

**OIL SPILL CONTINGENCY PLAN  
FOR THE  
SAN BERNARD  
NATIONAL WILDLIFE REFUGE  
BRAZORIA COUNTY, TEXAS**

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**October, 1993**

**OIL SPILL CONTINGENCY PLAN**

**For  
San Bernard National Wildlife Refuge**

**INTENT**

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 clearance. Additionally, the likelihood of a petroleum spill in the vicinity of the San Bernard National Wildlife Refuge 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 employed in the event that an oil spill is discovered or reported to the refuge. The three most likely spill scenarios are covered in the response sequence. These three scenarios (Appendix B) are:

- A. A spill from a barge or barges in the Gulf Intracoastal Waterway near or adjacent to the refuge.
- B. A barge spill or loading facility accident in the San Bernard River.
- C. An offshore spill with oil washing onto the Gulf beach or entering the San Bernard River and Gulf Intracoastal Waterway on a flood tide.

After completing steps 1 through 8, proceed to 9A (scenario 1), 9B (scenario 2), or 9C (scenario 3) according to the spill scenario. Actions which should be taken in order to prepare for a spill are presented in Appendix C. Available equipment

and equipment needs are presented in Appendix D. Colonial bird nesting islands are listed in Appendix F. Appendix G provides telephone numbers of those 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 San Bernard 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 2-6 while 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) 424-8802 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) 457-5191**

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

**THEN CALL**

**Texas Water 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:

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

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

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

Jack Crabtree - Home (409) 265-9743, or Office - (409) 964-3639

OR

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

AND

USFWS Texas Coast Spill Coordinator - Brian Cain

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

5. If Brian Cain cannot be reached, contact:

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. (or as soon as practical) The designated 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. The are OAS approved.

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!

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

9A. If boom materials have been acquired previously, proceed **by boat** with booms to the booming location nearest the spilled oil. Two sets of posts with eyebolts should be installed at most of these locations by the end of 1994 to allow for double booming. These locations are indicated as letters A-E on Figure 1, Appendix B. **THE NEAREST BOAT RAMP IS ON THE GIWW JUST WEST OF THE SAN BERNARD RIVER NEAR THE LETTER D ON FIGURE 1, APPENDIX B.** If refuge personnel do not have access to booms, response personnel should place the booms instead. Descriptions of the boom locations are as follows:

- A. Booms should be placed at the confluence of Cedar Creek and the Gulf Intracoastal Waterway (GIWW) (133 feet wide) and across the

two passes into Cedar Lake that are opposite Cedar Creek (279 and 443 feet wide). The goal should be to keep oil out of the sensitive areas of Cedar Lake and the Cedar Lakes Backwater upstream on Cedar Creek.

- B. HIGH PRIORITY. Booms should be placed across the Entrance to Cow Trap Lakes off the GIWW (191 feet wide) and the entrance to Cedar Lake opposite the Cow Trap Lakes entrance (142 feet wide). The goal is to keep oil out of the Cow Trap Lakes complex and the associated sensitive marshes, and out of Cedar Lake with its shallow water habitats.
  - C. HIGH PRIORITY. Booms should be placed across the entrance to Cedar Lake off the GIWW (420 feet wide). The goal is to keep oil out of the sensitive Cedar Lake area with its associated bird rookery islands indicated as islands 1-4. At the time of this plan preparation, island 5 was not being used (see Appendix E). Birds in these areas are most vulnerable to oiling during the nesting season (spring and summer). If oil enters Cedar Lake at this point, steps should be taken to place booms or other protective devices around islands 1-4. Shallow water boats or air boats will be needed to perform these tasks. Booms should also be placed across the entrances to Mud Lake (456 and 101 feet wide) which are across from the Cedar Lakes entrance.
  - D. Booms should be placed across the entrance to Cedar Lake (147 feet wide) in order to protect sensitive shallow water habitats in Cedar Lake. If the spill is east of the San Bernard River, booms should be placed across the GIWW at the San Bernard River in order to prevent oil from flowing down the GIWW toward the Refuge.
  - E. Although not part of this scenario, a spill upstream of the Refuge on Cedar Creek should be prevented from proceeding downstream toward the Cedar Lakes Backwater by the placement of booms at location E on Figure 1, Appendix B, or anywhere upstream of that point.
- 10A. Remain in the area and capture oiled birds. Follow oiled wildlife rehabilitation protocol (Appendix H). Contact Texas Parks and Wildlife Game Wardens and ask for their assistance in hazing wildlife away from oiled areas and in transporting personnel and equipment with their boats.

**B. A barge spill or loading facility accident on the San Bernard River.**

- 9B. Proceed immediately to location D on Figure 1, Appendix B and place boom (if available) across entrance to Cedar Lake 1 (old canal; 147 feet

- wide). The Coast Guard would need to halt traffic on the GIWW before any response personnel could place booms across the GIWW. Response personnel should accomplish this as soon as possible. If oil begins to flow southwest in the GIWW, booms should also be placed at locations A, B, and C if necessary.
- 10B. Remain in the area to capture oiled birds, etc. (see 10A).
- C. An offshore spill with oil washing onto the Gulf beach or entering the San Bernard River mouth and Gulf Intracoastal Waterway on a flood tide.
- 9C. Response personnel should set up deflection booms around the mouth of the San Bernard River to prevent oil from flowing up the river on a flood tide. Booms should also be used to block oil from entering the GIWW at location D on Figure 1, Appendix B.
- 10C. Refuge personnel should monitor the Gulf of Mexico beachfront carefully as it is a known wintering area for the threatened piping plover. They have been seen on the beaches of the Refuge with a greater likelihood of occurrence nearer the accreting beaches adjacent to the mouth of the San Bernard River. Hazing of the birds should occur in order to keep them out of any oil on the beach. Oiled birds should be rescued in accordance with the oiled wildlife rehabilitation protocol (Appendix H).

## **APPENDICES**

### **APPENDIX A**



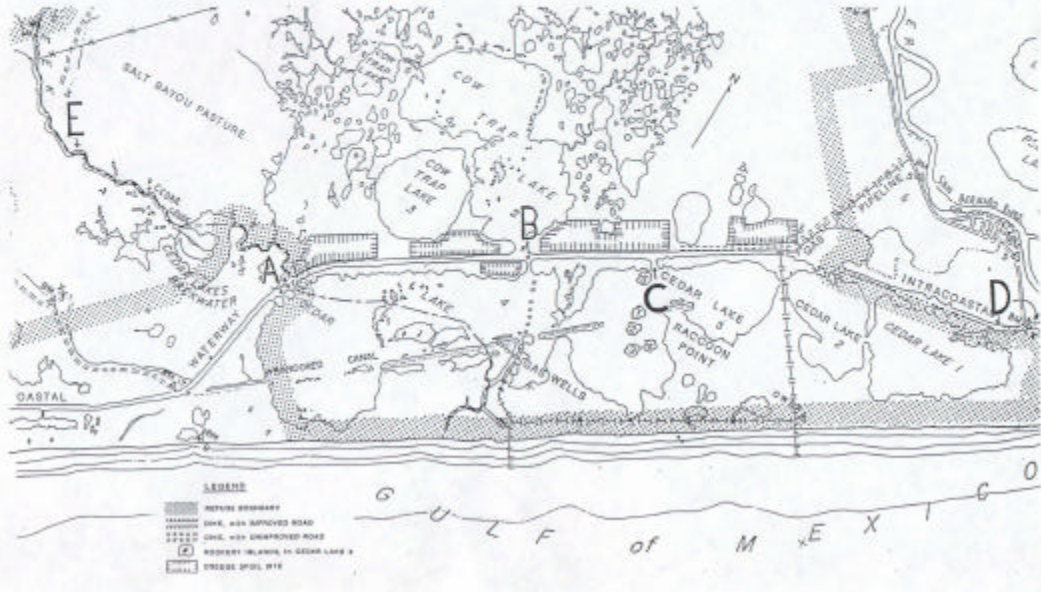
## Priorities for Service Response

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/REO 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 islands that could easily be boomed or "hay banded" to keep oil off the beach.

**APPENDIX B**  
**Map for Response Scenarios**

SAN BERNARD NATIONAL WILDLIFE REFUGE  
 BRASORIA AND MATAGORDA COUNTIES, TEXAS



## 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 of personnel and funding for the training.
  - 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. See Appendix H.
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 so that Refuge personnel can rapidly install it at locations B and C on Figure 1, Appendix B. Install on-site storage sheds or obtain trailer for storing/transporting booms and other spill control material.
6. Locate positions for boom anchors at locations B and C on Figure 1, Appendix B, and set, e.g., cement deadmen with large eyebolts. Refuge personnel must develop a boom strategy, locating marking exact positions where booms should be placed for maximum efficiency for all three of the likely scenarios.
7. Carry out drills as required to familiarize staff with equipment, procedures, etc.
8. Establish routine maintenance checks on equipment, radios, motors, fuel supplies, etc.

**APPENDIX D  
EQUIPMENT ON COMPLEX**

<b>BOATS W/TRAILER</b>	<b>Location</b>
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'x16' no trailer	BRZ

**MARSH BUGGYS W/TRAILER**

1976 Marsh Buggy	SNB
1986 Marsh Buggy w/fire pumper, 200 gal	BRZ

**4-WHEEL ATV**

ATV, Yamaha, Big Bear 4-wheel	SNB
ATV, Polaris, Trail Boss 4-wheel	BRZ

**HEAVY EQUIPMENT**

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

**TRAILERS**

Trailer, fuel, 250 gal	SNB
Trailer, shopbuilt "husky", 3500#, 18' x 7"	BRZ
Trailer, trash-hauling, 12T, 8' X 26'	SNB
Trailer, tilt, 4' X 8'	SNB
Trailer, 1/4 T Military, 3' x 5'	SNB

**EQUIPMENT NEEDS**

Booms and associated equipment  
Storage trailer for equipment

**VEHICLES**

	<b>Location</b>
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 Chev Crew cab PU, 3/4T	BRZ
GSA Chevy 1500 1/2T	SNB
GSA Chevy 2500 3/4T	SNB
GSA Dodge Ram 250 3/4T	BRZ
1978 GMC Brigadier, 32000 GVWR, 6X4	SNB
Trailer, Lowboy, 5 <sup>th</sup> 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
<b>*(Both 1T, 4X4, 200-gal tank)</b>	
1986 Marsh Buggy w/fire pumper, 200-gal	BRZ
Trailer, fire, 300-gal, 16Hp	BRZ
Pump, Crisafulli, 6", PTO drive	BRZ
Pump, Gator, 16" 10,000 GMP, PTO drive	BRZ

**GENERATORS**

Trailer, Welder/generator	BRZ
225A AC, 210A DC	BRZ
Homelite, 1700 W, 4Hp gas 120v, 14.2A	BRZ
McColloch, 2000W, gas, 110v	SNB
Honda 4KW Gas 110-220V	

SNB = San Bernard National Wildlife Refuge

BRZ = Brazoria National Wildlife Refuge

ANG = Angleton-Refuge Complex Office

## APPENDIX E

### NESTING ISLANDS AND ENDANGERED/THREATENED SPECIES ON THE SAN BERNARD NWR

**NESTING ISLANDS** The Refuge staff conducted the colonial waterbird survey on the Cedar Lakes rookery on June 5, 1990. The rookery consists of the islands designated as 1-4 on Figure 1, Appendix B. Island No. 5 is not currently being used. The following is a list of species found in the rookery in 1989 and 1990 and the number of breeding pairs.

<u>Species</u>	<u>1989</u>	<u>1990</u>
brown pelican	14	
olivaceous cormorant		16
great blue heron	181	60
little blue heron		1
cattle egret	1000	2200
reddish egret	15	28
great egret	420	450
snowy egret	420	515
tri-colored heron	1120	515
black-crowned night heron	10	
white ibis	1910	190
roseate spoonbill	85	55
laughing gull	1665	1725
gull-billed tern	10	
Forster's tern	440	
least tern		10
royal tern	275	
sandwich tern	5	
Total nesting pairs	7570	5765

From: Fish and Wildlife Coordination Act Report. Section 216 Study. Gulf Intracoastal Waterway - Texas Section. Sargent Beach Area. U. S. Fish and Wildlife Service, Department of the Interior. Clear Lake Ecological Services Field Office. Region 2.

**ENDANGERED/THREATENED SPECIES** The species listed actually or potentially occur on the refuge. These lists should be modified and updated yearly by Refuge personnel to reflect most current status.

**Endangered**

Hawksbill Sea turtle  
Kemp's Ridley sea turtle  
Leatherback sea turtle  
Brown Pelican  
Bald eagle  
Whooping crane

**Category C2**

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

**Threatened**

Green sea turtle  
Loggerhead sea turtle  
Arctic peregrine falcon  
Piping plover

**STATE Threatened**

Wood stork  
American swallow-tailed kite  
White-tailed hawk



## **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.
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 fund (311K).

## APPENDIX G

### Other Important Contacts and Phone Numbers

**Brazoria County Sheriff's Office**, Deputy Charles Wagner (409) 265-9310

**Brazoria County Emergency Management Office**, Jack McCann (409) 265-4261 ext. 1201)

**US Coast Guard Station Freeport**, BMC Scott Dunaway (409) 233-3802

**Brazosport Industrial CAER**, Tim Scott, Bill Gibson, (409) 238-CAER  
CAER Members have spill response capabilities that FWS could request in an emergency. It is unwritten but they would most likely respond.

**Fire Departments** Brazoria Fire Department 911 or 798-2211  
Freeport Fire Department 233-2651  
Lake Jackson Fire Department 297-1101  
Sweeney Fire Department 1-548-3242

Adjacent Land Owners

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

**Emergency Medical Services** Brazoria Volunteer Ambulance Service 911 or 798-2211

Sweeney Volunteer Ambulance Service 1-548-6233  
Lake Jackson Ambulance Service 297-4411  
Lifeline Ambulance Service, Clute 265-0063

### **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

### **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. Oiled birds cannot afford to use a lot of energy fleeing from 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 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.