduling the conference was the responsible and prudent decision and is consistent with the Centers for Disease Control (CDC) and other public health agencies’ recommendations to limit large gatherings.

Please note that all registrations will be transferred and any additional conference-related information will be posted at the LSWA website at www.LSWA.us.
Who’s Who At LDEQ?

April Wallace – Environmental Scientist, Surveillance Division, Office of Environmental Compliance

Wallace earned a Bachelor of Science degree in chemistry from Grambling State University in May 1999. She joined LDEQ as an environmental scientist in the Surveillance Division/Office of Environmental Compliance in 2002. After working at the agency for four years, Wallace left to pursue her passion in the teaching profession. She returned to LDEQ in July 2009 as an environmental scientist in the Surveillance Division and received a promotion in February to Environmental Scientist IV.

Wallace is a native of Baton Rouge. She enjoys spending time with family and friends and doing organizational projects.

Alan Karr – Senior Environmental Scientist, Remediation Division, Office of Environmental Assessment

Karr earned a Bachelor of Science degree in industrial engineering from Louisiana State University. He began his state career with LDEQ in 2002, after spending 20 years working for public and private companies in the U.S. and abroad.

Karr has 17-plus years in site investigation and remediation. In November 2019, he was promoted to Senior Environmental Scientist, overseeing various grant processes and Resource Conservation and Recovery Act (RCRA) reporting for the Remediation and Underground Storage Tank (UST) Divisions.

Patricia Wooden – Environmental Scientist, Surveillance Division, Office of Environmental Compliance, Capital Regional Office

Wooden is from Virginia, where she earned her Bachelor of Science degree in biology from Virginia Tech. She served as the collections manager for the Virginia Tech Entomological Collection until moving to Baton Rouge in 2017 to complete her master’s degree in entomology at LSU. She graduated in December 2019 and started at LDEQ in February 2020.

An avid naturalist, Wooden enjoys running, hiking and insect collecting as well has hanging out with her cats.
Louisiana Department Of Environmental Quality’s Second Quarter Summaries

Second Quarter 2020 Enforcement Actions: http://deq.louisiana.gov/page/enforcement-actions

Second Quarter 2020 Settlement Agreements: http://deq.louisiana.gov/page/enforcement-division

Second Quarter 2020 Quarter {Year} Air Permits: http://deq.louisiana.gov/page/permits-issued-by-calendar-quarter

Second Quarter 2020 Quarter {Year} Water Permits: http://deq.louisiana.gov/page/lpdes