DIL& PRODUCED WATER SPILL PREVENTION MEASURES Preparing for the Storm





Barataria-Terrebonne National Estuary Program 2007 TIDAL GRAPH CALENDAR

August 29, 2005 Hurricane Katrina

- Hurricane Katrina was the costliest and one of the deadliest hurricanes in the history of the United States. It was the eleventh named storm, fifth hurricane, third major hurricane and second Category 5 hurricane of the 2005 Atlantic hurricane season, and was the sixth-strongest Atlantic hurricane ever recorded!
- Katrina formed over the Bahamas on August 23, 2005, and crossed southern Florida as a moderate Category 1 hurricane before strengthening rapidly in the Gulf of Mexico; however, the storm weakened considerably before making its second landfall as a strong Category 3 storm on the morning of August 29 in southeast Louisiana.
- It is possible that Katrina was the largest hurricane of its strength to approach the United States in recorded history; its sheer size caused devastation over 100 miles (160 km) from the center. The storm surge caused major or catastrophic damage along the coastlines of Louisiana, Mississippi, and Alabama.
- Katrina caused severe devastation to the oil & gas industry with approximately 230 petroleum hydrocarbon spills, totaling a volume of more than 8 million gallons, occurring due to the storm's passage.





September 24, 2005 HURRICANE RITA

- Hurricane Rita was the seventeenth named storm, tenth hurricane, fifth major hurricane, and third Category 5 hurricane of the 2005 Atlantic hurricane season.
- The storm was the fourth-most intense Atlantic hurricane ever recorded and one of the most intense tropical cyclones ever recorded in the Gulf of Mexico.
- It made landfall on September 24 near the Texas-Louisiana border between Sabine Pass, Texas, and Johnson Bayou, Louisiana as a Category 3 hurricane as it continued on through parts of southeast Texas.
- The storm caused an estimated 10 billion dollars of extensive damage along the Louisiana and extreme southeastern Texas coasts, and completely destroyed some coastal communities.
- Rita also dealt a severe blow to the already weakened oil and gas industry by causing major damage to offshore and coastal facilities and pipeline systems.
- Hurricane Rita caused severe damage to the oil and gas industry, with approximately 234 reported petroleum hydrocarbon spills.





The Aftermath of the Storms HURRICANE KATRINA & RITA

Aftermath of the Storm

• Several spills caused by storage tank failure related to storm surge in the coastal region cost the oil companies millions of dollars in cleanup costs.

Katrina

• Hurricane Katrina caused severe damage to the oil and gas industry, with approximately 230 reported petroleum hydrocarbon spills, totaling a volume of more than 8 million gallons.

Rita

• Hurricane Rita caused severe damage to the oil and gas industry, with approximately 234 reported petroleum hydrocarbon spills..

Non-storm Related Examples of Costs versus Clean-up

Take a look at the following examples of actual cleanup costs incurred for relatively minor spills in the Barataria-Terrebonne estuary area:

- A spill of 2 barrels (84 gallons) costs the company \$6,094 for labor and equipment. That equates to \$72.55 per gallon.
- A spill of 8 gallons costs \$41,717, or more than \$5,000 per gallon.
- A spill of 5 barrels (210 gallons) of oil costs \$49,921 to cleanup (\$142.38 per gallon).
- A spill of 6/10 gallon of oil costs the company \$8,672.
- A company can spend from \$1500-\$10,000 per barrel on clean-up costs alone.
- Larger spills within the Estuary over the last several years, caused from oil and gas infrastructure, have costs associated with cleanup in excess of several million dollars.





EMERGENCY NUMBERS

If you see spilled oil, the law requires that you make the following toll-free calls:

- Call the 24-hour Louisiana Emergency Hazardous Materials Hotline at (877) 925-6595.
- Call the National Response Center at (800) 424-8802.













Improving in the aftermath of the storms PLANS OF ACTION

Hurricanes Katrina and Rita caused catastrophic damage to Louisiana's coastline, coastal communities, and infrastructure, with our important oil and gas industry sustaining severe physical facility and pipeline damage, along with displacement of its most important asset, its employees. Many were unprepared for the damage

resulting from Katrina and Rita, leaving communities and industries in a state of disarray. The aftermaths took their toll on all of us and made us realize that we desperately needed a better plan of action.

While a paper document may not save you from storm surge or tornadoes, a good plan of action will help you limit your environmental liability caused by significant spills and it will also assist you in safely evaluating your properties once the immediate danger has passed.

Many different plans are required from oil & gas regulatory agencies. Some of the more common plans are the Operations Manual, Facility Response Plan, and Spill Prevention, Control & Countermeasures. One important plan to remember when your operations are along the Gulf Coast is the Hurricane Contingency Plan!

The Hurricane Contingency Plan is a document that should outline the "who, what, when, where and why" of

Hurricane Preparedness and Response. Many companies are currently implementing entire company-wide Hurricane Contingency Plans, encompassing all of their assets - from their facilities and pipelines to every company employee.

The primary considerations in implementing a Hurricane Contingency Plan should be:

- Safety of Personnel
- Prevention of Pollution
- Protection of Equipment
- Maintenance of Production

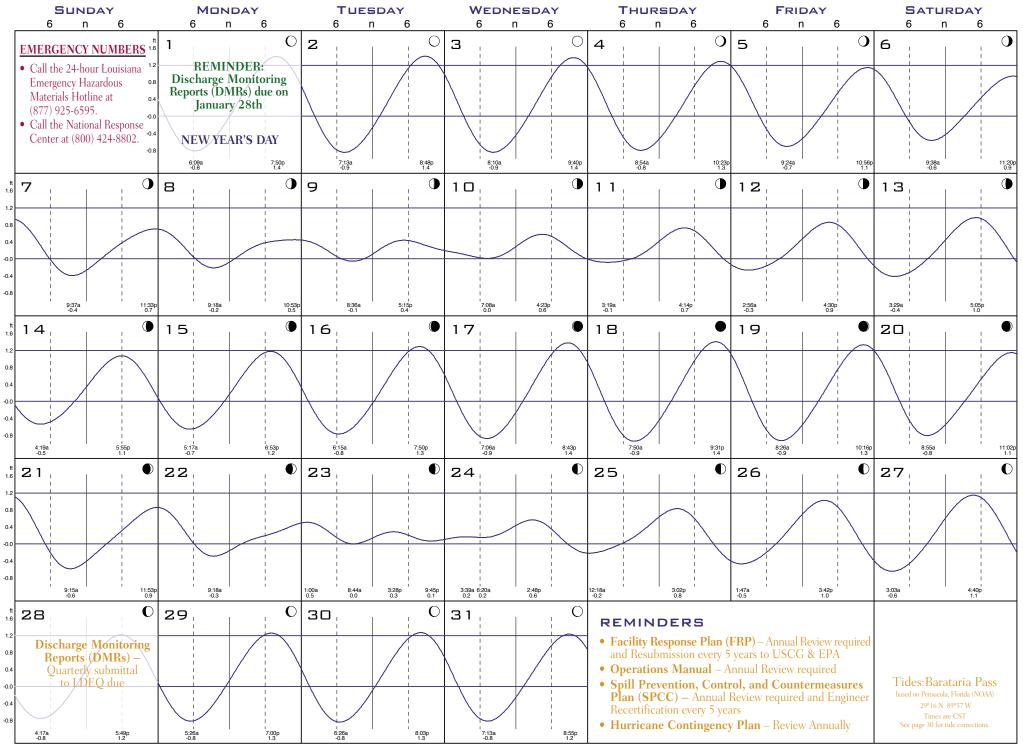
Take the time to learn from the 2005 hurricane season and check your Hurricane Plan today!







JANUARY 2007



Plan Implementation PHYSICAL MEASURES

In addition to measures outlined in your Hurricane Contingency Plan, some other important ways to prepare are by:

- Offloading crude oil from the facility in a timely manner. Waiting too late can hamper vessel availability and jeopardize personnel welfare.
- Filling empty storage tanks with ambient water will add weight and will reduce the chance of collapse or the tank floating away.
- Shutting-in wells properly.
- Inspecting and verifying safety equipment on facility, boats, and trucks
- Securing the services and/or equipment possibly needed for recovery (OSROs, quarters, barges, cranes,



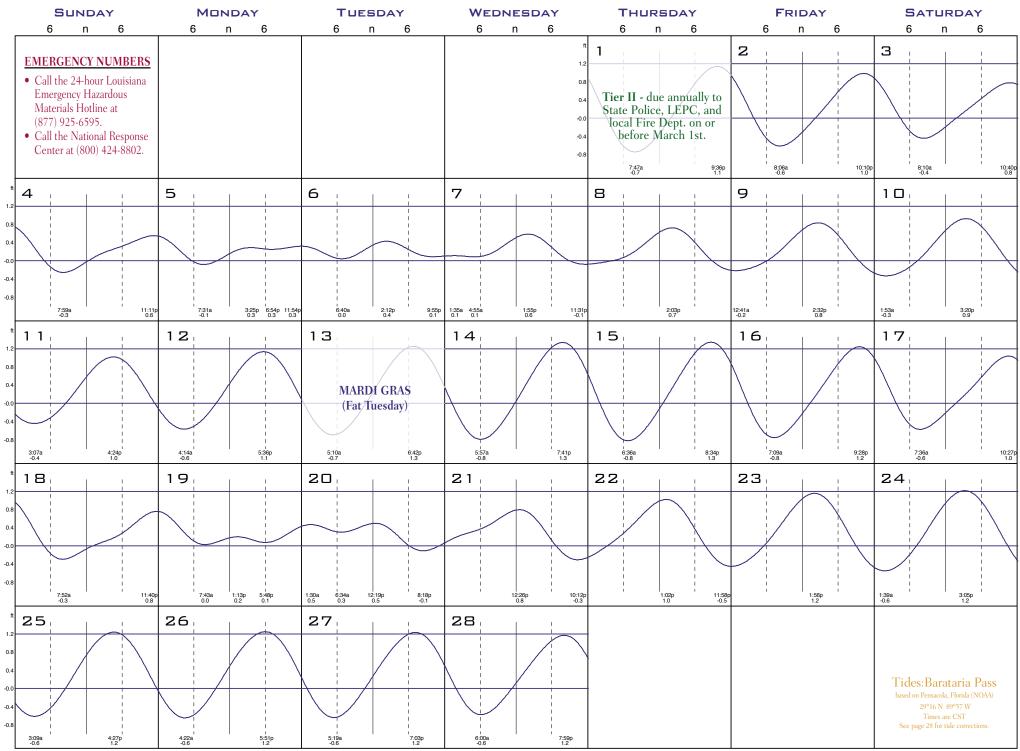
• Removing all important documents, logs, plans, etc. from the facility to avoid damage and or total loss (i.e. agency approval letters, Declaration of Inspection (DOI's), permits, emergency contact numbers).

Remember, adequate preparations can be made prior to the storm's actual movement over land —if precautionary measures are taken!





FEBRUARY 2007



Preparing to Reduce Environmental Impacts TRAINING, DRILLS & EXERCISES

The National Preparedness for Response Exercise Program (PREP) Guidelines were designed to prepare operators to adequately manage spill events in order to reduce the overall impact to the environment when spill events do occur.

While conducting these required exercises, please insure all potential measures for preventing spills at the exercised location are reviewed in depth. Measures such as adequate impervious secondary containment, annual flowline and saltwater injection line hydrostatic pressure tests, ensuring automatic shutdown devices are functioning properly, and ensuring the facility sump system is designed properly will prevent costly spills from occurring.



Proper training of personnel with emergency response duties is a necessary step to ensure that appropriate company procedures are followed. Common training courses include:

These PREP guidelines include:

QUARTERLY QUALIFIED INDIVIDUAL DRILLS:

Verbal drills designed to ensure adequate communications during a spill event.

Semi-annual Equipment Deployment Exercises:

Physical drills designed to test the readiness of facility and contractor response equipment.

Annual Table-Top Exercises:

Real-time exercises conducted with a company's Spill Management Team designed to exercise the company's response plans and procedures in the event of an incident.

Drills are to be thought of as if "it could happen tomorrow" events and everyone involved should take the drill seriously. You may never know what scenario you will have to deal with in real-life!

PRACTICE! PRACTICE! PRACTICE!

Person-in-Charge (PIC) Training

Designed to ensure facility person-in-charge understand their roles and responsibilities associated with the proper transfer of oil over navigable waters. Proper training and adherence to the topics discussed in this course have been shown to reduce the occurrence of spills.

HAZWOPER Training

Designed to ensure personnel working in emergency response "Hot Zones" like oil spills are adequately prepared to deal with the potential hazards associated with the site. HAZWOPER is mandated by OSHA and includes several levels of training.

Qualified Individual Training (QI)

Designed to adequately prepare the company Qualified Individuals to assume the duties of primary company representation responsibility in the event of a release of oil.

Spill Management Team Training

Designed to adequately prepare the company Spill Management Team to assume the responsibility of incident management in the event of a release of oil. This course draws heavily on the NIIMS (National Interagency Incident Management System) Incident Command System.

MARCH 2007

n 6	6 n	6	6 n	6	6 n 6		
				6		6 n 6	6 n 6
	REMINDER:			ft 1.6	1 O	2 0	3
ensacola, Florida (NOAA)	PREP drill records	s must view		1.2 0.8 0.4 -0.0	Tier II - due annually to State Police, LEPC, and local Fire Dept. on or before March 1st.		
				-0.4	6:26a 8:45p -0.5 1.0	1 1 6.35a 9:27p -0.3 0.9	6:27a 10:14p -0.1 0.7
0	6	0	7	0	8 0	9	
11:57a 6:52p 0.5 0.2	1:11a 3:49a 11:41a 0.3 0.3 0.7	8:01p 0.0	 11:4 0.8	4a 9:01p 3 -0.1	12.02p 10.09p 0.9 -0.2	12.37p 11:42 1.0 -0.2	p 128p 1.1
	13		14) (15	16	17
3:51p 1.2	3:42a 5 -0.5	і і 5:06р 1.3	4:27a -0.6	6:14p 1.4	5.04a 7;19p -0.5 1.3	5.34a 829p -0.4 12	1 1 558a 952p -0.2 1.0
	20		21		22	23	24
10:19a 5:50p 0.6 0.0	10:13a 0.9	7:20p -0.2	10:39a 1.2	8:44p -0.4	11.23a 10.18p 1.4 -0.4	12:19p 1.4	1202a 128p 1.4
	27		28	O	29 0	30, 0	31, 0
4:11p 1.3		1 1 5:29p 1.3	4:24a -0.3	6:35p 1.1	444a 734p -0.1 1.0	4/38a 8:40p 0.1 0.8	4:13a 11:01a 4:16p 10:10p 0.3 0.6 0.4 0.6
	11.57a 6:55p 0.5 0.22 0.5 0.20 0.5 0.20 0.5 0.20 0.5 0.20 0.5 0.20 0.5 0.00 0.5 0.00 0.00	be available for re on site during inspections. be available for re on site during inspections.	PREP drill records must be available for review on site during inspections. Presector gr 30 for tide corrections. PREP drill records must be available for review on site during inspections.	PREP drill records must be available for review on site during inspections. Presedu Head NOAN 2710N 8957W Times are CST get Dior tak corrections.	PREP drill records must be available for review on site during inspections. PREP drill records must be available for review on site during inspections.	PREP drill records must be available for review inspections. PREP drill records must be available for review inspections.	Barataria Pass bearataria Pass on site during inspections. Barataria Pass on site during inspections. Barataria Pass on site during inspections. Barataria Pass on site during inspections. Barataria Pass on site during inspections. Barata

Agencies, Reportable Quantities (RQs), Time Frames REQUIRED NOTIFICATIONS

F ederal notifications are required to the National Response Center (800-424-8802) for any discharge of a hazardous material that creates a sheen, sludge or emulsion at or below the surface of water or exceeds the Reportable Quantity (RQ).

Additionally, in OCS waters the Minerals Management Services (MMS) requires notification to the district office for a (1) barrel release or greater, and if the source is a pipeline or flow-line the MMS Pipeline Division requires a notification.

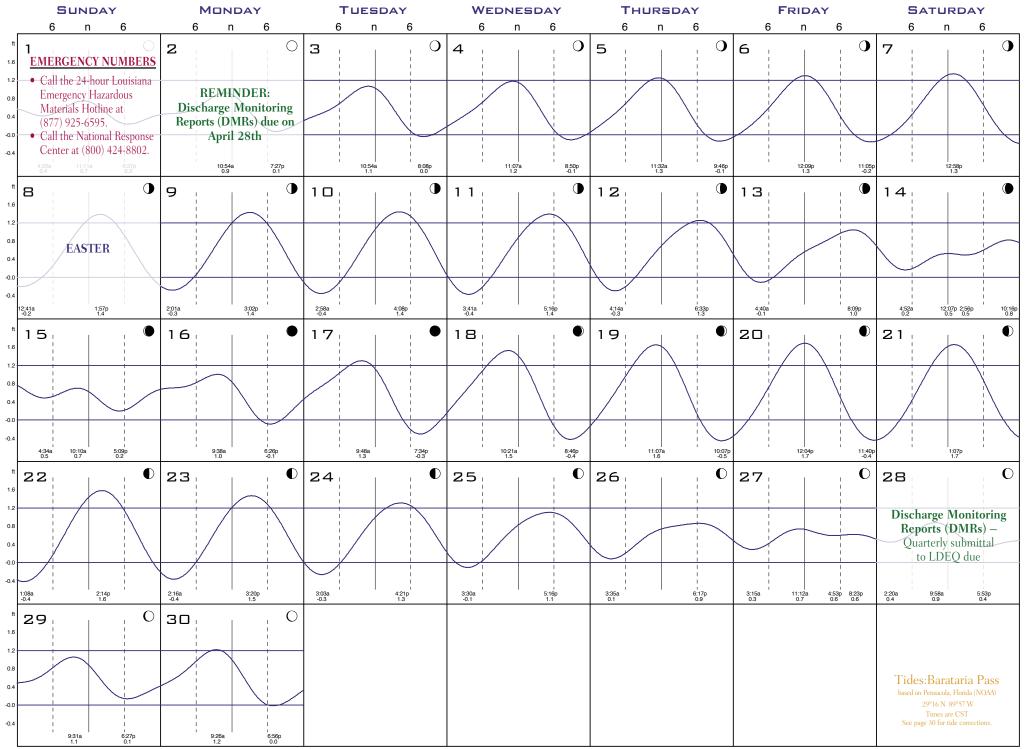
State notifications are required to the Louisiana Emergency Hazardous Materials Hotline for any discharge of hazardous material exceeding the RQ. Crude oil is considered a flammable liquid; therefore, it has a RQ of 100 pounds. Additionally, any release of a regulated hazardous material that causes an injury resulting in fatality or requiring hospitalization, results in a fire or explosion, and or exceeds the RQ during any continuous 24 hour period, and any incident, accident or cleanup within the facility, which could reasonably be expected to affect the public safety beyond the boundaries of the facility or where the owner/operator initiates protective measures beyond the boundaries of the facility must be reported.

Remember, the 24-hour Louisiana Emergency Hazardous Materials Hotline (225-925-6595) requires reporting within 60 minutes of discovery. Louisiana is a One Call State; which will meet the Louisiana Department of Environmental Quality (LDEQ) requirements as well. The Local Emergency Planning Committee (LEPC) with jurisdiction still must be notified. LDEQ requires notification for (1) barrel of crude oil or produced water (saltwater, produced brine).

A good neighbor will alert the adjacent facilities if a release of a hazardous material is going to impact his property or business!



APRIL 2007



Preparing the Foundation through Documentation INSPECTIONS, LOGS, & REPORTS

Maintaining proper inspection records will assist in the prevention of oil and produced water spills because it will document and insure the proper inspections and maintenance progress occurring at your operations.

Furthermore, maintaining these records in most cases is a regulatory requirement that will assist you with reducing your facility's environmental liability by helping you become better prepared! Keeping adequate records helps to document items needing to be addressed. Logs kept, including data on storm water discharges, tank inspections, flowline tests, and produced water, can help to document facility conditions and/or items needing repair. These items, if not fixed and brought into compliance, could cause a costly spill or emergency incident to occur.

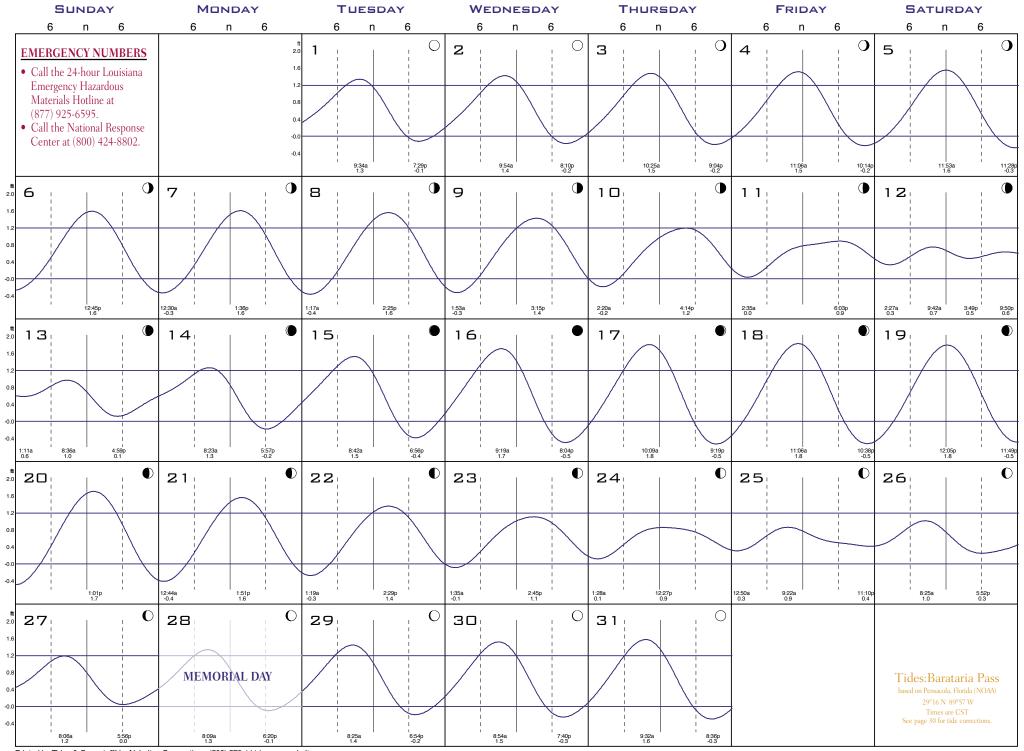
Remember, when preparing for hurricane season, protect these documents so that they are not destroyed! The 2005 hurricane season resulted in the destruction of numerous important records maintained by the industrial private sector and the regulatory community.

Items to Note Include:

- USCG Inspection Reports
- USCG Approval Letters
- LDEQ Inspection Reports
- Operations, Response, and Contingency Plans
- Declarations of Inspection
- Records of Discharge, Tank Inspection, and Flowline Tests
- Original Environmental Permits



MAY 2007



Southeast Louisiana Area HURRICANE CASE STUDY

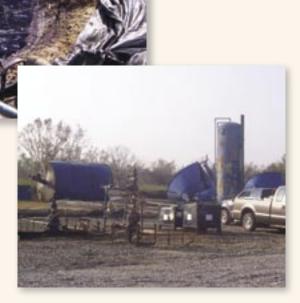
In the aftermath of Hurricane Katrina, numerous oil spills were observed in the initial over flights of southeast Louisiana. The Unified Command ranked these spills by severity, creating a "Top Ten List." Two of these incidents were caused by severe storm surge damage to several facilities located in and around the Town of Port Sulphur, both on the east and west banks of the Mississippi River. This case study focuses on one of the spills that impacted the west bank of the river.

The incident, a crude oil spill, was caused by storm surge overtopping and subsequent breaching the levee protection system, resulting in catastrophic damage to multiple tank batteries. Approximately 1500 barrels of medium crude oil were spilled, with the following impacts:

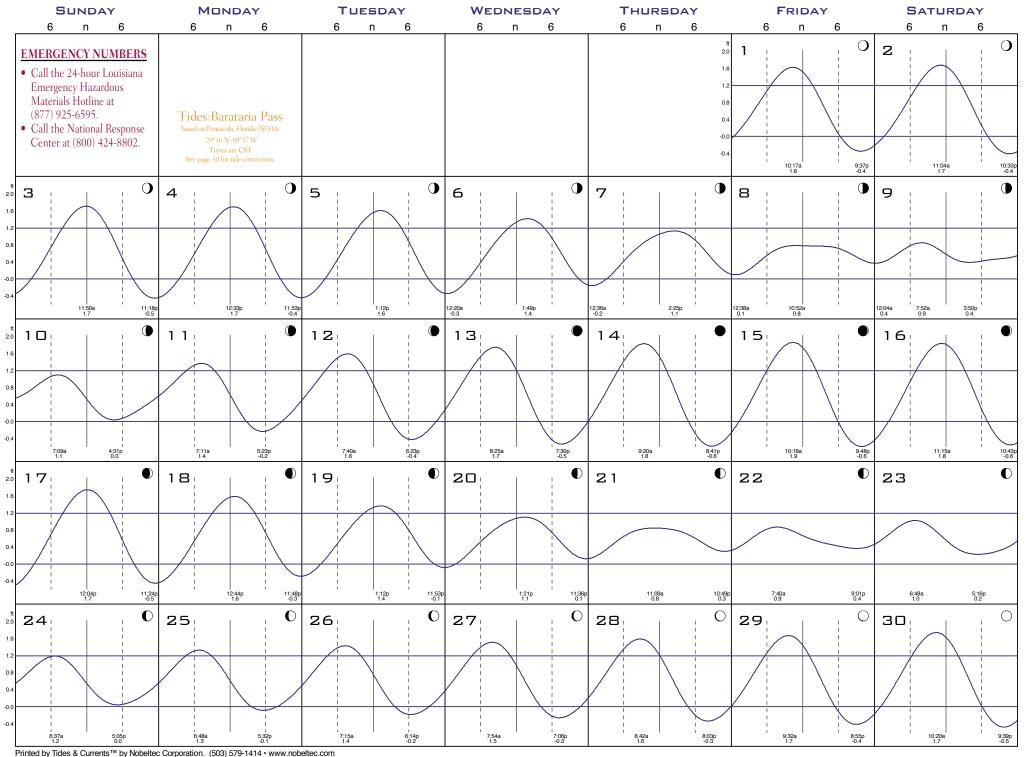
- (14) Miles of impacted vegetation on both the Mississippi River Levee System and the Hurricane Protection Levee System;
- Impact to surrounding property;
- 1/2 mile impact to LA HWY 23 and surrounding soils that make up the servitude on either side of the highway;
- Approximately 100 barrels of free crude oil contained in a drainage canal adjacent to the main pumping system for the township;
- Approximately 75 acres of impacted vegetation and brush.

Lessons learned from this response included:

- The difficulty of responding in the initial time periods immediately after the passage of a hurricane. Response to this event was significantly delayed due to the inaccessibility of the area with persistent flood waters.
- It is critically important to identify and have advanced correspondence with all land owners in the vicinity of a production related facility. In the event of a catastrophic event, it will be extremely difficult to identify the landowners impacted and obtain their approval to proceed with operations.
- Field storage tanks and large production vessels should be emptied of crude oil and then filled with ambient water. It is important to insure that all applicable field locations are equipped with adequate pumping capacity to accomplish this task in an expedited time frame.
- The logistics of operating in a disaster area far exceed the normal difficulties. Issues such as sanitation, immunizations, food services, and housing will take priority over recovery of the spill product safety first!



JUNE 2007



Debris Aftermath

In the aftermath of Hurricanes Katrina and Rita, significant damage was done to the infrastructure on both the east and west coasts of Louisiana. One of the particularly challenging aspects of the debris removal included the locating, recovery, and disposal of the numerous types of industrial debris scattered, in some cases, miles from the original storage areas. Types of industrial debris recovered post hurricane included:

- Fuel and Chemical Tote Tanks
- Production Vessels
- Drum Storage

FUEL AND CHEMICAL TOTE TANKS – A substantial number of tote tanks were displaced and required recovery following the passage of the two hurricanes. Many oil and gas facilities as well as large scale lubricant and fuel distributors stored large quantities of totes on location. The recovery of these totes proved very difficult logistically often requiring crane barges and airboat recovery. Recovery costs often exceed the value of the tote and products several fold. Relocation of these tanks prior to the hurricanes is suggested.

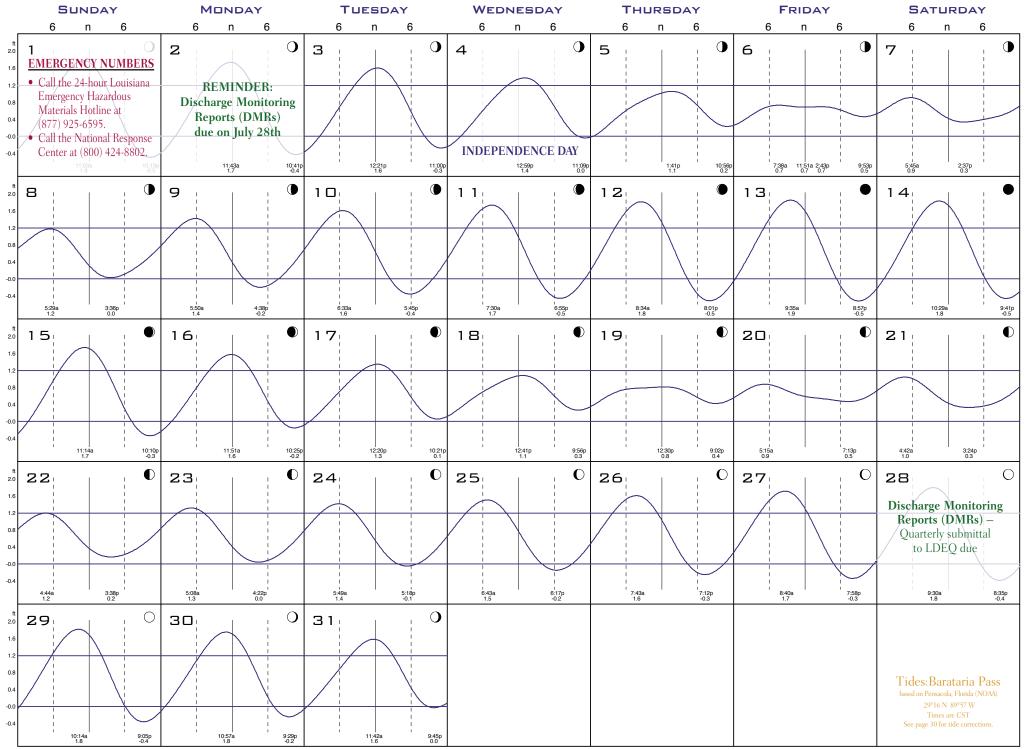
PRODUCTION VESSELS – A large percentage of the reported sheens following the passage of the hurricanes were the result of displaced production vessels that contained stored petroleum. These vessels included separators, line heaters, heater treaters, and sumps. In most cases, the release of oil from these vessels could have been prevented by purging of the production systems prior to any hurricane event.

DRUM STORAGE – Like tote storage, a substantial number of drum storage containers were displaced and required recovery following the two hurricanes. Many oil and gas facilities stored large quantities of chemical and oil drums on location. The recovery of these drums proved very difficult logistically often requiring airboat recovery. Recovery costs often exceed the value of the drums and products several fold. Relocation of these drums prior to the passage of hurricanes is suggested.

In some cases, industrial debris proved to be a significant safety hazard. During the response of one of the Unified Command Top Ten Oil Spills following Hurricane Katrina, an unidentified drum hampered recovery efforts due to safety concerns. In this case, the drum was adjacent to one of the recovery zones and was observed to be bulging with overpressure. Due to the significant weathering of the drum, it was impossible to determine the contents. Because of these variables, the drum required a HAZMAT recovery with the drum over-packed for HAZMAT disposal.



JULY 2007



Cameron, LA Area HURRICANE CASE STUDY

In the aftermath of the passage of Hurricane Rita, numerous oil spills were observed in the initial over flights of the Cameron, LA area. Most of these incidents were the result of crude oil storage and/or oil containing production vessel displacement. The lessons learned on these events were similar to the experiences after

Hurricane Katrina; however, the area proved to be less difficult to access than the Plaquemines Parish area. One of the events that proved typical of the spill response experience in these areas was the Second Bayou Incident.

SECOND BAYOU INCIDENT – Initial over flight assessments of the site revealed approximately 60 barrels of oil inside the containment wall of the facility and an additional 30 barrels in a marsh area adjacent to the facility site. The spill resulted from the displacement of the bulk oil storage tanks. The marsh areas included 5 acres of heavily impacted vegetation and approximately 100 acres of lightly impacted vegetation.

The heavily impacted vegetation was removed manually with bladed edgers and manual recovery of the cut vegetation. The lightly impacted vegetation was removed via a controlled burn conducted by the US Fish and Wildlife Refuge Managers.

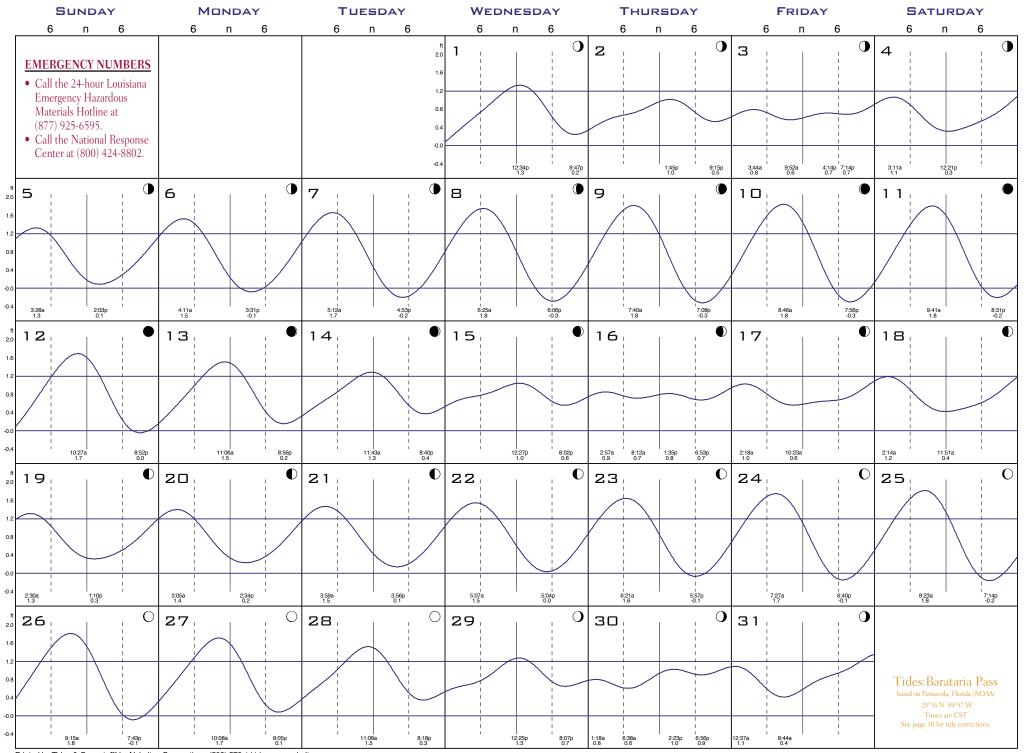
Lessons learned from this response included:



- Although not as difficult to access as the areas impacted by
- Hurricane Katrina, the logistics of operating in a disaster area far exceed the normal issues encountered. Issues such as sanitation, immunizations, food services, and housing will take priority over recovery of the spill product. In this case, providing adequate housing in this remote area required the mobilization of expensive modular housing units.
- The heavily impacted vegetation, when adjacent to Wildlife Management Areas, will require active removal. Rarely, passive maintenance may be allowed in marginally impacted areas.
- The lightly impacted vegetation around this site was a very good candidate for an *In Situ* Burn. In this case, the U.S. Fish and Wildlife Representatives from the Cameron Wildlife Refuge facilitated this process by conducting the burn under their direction and control. This process alleviated the Responsible Party from having to submit a formal burn plan or conduct passive maintenance. Industry – Agency partnerships such as these prove to be ideal when trying to reach the goal of removing contamination from the environment.



AUGUST 2007



Storage Tanks HURRICANE CASE STUDY

Let he storm surge and wind events created by Hurricanes Katrina & Rita resulted in a large percentage of petroleum hydrocarbon releases originating from damaged storage tanks and large cylindrical production vessels. This damage ranged from tanks and vessels floating away from their permanent facility locations, resulting in spills where the tanks were deposited by the receding waters, to total catastrophic failures of these primary storage containers. Environmental impact from these types of releases occurred with an enormous amount of man

hours and revenue being spent during the clean ups of these incidents. Based on the numerous incidents that were related to storage tanks and large vessels throughout the impacted regions, established preventable measures were proven to work in preventing these large scale spills from occurring. It is suggested that while reviewing your company's Hurricane Contingency Plan, take time to investigate if the following preventable measures are applicable to your storage tank operations:

Field storage tanks and large production vessels should be emptied of crude oil and then filled with ambient water. It is important to insure that all applicable field locations are equipped with adequate pumping capacity to accomplish this task in an expedited time frame. All Marine Transfer Related facilities should make provisions to load out via barge transfer.

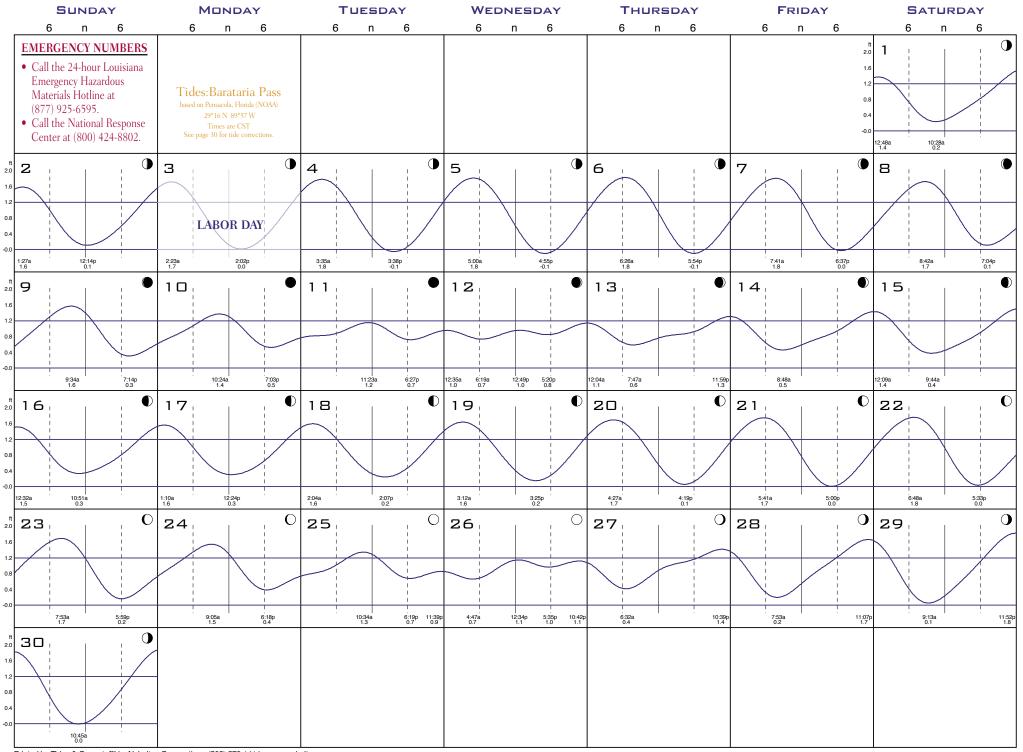
LESSONS LEARNED INCLUDED:

- Lessons learned during the aftermath of these storm events are that operators did not allow themselves enough time during the evacuation process to safely accomplish this task. It was also identified that most field facilities were not equipped with pumping capacity capable of expediting this filling process.
- After the passage of the storm event, please be advised that the discharge of the ambient ballast water from the storage tanks must meet the following LDEQ permit parameters for "used equipment" and sample results will have to be submitted to the LDEQ regional office for prior verbal approval before the discharge of storage tank ballast water can occur:

TSS =90 ppm O&G =15 ppm PH = 6 to 9 SU TOC =50 ppm Benzene =50 ppb BTEX (total) =250 ppb Lead =50 ppb



SEPTEMBER 2007



The Human Element

Hurricanes Katrina and Rita obviously had an impact on the entire Gulf Coast area; many oil & gas companies were devastated by the effects of the hurricanes. Facilities were gone, tanks were ruptured, people lost contact

with one another, homes and lives were destroyed. The coming-together of companies with their employees was a major lesson learned during the 2005 hurricane season. Companies were faced with major recovery efforts, but learned that employees were not readily available due to evacuations and lack of communications systems.

Once employees were contacted, companies found that employees living in the impacted areas were recovering from their own personal devastations such as flooded homes, missing loved ones, lack of transportation, or lack of food and clothing. Times were very trying!

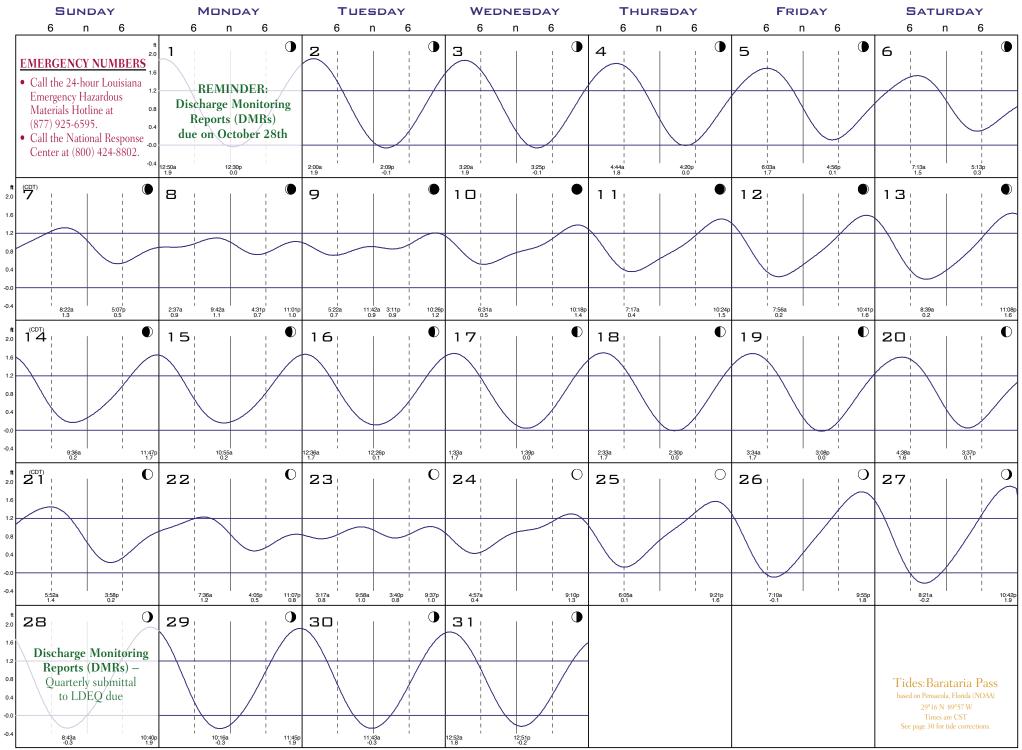
Several companies stepped up to the plate and realized that without taking care of their employees and their needs, they had no business. Companies rented housing, purchased food and clothing, searched for missing relatives, provided allotments for counseling, and even entirely relocated employees so that the employee and family could start over and continue to have a job.

Personnel assets should be the #1 priority during any recovery operation! They are the only means to 'Get the Job Done'!





OCTOBER 2007



Wildlife Impacts HURRICANE CASE STUDY

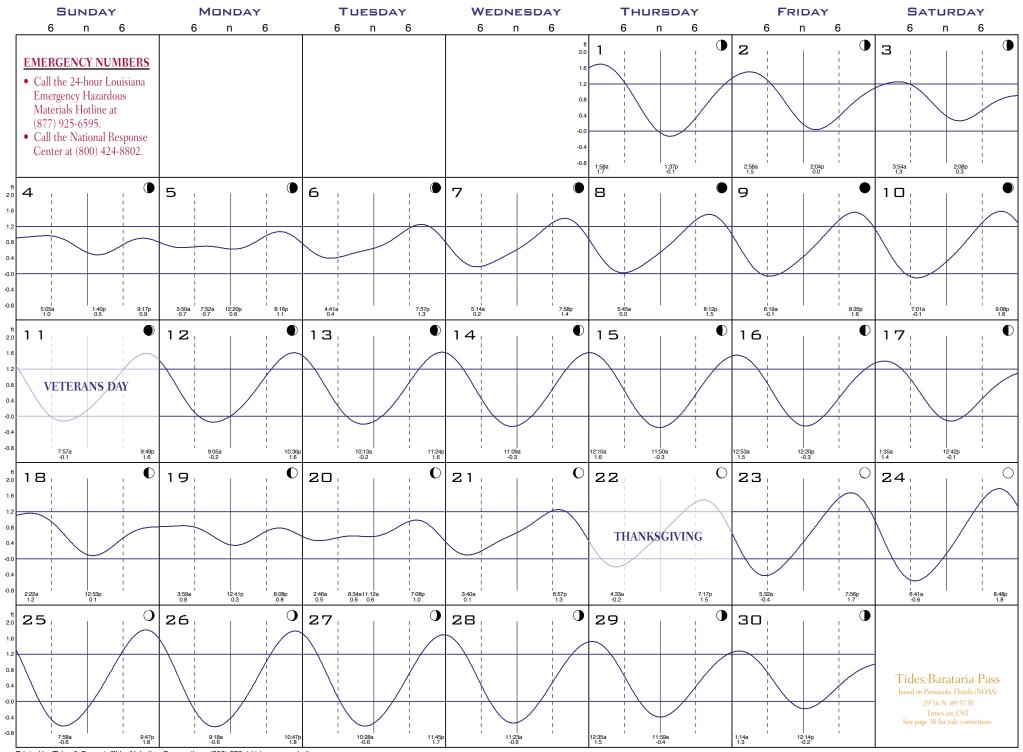
After any oil spill, the potential for impacts to wildlife is substantial. In the case of hurricane events that cause multiple large scale spills simultaneously, the potential for impacted wildlife is magnified greatly. Although not all of the impacts to wildlife following hurricanes are directly attributable to the resulting spills, the oil impacts can be some of the most severe to various fauna in a given area. The primary impacts observed after the passage of

the Hurricanes of 2005 were:

- Loss of habitat and displacement due to flooding or contamination of the wildlife areas. This habitat loss was substantial on the barrier islands and coastal estuaries in the southern portions of the state. Habitat loss has the potential for the most severe long term impacts to wildlife populations.
- Establishing contacts and contracts for Wildlife Rehabilitation is critical to insure priority service after catastrophic events.
- In many of the impacted areas domesticated animals left behind during evacuations were prevalent. In several cases, the animals tended to congregate around the response personnel. Although most of these animals were tame, a small percentage of them can represent a safety concern for the responders working in a devastated area.



NOVEMBER 2007



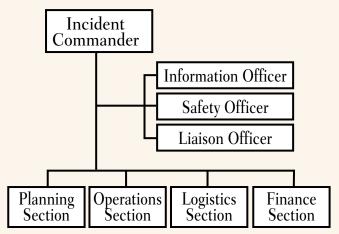
The Importance of the Incident Command System LESSONS LEARNED

During any emergency response, it is crucial to operate in a modular and organized system. The current most widely accepted system of management is the NIIMS Incident Command System (ICS). ICS allows a manageable span of control while integrating action plans and communications. During disaster related emergency responses, it is crucial to "speak the same language" as the agency Unified Command. Responsible parties **MUST** be able to effectively achieve the following:

- Staff a fully functioning ICS Team including, at a minimum, the relevant positions of Incident Commander, Safety Officer, Liaison Officer, Public Information Officer, Operations Section Chief, Planning Section Chief, Logistics Section Chief, and Finance Section Chief.
- Develop an effective Site Specific Safety and Health Plan to guide all incident operations.
- Develop a daily Incident Action Plan to govern future activities.
- Maintain effective liaison with all concerned agencies and parties.
- Conduct organized and regular meetings to determine incident objectives.
- Determine appropriate staffing and resources throughout the incident.

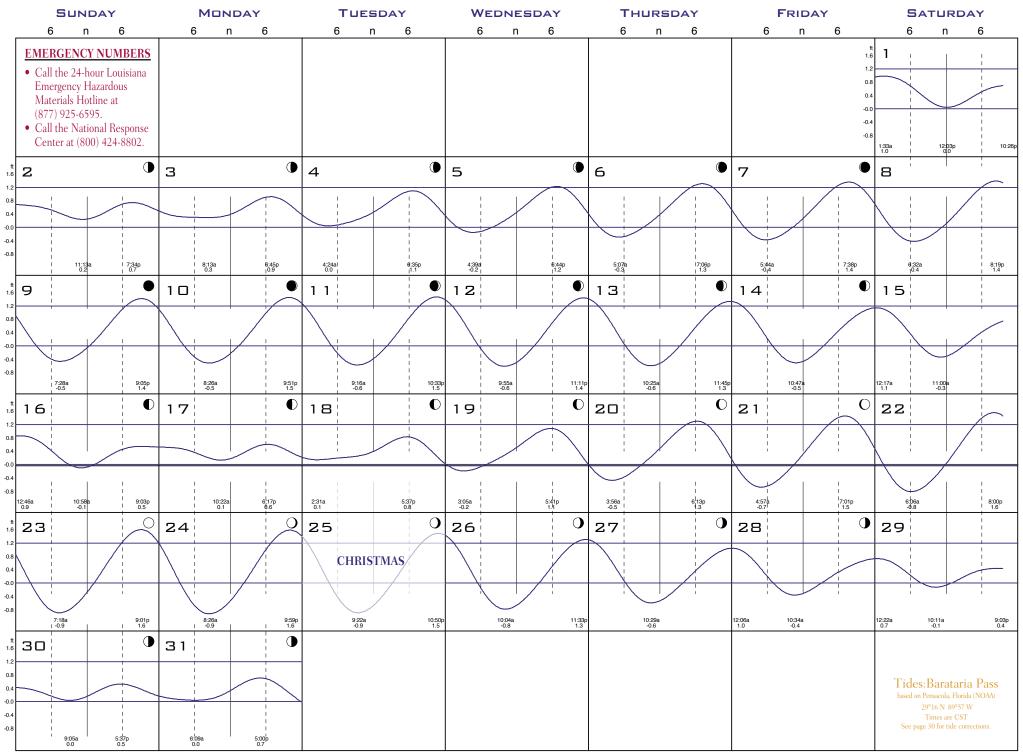
During disasters, all emergency response will be conducted under the Unified Command systems that will expose responsible parties to numerous agencies with rotating personnel. Adhering to the tenets of ICS will insure continuity of operations throughout the response.

INCIDENT COMMAND SYSTEM





DECEMBER 2007



IMPORTANT INFORMATION

Tide Corrections

To find the best time to fish your favorite locations, find a location that is closest to your area and add or subtract the time from the corresponding daily prediction.

AREA	LOW (Hours:Minutes)	HIGH (Hours:Minutes)	
Shell Beach, Lake Borgne	+5:10	+4:01	
Chandeleur Lighthouse	+ :38	+ :05	
Venice, Grand Pass	+1:28	+1:06	
Southwest Pass, Delta	- :29	-1:29	
Empire Jetty	-1:35	-2:03	
Bastian Island	+ :22	- :19	
Quatre Bayou Pass	+ :27	+1:18	
Independence Island	+2:09	+1:29	
Caminada Pass	+1:44	+1:14	
Timbalier Island	+ :33	- :41	
Cocodrie, Terrebonne Bay	+2:50	+1:10	
Wine Island	+1:12	+ :08	
Raccoon Point	- :10	-1:03	
Ship Shoal Light	-1:40	-2:54	

Charts in this calendar are intended for use solely as a reference guide to Louisiana fishing. It is not intended for navigational use. BTNEP makes no warranty, expressed or implied, with respect to the accuracy or completeness of the information contained in these charts. BTNEP assumes no liability with respect to the use of any information contained in this document.

Grand Isle 2007 Fishing Rodeos

MAY RODEO

G.I. Speckled Trout Bridge Side Marina May 25, 26, 27

JUNE RODEOS

OMSA 8th Annual Cajun Tropics Bridge Side Marina June 1, 2

New Orleans Electrical Assoc.. Sand Dollar Marina June 1, 2, 3

Cut Off Fishing Club Bridge Side Marina June 7, 8, 9

Swollfest Sand Dollar Marina June 8, 9, 10

Creole Classic Bridge Side Marina June 21, 22, 23

Fireworks & Band Bridge Side Marina June 30

JULY RODEO

G.I. International Tarpon Rodeo Sand Dollar Marina July 27, 28, 29

August Rodeos

South Lafourche High School Hook & Leaders Bridge Side Marina Aug. 4

IFA Redfish Tour Bridge Side Marina Aug. 18

September Rodeos

G.I. Original Redfish Bridge Side Marina Aug. 31, Sept. 1, 2

Caminada Redfish Sand Dollar Marina Sept. 21, 22, 23

October Rodeos

Traffic and Transportation Bridge Side Marina Oct. 5, 6

Although we make every effort to publish accurate rodeo dates, we suggest you consult the marina.

The Barataria-Terrebonne National Estuary System

Dear Friends,

We have all been so deeply affected by the destruction left by Hurricanes Katrina and Rita. This has been a heartbreaking experience for all of us. Entire communities have been devastated to a level that is unprecedented in our history. Many lives remain disrupted even now, months after the passage of Katrina and Rita, and will remain so for years to come. I sometimes wonder how or if these events will change our regional identity.

People from other areas of the U.S. love this region because both the place and the people are pleasantly unique. We are different largely because our assorted cultures have intermingled together over time and remained intact, in spite of the influences of the rapid changes affecting the world around us. Our people have tended to remain here through multiple generations, passing our traditions along to our children and grandchildren. For many of us, the bond to our wetlands, to our rivers and bayous is too strong for us to be content elsewhere.

We are most assuredly people of the wetlands. We all depend on their existence. Our way of life was born of the wetlands and landscape that surrounds us. If we live here, then we rely on the protection of our coastal landscape. They protect our homes, the quality of our waters, our industries and our infrastructure, and they are



symbols of who we are. We did not need Katrina and Rita to teach us what we already knew.

If we are to survive this hardship, if we have a chance of preserving our culture, we must restore our wetlands, our natural live oak covered ridges, and our barrier islands at the same time we rebuild hurricane protection systems, roads, and homes. But to succeed, restoration strategies must start with agreement on how this is accomplished. The Barataria-Terrebonne National Estuary Program (BTNEP) was designed to condense all of the diverse restoration options and ideas into a consensus agreement known as a Comprehensive Conservation and Management Plan—the CCMP. We accomplished that task and it is as valid today as it was when it was approved in 1996 by both the Louisiana and United States governments.

BTNEP's function is to be the central advocate for the implementation of this plan. We believe that the BTNEP Comprehensive Conservation and Management Plan very clearly presents the vision of what the people of this region expect to see in a "restored" system and we are determined to see that it is honored. It is time to move from restoration planning to restoration implementation. It is time to start re-building land now!

We are convinced that it is possible to rebuild significant amounts of our coastal landscape by transporting sediments from the bottoms of the Mississippi and Atchafalaya Rivers and from offshore sources through an infrastructure of newlyconstructed pipelines. This is a land building strategy that is consistent with our Comprehensive Conservation and Management Plan because it would enable us to rebuild many of our coastal landscape features in the short term without the huge volumes of freshwater that would conflict with some of our current uses. Smaller river diversions would then be used to sustain the marshes created with the newly-deposited sediment.

The Barataria-Terrebonne National Estuary Program has been focused on this restoration strategy for the last several years because it can deliver what we need and want -- a restored coast, in the least amount of time, with a

minimal chance of the user conflicts that would delay restoration. Ask us about the Pipeline Sediment Slurry Delivery strategy the next time you see us.

With warm regards, Keny M. H.P.

Kerry M. St. Pé, Program Director Barataria-Terrebonne National Estuary Program





BTNEP

NATIONAL ESTUARY PROGRAM

P. O. Box 2663, NSU N. Babinton Hall Thibodaux, LA 70310 1-800-259-0869



The Barataria-Terrebonne National Estuary Program would like to thank all those who contributed to the Spill Prevention Calendar, especially those who participated on the "Oil and Produced Water Spill Prevention Early Detection" action team.

The following agencies and companies have provided data, information or photographs for use in this calendar:

The Barataria-Terrebonne National Estuary Program (BTNEP) BTNEP Action Team Members ES&H Consulting and Training Group LOSCO - Louisiana Oil Spill Coordinator's Office/Office of the Governor Louisiana Department of Environmental Quality National Oceanic Atmospheric Administration United States Coast Guard United States Fish and Wildlife

This project was partially funded by the U.S. Environmental Protection Agency and the Louisiana Universities Marine Consortium under Grant # CE006660-02. The contents of this document do not necessarily represent the views of the U.S. Environmental Protection Agency or the Louisiana Marine Consortium nor do the contents of this document constitute the views of policy of the Barataria-Terrebonne National Estuary Program Management Conference. The information presented represents the opinions of the authors and is intended to provide background information for Management Conference deliberations in implementing the Comprehensive Conservation and Management plan. The mention of trade names or commercial products does not in any way constitute an endorsement or recommendation for use.

Lumcon

This public document was published at a total cost of \$_____.00. Five thousand copies of this public document published in this first printing at a cost of \$_____.00. The t _.00. The t Program, NSU Campus, P.O.

material was printed in accordance with standards for printing by state agencies established pursuant to La. R.S. 43:31.

Tidal Data by Tides and Currents for Windows by Nobeltec Corporation (503) 579-1414 • www.tides.com.