

# Bolivar Flats Protection Plan

A joint venture between:

Houston Audubon Society and Texas General Land Office

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## Table of Contents

1.0 Introduction .....	3
2.0 Overview/Response .....	4
2.1 Planned Response Actions .....	4
2.2 Chain of Command.....	5
2.3 Communication.....	6
2.4 Federal, State and Local Government Notification Procedures .....	6
2.5 Strategies/Methods for Mechanical Recovery .....	6
2.6 Non-Mechanical Response Options.....	7
2.7 Strategies/Methods for Storage .....	7
2.8 Strategies/Methods for oil/water/debris separation .....	7
2.9 Strategies/Methods for Transportation.....	7
2.10 Strategies/Methods for Wildlife Protection and Rehabilitation.....	7
2.11 Trajectory/Current Information.....	8
2.12 Protection Plans for Environmentally Sensitive Areas.....	8
2.13 Plans for Providing Medical Services .....	9
2.14 Site Safety Plan.....	9
3.0 Equipment Inventory and Information .....	9
Appendix I Houston Audubon Society Internal Notification List .....	10
Appendix II Resources at Risk Summary .....	11
Appendix III Booming Strategy for Bolivar Flats .....	12
Appendix IV Discharge Cleanup Organizations Contact List .....	14

## 1.0 Introduction

Bolivar Flats Shorebird Sanctuary on the eastern end of Bolivar Peninsula in Galveston County began with agreements with the General Land Office and Galveston County in the late 1980s that allowed Houston Audubon Society (HAS) to establish the sanctuary and close the beach to automobiles. The 1,146.35 acres that make up the sanctuary today were acquired in a number of transactions. The first acquisition was the purchase of 178 acres (Suderman Tract, 1997), followed by a donation of a 4/5 undivided interest in a tract of land from Houston businessman Lewis Tyra, given with the restriction that it be used as a wildlife sanctuary. A partition agreement with Mr. Tyra and the owners of the 1/5 undivided interest in 2002 led to full HAS ownership of the present 353.35-acre Tyra Tract. In 2001 a major addition to the Bolivar Flats Shorebird Sanctuary was made with the purchase by HAS of 615 acres (the Jetty Tract) through the U.S. Bankruptcy Court. A major fundraising effort led to support for that purchase from National Fish and Wildlife Foundation, Shell Marine, Houston Endowment, and hundreds of individual donors. Efforts to acquire further small adjacent tracts have continued. This sanctuary is recognized as a site of hemispheric importance by the Western Hemisphere Shorebird Reserve Network and as an Important Bird Area of national importance by National Audubon Society and Birdlife International (Houston Audubon Society, 2010).

## 2.0 Overview/Response

- Winnie Burkett and HAS are very proactive and willing to be a part of the team during an oil spill event.
- Remember the boat cut on the north jetty, it is 25' wide according to chart [11324](#).
- Depending on conditions, vehicles and equipment could get stuck or lost in the mud flats.
- If Bolivar Peninsula is threatened hotels can be secured in Galveston, Winnie or High Island as all hotels big enough to support a command center are currently destroyed post Ike. County buildings or school buildings could be an alternative depending on size of event and time of year.
- Strong winds and full moon cycles influence the flats tremendously.
- Checking the "Alvenus" and "Buffalo 292" impacts on this area would be a good step in understanding impact potential.
- Add others as we learn.

### Priority Issues:

1. Keep oil off the mud flats and out of the marsh.
2. Keep oil off the beach adjacent to the flats.
3. Keep birds out of oiled areas.

### Expectations:

1. That HAS be communicated promptly and frequently.
2. That HAS volunteers be used if possible.

The distance between Bolivar Flats and the jetty ranges from 900'-2100'. The distance along the beach face is 4,500'. These are approximate numbers for planning purposes. The equipment recommendations are based on the following assumptions:

### Boom:

- 1000' of shoreline barrier type boom – 2 ea. 500' packages
- 6500' of 8" containment boom – 13 ea. 500' packages

### Related equipment:

- Anchor Buoy Systems (Includes line, floats, quick-connects, t-posts)
- Boom Marker Lights
- Shallow water vessels or air boats
- Sorbent Material (Natural and Synthetic)

## 2.1 Planned Response Actions

HAS will utilize the following process to conduct internal notifications in the event of a spill. Call: HAS Staff and Board of Directors (Appendix I).

After the above calls have been made the flats manager will contact the GLO La Porte Field Office to discuss the situation. After said discussion flats manager will contact the membership organizer and begin to disseminate the information to all members who have expressed an interest in being an oil spill volunteer at Bolivar Flats.

HAS will keep a current list of volunteers that can be contacted in the event of an incident that will threaten the sanctuary. Information on that list should include: name, address, number, times/days of week available to volunteer, and name of insurance carrier as this is the minimum information that will be required from the Unified Command.

The phone call with the GLO should address the following:

- \_ Incident summary
- \_ Need/desire for HAS volunteers
- \_ Potential safety issues
- \_ Potential travel route to the site (Has ferry service been suspended?)
- \_ Establishment of meeting site for HAS volunteers
- \_ Evaluate boat cut impact in the jetty
- \_ Evaluate potential overall impact, discuss current conditions/ bird populations present
- \_ Discuss HAS and agency perspective on the need for volunteer assistance with incident
- \_ Establish an information update mechanism (within HAS org?)

The membership organizer will put together a list of people who would like to be involved in the situation and work with the flats manager to organize the process.

Note: Any activity relating to an active incident **MUST BE** coordinated with the Federal on-scene Coordinator (FOSC), State on-scene Coordinator (SOSC), and Responsible Party (RP). This will limit any confusion.

## 2.2 Chain of Command

The Incident Command System is the system utilized for organizing response efforts during emergencies. The system provides standard terminology and methodology which allows for effective multijurisdictional interface. The below chart is an example of how the functional areas are organized.



HAS members should have an understanding of the IC system and the Unified Command process. They would most likely fit into the planning, logistics and operations sections depending on their assigned duties.

## 2.3 Communication

A smooth working communication system cannot be overemphasized. A single point of contact will be established for HAS for each incident. This person will be the only person notified of an incident that may impact the sanctuary by outside agencies. Once an event has occurred and a Unified Command has been established, HAS will coordinate with the appointed incident Liaison Officer.

## 2.4 Federal, State and Local Government Notification Procedures

If a spill is spotted in or around Bolivar Flats notify:

National Response Center      1-800-424-8802

Texas General Land Office      1-800-832-8224

Fire, Police, Medical, LEPC      911

## 2.5 Strategies/Methods for Mechanical Recovery

- The closest cleanup contractor to the sanctuary is T&T Marine in Galveston. Due to transit times across the ferry contractors from Beaumont may provide quicker response times: Miller Environmental, Garner Environmental or Oil Mop.
- Vacuum truck services are available at: H&H Vacuum Winnie, TX.
- There is no longer a GLO spill trailer on Bolivar Peninsula.
- Area access:
  - The closest boat ramp to Bolivar Flats is the ramp on the south side of the north jetty. A boat can not be launched here post Ike. The best option is to run a boat across from Galveston Yacht Basin or utilize the boat ramp on 23<sup>rd</sup> street in Port Bolivar off of the ICWW and then out to the boat cut in the north jetty. The water north of the jetty is very shallow. The mud flats, beach and marsh to the left of the boat cut is Bolivar Flats.

- Beach will normally support vehicle traffic. Pay particular attention after periods of very high tides.

## **2.6 Non-Mechanical Response Options**

Methods for marsh cleanup would have to be determined at the time of the incident. For example: if the marsh was dry, in-situ burning would be inappropriate as it would kill vegetation and force oil down into the soil. Contact State and Federal Scientific support for comment on best response options for habitats effected.

## **2.7 Strategies/Methods for Storage**

HAS believes that decanting water back into a boomed area would probably be acceptable depending on the product that was spilled and the percent that might be dissolved in the decant water. Post Hurricane Ike there is not an abundance of storage on Bolivar Peninsula. Storage in the area would need to be identified as it is rebuilt and verified as in service.

Note: Most of the year beaches adjacent to the sanctuary are hard packed and drivable. A staging area could be set up at the end of Rettilon Road where it meets the beach or somewhere on the beach closer to the area being cleaned.

## **2.8 Strategies/Methods for oil/water/debris separation**

Once debris contacts oil, it many times needs to be classified as a hazardous material and more complicated disposal is required. HAS would be willing to participate in a volunteer program to remove debris prior to oil arrival to minimize oily debris.

## **2.9 Strategies/Methods for Transportation**

Directions to Bolivar Flats

- From Winnie take Route 124 South to High Island and turn right on Route 87. Go to Rettilon Road which is across from the north end of Loop 108 and turn left on Rettilon Road. Drive to the beach, turn right and proceed to the vehicular barrier.
- From Galveston take the Bolivar Ferry and drive approximately 3.7 mile to Rettilon Road and turn right. Drive to the beach, turn right and proceed to the vehicular barrier.

Getting response equipment on/off the peninsula can be cumbersome if utilizing the ferries. As of May 2010: John Boats can have 2 fuel tanks per boat, there can be no external gas cans of any kind for equipment, vacuum trucks have to be certified gas free, and no hazardous waste transportation can occur across ferries. This must be taken into account when planning response operations.

## **2.10 Strategies/Methods for Wildlife Protection and Rehabilitation**

- Least Terns and Wilson's Plovers nest on the beach and in dry pans in the marsh from April to August.
- Clapper Rails, Willet, Red-Winged Blackbirds and Seaside Sparrows, nest in the marsh from March to August.

- Piping Plovers will be found roosting on the beach during high and low tide and feeding out on the mud flats during low tide.
- All other birds will be found roosting on the beach or in the marsh and feeding on the mud flats or in the marsh at low tide (Appendix II).

\*HAS is willing to provide personnel for manual hazing until propane scare cannons arrive.

**Important Note:** Federal and State Laws are very specific when it comes to dealing with wildlife, especially rare, threatened, endangered or migratory birds. Contact NOAA, USFWS, or TPW for specific information. Permits are often necessary when dealing with this subject.

## 2.11 Trajectory/Current Information

Bolivar Flats was created by the building of the north jetty at the mouth of Galveston Bay. The longshore currents in this part of the Gulf of Mexico flow south. The jetty stops the longshore currents causing it to drop sediment and trash on Bolivar Flats.

The waters adjacent to Bolivar Flats are very shallow and current direction can rapidly be changed by changes in wind direction. Strong winds will always supersede tides. For example, if the wind is from the north, water will be blown out and there will be low water in the flats during a high tide.

## 2.12 Protection Plans for Environmentally Sensitive Areas

Priority Issues

1. Keep oil off the mud flats and out of the marsh.
2. Keep oil off the beach adjacent to the flats.
3. Keep birds out of oiled areas.
4. Develop booming strategy (Appendix III).

Types of Habitat present:

- **Mud Flats:** There are approximately 700 acres of mud flats heavily used by birds at low tide and by fish and shrimp. Some can support walking where others won't.
- **Salt Marsh:** There are approximately 200 acres of salt marsh that is regularly inundated by saltwater at high tide. This area is used by birds during the high and low tide and by fish and shrimp at high tide.
- **High Salt Marsh:** There are approximately 100 acres of high salt marsh that are only inundated by saltwater on exceptionally high tides. These areas are used by birds for feeding and roosting.
- **Beach:** There is approximately 1 mile of beach included in the sanctuary. The beach is used by birds for nesting, feeding and roosting.
- **Shallow water adjacent to the mud flats:** High concentrations of detritus and invertebrates brought to the flats by the longshore currents and coming from the marsh provide food for large numbers of fish and consequently this area is used by large numbers of wade fisherman in the summer.



### **2.13 Plans for Providing Medical Services**

Call 911 from cell phone as there are no phones at the sanctuary.

### **2.14 Site Safety Plan**

During an incident waiver forms will be signed by any volunteer engaging in any activity relating to the incident. Once on an incident, the need for formal training will be determined with the incident safety officer and HAS personnel will agree to comply with all safety and training requirements. The morning of an assignment during an incident a site safety brief will be conducted by personnel associated with the Unified Command.

## **3.0 Equipment Inventory and Information**

All certified cleanup contractors have standards they are required to meet as far as available equipment. For specific information on each contractor mentioned in section two please contact the contractor of choice (Appendix IV)

## Appendix I Houston Audubon Society Internal Notification List

### *Staff*

Executive Director	Gina Donovan	(o) 713-932-1639
Sanctuary Manager	Winnie Burkett (c) 832-385-7551*	(o) 713-932-1639
Sanctuary Steward	Andrew Beck (c) 832-643-7471	(o) 713-932-1639

### *Board of Directors*

President	Jim Winn	(o) 713-932-1639
President Elect	Mary Carter	(o) 713-932-1639

\*Main notification number for Bolivar Flats.

Updated 5/21/2010

## Appendix II Resources at Risk Summary

<b>1. Incident Name</b>		<b>2. Operational Period (Date/Time)</b> From: _____ To: _____		<b>RESOURCES AT RISK SUMMARY</b> <b>ICS 232-CG</b>	
<b>3. Environmentally-Sensitive Areas and Wildlife Issues</b>					
Site #	Priority	Site Name and/or Physical Location	Site Issues		
1	High	Bolivar Flats Shorebird Sanctuary	Sandy shoreline, marsh wetlands with tidal pools and inlets. Wildlife at risk: year round and migratory shorebirds, diving and wading birds.		
<p>Narrative</p> <p>Piping Plover (T&amp;E), Least Tern (T&amp;E), Gulls, Terns, Brown Pelican, American White Pelican, Reddish Egret, Black Skimmer, American Oyster Catcher, Black-necked Stilt, American Avocet, Long-billed Curlew, Wilson's Plover(nesting), Snowy Plover, Black-bellied Plover, Killdeer</p> <p><u>Migratory:</u> Redknot, Godwit, Western Sandpiper, Sanderling, Dunlin</p>					
<b>4. Archaeo-cultural and Socio-economic Issues</b>					
Site #	Priority	Site Name and/or Physical Location	Site Issues		
<p>Narrative</p> <p>_____</p>					
<b>5. Prepared by: (Environmental Unit Leader)</b>				<b>Date/Time</b>	
RESOURCES AT RISK SUMMARY				ICS 232-CG (Rev.07/04)	

**Appendix III Booming Strategy for Bolivar Flats**



## Appendix IV Discharge Cleanup Organizations Contact List

Anderson Pollution Control	La Porte, TX	936-441-2225
Clean Harbors	Beaumont, TX	409-682-0805
Eagle Construction and Environmental	La Porte, TX	800-336-0909
ES&H	Houston, TX	877-437-2634
Garner Environmental Services	Beaumont, TX	409-983-5646
Miller Environmental	Beaumont, TX	409-842-6900
Oil Mop Inc.	Beaumont, TX	409-962-7226
Phoenix Pollution Control	Baytown, TX	877-885-3400
Palacios Marine Industrial	Palacios, TX	361-893-5390
T&T Marine Salvage, Inc.	Galveston, TX	409-744-1222
US Environmental Services	La Porte, TX	281-867-4100