

OIL SPILL CONTINGENCY PLAN
FOR
ARMAND BAYOU NATURE CENTER AND
COASTAL PRESERVE
HARRIS COUNTY, TEXAS

By
Maren Harding
Oil Spill Response Officer

Plan approved by CTCAC and
Mark Kramer ABNC, March 6, 2008

Texas General Land Office Oil Spill
Prevention and Response Program
LaPorte, Texas

March 2008

OIL SPILL CONTINGENCY PLAN
Table of Contents

1.0 Intent

2.0 Background

3.0 Response Plan

 3.1 Initial Discovery

 3.2 Person In Charge

 3.3 Notifications

 3.4 Chain Of Command

 3.5 Initial Assessment

 3.6 Pre-Planned Boom Deployment for Discharge Scenarios

 3.7 Alternative Response Strategies

4.0 Additional Information about ABNC

5.0 Appendices

 5.1 Appendix I. Initial Notification Flowchart for ABNC Personnel

 5.2 Appendix II. Notification Quick Reference Guide for ABNC Personnel

1.0 INTENT

This plan is intended to serve as recommended first responder guide to an emergency oil spill response event should such a spill threaten Armand Bayou Nature Center lands and/or wildlife located in the Clear Lake area (29° 35' 45.13" N, 95° 4' 18.50" W).

Historical Response data indicates that it may take several hours before professional oil spill responders and cleanup crews arrive, emergency efforts of nature center personnel will play a key role in minimizing impacts to nature center lands and/or wildlife resources. The primary goal in an emergency response will be to minimize impacts on coastal resources while protecting nature center personnel and visitors.

This plan pertains to spills of petroleum products only. Because of the threat to human health involved in responding to hazardous substance spills, only trained personnel will handle such spills. Since the major pipeline crossings carry petroleum products, haz mat spills are far less likely. Therefore this plan will place emphasis on oil spill response.

2.0 BACKGROUND

Armand Bayou is the largest urban wilderness preserve in the United States encompassing approximately 2500 acres. The nature center was created in 1974 and continues to operate as a non-profit organization dedicated to preserving natural habitats and allowing the public to experience these disappearing habitats. The property encompassed by the preserve was once owned by an oil company and thus has pipeline corridors that cross through the area. <http://www.abnc.org/>

In 1996 the Texas General Land Office (TGLO) in coordination with the U.S. Environmental Protection Agency (USEPA) and Texas Parks and Wildlife Department (TPWD) declared 300 acres of the submerged lands in Armand Bayou a Coastal Preserve. Management of the submerged lands is coordinated through TPWD and TGLO. TPWD in cooperation with USEPA and Galveston Bay National Estuary Program developed a management plan for Armand Bayou that focuses on environmental protection, water quality, and habitat mitigation. To date there are 16 identified marsh-planting sites in Armand Bayou and its tributaries.

The management plan created by TPWD and USEPA states that plans for protection during an acute pollution event should be coordinated with TGLO and Texas Commission on Environmental Quality (TCEQ). This plan will focus on protecting the identified coastal marsh plantings during a petroleum based spill event.

3.0 RESPONSE PLAN

3.1 INITIAL DISCOVERY

- Identify the source (safely)
- Notify person in charge of ABNC
- Notify other employees of the incident, evacuate if necessary
- Initiate emergency medical services if necessary
- Remove all ignition sources, if can be done safely
- Secure the scene/vacate nature center (if necessary)/close front gate

3.2 PERSON IN CHARGE

- Ensure all personnel are accounted for
- Notify Board of Trustees
- Notify outside agencies and organizations and potential pollution owners
- Ensure all safety procedures are followed until emergency responder arrive
- Assess character, source, amount, and extent of spill, if can be done safely

3.3 NOTIFICATIONS

An employee who discovers a spill should immediately notify the person in charge (see 5.1 Appendix I) . The person in charge will immediately implement the notification procedures outlined in the One Gulf Plan (Section 1500) and Sector Houston-Galveston Geographic Response Plan (GRP Sections 9100 and 9200).

<http://www.glo.state.tx.us/oilspill/Atlas/atlas/acp/houston/houstontoc.pdf>

<http://www.nrc.uscg.mil/nrchp.html>

All Federal and State Notification Numbers are listed in GRP sections 9100 and 9200; as well as all local Fire, EMS, OEM, LEPC and medical center numbers.

3.4 CHAIN OF COMMAND

A Unified Command System will be established with the TGLO, USCG and RP in the event of an oil spill as per Area Contingency Plan (ACP). The person in charge at the Nature Center should be prepared to brief the incident commander once on-site.

Information should include:

- When was the spill spotted (what time and where)?
- Who spotted it?
- About how big an area does it cover?
- What areas/wildlife are impacted?
- What has been done thus far?

3.5 INITIAL ASSESSMENT

Upon discovery of a discharge in the Nature Center boundaries the person in charge will take all actions necessary to ensure personal and personnel safety. If appropriate, the person in charge should ensure Nature Center personnel and visitors leave the

area immediately and muster at the Visitors Center. Person in charge should wait for Emergency Responders for further instruction.

Once they arrive on scene, Emergency Responders should take actions to control the source and prevent further discharges, assess the situation and, based on the information gathered, initiate an appropriate response in accordance with ACP. The responders should follow NIMS protocol for command structure and incident documentation. <http://www.glo.state.tx.us/oilspill/Atlas/masterpage.pdf> (Incident Command System link)

3.6 PRE-PLANNED BOOM DEPLOYMENT FOR DISCHARGE SCENARIOS

The following are recommended booming strategies that should be employed in the event that an oil spill is discovered by or reported to the Nature Center. The three most likely spill scenarios are covered in the response sequence. These three scenarios are:

- A. A spill from the northernmost pipeline crossing on a northerly wind event.
- B. A spill from the northernmost pipeline crossing on a southerly wind event.
- C. A spill threatening to enter or entering Armand Bayou from Clear Lake.

The Site Specific Response Sheet for this area is League City and may be accessed from the following web address.

<http://www.glo.state.tx.us/oilspill/Atlas/atlas/siteplans/houston/houstonindex.pdf>

A. Northern most pipeline crossing on north wind. This is by far the worst scenario for this habitat. This scenario would have the potential to impact many acres of marsh planting and depending on tides many acres of tidal flats. Horsepen Bayou is a major concern in this scenario. The upper reaches of Horsepen Bayou go through University of Houston Clear Lake and a subdivision ending near Ellington Air Field. Booming for this scenario is recommended as:

1. Boom both ends of slick. Try to cut off southerly movement before opening of Mud Lake.
2. If not yet in Horsepen Bayou boom according to 35H (Site Specific Plans).
3. Boom 35D if not already impacted.
4. Survey 35C, E, F, and G and boom if necessary and not already impacted.

B. Northern most pipeline crossing on south wind. This scenario is the most likely scenario for this area; ABNC personnel should be contacted for current planting sites north of the Bay Area Blvd. Bridge. There are marshy areas that would need to be protected. Due to shallow water and low water crossing at Bay Area Blvd only johnboats can navigate north of the bridge. Tributaries of Armand Bayou cross Red Bluff Road at two locations north of Bay Area Blvd. Booming for this scenario is recommended as:

1. Boom both ends of slick. Try to prevent oil from migrating past 35A as there are many canals past this point with very shallow water.
2. Boom at 35A and 35B to prevent further oil flow to the north.
3. Survey 35 C, D and E and boom if necessary and not already impacted.

C. Threatening to enter or entering Armand Bayou from Clear Lake. This scenario is likely due to normal wind conditions and locations of fueling docks in Clear Lake. This scenario, if contained before the entrance to the Bayou, should be easily avoided. If a spill enters Armand Bayou on a south wind the likely natural collection point is an extensive marsh planting. This and other plantings in the area would need to be protected. Booming for this scenario is recommended as:

1. Boom off at 35O to prevent oil from entering Bayou.
2. Try to prevent oil from passing north end of Mud Lake.
3. Survey 35N, M, and L and boom if necessary and not already impacted.

3.7 ALTERNATIVE RESPONSE STRATEGIES

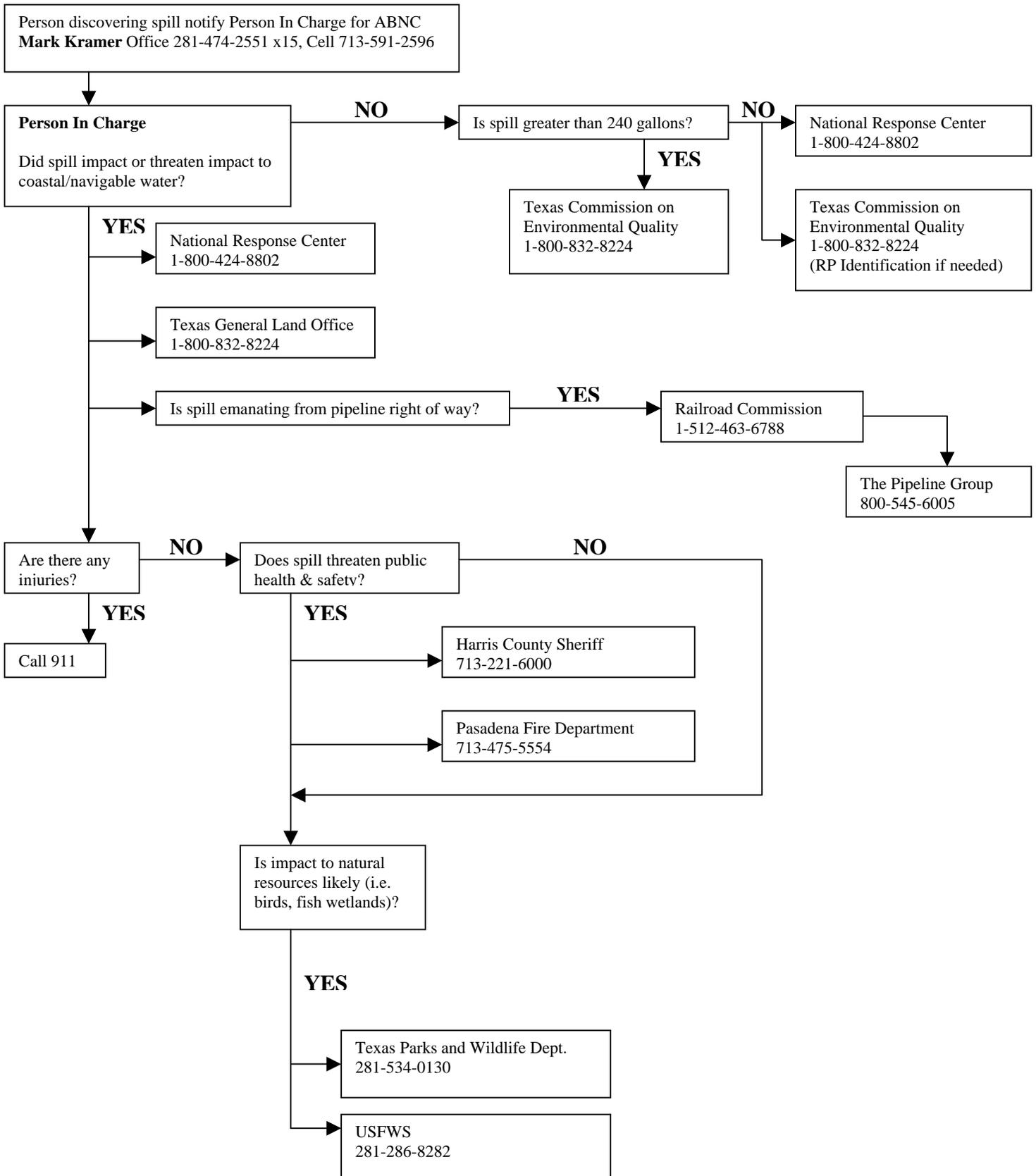
As per the ACP all alternative response strategies must be approved through Joint Incident Command and Regional Response Team IV. For more information on alternative techniques please refer to One Gulf Plan Sections 3260, 3270 and 3280 <http://www.glo.state.tx.us/oilspill/Atlas/atlas/acp/houston/houstontoc.pdf> or TGLO Toolkit under Regional Response Team IV. <http://www.glo.state.tx.us/oilspill/Atlas/masterpage.pdf>

4.0 ADDITIONAL INFORMATION

Armand Bayou is a relatively shallow estuarine system. During high tides water depth can reach 3-4' in the flats and 8-10' in the natural deep-water channel. During low tides there can be extensive mud flats with 4-6' water in the deep-water channel. These conditions require either an airboat or small johnboat for operational functions. Gasoline engines are allowed in this area ONLY for emergency response. Local knowledge on the water would be of importance as the natural channel meanders throughout the bayou and is not marked. Multiple boat ramps and surrounding developments make this area accessible. Access points and potential staging areas are outlined on the boom strategy maps. Due to the urban environment there are no difficulties foreseen with logistics and communication. This area is a Nature Center and Coastal Preserve and as such poses safety threats to responders. Snakes, alligators, mosquitoes and other environmental threats need to be taken into consideration during a spill event.

This is a dynamic document and is intended to be updated when appropriate.

5.1 APPENDIX I-INITIAL NOTIFICATION FLOWCHART FOR ABNC PERSONNEL



5.2 APPENDIX II

NOTIFICATION QUICK REFERENCE GUIDE FOR ABNC PERSONNEL

Internal Notification

- Mark Kramer ABNC - **Office 281-474-2551 x15 Cell 713-591-2596**

Federal Agency Notification

- National Response Center - **800-424-8802**
- United States Coast Guard Sector Houston - **713-671-5100**
- United States Fish and Wildlife Service (USFW) - **281-286-8282**

State Agency Notification

- State of Texas Emergency Spill Reporting Hotline - **800-832-8224**
- Texas General Land Office Region 2- La Porte 24hr - **800-832-8224**
Office - **281-470-6597**
- Texas Commission on Environmental Quality Local - **713-767-3563**
- Railroad Commission 24 Hour - **713-869-5001**
- Texas Parks and Wildlife Department - Austin 24 Hour - **512-389-4848**
Dickinson Office - **281-534-0130**

Local Government Notification

- City of Pasadena Office of Emergency Management - **713- 477-1511**
- City of El Lago Office of Emergency Management - **291-326-2658**

Other Organization Notification

- Ambulance – **911**
- Christus St. John Hospital, Nassau Bay – **281-333-4211**
- Pasadena Fire Department – **713-475-5554**
- Harris County Sheriff's Department - **713-221-6000**
- Harris County Parks Department - Earl Ehlers Mgr. Phone – **281-326-6539**
- Harris County Pollution Control - **713-920-2831**
- Harris County Office of Emergency Management – **713-881-3100**
- Texas Department of Public Safety – Austin - **512-424-2000**

Potential Pipeline Operators

- The Pipeline Group - **800-545-6005**
- Exxon Pipeline - **800-537-5200**
- Genesis Pipeline - **800-806-5463**
- Shell Pipeline Company - **800-922-3459**
- Air Liquide - **800-364-7368**
- Conoco Phillips – **877-267-2290**
- Enterprise Products Operations - **800-546-3482**
- Air Products – **800-523-9374**