Time-Critical Assessment:

Gulf Coast Breeding, Beach-Nesting Bird Populations in Areas Impacted by the BP Deepwater Horizon / Mississippi Canyon 252 Oil Spill

Bird Study #8

7/13/2010

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The primary objective of this proposal is to assess breeding, beach-nesting bird populations impacted by the BP Deepwater Horizon oil spill on the Gulf coast before the close of the 2010 breeding season. Currently, mainland coastal beach, barrier and delta island habitats throughout the Gulf are being seriously impacted by oil washing ashore. Beach-nesting birds are also facing significant threats from oil spill response activities, both pre-landfall preparations and post-oiling clean-up activities (i.e., beach-raking, boom placement, sand berm construction, inlet closings, off-road vehicle use, clean-up crews, etc). The Coastal Bird Conservation/Conservian (CBC) received funding prior to the oil spill to perform routine monitoring of several beach-nesting bird species in Louisiana, Mississippi, and Alabama in 2010. Once the oil spill occurred, the CBC began to notice impacts to beach-nesting species. Thus, since the start of the oil spill, during its routine monitoring activities, the CBC has been on the ground, assessing, documenting, monitoring and raising awareness of the impacts of the oil spill and the associated response activities on shorebirds, particularly the beach-nesting species. These impacts have suggested losses of shorebird nests and young and severe degradation of large areas of coastal habitat throughout the Florida panhandle, Alabama, Mississippi and Louisiana. The proposed study will contribute to the quantification of these impacts in Wilson's Plover (*Charadrius wilsonia*), Snowy Plover (*C. alexandrines*), and American Oystercatcher (*Haematopus palliates*).

Objectives

1) Estimate the number of breeding birds for the target shorebird species (Wilson's Plover, Snowy Plover, and American Oystercatcher) in the survey area.
2) Determine the proportion of observed birds that are oiled and the degree of oiling on those birds.
3) Obtain opportunistic photographic and other evidence of response-related natural resource injuries to the target shorebird species and/or their habitats.

Project Location

The proposed project will occur on the Gulf coast in oil impacted areas of Alabama, Mississippi and Louisiana. Data collection efforts in Texas and the panhandle of Florida are not proposed in this study plan, but efforts similar to those described in this plan may be conducted in Texas or Florida, coordinated by the appropriate state natural resource agency and/or its cooperators. (Funding for such activities in Florida is not included in this study plan.)

Project Timeline

July 1, 2010 to August 15, 2010. Initiation of this project is TIME-CRITICAL, as much depends on observing locally breeding birds before they abandon breeding sites that were surveyed earlier in the 2010 season.

Background/Summary

The Deepwater Horizon (MC 252) oil spill began April 22, 2010. The Natural Resource Trustees for this oil spill who have particular interest in birds include, but are not limited to, the Department of the Interior (U.S. Fish and Wildlife Service and National Park Service), the National Oceanic and Atmospheric Administration, and the natural resource agencies of the States of Texas, Louisiana, Mississippi, Alabama, and Florida. The Trustees are authorized under the Oil Pollution Act (33 U.S.C. 2701 *et seq.*) and the Comprehensive Environmental Response, Compensation and Liability Act (42 U.S.C. 9601 et seq.) to assess natural resource damages associated with the harm caused to natural resources by the releases of hazardous substances and discharges of oil. The activities proposed in this study plan are part of the natural resource damage assessment being conducted by the Trustees.

Since the early 2000's the Coastal Bird Conservation program (CBC) has documented and monitored significant shorebird populations throughout the Gulf coast and has lead statewide and region-wide breeding and nonbreeding shorebird monitoring efforts in all Gulf coast states, including the Mexican Laguna Madre de Tamaulipas, Mexico. In recent years, the CBC has mapped and documented thousands of breeding and nonbreeding bird populations in Texas (2003-2010), Mississippi and Louisiana (2005-2010), Tamaulipas, Mexico (2006), Alabama and the Florida panhandle (2007-2010), and the Florida Keys (2008-2010). Through surveys and monitoring of important sites, impact assessment, and building close partnerships with land managers, the CBC has begun implementation of protective measures for coastal birds and their habitats in all five Gulf coast states. The CBC has also collected data and gained a clear understanding of human-created shorebird disturbance (pre-spill causes and impacts) that will serve as important comparison data to the current oil-related impacts occurring in shorebird habitat that formerly had little or no disturbance.

The CBC has completed its previously-funded routine monitoring activities for 2010. The CBC completed one full round of beach-nesting bird surveys and habitat assessment from the Florida/Alabama border to the Louisiana/Texas border covering all potential nesting habitat for specific beach-nesting bird species (Wilson's Plover, Snowy Plover, American Oystercatcher and multiple colonial nesters) during the 2010 breeding season. These surveys have produced current (pre-oil spill) population estimates for the beach-nesting bird species. Funding for the initial 2010 surveys (not an NRDA-sponsored activities) was provided by grants from the National Fish and Wildlife Foundation (NFWF) and Barataria-Terrebonne National Estuary Program (BTNEP). Under this study plan, the CBC will perform a second round of monitoring at select sites. At a minimum, this study will yield data upon which to estimate the oiling rate among the birds observed.

The activities proposed in this study plan are not part of the routine annual monitoring that the CBC performs. The proposed activities are not duplicative of the activities proposed in the Shorebird Study Plan (Bird Study #5) that is currently under development. The activities proposed here are time-critical, one-time observations of remaining nesting individuals of the focal species in pre-identified (targeted) locations, while the Shorebird Study Plan will involve systematic and repeated sampling of all shorebird species throughout the U.S. Gulf of Mexico through at least November 2010. However, the data produced from the work proposed here will

complement the Shorebird Study and contribute to the Trustees' overall quantification of avian injury.

Study Design

The main objective of this proposal is to assess beach-nesting bird species that are still occupying breeding territories in the latter part of the 2010 breeding season in areas impacted by the BP Deepwater Horizon oil spill on the Gulf coast. The reproductive season will come to a close in late July to mid-August. If beach-nesting birds begin to leave their breeding territories, an opportunity to obtain time-series data for territorial individuals will be lost. The CBC proposes an immediate re-assessment of these species at breeding areas on all barrier islands and mainland beaches in areas previously surveyed in 2010 but where oil has made landfall since the time of the previous CBC survey. As of July 4, 2010, in Louisiana these sites include Caminada Headland (Grand Isle, Elmers Island to Port Fourchon including East and West Belle Pass) and Barataria Bay (East Grand Terre, Grand Terre, the Bay Chaland Islands restoration sites, Bastian Bay Islands and Bay Joe Wise restoration sites). Surveys conducted under this study plan will not include an assessment of the Mississippi Delta islands or the Chandeleur Islands, in LA, since the CBC already assessed the post-oiling condition during the first round of CBC surveys. These data, collected using non-Trustee funds, can be made available to the Trustees for use in the natural resource damage assessment. In Alabama and Mississippi, the CBC proposes full state-wide resurveys. Timing for the resurveys is critical. Surveys must be completed before the breeding season ends for the specific focal species. The CBC proposes to complete all resurveys as soon as possible with the goal of finishing during the month of July 2010; however, surveys will extend to mid August if necessary.

The focal species included in the resurveys are consistent with those documented during the first round of CBC surveys and include solitary pairs of beach-nesting birds (Wilson's Plover, Snowy Plover, and American Oystercatcher). The pre-spill CBC work included opportunistic surveys of colonial species (e.g., Sandwich Tern, Royal Tern, Caspian Tern, Least Tern, Gull-billed Tern, and Black Skimmer) and non-breeding shorebirds (e.g., Piping Plover, Red Knot, and Reddish Egret) if they occurred in areas being surveyed for the breeding focal species. If such co-occurrences are encountered during the proposed project, colonial species may also be surveyed opportunistically unless such sites are located in the colonies that are being evaluated under the Colonial Waterbird natural resource damage assessment study (Bird Study #4). Observations of live oiled and non-oiled non-breeding shorebirds will be addressed in the Shorebird Study Plan (Bird Study #5). The goal of the resurveys is to provide comparison data for the first round of CBC surveys and thus obtain evidence of natural resource injury that may be associated with the direct impacts from oil or oil spill related activities.

Data on incidence of oiling on live shorebirds will be collected according to the procedures in the "Deepwater Horizon (MC 252) Oil Spill Beach Bird Protocol – Field Procedures," as amended, except that live bird observations will be done along a continuous transect of beach or multiple transects depending on site width, rather than from a single point geographically, and degree-of-oiling observations will not be restricted to 15-minute periods. Observations of birds at surveyed sites will be made with 10 x 40 binoculars and/or a 20-60x spotting scope. Only birds that can be observed well enough to be confidently classified as being visibly oiled or not visibly oiled

will be included in the sample (i.e., observers will not just count all birds, record the number of visibly-oiled birds, and assume all the others are un-oiled). Each observed focal shorebird (adults and chicks/fledglings) will be assigned as either being oiled or un-oiled and the degree of oiling on each bird will be noted. Photographs of all confidently classified birds will be taken when possible. If individuals of the focal species are observed to be wearing color and/or metal field-readable bands, the observer will record the color combinations and/or band number.

In addition, if any of the secondary species of concern (colonial nesters, Reddish Egret, Piping Plover, or Red Knot) are encountered during searches for the focal breeding species, the CBC may perform oiling observations on these non-focal species, provided that (i) the area is not a site being monitored under Bird Study #4 or (ii) the primary objective of collecting data on the target breeding species is not compromised. Similarly, the CBC will opportunistically collect data related to natural resource injuries caused or exacerbated by spill response-related activities. These data may include, but are not limited to, photo or video documentation of response-related impacts. Examples of response-related data relevant to the target species include, but are not limited to, the operation of ATVs in areas of pre-fledglings, the presence of deep tire tracks (caused by oil spill response vehicles) that could entrap chicks of the focal species, and the presence of cleanup-related heavy machinery being operated inside a nesting area.

Deliverables

The CBC will provide the Trustees with the original NRDA data forms and photo documentation for all resurveyed areas. (Protocols for transfer of data will be presented in Standard Operating Procedures to be attached to this Study Plan.)

Budget

Salaries

Position	Duties	$ / day*	days	cost
CBC Director	Project coordinator, survey planning, field data collection, data preparation			$8,670
CBC Asst. Director	coordinate, supervise, and conduct surveys, data prep.			$7,000
Seasonal staff #1	conduct surveys, collect data			$3,400
Seasonal staff #2	conduct surveys, collect data			$3,400
			subtotal	**$22,470**

* Includes overhead and benefits.

Travel and housing expenses

Mileage (50 cents per mile)	$ / unit	Units	cost
CBC RV mobile office #1			$1,625
CBC RV mobile office #2			$1,250
Seasonal staff vehicle #1			$600
Seasonal staff vehicle #2			$600

Lodging ($75 per night, housing >1 person per room)	$ / unit	Units	cost
Motel (# staff-nights)			$4,500

Meals ($40 per day)	$ / unit	Units	cost
Director			$480
Asst Director			$1,200
Seasonal staff #1			$1,200
Seasonal staff #2			$1,200
		subtotal for travel and housing	**$12,655**

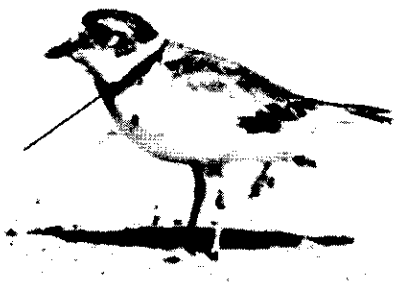
Field Equipment

Item	$ / unit	Units	cost
digital cameras w/20x optical zoom			$850
camera case			$40
camera memory cards			$180
spotting scope (20x60, waterproof)			$1,600
binoculars (10x42, waterproof)			$1,000
hip waders			$320
		subtotal for equipment	**$3,990**

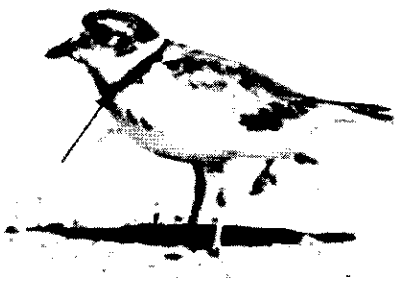
Total	**$39,115**

NRDA Bird Oiling Levels

(≤5%) TRACE



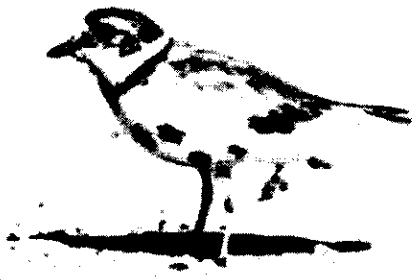
Note single tiny spot or fine streak on breast, face, or side.



Typically a single to several tiny spots or hairline streaks.

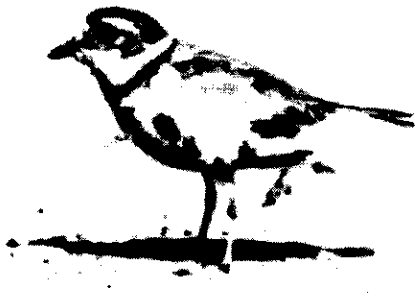
(6-20%) LIGHT

Note light soiling around the top of leg(s).

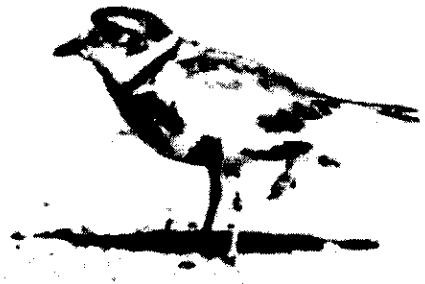


Other example of light oiling may also appear as light colored spots on the face or breast or belly, or parts of the body. <u>Oiling on 2 or more body parts is recorded as Moderate</u>.

(21-40%) MODERATE

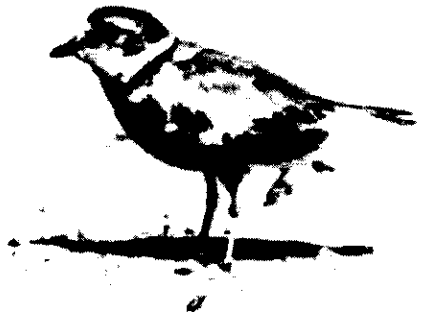


Note that the whole belly is covered with moderately darker oil

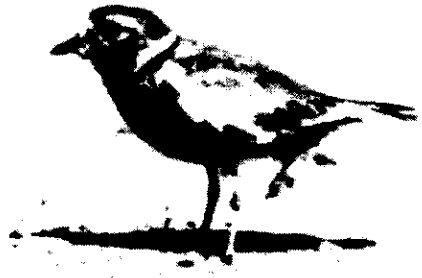


Another example of moderate oiling showing most of the breast, belly and vent covered with oil.

(>40%) HEAVY



Note that the breast and belly are covered with a very dark layer of oil.



Here, a heavy dark layer of oil is seen on the face, breast, and belly.

Revised 7/3/2010

Live Breeding Shorebird Assessment Form (for use in Bird Study #8)

Incident Name: Deepwater Horizon/MC-252			**Observation Team: (Print Names)**	
Date:	**Division/Segment name:**		**Signatures:**	
Transect Start:	**Time**	**Transect End:**	**Time**	**Optics**
	Lat°		**Lat°**	
	Long°		**Long°**	
	GPS Waypoint #		**GPS Waypoint #**	
Weather (describe briefly)			**Wind direction: (blowing toward or away from shore)**	
Oiled habitat observed in segment?			**Visibility (circle)** 0.1 mi 0.5 mi 1.0 mi >1.0 mi	

Species	Age[2]	GPS Lat/Long[1]	Degree of Oiling[3]	Debilitated (Y/N)	Behavior[4]	Photo ID[5]	Notes

[1] Decimal degrees, WGS 84
[2] **HY** = hatch year / chick / fledgling, **JUV** = juvenile / sub-adult, **AD** = adult
[3] **None** = not visibly oiled, **Trace** = ≤5%, **Light** = 6 - 20%, **Moderate** = 21-40%, **Heavy** = >40%
[4] Flying, Standing, Sitting, In water, Not Evaluated
[5] Record the photo # shown on the camera.

Database Form ID: _____

Database entry by (print and sign): _____ Date Entered: _____

Live Breeding Shorebird Assessment Form (for use in Bird Study #8)
Continuation Page

Page _____of _____

Incident Name: Deepwater Horizon/MC-252		**Observation Team (Print Names):**
Date:	**Division/Segment name:**	**Signatures:**
Transect Start Time (copy from page 1) (this is just for matching continuation pages to the first page) :		

Species	Age[2]	GPS Lat/Long[1]	Degree of Oiling[3]	Debilitated (Y/N)	Behavior[4]	Photo ID[5]	Notes

[1]Decimal degrees (dd.mmmmmm°), WGS 84
[2] **HY** = hatch year / chick / fledgling, **JUV** = juvenile / sub-adult, **AD** = adult
[3] **None** = not visibly oiled, **Trace** = ≤5%, **Light** = 6 - 20%, **Moderate** = 21-40%, **Heavy** = >40%
[4] Flying, Standing, Sitting, In water, Not Evaluated
[5] Record the photo # shown on the camera.

Database Form ID: _____

Database entry by (print and sign): _____ Date Entered: _____

Gulf Coast Breeding, Beach-Nesting Bird Populations in Areas Impacted by the BP Deepwater Horizon / Mississippi Canyon 252 Oil Spill

Bird Study #8

******Approval of this work plan is for the purpose of obtaining data for the Natural Resources Damage Assessment. Parties each reserve its right to produce its own independent interpretation and analysis of any data collected pursuant to this work plan******

APPROVAL

Carolyn Marn (USFWS)
Trustee NRDA Bird Group Lead

7/24/10
Date

FOR ROLAND GUIDRY

State of Louisiana Trustee Representative

7/24/10
Date

Declined by Scott McDonald

(email 7/22/2010)

BP Representative

Date