Original Draft: June 16, 2010
Final draft August 4, 2010

NATURAL RESOURCE DAMAGE ASSESSMENT WORK PLAN FOR DETERMINING INJURY TO THE PIPING PLOVER (*CHARADRIUS MELODUS*) FROM THE DEEPWATER HORIZON (MC 252) OIL SPILL

BIRD STUDY #7

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INTRODUCTION

The Deepwater Horizon (MC 252) oil spill began April 22, 2010. The Natural Resource Trustees (Trustees) for this oil spill with interest in birds include, but are not limited to, the U.S. Fish and Wildlife Service (Service), the National Park Service, 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 (NRDA) being conducted by the Trustees.

Oil spill related injury to wildlife is of major concern to the Trustees and the American public. Seabirds, colonial waterbirds, coastal marsh birds, shorebirds and raptors are susceptible to impacts from the oil. Several work plans have been developed to concurrently evaluate oil spill related injuries to these different avian guilds. This plan assesses injury to the Federally threatened/endangered piping plover (*Charadrius melodus*) at sites in the Gulf of Mexico by: (1) collecting re-sighting and proportion oiled data from piping plovers in the wintering habitats, (2) estimating over-winter survival in oiled and un-oiled areas, and (3) evaluating winter population abundance and distribution in oiled and un-oiled areas. This study plan contemplates piping plover injury assessment work through August 2011 for budget purposes only, however, it may be necessary to extend the time frame and scope of this work plan through and beyond the 2011 breeding season to assess long-term oil spill-related injury to the piping plover across its range.

There are three populations of the piping plover in North America. The Service has listed the Atlantic coast (nesting from North Carolina to southeastern Canada) and the Great Plains populations (rivers and pothole region from Kansas to Canada) as threatened and the Great Lakes population as endangered (USFWS 1985, Haig et al. 2005). Wintering piping plovers roost and forage on intertidal sandflats and mudflats, on barrier island beaches, on barrier algal flats, and in coastal marshes (Gratto-Trevor et al. 2009, Johnson and Baldasarre 1988, Zonick 2001, Cohen et al. 2008). This dependence on coastal environments may make them particularly susceptible to the addition of oil to those environments.

Background

Banding of plovers on the breeding grounds in July 2010 provided baseline information on the breeding population prior to oil exposure on the wintering grounds and will provide information for subsequent demographic analyses. Following a standard operating procedure, sixty adult piping plovers were banded in each of the three populations prior to the southern migration. Morphometric data were collected on all handled birds and individual birds were marked with a unique color band and flag combination. Thousands of piping plovers have been captured and handled in this manner and the survival rate of plovers handled has been very high (e.g. Catlin 2009). Spatial data on all captures and nests was recorded for each bird and nest. Breast feathers (3) were removed from each bird and archived at -80 °C for use in both ecotoxicological and ecological studies; they are sampled using minimally invasive techniques, can be stored for long periods of time, and provide vast information about avian biology. Feathers will be archived in the event that they are needed for genetic analyses or for drawing inferences about spatial and feeding ecology using stable isotopes (e.g., Hobson 2003, Bergeron et al. 2007).

The Importance of the Gulf of Mexico to Piping Plovers

The Gulf of Mexico is one of the piping plover's key known wintering areas. Marked birds from all three populations have been observed on the Gulf Coast. Thus, all three populations of piping plovers may be at risk to oil exposure from this spill. Every five years since 1991, an attempt has been made to count all breeding and wintering piping plovers. In these counts, 73-93% of all wintering plovers counted have been on the shores of the Gulf of Mexico (Table 1, Haig et al. 2005, Elliot-Smith et al. 2009).

Many birds may have been overlooked during these winter studies. Indeed, the number counted on the wintering areas has been only 40-63% of the number on the breeding areas (Table 1). Many of the "missing" birds may have been in the areas surveyed, but were missed because they moved out of the surveyed area during the survey. At low tide, wintering plovers often leave the high energy beaches (i.e., beaches exposed to the largest water bodies, such as those facing the Atlantic Ocean or the Gulf of Mexico) to forage on emergent intertidal flats and in marshes (Cohen et al. 2008). Birds in these habitats could be overlooked during typical plover surveys. Moreover, very high piping plover numbers have been seen in southeast Texas, near the Mexican border, suggesting that many of the unseen piping plovers may have been wintering on the shores of the Gulf of Mexico - in Mexico and the Yucatan Peninsula, in areas that have not been surveyed.

We believe it is conservative to say that more than 70% of all piping plovers winter (not on the breeding grounds) on the shores of the Gulf of Mexico. It is suspected that most of the piping plovers in the Great Plains population spend all or part of the winter/migration period on the shores of the Gulf of Mexico. As piping plovers may spend eight months or more each year in winter/migration habitats, it is clear that the Gulf of Mexico is central to the survival of this species (Figure 1).

Figure 1. Piping Plover Breeding and Winter Range (courtesy of Cornell Laboratory of Ornithology)

STUDY AREA

A detailed description of breeding grounds can be found in Service's *5-Year Review of the Piping Plover* (USFWS 2009). The areas of concern for the natural resource damage assessment of piping plovers in their wintering habitat is broadly described as all coastal areas between Florida and Texas. This area of potential impact might expand in the future, necessitating an increase in the sampling universe. For example, future areas of concern may include habitat such as in the southwest Florida Keys (including the Dry Tortugas) and Southeast Florida (e.g., Dade County).

Due to the proximity of the spill release to the Mississippi River delta, Grand Isle and Fourchon beaches, and the fact that band returns show that the delta hosts large numbers of wintering birds from the Great Plains and Great Lakes populations of piping plovers, these areas have been identified as priority piping plover study sites. These areas are very reliable sites for observing birds. The Mississippi River delta has not received the spill response clean up attention that the other two locations have.

OBJECTIVE

The objective of this effort is to collect data that will facilitate the evaluation of potential injury of the Deepwater Horizon (MC 252) oil spill on the piping plover.

In general the study will:

- Evaluate over-winter survival on oiled and un-oiled areas in 2010/2011.
- Evaluate winter population abundance and distribution in the oil impact area (and reference areas) through April 2011.
- Evaluate oiling of piping plovers in the impact area in 2010/2011.

Coordination with other Deepwater Horizon (MC252) studies

To the extent feasible, the piping plover injury assessment will be coordinated with other studies that are currently ongoing, approved or proposed. We will coordinate with shorebird assessment teams to locate piping plovers on the wintering ground in the Gulf of Mexico.

STUDY DESIGN

In accordance with Parks and Refuges access protocols (attached) as well as before entering state Wildlife Management Areas, the appropriate managers will be notified prior to entering the site and will be allowed to accompany and participate with the observation and trapping teams.

Task 1. Estimate plover numbers in oiled and reference areas over winter, estimate numbers of plovers passing through the oiled area; and estimate survival at oiled and un-oiled sites

<u>Mark and Resighting Surveys – Wintering Grounds</u>

Impacts of the oil spill on piping plovers can include rapid death as a result of poisoning, hypothermia or inability to move to escape predators or obtain food or shelter. In addition, oiling could result in mortality over a longer term, due to chronic toxicity of PAHs. Resighting of marked plovers over the course of the wintering (non-breeding) period will allow us to estimate survival during several two to six week periods over the winter (early, mid and late winter). Piping plovers that have been banded on their breeding and wintering grounds will be resighted throughout the study area to confirm habitat use and for the demographic estimates outlined under Task 4. From 2005 to 2009, 552 adult and 1,667 hatchling piping plovers were banded on the Missouri River, from Lewis and Clark Lake to Ponca. In 2010, 60 adult piping plovers were banded in Virginia and Maryland. Nearly the entire Great Lakes population of plovers is already banded (more than 50 pairs).

Despite these numbers of banded birds, there may not be enough existing banded birds in the study area to support data collection that will facilitate estimation of piping plover survival. As a result, we will trap and individually mark more plovers in the wintering study area. The number marked will depend upon the number of previously marked birds we find, and the resight rate we obtain during the surveys. We currently plan to achieve 200 marked birds east of the Mississippi, 200 between the Mississippi and Raccoon Island (including important areas of the Mississippi River delta, Grand Isle and Fourchon), and 200 birds that are wintering along shorelines that are un-impacted by, and distant from, the effects of the DWH (MC252) oil spill. In summary, we may mark up to 600 birds in addition to those marked in July 2010 on the breeding grounds. The resighting project 1) estimates the winter survival in the oil spill impacted and reference areas, 2) distinguishes between true survival and apparent survival, 3) estimates the number of piping plovers using the oil spill impacted and reference areas, and 4) estimates the "passage population," i.e., the number of birds that pass through the spill area, and thus may be exposed to oiled shorelines. Resighting means specifically the reading of color bands of individually marked birds. Separating true from apparent survival keeps emigrants from being lumped in with the dead birds.

Gulf Coast piping plovers forage and roost on intertidal sandflats and mudflats, on barrier island beaches, on barrier algal flats and in coastal marshes. We will coordinate closely with other NRDA study teams to identify piping plover locations. We will conduct systematic surveys of areas known to have been used by plovers in the past and use remotely sensed data (Google Earth or other data that provide land cover information) to direct teams to those habitats that may have been overlooked in previous surveys.

To mark piping plovers, the birds will be safely captured on the wintering grounds using a number of techniques, including drop nets, whoosh nets (similar to a cannon net, but powered by bungee cords), funnel traps and/or bal-chatri (noose carpet) traps. The decision to employ each of these methods will depend upon flock size, habitat composition, and other local circumstances. In many cases, the first preference will be the drop net.

We will deploy six dedicated piping plover (PIPL) resighting teams. Band reading of PIPLs by NRDA teams involved in collecting data pursuant to other NRDA approved plans for this incident is likely insufficient to achieve the sampling necessary to assess injury to the PIPL. PIPL teams will consist of (at least) one crew leader/resighter, two resighters, and a boat captain. There will be three, two to six week sampling periods (observation and banding) during the

wintering period – early, mid and late winter. Deployed PIPL teams across the Gulf of Mexico will allow efficient access to key study areas. Four PIPL teams will be distributed more or less across the oil impact area in areas of known or likely piping plover habitat. Based upon our current understanding of coastal oiling patterns, the first four teams will be deployed from Caillou Bay, Louisiana to Panama City, Florida. A fifth team will be located in an area of the Gulf of Mexico not currently known to be exposed to oil (Reference Site #1), in far south Texas, potentially Laguna Atacosa National Wildlife Refuge. Given that oil is now impacting Texas coastline, this reference site could become oiled in the future and may subsequently switch categories from reference to oil-impacted. Additionally, piping plovers oiled in one section of the Gulf may fly to un-oiled sections. Therefore, a second reference site (Reference Site #2) will be located along the Atlantic coast (North Carolina, South Carolina, Georgia or northeast Florida) in a known piping plover aggregation area, remote from oil-related impacts of DWH (MC252). Data from the reference areas will help in evaluating the over-winter survival of piping plovers in oiled versus reference areas and the return rate to their breeding grounds. This assessment, as designed, will provide data to more precisely quantify which proportion of each breeding population may be impacted by oil in the Gulf. There are good estimates of survival from all three breeding populations. Thus, we will be able to compare survival rates of birds known to spend time in the oiled Gulf versus birds spending time in un-oiled reference areas to historical estimates of survival for all three populations.

Teams will pass through their assigned section, surveying all suitable open habitats (beach, algal flat, intertidal flat) for piping plovers. Protocols in use for the NRDA Bird Studies will be used for recording data in this study (Appendix 1). Each plover observed will be examined through a 20-60 x 80 spotting scope, the state of oiling will be recorded and bands, if any, will be read and recorded. Flock sizes, surveying time, habitat used, condition (oiled or not), geo-referenced, photo id, and the presence or absence of oil on the nearby shoreline will be recorded.

Task 2. Assess oiling of piping plovers on the wintering grounds.

During surveys for marked birds, we will scan piping plovers for oiling. Observations of piping plovers in the study area will be made with 10 x 40 binoculars and/or a 20-60x spotting scope. Plovers classified for oiling will be documented with a geo-referenced and time-referenced photograph. The Live Animal Assessment form and protocol (attached) will be used to evaluate (not visibly oiled, or as having trace, light, moderate, or heavy oiling) and record plover oiling levels (these protocols assure an unbiased sample. For large flocks of birds (>30 birds), we will use a tally meter or tape recorder to record birds in each category.

Roles and Responsibilities

The principle investigator (PI) is responsible for overall scientific, fiscal and personnel management on the project. He is the principle liaison with the other NRDA partners. He will directly supervise one or more graduate students and research scientists, and the project administrative assistant.

Dr. Bill Hopkins (Associate Professor) will assist in overall project direction and provide oversight on chain of evidence and documentation.

Co-PI and project assistant manager, Dr. Sarah Karpanty (Assistant Professor) will assist in all aspects of project management and will directly supervise several graduate students, one research scientist, and the watercraft manager.

Co-PI Dr. Dan Catlin (research scientist) will oversee and help direct all population analyses and modeling. Dr. Catlin will also provide oversight and QA/QC of resight database. He will provide advice on all research design and statistical issues, with special emphasis on the Great Plains and Gulf Coast studies.

Co-PI Dr. Jonathan Cohen (research scientist) will assist with project planning and statistical design and analysis. He will provide GIS support.

Plover biologist Joy Felio (M.S.) will oversee and help direct all field activities. She will be responsible for training all crew leaders and graduate students in field techniques. She will also be responsible for daily management of the resight database.

Watercraft operations manager for the project 1) will oversee logistics, equipment maintenance and safe operation of boats, 2) is a licensed captain and 3) will pilot largest vessel, which is radar equipped, during the Gulf Coast field season outside the area where Vessels of Opportunity (VOO) are used.

The administrative assistant will oversee advertisement, hiring, and payment of staff, will manage equipment and logistics (e.g., boats, multiple vehicles, arranging for travel, and providing travel reimbursements), ordering supplies and services and renting properties.

Technicians will be responsible for daily resighting of marked birds, identifying plover concentration areas for trapping, assisting bird trappers, conducting oiled bird surveys, collecting habitat data, inputting data into the database, and assisting with boat operation and maintenance. Requested qualifications will be a degree in biology, prior field experience, and references. We will seek technicians with prior boating experience.

The bird trapper will provide the key role of piping plover trapping oversight; a specialized team is needed for this purpose. We expect to employ a recognized expert shorebird trapper for this purpose with multiple drop nets and whoosh nets, who will travel through the study area capturing birds in specified locations. Technicians will assist, as needed.

Chief resighter (Sid Maddock) is an expert in the field and will train other resighters and photograph oiled birds.

BUDGET –

Budget Period : 07/1/2010-8/31/2011
COTR for US Fish and Wildlife Service: Peter Tuttle

NAME/POSITION		REQUESTED SALARY	FRINGE
Jim Fraser	CY-Regular	$73,268	$23,629
Sarah Karpanty	Summer	$21,956	$1,592
Bill Hopkins	CY-Regular	$17,618	$5,682
Research Scientist TBN	CY-Research	$120,000	$40,500
Plover Biologist	CY-Research	$48,533	$16,380
Watercraft Manager	CY-Research	$58,333	$19,687
Admin Assistant	Classified	$37,440	$16,848
GRA PhD Step 18	GBB	$75,146	$6,012
GRA MS Step 14	GBB	$45,418	$3,633
Natural Research Spc II TBN Bird Trapper	Classified	$28,001	$12,600
Natural Research Spc I TBN	Classified	$310,611	$139,775
Natural Research Spc II TBN Crew Leaders	Classified	$262,080	$117,936
Res SpcI Chief Resighter	Classified	$28,001	$12,600
Technician TBN	Wage	$0	
Post Doc TBN	CY-Research	$0	
Watercraft Operators TBN	Classified	$174,470	$78,512
TOTAL PERSONNEL SALARIES		**$1,300,875**	
FRINGE BENEFITS		**$495,386**	
TOTAL SALARIES AND FRINGES		**$1,796,261**	

EQUIPMENT	
Boats	$207,900
Trucks	$227,745
Ultra low freezers	$0
Olympus Recording microscopes	$0
Thermo Scientific Legend centrifuges	$0
Trimble ranger data collector	$15,837
4 UTV's @ $7,500 ea	$30,000
TOTAL EQUIPMENT	**$481,482**

TUITION & ACADEMIC FEES - AY	**$46,995**
TRAVEL	**$166,007**
MATERIALS/SUPPLIES	
Office supplies	$2,500
Truck maint, boat gas, lab supplies, computers	$117,250
TOTAL MATERIALS/SUPPLIES	**$119,750**
CONTRACTUAL SERVICES	
Rentals, phone, publications	$207,750
Postage	$1,000
Courier Service	$1,000
(Description)	$0
TOTAL CONTRACTUAL SERVICES	**$209,750**
PUBLICATION COSTS	**$2,000**
TOTAL DIRECT COSTS	**$2,822,245**
INDIRECT COSTS	**$596,380**
FY 10-11 (7/1/09-6/30/11) MTDC @	
Off Campus federal Rate 26%	
TOTAL COSTS	**$ 3,418,625**

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Table 1. Piping plovers seen during four surveys, 1991-2006, from Haig et al. 2005 and Elliot-Smith et al. 2009.

Census year	winter survey total	no in gulf	% of winter census pipl in Gulf	breeding census total	winter census birds as a % of breeding birds counted	source
1991	3451	3206	92.9%	5484	62.9%	Haig et al. 2005
1996	2515	1833	72.9%	5931	42.4%	Haig et al. 2005
2001	2389	1906	79.8%	5945	40.2%	Haig et al. 2005
2006	3884	2820	76.2%	8092	48.0%	Elliot-Smith et al. 2009

APPENDICES

Appendix 1.
Deepwater Horizon (MC 252) Oil Spill

NRDA Bird Group Live Bird Assessment Procedures

Introduction: Live Bird Assessments are essentially point counts, conducted to assess the degree of oiling on live birds. Only birds that are close enough for confident evaluation of visible oil detection should be evaluated, and the distance will vary based on a variety of factors including bird size, coloration of plumage, bird behavior (standing, sitting, flying), and degree of oiling. If identification to species is not possible, birds can be grouped by class (gull, terns, sandpipers, plovers, etc.).

Procedures:

1. Choose a location to conduct the assessment. The location should allow you to observe a group of birds, of any size, for up to 15 minutes. If necessary, allow several minutes for birds to adjust to your presence.

2. Fill out all data fields in the top portion of the *Live Animal Assessment Form*, attached to the end of this protocol.

If you exceed the capacity of one form, use additional forms. Fill out the tops of these completely and note, page "2 of __," "3 of ____," etc. on these additional forms, and staple originals together.

a. List all team members. All team members should sign the form after review.

b. Note the date, and actual start time of the survey. At the end of the survey, note the end time.

c. Spend up to 15 minutes evaluating birds for degree of oiling. If all birds cannot be classified in 15 minutes, evaluate as many as practical.

Note: Remember to only evaluate birds that are close enough for you to confidently detect the presence of visible oil.

c. Note the location of the survey. This will vary among surveys and species groups.

Note: "Location" is the geographic experimental unit, within which you are doing the survey. For example, for NRDA Beached Birds, this is the ACP Segment Name.

d. Record your coordinates and create a waypoint in the GPS.

Note: All coordinates must be recorded as decimal degrees in the WGS 84 datum.

e. Note the optics used for the survey. Please be specific, e.g. "Nikon 8 x 42 Explorer binoculars."

f. Briefly note the weather, for example, “Sunny, light breeze, 90 degrees F.”

g. Note whether the wind is blowing toward or away from shore, if that is applicable for your survey habitat. If not, put “n/a.”

h. Circle the estimated visibility distance.

3. For each species (or class), record each different behavior observed on a separate line (eg. “gull, standing”, “gull, flying”, “gull, on water”).

4. Assess the birds in each behavior category for degree of oiling: no visible oil, trace oil (≤5%), light oil (6-20%), moderate oil (21-40%), or heavy oil (>40%) (See photos for examples of each oiling category). Also enter the number of birds observed that are debilitated.

For a two-person team, one person observes the birds and calls out the degree of oiling while the other tallies the observations. Final tallies for each species (or class), behavior category, and percent oiling should be recorded on the data form. In the example below, the observer was able to confidently assess visible oiling on 5 sitting Brown pelicans, 6 standing Brown pelicans, and 3 flying Brown pelicans.

		Degree of Oiling (record number of birds in category)[1]					
Species/Class	Behavior	No Visible Oil	Trace (≤5%)	Light (6 -20%)	Moderate (21-40%)	Heavy (>40%)	Debilitated
Brown pelican	sitting	3	1	1	0	0	0
Brown pelican	standing	0	2	3	1	0	0
Brown pelican	flying	1	2	0	0	0	0

5. Record the stop time at the end of the survey. All team members should review the data sheet and sign beside their printed names.

6. Make sure all of the fields are filled in correctly, completely, and legibly. Cross out all empty fields with an X.

7. If you fill in a field on the data sheet incorrectly, cross out the incorrect entry with a SINGLE thin line and record your initials next to the crossed out entry.

Data transfer, entry, and storage:

8. As soon as possible, make copies of all data sheets. You may also choose to scan the sheets to a .pdf as an additional backup.

9. After copying, FedEx original data sheets to the USFWS Data Management Group, who will enter the data[1]. Currently, that address is:

Homewood Suites Inn
29474 North Main Street

Daphne, AL 36526
Blakely Conference Room 2
ATTN: USFWS-NRDA BIRD DATA ENTRY
(251) 621-0721 (Hotel phone number for delivery purposes only)

Questions should be directed to the USFWS NRDA Bird Group Lead (FW4NRDABIRD@FWS.GOV).

Appendix 1. Live Animal Assessment Form

Incident Name: Deepwater Horizon MC-252 **Crew (Print and Sign Names):** _____

Date: _____ **Start time**:_____ **End time**:_____ Ph**otographer** _____**Camera**_____

Site Name:_____ **Coordinates (WGS 84) Lat**:_____**Long**:_____

O**ptics:** _____ **GPS Waypoint No**.:_____ **GPS Equip**._____

Weather:_____ **Wind Direction:** _____ **Visibility:** <0.1 mi 0.5 mi 1.0 mi >1.0 mi
(describe briefly) (Blowing toward or away from shore)

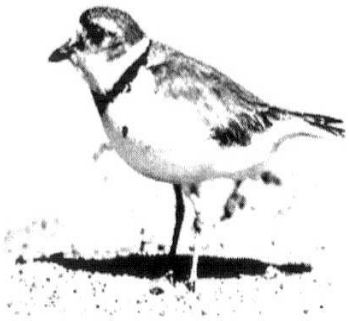
		Degree of Oiling (record number of birds in category)							
Species/Class	**Behavior**	**No Visible Oil**	**Trace (≤5%)**	**Light (6 - 20%)**	**Moderate (21-40%)**	**Heavy (>40%)**	**Debilitated**	**Photo ID**	**Notes**

Oil Presence (circle all that apply):
Oil Smell Oil in water Oil on vegetation Oil on birds Oil on exposed land None

Appendix 1 continued. Illustration of bird oiling levels (trace ≤5%, light 6-20%, moderate 21-40%, heavy>40%).

NRDA Bird Oiling Levels

TRACE



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

Typically a single to several tiny spots or hairline streaks.

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. Oiling on 2 or more body parts is recorded as Moderate.

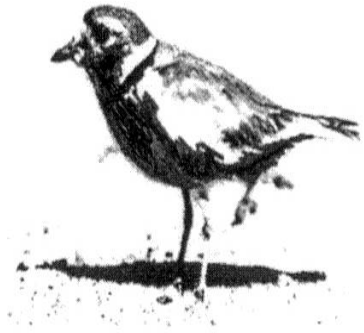
MODERATE

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.

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.

PROTOCOL FOR REQUESTING ACCESS

to

US FISH AND WILDLIFE SERVICE

NATIONAL WILDLIFE REFUGES

For

Natural Resource Damage Assessment Activities

MSC252 – Deep Water Horizon

To be used with respect to Natural Resource Damage Assessment (NRDA) activities related specifically to the BP Mississippi Canyon 252 Oil Spill in the Gulf of Mexico

National Wildlife Refuge (NWR) lands are some of the most sensitive areas in the oil spill area. National Wildlife Refuge managers have been overwhelmed with requests for data collection on NWR lands. Collection of data from NWRs is vitally important and coordination with NWR staff on all activities on NWR lands is needed. The refuge staff are experts on their NWRs and integration into appropriate ongoing refuge activities, as applicable, is important. The purpose of this protocol is to facilitate assessment by providing central points of contact for NWR managers and Technical Working Group (TWG) members. The refuge staff are experts on their NWRs and integration into appropriate ongoing refuge activities, as applicable, is important. To assist with NRDA data collection, please use the Access Request Form to facilitate your preassessment and assessment needs.

The form is located on the ftp site: www.researchplanning.com/downloads/ under *Field Operations* in the *Scientific Research and Collecting Permits* file. Please submit access request and associated assessment work plan(s) to fw4nrdanwr@fws.gov. After the request is received by an NWR liaison you will be contacted to arrange access to the requested site.

NRDA NWR Liaison: (251) 725-2439 NWR Liaison: (504) 303-2859

Incident-Specific Guidance for Scientific Research and Collecting Permit applicants

May 14, 2010

To Be Used Only With Respect To Scientific Activities Related Specifically To

The BP Mississippi Canyon 252 Oil Spill In The Gulf Of Mexico

The purpose of this information is to provide guidance to those who wish to conduct scientific activities in parks impacted by the oil spill.

- Activities related to response/clean-up up do not require a Scientific Research and Collecting Permit. Contact the park directly to determine how to proceed.
- Proposed activities that trigger the requirement to apply for a Scientific Research and Collecting Permit include Natural Resource Damage Assessment (NRDA) activities, scientific specimen collection, data collection, inventory, monitoring, and research.

If you need a permit this is what you do: Access the Research Permit and Reporting System (RPRS) web site: https://science.nature.nps.gov/research

- Choose "Submit applications for research permits" and follow the instructions
- Please identify the funder of your activity in the "Purpose of Study" field.
- Be sure to complete the process. You will know you are done when the system provides you the option to print a copy of your application. This page also provides an "Apply for another Research Permit" option by which you may submit the same application to additional parks. This option saves time by porting the data you entered in your original application into the new application, and you will be able to edit the data in the new application.
- Park contact information is provided at the beginning and end of the application process. It is a good idea to follow up your application by checking in with the Park Research Coordinator.
- If you are unable to submit your application on-line, you may contact the park directly. The park has the option of processing permit applications via paper forms.

Park contact information is available from the RPRS web site; choose the "Park Info" menu item.

- A National Park Service resource advisor/observer may be assigned to accompany you in the field.
- Review of applications related to the oil spill will be expedited.
- Review of applications not related to the oil spill may be delayed.
- For questions related to the process of submitting an application you may contact Bill Commins at 202-513-7166, bill_commins@nps.gov
- For questions related to the status of your application, contact the Park Research Coordinator.

NATURAL RESOURCE DAMAGE ASSESSMENT WORK PLAN FOR DETERMINING INJURY TO THE PIPING PLOVER (CHARADRIUS MELODUS) FROM THE DEEPWATER HORIZON (MC 252) OIL SPILL / BIRD STUDY #7

****Approval of this work plan is for the purposes of obtaining data for the Natural Resource 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

Veronica W. Varela — 8/4/2010

Trustee NRDA Bird Group Lead
Veronica Varela

Date

FOR ROLAND GUIDRY — 8/12/10

State of Louisiana Trustee Representative

Date