

**OIL SPILL CONTINGENCY PLAN
FOR THE
BIG BOGGY
NATIONAL WILDLIFE REFUGE
MATAGORDA COUNTY, Texas General Land Office**

**By
Stephen R. Spencer, Ph.D.
Environmental Contaminant Specialist**

**U.S. Fish and Wildlife Service
Ecological Services
Clear Lake Field Office
Houston, Texas General Land Office**

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OIL SPILL CONTINGENCY PLAN

For

Big Boggy National Wildlife Refuge

This plan is intended to serve as a step by step guide to emergency oil spill response in the event that such a spill threatens refuge lands and wildlife.

Because it may take several hours before professional oil spill responders and cleanup crews arrive, the emergency efforts of refuge personnel may play a key role in minimizing impacts to refuge lands and wildlife resources. The primary goal in an emergency response is to minimize the impacts on trust resources of the U.S. Fish and Wildlife Service (Service). Appendix A lists the priorities for Service response, as outlined in the Service's Response Plan for Discharges of Oil or Releases of Hazardous Substances (Service Contingency Plan - SCP). For specifics regarding legal authorities and responsibilities, refer to the Service Contingency Plan.

This plan pertains to spills of petroleum products only. Because of the threat to human health involved in responding to hazardous substance spills, it is anticipated that such spills will be handled only by trained personnel. There are few Service personnel who are trained for hazardous spill response. The Service policy states that Service personnel will not enter hazardous waste sites without specific Regional Office clearance. Additionally, the likelihood of a petroleum spill in the vicinity of the Big Boggy NWR is greater than that for a hazardous substance spill, since most barges carrying hazardous substances have double hulls, as opposed to the single hulls on barges carrying petroleum products.

The following is a numbered, step-by-step response sequence that should be followed in the event that an oil spill is reported to the refuge. The most likely spill scenario is covered in the response sequence as follows:

A spill from a barge or barges in the Gulf Intracoastal Waterway near or adjacent to the refuge.

After completing steps 1 through 8, proceed to 9 for specific response activities for this scenario. Actions which should be taken in order to prepare for all spills are presented in Appendix C. Available equipment and equipment needs are presented in Appendix D. Colonial bird nesting island as well as endangered, threatened and category 2 are listed in Appendix F. Appendix G provides telephone numbers of additional people and organizations who may need to be contacted.

This is a dynamic document and is intended to be updated when appropriate. Although it is recognized that it is impossible to predict, prepare for, or control all potential spill scenarios, it is hoped that this document will help guide personnel reacting to an incident in the critical early stages.

OIL SPILL CONTINGENCY PLAN

**For
Big Boggy National Wildlife Refuge**

Priority Response Sequence

1. Cease all non-essential work. If more than one staff member is available, assign one to make telephone contacts 1-6 while the other personnel proceed immediately to step 7. If only one staff member is available, begin with the phone calls in the order listed.

2. If they have not already been notified, call:

National Response Center (800) 424-9902 or (202) 267-2675

AND

Texas General Land Office (800) 832-8224

For spills of oil or other petroleum products in coastal areas, **OR**

Texas Emergency Response Center (TERC) (512) 463-7727

For hazardous substances and inland oil spills, or

Texas Railroad Commission (713) 460-0631

For spills less than 240 barrels (10,080 gallons) from pipelines or oil/gas platforms.

THEN CALL

**Texas Natural Resource Conservation Commission District Office (713)
457-5191**

Tell them:

- a. Your name and callback number.
- b. Exact location and nature of the incident.
- c. Extent of personal injuries, fire, and damage.
- d. Wind speed and direction (if possible).
- e. If identifiable, the type of material involved and the extent of the spill.

ONLY trained personnel should ever approach a fire or spill.

3. If they have not already been notified, call the Refuge Manager

Al Jones Home (409) 297-8737, or Office (409) 964-3639

Ron Bisbee Home (409) 849-6276, or Office (409) 849-7771

AND

USFWS Texas Coast Spill Coordinator- Brian Cain

Office (713) 286-8282 Mobile (713) 542-1861 Home (713) 480-7418

4. If they have not already been notified, call:

Coast Guard Marine Safety Office in Galveston. (409) 766-3687

If possible, give them the barge or ship name and phone number of the company.

5. If Brian Cain has not been reached, contact an Environmental Contaminants Specialist at the Clear Lake ES Field Office.

Marcos Baca - Office (713) 286-8282, or Home (713)

Steve Spencer- Office (713) 286- 8282, or Home (713) 996-0106

6. Call the designated pilot and arrange for an overflight survey for the refuge manager immediately. The designated OAS approved, pilot (helicopter) is PHI at the Brazoria County Airport (409) 849-2485. Arrangements can be made through the Minerals Management Service office in Lake Jackson (Ed Smith 409/299-1041) or directly through PHI.

7. Check wind speed and direction by calling the Houston Area Weather Service Office in League City (713) 337-5192.

8. If possible, designate one person as the media contact. This should be someone who can provide specific, accurate information about the resources at risk. If the spill is large enough to catch the attention of the media, the refuge will be besieged by the press!

9. If boom materials have been acquired previously, proceed **by boat** with booms to the booming location nearest the spilled oil. These locations are indicated as letters **A-D** on Figure 1, Appendix B. **Most of these booming locations should have two sets of posts with eyebolts installed by the end of 1994 to allow double booming. THE NEAREST BOAT RAMP IS ON LIVE OAK BAYOU AT CHINQUAPIN, LETTER F ON FIGURE 1, APPENDIX B.** If refuge personnel do not have access to booms, response personnel should place the booms instead. Descriptions of boom locations are as follows:

A. Booms should be placed at the confluence of Boggy Creek and the Gulf Intracoastal Waterway (GIWW) and across the passes into East Matagorda Bay that are opposite Boggy Creek. The goal should be to keep oil out of sensitive areas of East Matagorda Bay and Boggy Lake upstream on Boggy Creek.

B. Booms should be placed across the entrance to Pelton Lake. The goal is to keep oil out the sensitive marshes in the area.

C. Booms should be placed across the mouth of Live Oak Bayou and the passes into East Matagorda Bay that are opposite Live Oak Bayou. The goal should be to keep oil out of the sensitive marshes on Live Oak Bayou, Lake Austin, and the residential area of Chinquapin.

D. Booms should be placed across the cuts from the GIWW into East Matagorda Bay between Live Oak Bayou and Boggy Creek. The goal is to keep oil out of the sensitive East Matagorda Bay with its associated rookery islands, oyster reefs, and shrimping and fishing grounds.

E. Although not part of this scenario, a spill upstream of the refuge on Boggy Creek should be prevented from proceeding downstream toward Boggy Lake by placement of booms at location E on Figure 1, Appendix B, or anywhere upstream.

F. Although not part of this scenario, spills on the GIWW should be prevented from spreading up and down the canal. This could be accomplished by booming across the GIWW. The Coast Guard would need to halt traffic on the GIWW before this could occur.

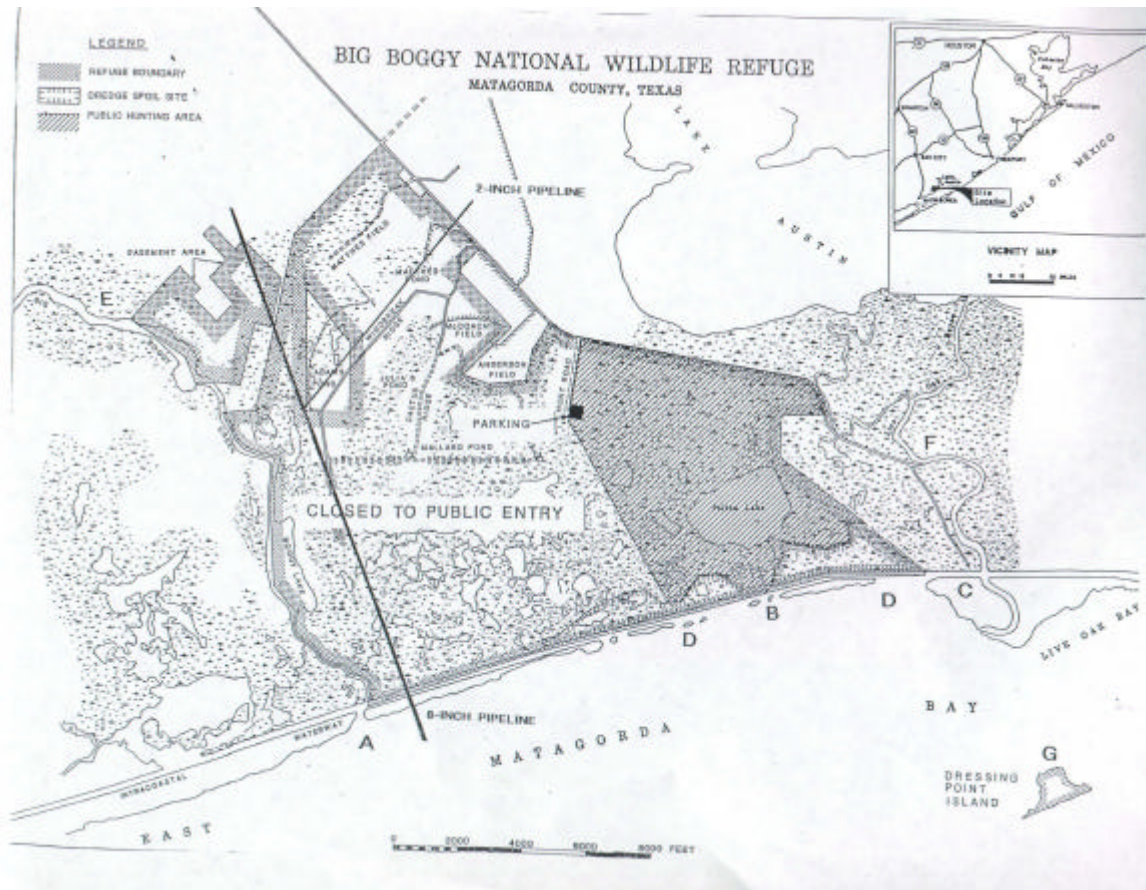
APPENDIX A

Priorities for Service Response

Each of the actions listed below should be provided for during advance planning and be carried out where applicable in the event of a spill. The actions are listed in order of priority should lack of manpower or other limiting factors constrain the level of response to a spill.

1. Protect threatened and endangered species and their habitats, including, where advisable, rescue and rehabilitation of individual animals.
2. Minimize the direct and immediate impacts to fish and wildlife populations (e.g., dispersal of birds or other wildlife) and advise the On Scene Coordinator (OSC) of actions needed to minimize impacts to or prevent destruction of fish and wildlife habitats.
3. Assist State agencies or the OSC with collection of oiled birds and other wildlife and advise/assist groups wishing to rehabilitate oiled wildlife. The Texas Wildlife Rehabilitation Coalition and/or the Tri-State Rehabilitation Center in Delaware will likely be involved. Refer to Appendix H "Oiled Wildlife Rehabilitation Protocol".
4. Provide the media and public with information on Service response activities through the DOI/Regional Environmental Officer and the OSC or through the PAO (with clearance from the OSC and DOI/REO).
5. Other activities to minimize indirect impacts to fish and wildlife resources, as warranted. Identify priorities and mark nesting island that could easily be boomed or "hay banded" to keep oil off the beach.

APPENDIX B
Map for Response Scenarios



APPENDIX C

Preparations Necessary Prior to Spill

1. Locate a pilot with proper certifications for overflight survey. Clarify needs, billing, availability, etc., so no time is lost when a situation arises.
2. Arrange for training and funding for training of personnel.
 - a. Oil Spill Control School
 - b. Oiled Bird Cleaning
3. Insure that all staff who may be capturing oiled birds are listed on State and Federal collecting permits.
4. Select site suitable for use as an oiled bird cleaning and holding station. Implement minor modifications if necessary. Prepare data sheets for keeping records of oiled birds as they are collected. If the Texas Wildlife Rehabilitation Coalition, or an equivalent, contracted organization, is involved, they will direct wildlife rehabilitation efforts and USFWS will provide support.
5. Measure distances to be covered by fixed-position booms, taking into account sags and angular deflection arrangements. Acquire sufficient boom material. It is recommended that the refuge acquire enough boom material so that refuge personnel can rapidly install it at the mouth of Boggy Creek and the mouth of Pelton Creek (locations A and B, in part. Figure 1, Appendix B). Oil spill response material will be acquired by the refuge complex and will be stored at San Bernard NWR, approximately 35 miles, one hour, northeast of Big Boggy NWR.
6. Locate positions for boom anchors at locations A and B on Figure 1, Appendix B, and set, e.g. cement deadmen with large eyebolts. Refuge personnel must develop a boom strategy, locating and marking exact positions where booms should be placed for maximum efficiency in the likely scenario.
7. Carry out drills as required to familiarize staff with equipment, procedures, etc., and as practice to remain effective.
8. Establish routine maintenance checks on equipment, radios, motors, fuel supplies, etc.

**APPENDIX D
EQUIPMENT ON COMPLEX**

<u>BOATS W/ TRAILER</u>	<u>Location</u>
91 Panther Airboat - 15"	BRZ
92 Panther Airboat - 15'	SNB
12' Jon Boat 15 Hp	BRZ
16' Jon Boat 35 Hp	SNB
18' Tunnel Boat 70 Hp	SNB
Barge 10' x 16' no trailer	BRZ
 <u>MARSH BUGGYS W/ TRAILER</u>	
1976 Marsh Buggy	SNB
1986 Marsh Buggy, w/fire pumper, 200 gal	BRZ
 <u>4-WHEEL ATV</u>	
ATV, Yamaha, Big Bear 4-wheel	SNB
ATV, Polaris, Trail Boss 4-wheel	BRZ
 <u>HEAVY EQUIPMENT</u>	
JD Backhoe/Loader 3021	BRZ
JD Backhoe/Loader 310D	SNB
W9B Case Loader	SNB
W14 Case Loader	SNB
Ford 3000 Tractor	BRZ
IH 986 Tractor	SNB
IH 384 Tractor	SNB
MF 282 Tractor	SNB
JD 4055 Tractor	BRZ
Case 1550 Dozer	SNB
Case 1150C Dozer, 105 Hp	BRZ
Cat 112 Grader	SNB
Cat 12D Grader	BRZ
Link-belt Excavator, 35' reach, 1.12 yd	SNB
 <u>VEHICLES</u>	
1986 Chevy Van	ANG
1986 Chevy S-10	ANG
1986 Chevy 4x4	SNB
1987 Jeep Cherokee	ANG
1988 Chevy Flatbed 1T	BRZ
1989 Dodge 250 3/4T	SNB
1990 Chevy 4x4, 3/4T	SNB
1992 Chevy Crew cab PU, 3/4 T	BRZ
GSA Chevy 1500 1/2 T	SNB

GSA Chevy 2500 3/4T	SNB
GSA Dodge Ram 250 3/4T	BRZ
1978 GMC Brigadeer, 32000 GVWR, 6x4	SNB
Trailer, lowboy, 5 th wheel, 40T, 42'L	SNB
1972 IH Dump Truck, 21000 GVWR, 4x4	BRZ

PUMPS, FIRE & OTHER

1989 Fire Truck Chev,	SNB
1992 Fire Truck Chev,	BRZ
Both 1T, 4x4, 200 gal tank	
1986 Marsh Buggy, w/fire pumper, 200 gal	BRZ
Trailer, fire, 300 gal, 16 Hp	BRZ
Pump, Crisafulli, 6", PTO drive	BRZ
Pump, Gator, 16",	BRZ
10,000 GPM, PTO drive	

GENERATORS

Trailer, Welder/generator, 225A AC, 210A DC	BRZ
Homelite, 1700W, 4Hp gas, 120v, 14.2A	BRZ
McColloch, 2KW, gas, 110v	SNB
Honda 4KW Gas 110-220V	SNB

TRAILERS

Trailer, fuel, 250 gal	SNB
Trailer, shopbuilt "husky", 3500#, 18'x7"	BRZ
Trailer, trash-hauling, 12T, 8'x26'	SNB
Trailer, tilt, 4'x8'	SNB
Trailer, 1/4 T Military, 3'x5'	SNB

EQUIPMENT NEEDS

Booms and associated equipment
Storage trailer for equipment

BRZ = Brazoria National Wildlife Refuge
SNB = San Bernard National Wildlife Refuge
ANG = Brazoria National Wildlife Refuge Complex Headquarters

APPENDIX E

NESTING ISLAND OR ROOKERIES ON BIG BOGGY NWR

Dressing Point Island has historically been one of the largest colonial bird rookeries on the Texas coast with a peak of 23,326 nesting pairs in 1983. The average number of pairs in the 21 years from 1973 through 1993 is 13,405. On June 2, 1993, refuge personnel conducted the annual colonial nesting bird survey on Dressing Point Island. Numbers of all species continued to decrease in 1993 as they have in the last three years. Brown pelicans nested on Dressing Point Island only in 1989 and 1990. The 1993 season, with only 392 nests, rates as the worst since records were first kept in 1973. This island is designated G on Figure 1, Appendix B.

Results of the colonial nesting bird survey on Dressing Point Island.

SPECIES	1990	1991	1992	1993
Brown Pelican	19			
Anhinga				
Great Blue Heron	75	90	65	60
Great Egret	320	550	430	140
Snowy Egret	430	180	45	
Little Blue Heron				
Tricolored Heron	1300	1200	70	
Reddish Egret	45	22	14	2
Cattle Egret	1025	100	30	
Green-Backed Heron				
Black-crowned Night Heron	25	35	55	25
White Ibis	1800	2500	2800	
White-faced Ibis				
Roseate Spoonbill	180	235	185	70
Laughing Gull	2800	2500	120	
Gull-billed Tern	25			
Caspian Tern	25	6		95
Royal Tern	2800			
Sandwich Tern	2			
Forester's Tern	45			
Least Tern				
Black Skimmer	<u>12</u>	<u>—</u>	<u>1</u>	<u>—</u>
Total nesting pairs	10928	7421	3815	392

ENDANGERED SPECIES ON BIG BOGGY NWR

Endangered

Hawksbill Sea Turtle
Kemp's Ridley Sea Turtle
Leatherback Sea Turtle
Brown Pelican
Bald Eagle
Whooping Crane

Threatened

Green Sea Turtle
Loggerhead Sea Turtle
Arctic peregrine Falcon
Piping Plover

Category C2

Gulf salt marsh snake
Texas diamondback terrapin
Texas horned lizard
Henslow's sparrow
Long-billed curlew
Reddish egret
Southeastern snowy plover
White-face ibis

STATE Threatened

Wood stork
American swallow-tailed kite
White-tailed hawk

The endangered **brown pelican** and the category 2 **reddish egret** and **white-face ibis** have all nested on Dressing Point Island. The later two along with the **wood stork** also feed in the marshes and ponds on the Refuge. The pelicans feed in the waters of East Matagorda Bay and loaf on the islands, reefs, and posts around the Bay. Nesting by pelicans was absent from most of the Texas Coast for many years. In the summers of 1989 and 1990, brown pelicans nested on Dressing Point Island. They have not nested there since. Dressing Point Island has traditionally hosted one of the largest nesting concentrations of reddish egrets on the Texas Coast. White-faced ibis also occasionally nest on the island. As noted in the rookery section above, numbers of all species of nesters on Dressing Point Island have been decreasing for the last several years. The **White-tailed hawk** nests in the Refuge uplands. The **Texas diamondback terrapin** and **gulf salt marsh snake** have never been recorded on Big Boggy NWR although they have been observed in similar nearby habitat and could occur here. Some species of concern, such as the endangered **bald eagle**, and **arctic peregrine falcon**, and **C2 long-billed curlews**, and **southeastern snowy plover** feed and loaf on the refuge marshes and uplands. Other possible endangered species include the various **sea turtles**, **piping plover**, and **whooping crane**. Other possible C2 species include the **Texas horned lizard** and **Henslow's sparrow**. The **American swallow-tailed kite** is known to occur rarely in the area.

APPENDIX F

Secondary Responses

1. Search for, cleanup and tabulate oiled birds. Prepare data sheets on bird numbers and species. See Appendix H.
2. As part of oiled wildlife rehabilitation efforts, considerable volumes of oily, soapy water will be produced. A tank for storage of this effluent will be necessary, along with a regular removal by a vacuum truck to the PRP's designated waste handler. Arrangements must be made for disposal of carcasses.
3. Maintain documentation of staff time and expenditures for equipment during the response since these may be reimbursed from either the responsible party or the spill response funds. Designate a lead person for this activity and procedures for reporting by staff to this person.

APPENDIX G

Other Important Contacts and Phone Numbers

Matagorda County Sheriff's Office, Dispatch, (409) 245-5526

Matagorda County Emergency Management Office - in Sheriff's office.

Texas Department of a Public Safety, Wharton, (409) 532-1780

Fire Departments Bay City Fire Department 911 or (409) 245-8314
Wadsworth Fire Department (409)245-1616

Adjacent Landowners

Texas Game Wardens 24-hour Houston (713) 471-3202
24-hour Austin (512) 389-4848

Emergency Medical Services Bay City EMS 911 or (409) 245-4613

FWS Law Enforcement Tom Healy - Victoria
Office (512) 575-8608 Mobile (512) 550-2108
Home (512) 572-0419

Bill Reynolds - Houston
Office (713) 229-2559

Additional Refuge Personnel and Phone Numbers

	<u>Work</u>	<u>Home</u>
Ron Bisbee	(409) 849-7771	(409) 849-6276
Rich Antonette	(409) 849-7771	(409) 297-1507
Jack Crabtree	(409) 849-7771	(409) 265-9743
Al Jones	(409) 964-3639	(409) 297-8737
Barbara Locke	(409) 849-7771	(409) 849-1720
Bob O'Leary	(409) 964-3639	(409) 548-5640
Willie Zgarba	(409) 849-5692	
Ben New	(409) 964-3639	(409) 964-3372
Claude Maynard	(409) 849-7771	(409) 849-6734
Mike Lange	(409) 849-7771	(409) 297-8167
Tom Schneider	(409) 233-8090	
Charles Ratjen	(409) 798-9247	
Rick Speer	(409) 299-6777	
Greg McClellan	(409) 299-6750	

Collene Lewis

(409) 265-6810

APPENDIX H

Oiled Wildlife Rehabilitation Strategy

As birds begin to feel the effects of oil contamination and exposure, they will move into shallower water or on shore where they will hide in available cover. Human activity on shore will inhibit birds from emerging or drive them back into the water. Since birds will tend to come ashore at night when there is minimal disturbance, capture efforts will be most efficient in the early morning and during low tide when more shoreline is exposed. Rescuers should place themselves between the birds and the water's edge to prevent the birds from reentering the water. The birds can be herded toward other individuals possessing nets of various types, while the more debilitated birds can be picked up by hand.

Competent handling can be a crucial factor in the outcome of rehabilitation efforts since physical injury or damage to plumage can occur. Birds will attempt to defend themselves with beaks, wings, and/or claws. Birds should be held at waist level or below and protective eyewear should be worn by handlers and those near them. Most birds can be held by the wings by one hand where the wings meet the body. The other hand can then be used to cover the eyes or control the head. For heavy birds the other hand can be used to support the body. For ducks and other birds where it is not important to control the head, both hands can be wrapped around the body holding the wings against the sides. Large birds such as pelicans can be held under one arm while the other hand holds the beak closed and holds the head. Delicate small birds can be cupped gently in one hand. Raptors should be controlled by holding the birds' upper legs together well above the joint with one hand. Control can be gained over raptors and other aggressive birds by dropping a towel or sheet over them and reaching under the towel to grasp the beak and head. This often works better after grasping the head on the outside of the towel or sheet first. Remember that necks are delicate and should not be handled roughly and that gloves and safety glasses should be worn while handling large or aggressive birds.

When a bird cannot be captured with minimal pursuit, it should be left for later capture. When they are captured they should be transported as rapidly as possible to a rehabilitation center in cardboard boxes or pet carriers. Burlap bags or pillowcases are not recommended because they abrade eyes and feathers and do not protect against cold and rain. When birds cannot be transported to a treatment center within 1-2 hours, treatment procedures should begin at the capture site. The mouth and nostrils should be cleared of oil with cloth or cotton swabs. Excess oil and water should be removed by wiping with cloth rags in the direction of feather growth. If possible, oral fluids should be given by **experienced personnel** by intubation. Irritated eyes can be soothed by the application of artificial tears without allowing the applicator to touch the eye. Preening and further ingestion of oil can be prevented by pinning a cloth or

diaper around the body except in hot weather when the bird should only be wiped as clean as possible. Do not tape a bird's bill closed since it would interfere with regurgitation and thermoregulation. Each bird should be placed in an individual cardboard box large enough for the bird to stand in. The birds should be kept from temperature extremes, should be tube fed every 2-3 hours, and should be kept in a quiet area until they can be transported to a rehabilitation center. Birds should be permitted to improve in condition before the ordeal of cleaning takes place.

For more detailed information, see the document titled "Fish and Wildlife Handbook. Rescue and Rehabilitation of Oiled Birds." Fish and Wildlife Service Leaflet 13.2.8. U.S. Department of the Interior. 1991.