



Spill Prevention: *Invest Now or Pay Later*



Barataria-Terrebonne National Estuary Program

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A Publication of the





The Problem



The area of south Louisiana resembling a triangle between the Atchafalaya and Mississippi Rivers and the Gulf of Mexico has been designated the Barataria-Terrebonne National Estuary. This is an environmentally sensitive area containing extensive wetlands and serving as the home to a wide variety of fish, birds, and other wildlife.

This area of great natural beauty and rich biological resources also plays an important role in the commerce and economy of Louisiana. In addition to fishing and agriculture, the oil, chemical, and marine transportation industries have a major presence in this area. In order to preserve the vast biological

resources of this area, it is important that all who use the area exercise great care and do all that they can to prevent accidents that can cause great and permanent harm. This applies to all activities in the area, including both commercial and recreational.

Unfortunately, more and larger oil and chemical spills happen in the waters of the Barataria-Terrebonne National Estuary than in any comparable area in the United States. These spills pollute the waters and destroy plant and animal life.

Of the 24 oil spills highlighted by the Coast Guard in annual spill reports during the 6-year period from 1995 through 2000, 10 occurred within the Barataria-Terrebonne National Estuary or in adjacent waters. In other words, over 41 percent of the significant spills occurring throughout the entire United States happened within this small area. These ten spills alone total over one and two-thirds million gallons and include at least one significant spill each year.



A Lafourche Parish spill.

During the same period, four of the eleven chemical spills noted by the Coast Guard as most significant, also occurred within or adjacent to the Barataria-Terrebonne National Estuary. This was over 36 percent of the significant spills for the entire country during this period.

These major incidents had many different causes, including damage to a vessel, material failure on a production platform, overflow of a storage tank, rupturing of a pipeline, and an accidental chemical discharge from a facility. When you think of oil spills, you may think of ships, but only about one spill in eight comes from a vessel.



St. Charles Parish

Did you know....

- That the Mississippi River is the world's busiest waterway?
- That, according to 1999 statistics from the U.S. Army Corps of Engineers, 4 of the United States' 8 busiest ports (The ports of South Louisiana, New Orleans, Baton Rouge, and Plaquemines) are located on that portion of the Mississippi River adjacent to the Barataria-Terrebonne National Estuary?
- That Port Fourchon, located at the mouth of Bayou Lafourche, about midway between the Atchafalaya and Mississippi Rivers, is Louisiana's only port on the Gulf of Mexico, supporting offshore oil and gas activities throughout the Central Gulf of Mexico. It serves as a supply base for oil rigs and production platforms. Designed as a multi-use port, Port Fourchon is equipped to accommodate and service the offshore oil, commercial fishing, LOOP, seafood, shipping, tourist, and recreation industries.
- That the National Pollution Funds Center reports that nearly 20% more oil spill response funds were spent in Louisiana during fiscal years 1996-2000 than the next highest state?

The Problem

Of 56 Coast Guard units throughout the United States responsible for assigned geographic areas throughout the United States, MSO New Orleans and MSO Morgan City consistently rank at the top of the list of spill notifications received. Both units run more than double any other unit in the Coast Guard. The Barataria-Terrebonne National Estuary covers a large portion of both of these zones. A comparison of the number of notifications received by the leading Coast Guard units for the fiscal year ending September 30, 2001 is shown below.

| Coast Guard Unit Receiving Notifications | Number of Notifications |
|---|-------------------------|
| MSO Morgan City | 1802 |
| MSO New Orleans (Including MSD Baton Rouge) | 1740 |
| MSO Houston, TX | 832 |
| MSO Galveston, TX | 727 |
| MSO Port Arthur, TX | 719 |
| Activities New York | 704 |
| MSO Hampton Roads, VA | 702 |



St. Charles Parish

In order for us to protect this valuable environment, it is important that we understand and follow the steps that can be taken to prevent spills from happening, and to minimize the effects of those spills that do happen.



The Cost of Not Taking Precautions



Terrebonne Parish

If you think that you cannot afford the time and resources to prevent an oil or chemical spill, how will you find the time and resources to clean one up!

You may believe that small spills cause little harm and do not cost much to clean up. However, it is generally true that the cost per gallon to clean up a spill normally is less for a large spill than for a small spill. For this reason, the cost of cleaning up a small spill can seem very high compared to the cost of cleaning up a larger one. The cost of removal and restoration following a spill that affects the shoreline or dry land tends to be much greater than the cost of removing a similar amount of oil from the water. A spill into a river or

“Chances are that I will never have a spill, and even if I do, it probably won’t be very big, so why is it worth my time, trouble, and expense to worry about preventing a spill?”

bayou is likely to impact the shoreline resulting in increased cleanup costs. The cost to clean up relatively small spills that can happen even to a fishing boat, a small marina, or a low-volume production well can be very expensive. Just one accident can more than offset the costs of preventive measures that could have eliminated the possibility of the spill.

“My boat only has a fuel capacity of 100 gallons. Even if I lost it all, that is a small spill compared to the tank ships that sail up and down the river. How expensive could it be, even if something went terribly wrong and I lost all of my fuel?”



Note that the largest spill described below was only 210 gallons. Five of the 7 spills were less than 100 gallons. These are all spills that could be experienced by the operator of a small vessel or facility. Yet even the smallest of these spills cost the responsible company over \$5,000 to clean up. While not every single spill will cost thousands of dollars to clean up, these examples illustrate how the cost of a very small spill can easily exceed the cost of adequate prevention measures. Typical costs for shoreline cleanup range from several hundred up to several thousand dollars per barrel.

Remember that the above costs are only for the labor and equipment to conduct the cleanup. There are many other costs that result from a spill. Some of these are the cost of the lost product, the cost of lost business while operations are shut down for the cleanup, liability to others for their damages resulting from the spill, costs of repairs to the vessel or facility, administrative costs, and civil penalties assessed by federal and state agencies.

“My marina is so small that it isn’t even subject to Coast Guard regulations. A spill from a big refinery can be really expensive to clean up, but an accident at my fuel dock wouldn’t be expensive, would it?”

Consider the following examples of actual cleanup costs incurred for spills in the Barataria-Terrebonne estuary area.

- A spill of two barrels (84 gallons) cost the company \$6,094 for labor and equipment. That comes to \$72.55 per gallon. Labor costs in these examples include both the cost of the time that the company’s own personnel spent on the spill and the cost of outside personnel hired to assist in the cleanup.
- A spill of 8 gallons cost \$41,717, or more than \$5,000 per gallon.
- A third spill of 5 barrels (210 gallons) of oil cost \$29,921 to clean up (\$142.48 per gallon).
- In a fourth example, this company spent \$5,050 (\$1,683.33 per gallon) to clean up 3 gallons of oil.
- A spill of only 6/10 gallon (less than 5 pints) of oil cost the company \$8,672.
- A 3 barrel (126 gallons) spill cost \$26,683.94 (\$211.78 per gallon) to clean up.
- A 1.4 barrel (58.8 gallons) spill cost \$5,998 to clean up (\$102 per gallon).



Spill cleanup in St. Charles Parish



Terrebonne Parish

Finally, you may ask, “But doesn’t the Coast Guard come in and do the cleanup after a spill? The cost isn’t my problem, is it?” It is true that, if the responsible party does not take adequate action to clean up a spill, the federal government will take over control of spill cleanup. However, costs to the government will in turn be charged to whomever is determined to be the responsible party. These costs generally are far higher than costs of cleanup by the responsible party. Remember, regardless of whose fault a spill is, the responsible party is always the owner of the vessel or facility that was the source.

When viewed in this light, voluntary preventive measures can be a bargain in the long run. Many of the suggested measures in this booklet may be accomplished for very little cost. Many simply call for following good management practices. Others can be accomplished with very inexpensive materials, such as buckets and pans. Precautions, such as additional containment curbing on a transfer dock or additional wrapping of system connections can be accomplished at low cost.

Even more costly measures can pay off in the long run. For example, containment boom suitable for installation around a vessel during an oil transfer costs approximately \$7.50 to \$8.00 per foot. Accessories such as anchors may bring the cost to \$10.00 per foot. That brings the total cost to run 600 feet of boom from shore around a 300 foot barge, allowing room for containment of a medium-sized spill, to about \$6,000.00. A single spill of only one barrel of oil may be more expensive than this investment that, if properly stored and maintained, could last for years.

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The facility shown below was modified by extending the deck by adding cantilevers, flooring, and a 48" steel wall. The total capacity of the containment system is now capable of holding the facility's calculated worst case discharge from one of its storage tanks (210 barrels). The owner estimates that a spill of this size could cost over \$500,000 for cleanup, penalties, and restoration of natural resources. The modifications cost only \$50,000 dollars. This figure is within the range of the estimated cleanup cost of the facility's average most probable discharge of only 2.1 barrels.

What should be apparent from the examples in this section is that spill prevention measures not only help to save our environment; they can actually save large sums of money. Investing in spill prevention makes good economic sense.

**48" steel walls
for secondary
containment**



Oil Spill Prevention Measures



One method of addressing impervious decking requirements is to place existing storage tanks within a larger half tank.

*An ounce of prevention can
Save barrel\$ of cleanup.*

The next section summarizes state and federal regulations that provide standards and procedures to prevent pollution. Regulations provide only minimum standards. In addition, many regulations only apply to vessels, facilities, tanks, etc., of a certain size or capacity. In planning to operate your facility or vessel in a way that minimizes the risk of causing harm to our environment, you should not limit yourself to

only those precautions required by law. Even if the rules do not apply to you because your vessel or facility is small, those rules should still be considered as useful guidelines in order to prevent and control accidents. Remember that oil spill prevention is not only responsible behavior, it is also the law. Even oil spills from unregulated activities can result in large civil penalties and liability for cleanup costs and damages.

Besides taking measures to prevent spills from your operation, you should consider two additional stages. First, how can you keep any leaked or spilled material from getting into the water? Second, if any material does get into the water, how do you keep it from spreading out and doing damage to the environment?

Personnel

Like other types of accidents, most spills are caused, at least in part, by human error. Every possible measure should be taken to minimize this problem. Whether working on a vessel, a dock, a pipeline, or other facility handling oil or hazardous liquids, personnel should:

- Be sufficient in number
- Be physically and mentally fit and drug-free
- Have adequate rest



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- Have adequate training and sufficient experience with the products being handled, facility equipment, operating and emergency procedures, initial spill reporting and response, and federal, state, and local requirements.
- Be properly supervised
- Have written transfer procedures and FOLLOW THEM!
- During liquid cargo transfers or other operations involving more than one person, have adequate operable communications

Ships, barges, boats, and docks

Accident Prevention

The following is a list of measures that will reduce or eliminate the possibility of an oil spill. Even if a measure is not required for your vessel or facility, due to its size or capacity, you should seriously consider voluntarily following it.

- Vessels should be properly moored to prevent breakaways.
- Hoses and loading arms should be long enough, in good condition, clearly marked, and properly supported
- Unused hose and system connections should be closed or blocked.
- Close all overboard discharges, sea suction valves, drains, and scuppers on vessels.
- Maintain leak-free connections. The photograph at right shows how inexpensive materials such as plastic and duct tape can be used to provide a second line of protection at connection points in a transfer system. (Note that this technique should only be used to reinforce a sealed connection, not to repair a faulty connection.)
- Coast Guard regulated transfers require that transfer personnel complete a Declaration of Inspection. When this is not required, a written check-off list to ensure proper preparation, connections, and procedures is still a good practice.
- Check, recheck, and check again, all valves and connections throughout the transfer systems!
- Do not start transfer operations or, if already started, shut down in case of severe weather, electrical storms, wave conditions, or fire in the vicinity.



Oil Spill Prevention Measures



This is not an adequate substitute for a leak-free connection. This leak should be permanently repaired.

- Regularly test and inspect all oil handling equipment. Maintain thorough records to ensure that this is done.
- Install overflow alarms for all tanks and vessels
- Keep oil-absorbent pads in your bilge
- Oily bilge water and residues from tank cleaning must be pumped ashore to proper reception facility
- Prevent pollution from maintenance routines, e.g., painting, engine repairs, or from run-off from cleaning vessels or dock facilities. Remember that the wash water from your deck may contain oil.
- Provide security to prevent vandals or intruders from being able to enter your boat or facility, damage hoses or piping, or open valves. Remember you are responsible for a spill from your boat or facility, regardless of how it happened.
- A large facility may want to take the high-tech approach. The U.S. Navy's Space and Naval Warfare Systems Center in San Diego, CA, has developed and tested an underwater oil spill detection system. It is a computer-based optical detection system.
- For facilities with a high incidence of oil spills, additional measures are to stage skimmers at the facility and to install boom around the dock area.
- Recreational boaters should only fill fuel tanks to 90% of capacity, in order to prevent overflow.
- Boats should be equipped with fuel/air separators.
- Spud barge operators should contact Louisiana One Call (1-800-272-3020) before lowering a spud or dropping an anchor at any location within waters under the jurisdiction of the State of Louisiana, in order to avoid penetrating a submerged pipeline.



Spill Containment

If a spill or leak should occur, the following measures may help to prevent oil from reaching water or minimize the spread of the oil and damage caused by the spill. These measures can greatly simplify and reduce the cost of cleaning up a spill.

- Keep containment in place around potential spill locations and keep it drained to prevent overflow. Regulations prescribe required containment for larger vessels. When fueling smaller boats, buckets or drip



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pans should be placed under hose connection points. Sorbent pads and rings can also be used to block access of the spill to water.

- Areas of docks where oil or hazardous liquid is stored or handled, or where transfer equipment is located, should have solid decking and be surrounded by curbing to contain any discharged material and prevent it from entering water.
- Maintain means of emergency shutdown. (Should be operable and accessible, clearly marked)
- Stop transfer as soon as any spill or leak is discovered.
- Have sufficient containment, removal, and storage supplies ready for immediate use to handle small to medium size spills. Even the smallest boat or fueling facility should have sorbents, non-sparking hand scoops, shovels, and buckets, and portable containers to hold waste available in case of a spill.
- Boom area adjacent to the vessel. A boom from the shore that extends around the vessel and back to shore can contain a medium-sized spill from spreading. Although not capable of containing as large a spill, short lengths of boom between a vessel and shore, placed forward and aft of where a transfer hose crosses the water, can contain small leaks or overflows.
- Self-contained spill kits, consisting of lockers packed with all essential tools and materials for initial response to a spill are available from vendors.



Be familiar with “oil related” facilities, pipelines, and pipeline right of ways in your area.

Pipelines and Production Systems

The following measures reduce the risk of oil spills from pipelines and other oil production and handling facilities.

General Topics

- Unused/ Old Equipment should be removed from the system.
- Infrequently used equipment should be periodically tested.
- Provide durable connections. Threaded connections tend to leak over-time.
- Secondary devices such as gauges, meters, valves, etc. should be located as close as possible to the primary connection point.





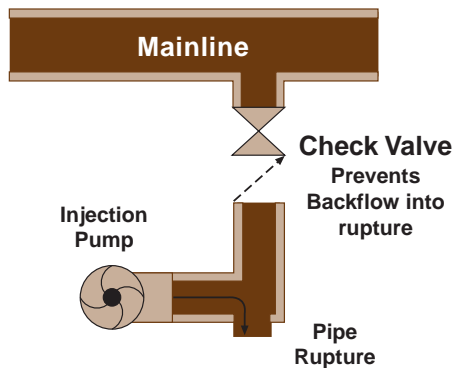
- Use valves and fittings made from corrosion-resistant materials such as stainless steel.
- Open-ended valves – should always be plugged.
- Thermo wells – should always be capped/ plugged.
- Proper support of piping is mandatory in order to minimize the effects of vibration.
- Beware of wind and rain. They can cause overflows.

Commissioning new or existing facilities

- All fittings, welds, and connections should be double checked for proper installation, tightness, pressure rating, and support.
- Tie-ins to new or existing lines should have a properly placed check valve.
- Proper fittings, isolation valves, pressure protection, gasket selection, and flange tightening can benefit the integrity of a facility.

Pump Stations and Production Facilities should have

- secondary containment or curbing around all pressurized equipment.
- impervious decking.
- pumps, tanks, etc., located where a liquid failure can be contained.
- splash shields will help if failure occurs.
- storage drum secondary containment.



Secondary pipe and tubing should be

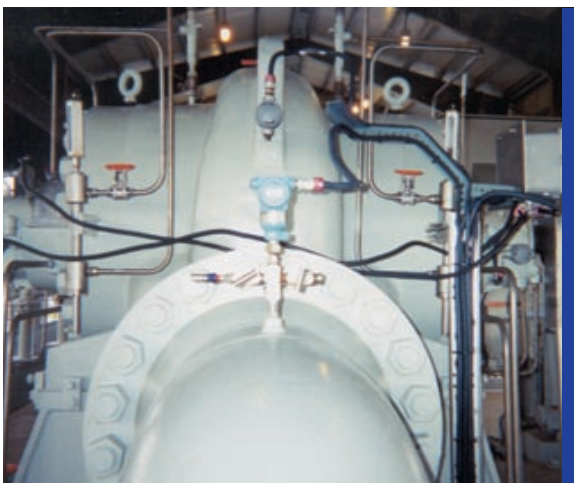
- as short and simple as possible.
- have the minimum amount of fittings.
- evaluated for appropriate material: Stainless Tubing vs. Hard pipe.
- double checked-Pressure Tested after installation.
- properly supported to prevent stress and vibration.
- of the same compatibility, type, style, and material.

Drain systems

- Gravity and pressurized drains should be separated.
- Drain systems should be flushed periodically to prevent internal corrosion.
- Low spots can be identified as water traps and corrosion points.

Sumps (because they can overflow) should

- have remote level monitoring.
- have local visual monitoring.
- have strainers on the inlet.
- be cleaned and inspected periodically.
- have high level alarm and shutdown.



Storage tanks should

- be constructed of corrosion resistant materials.
- have lightning protection.
- have overflow alarms.
- maintain physical integrity.
- have a leak detection system.
- have written procedures for maintenance and inspection.
- have secondary containment with greater capacity than largest tank.
- have an SPCC Plan.
- have adequate lighting.
- have a high level shutdown system.
- undergo routine visual inspections for leaks.
- be surrounded by impervious decking if located over water.

Other

- corrosion protection system installed
- ultrasound testing for pipe integrity
- semiannual inspection of valves, piping, and coatings
- computerized operational control reduces incidence of human error
- identification of “oil related” facilities, pipelines, and pipeline right of ways in your area
- report of unusual activity around facilities, pipelines, and right of ways
- report of any unusual sights, sounds, or smells
- Pipeline operators should plot and register locations of all pipelines, either buried under any land or submerged under any waters within the jurisdiction of the State of Louisiana, with Louisiana One Call.
- Before you dig or perform any excavation or ground penetration within the State of Louisiana, place a phone call to Louisiana One - Call (1-800-272-3020). This is the law and a free service!



Applicable Regulations



It is against the law for oil in any quantity “which may be harmful” to be discharged into the navigable waters of the United States. The law also requires that these spills be reported immediately to the Coast Guard. The Environmental Protection Agency’s definition of a quantity “which may be harmful” includes virtually any amount of oil. If there is enough oil to cause a film or sheen or discoloration of the surface of the water, EPA has determined that is a quantity “which may be harmful.” Try putting a single drop of oil in a bucket of water to see how

little it takes to create a sheen. No matter who causes a spill or how it happens, the owner or operator of any vessel or facility from which the oil discharge occurs may be liable for a Federal civil penalty of up to \$11,000 per day. “Navigable waters” is also broadly defined. It does not have to be navigable where the spill originates, as long as the water has the potential to reach a navigable waterway. Thus, even water that may run off a field into a ditch that flows to a drainage canal that connects to a river is considered navigable.

Several federal agencies have issued regulations aimed at the goal of preventing pollution from oil and hazardous materials. In addition, the Louisiana Department of Environmental Quality has issued similar regulations. These regulations provide minimum standards to be followed by anyone handling or storing potential pollutants.

COAST GUARD

The Coast Guard regulates **facilities** that are capable of transferring oil or hazardous liquids in bulk to or from a vessel with a total capacity of 250 barrels or more (10,500 gallons). These regulations do not only apply to fuel and cargo transfer docks, they also apply to **tank trucks** that conduct transfers to or from vessels.

These regulations contain requirements for transfer equipment, including hoses, loading arms, closure devices, and monitoring devices. These regulations also set standards for containment and removal of spills. The Coast Guard also issues rules for facility operations including qualification of persons in charge of transfers and facility safety requirements. The regulations also require a written spill response plan for oil transfer facilities and tell what must be included in the plan.

Ports and terminals used by certain large ships carrying oily waste must have suitable reception facilities for the waste that visiting ships wish to offload, and a Certificate of Adequacy to handle anticipated wastes.

If you own or operate a ship, boat, or barge of any type or size, the Coast Guard has published many regulations that you must know and follow. There are rules for both commercial vessels and for pleasure craft. These rules affect vessel design, equipment, and operation.

The transfer regulations discussed above for facility operators also apply to transfer of oil or hazardous liquids to, from, or within vessels with a capacity of 250 barrels or more. In other words, both facilities and vessels must comply with these transfer regulations.

Certain vessels must also have oil spill response plans.



U.S. DEPARTMENT OF TRANSPORTATION



Owners and operators of **pipelines** transporting oil and hazardous materials must know and follow regulations published by the U.S. Department of Transportation, Research and Special Programs Administration, Office of Pipeline Safety. These regulations provide standards for reporting accidents and safety-related conditions, design requirements, construction standards, pressure testing, and operations and maintenance

In addition, pipelines that transport oil are required to have an oil spill response plan.

U.S. ENVIRONMENTAL PROTECTION AGENCY



Owners and operators of non-transportation-related facilities such as production facilities, refineries/chemical plants, tank farms, and above-ground storage tanks (ASTs) should know and follow the pollution prevention rules published by the U.S. Environmental Protection Agency (EPA).

Facilities covered by these regulations must prepare a Spill Prevention Control and Countermeasure Plan that includes provisions for spill prevention and containment, discharge collection systems and drainage, and transfer and loading systems and procedures. Like operators of vessels, dock facilities, and pipelines, operators of these facilities must prepare a facility response plan.

Owners and operators of underground storage tanks (USTs) must know and follow regulations concerning design, construction, and installation standards, requirements to notify appropriate state agencies, general operating requirements, and spill detection, reporting, and response procedures.

LOUISIANA DEPARTMENT OF ENVIRONMENTAL QUALITY

Louisiana DEQ has published regulations that detail state notification requirements and procedures for unauthorized discharges and releases (spills). Spills of more than one barrel must be reported to the state.

Other regulations prescribe procedures and guidelines for the state discharge permitting system. These regulations require permits for facilities that may discharge pollutants to state waters. These permits impose monitoring requirements for these discharges.

LADEQ requires regular inspections of all tanks, separators, production, and transfer equipment and annual integrity testing of flow lines.

Specific design and equipment requirements include pollution containment devices for work-over and drilling barges, impervious decking for tanks and equipment over water or wetlands and valves that are kept closed except under supervised discharge for drains from diked areas, and means of preventing any spill of produced water.

In addition to the federal prevention and response plans previously described, the state requires preparation and implementation of a Spill Prevention and Control (SPC) Plan for certain facilities handling oil of any kind and all substances listed in the state notification regulations. The plan should provide a complete discussion of the facility drainage, events of human error, restricting unauthorized entry, locking and tagging of valves, facility lighting, personnel training, operator responsibility, designated responsible person, and pipeline design and maintenance requirements, and specific criteria for tank car and truck loading areas, etc.

In case of a spill, the state requires provisions for rapid deployment of containment boom and clean-up equipment.

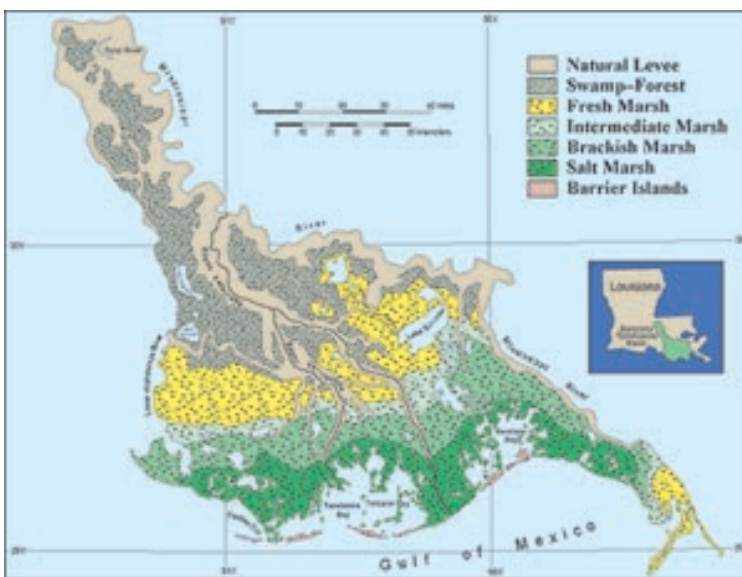


What Is BTNEP? How Can You Help?



Stretching across 4.2 million acres between the mighty Mississippi River and the great Atchafalaya Swamp is Louisiana's national estuary: Barataria-Terrebonne. More than three quarters of the region is classified as open water or wetlands, leaving more than 50,000 acres for urban and agricultural uses. The Barataria-Terrebonne system comprises all or parts of fifteen parishes, extending from the town of Morganza in the north, to Grand Isle in the south.

The Barataria-Terrebonne National Estuary Program (BTNEP) is a partnership. The Barataria-Terrebonne Partnership includes all of the stakeholders of the Barataria-Terrebonne estuary including landowners, residents, local businesses, fishers, farmers, scientists, natural resource managers, local government officials, and environmental organizations. Without the participation and contributions of such Partners, BTNEP would not function or exist. The BTNEP Management Conference is a body of actively involved Partners that direct the Program's activities. A small, dedicated staff in the Program Office, located in Thibodaux, conducts the day-to-day activities of BTNEP.



This novel partnership was formed in 1990. Its goal was to conduct a comprehensive study of the environmental problems facing the Barataria-Terrebonne estuary and develop community-supported solutions to these problems into a Comprehensive Conservation and Management Plan (CCMP). The Management Conference identified seven priority problems confronting the estuary. The priority problems can be categorized into three broad environmental issues:

- Wetland loss;
- Water quality problems; and
- Fish and wildlife issues.



The Management Conference developed 51 separate Action Plans within the CCMP to address the Priority Problems; together these Action Plans include components from four “pathways” recognized by the Management Conference to address the estuary’s Priority Problems:

- Better coordinate environmental planning efforts;
- Protect and restore ecological resources;
- Involve and educate the estuary’s citizens; and
- Promote sustainable economic growth.

In 1996, The Management Conference selected 21 of 51 Action Plans in the CCMP for priority implementation. The implementation priority of these 21 action Plans was determined by a wide range of factors, such as being a catalyst action, having current political or public support, or coordinating well with other natural resource management efforts. While the Program Office and Management Conference have concentrated their resources on implementing the 21 priority Action Plans, it is BTNEP policy to encourage and actively support implementation of all 51 Action Plans, whenever opportunities present themselves.

What is BTNEP? How Can You Help?

This booklet describes a number of measures, some significant, some simple and inexpensive, that can be taken to reduce the amount of oil and chemicals spilled into the waters of the estuary. Most oil and chemical discharges are preventable. Whether you are a commercial or recreational fisherman, a farmer, a vessel operator, a dock facility operator, an industrial user, or have some other presence in the region, your taking the applicable measures described in this booklet can help preserve the centuries-old legacy of the estuary for centuries to come. Review your practices, inventory and inspect your equipment, get proper training for yourself and others who play any role in the handling or transporting of oil and chemicals, and encourage others to take measures that will prevent the fouling of our waters with oil and chemicals. Working together, we can greatly reduce the threat that these substances pose to our environment.

***Remember – Invest now or
pay more later!***



Helpful Resources for Spill Prevention

FEDERAL REGULATIONS

- Title 33 CFR Part 127 – Waterfront Facilities Handling Liquefied Natural Gas and Liquefied Hazardous Gas
- Title 33 CFR Part 154 – Facilities Transferring Oil or Hazardous material in Bulk
- Title 33 CFR Part 155 – Oil or Hazardous Material Pollution Prevention Regulations for Vessels
- Title 33 CFR Part 156 – Oil and Hazardous Material Transfer Operations
- Title 40 CFR Part 112 – Oil Pollution Prevention
- Title 40 CFR Part 280 – Technical Standards and Corrective Action Requirements for Owners and Operators of Underground Storage Tanks (UST)
- Title 49 CFR Part 194 – Response Plans for Onshore Oil Pipelines
- Title 49 CFR Part 195 – Transportation of Hazardous Liquids By Pipeline

STATE REGULATIONS

- LAC 33: Part I, Chapter 39 -- Notification Regulations and Procedures for Unauthorized Discharges
- LAC 33: Part IX, Chapter 7 – Effluent Standards
- LAC 33: Part IX, Chapter 9 – Spill Prevention and Control

USEFUL WEBSITES

- Barataria-Terrebonne National Estuary Program – www.btnep.org
- Louisiana Administrative Code -- <http://www.state.la.us/osr/lac/lactitle.htm>
- LAC33:Part I -- <http://www.state.la.us/osr/lac/33v01/33v01.pdf>
- LAC33:Part IX -- <http://www.state.la.us/osr/lac/33v09/33v09.pdf>
- United States Code of Federal Regulations -- <http://www.access.gpo.gov/nara/cfr/index.html>
- Louisiana Department of Environmental Quality – <http://www.deq.state.la.us/>
- United States Department of Transportation, Office of Pipeline Safety – <http://www.ops.dot.gov/>
- United States Environmental Protection Agency -- <http://www.epa.gov/>
- Pollution Prevention -- <http://www.epa.gov/ehtpages/pollutionprevention.html>
- Region VI -- <http://www.epa.gov/earth1r6/index.htm>
- United States Coast Guard -- <http://www.uscg.mil/>
- Marine Safety and Environmental Protection -- <http://www.uscg.mil/hq/g-m/gmhome.htm>
- Office of Response -- <http://www.uscg.mil/hq/g-m/mor/index.htm>
- Marine Safety Office Morgan City -- <http://www.uscg.mil/d8/mso/morgancity/>
- Marine Safety Office New Orleans -- <http://www.uscg.mil/d8/mso/nola/>

OTHER GUIDANCE ON SPILL PREVENTION

- Release Prevention Guidelines, Shell Pipeline Co. LP (1-888-325-LEAK) -- prevention@shellopus.com



Barataria-Terrebonne
NATIONAL ESTUARY PROGRAM



P.O. Box 2663

Nicholls State University

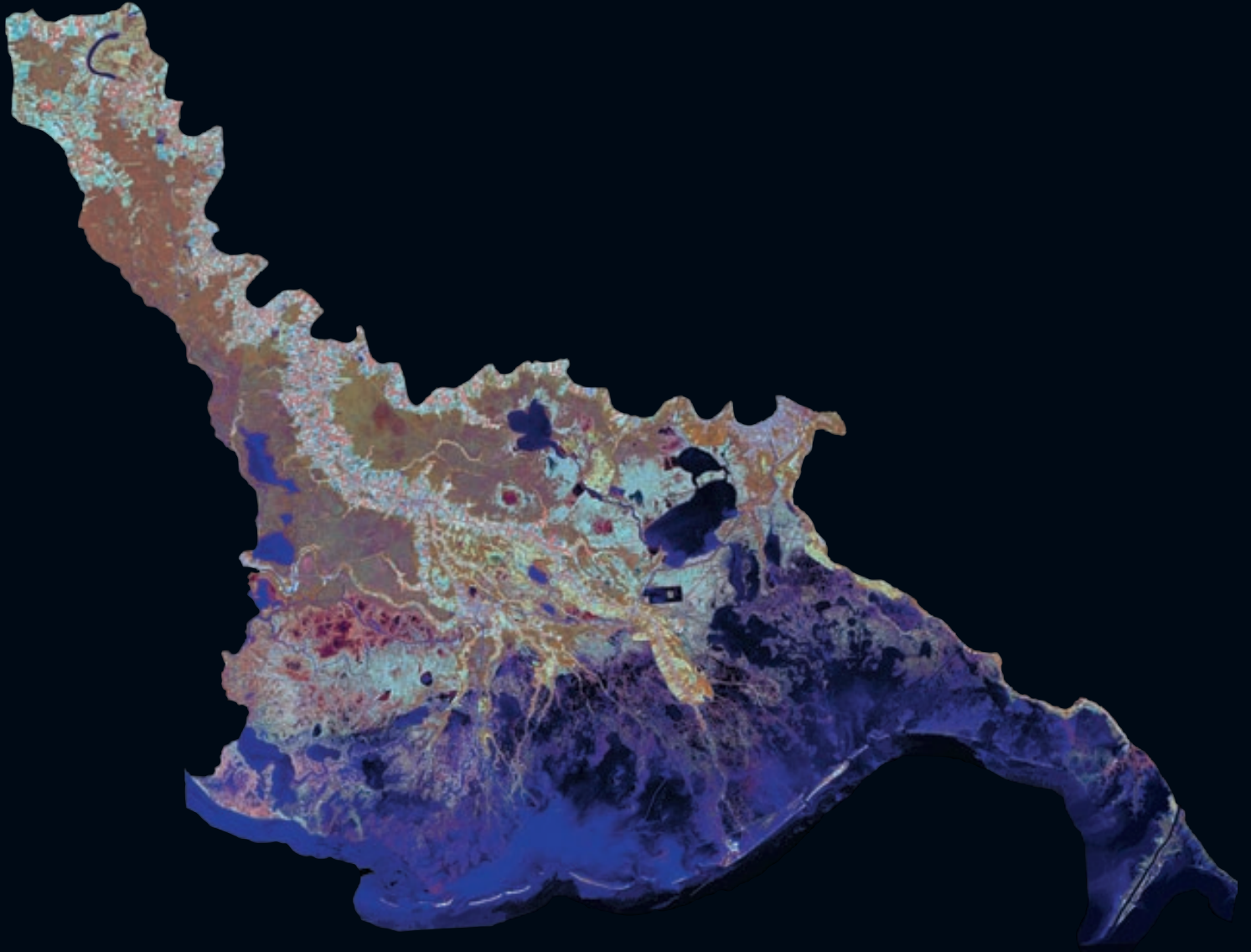
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