

**Mississippi Canyon 252 Incident
Submerged Aquatic Vegetation Tier 2 Pre-Assessment
Low Altitude Aerial Photography of the Seagrass Beds of
Southeastern Louisiana and Coastal Mississippi**

Christopher Wells (United States Geological Survey)
Larry Handley ((United States Geological Survey)
Paul Carlson (Florida Fish and Wildlife Conservation Commission)
Laura Yarbro (Florida Fish and Wildlife Conservation Commission)
Natalie Cosentino-Manning (National Oceanic Atmospheric Administration)

For the
MC 252 NRDA Submerged Aquatic Vegetation Technical Working Group

Mississippi Canyon 252 Trustees

First submitted September 27, 2010
Final June 26, 2012

**Mississippi Canyon 252 Incident
Submerged Aquatic Vegetation Tier 2 Pre-Assessment
Low Altitude Aerial Photography of the Seagrass Beds of
Southeastern Louisiana and Coastal Mississippi**

Approval of this Tier 2 Aerial Pre-Assessment plan is for the purposes of obtaining data for the Natural Resource Damage Assessment. Each party reserves its right to produce its own independent interpretation and analysis of any data collected pursuant to this work plan.

This plan will be implemented consistent with existing trustee regulations and policies. All applicable state and federal permits must be obtained prior to conducting work.

APPROVED:

Kevin D. Reynolds 3 July 2012
Department of the Interior Trustee Representative: Date

Robert W. Parks 26 June 2012
Department of Commerce Trustee Representative: Date

[Signature] 08/03/2012
Louisiana Trustee Representative: Date

[Signature] 24 July 2012
Mississippi Trustee Representative: Date

[Signature] 20-July-2012
BP Representative: Date

Title of Activity: Low Altitude Aerial Photography of the Seagrass Beds of Southeastern Louisiana and Coastal Mississippi

Principal Investigators: Chris Wells, Geographer, USGS/National Wetlands Research Center and Paul Carlson, PhD, Florida Fish and Wildlife Research Institute

Summary*: The Trustees for the Deepwater Horizon/MC252 Oil Spill propose to collect low altitude aerial imagery to assist in assessing potential injury to seagrass beds along Southeastern Louisiana through Coastal Mississippi and possibly to the Florida panhandle as a result of the Deepwater Horizon release. This document presents the plan to collect low altitude aerial imagery before the end of the seagrass growing season (late October 2010). Additional flights in the spring and fall of 2011 may also occur, but are not requested as part of this proposal. If the Trustees propose these additional flights in 2011, work plans will be submitted to BP for review. These data will be used as part of the pre- assessment activity within the NRDA process for the MC252 spill (April 2010).

* The collection of low altitude aerial imagery described throughout this work plan occurred in the Fall of 2010 .

Purpose: Collect low altitude aerial imagery for a rapid acquisition of imagery of the seagrass beds to document the condition of seagrass beds to assist in the Natural Resource Damage Assessment. The areas identified for aerial mapping are based on SCAT, NOAA oiling trajectories and shoreline NRDA data and also overlap with Submerged Aquatic Vegetation (SAV) Tier 1 and Tier 2 rapid assessment activities.

Specific Locations: Seagrass beds in the vicinity of Breton Island, Chandeleur Islands and the Mississippi Sound. (Figure1).

Description of Activity: Department of the Interior Cessna 185 amphibious airplane N727, fitted-out for vertical aerial photography with equipment loaned by the State of Florida for this mission. Photography will be acquired at 2,000 feet AGL. Flight crew consists of a DOI approved pilot and USGS observer.

Metadata: All metadata will comply with the “Specification for Mission Related Information to be delivered Aerial & Satellite Imaging and Surveillance Missions” Version 1.1, Prepared for BP by Pierre le Roux, Remote Sensing Advisor. Proposed Metadata is included in Table 1.

Deliverables: Still photography of seagrass beds and associated GPS files to provide information for georeferencing the images. There will be no further processing of the digital images. These data will be uploaded to the Hazards Distribution Database (HDDS) website maintained by the USGS for use by the NRDA technical working groups.

Data Sharing:** All data, imagery and any other products and services produced for this project become the property of BP and the NRDA Trustees and may be used by any of them for all NRDA activities restoration planning, education, and in related legal claims and litigation or

legal action. All parties reserve their right to produce their own independent interpretation and analysis of any data collected pursuant to this work plan. All deliverables will be shared with BP within 2 weeks of final acquisition and will be posted on HDDS.

** Photography was collected and distributed in raw form and distributed with associated GPS track files to BP and Florida Fish and Wildlife Research Institute (FWRI). FWRI geotagged the photography, and provided it to the USGS HDDS for distribution. The imagery and metadata is currently available on HDDS to BP and the Trustees.

Chain of Custody: All tracks and imagery and processing will be collected and maintained under chain of custody according to DWH/MC252 NRDA procedures.

Timeline*:** 3 days of flying between September 14 through September 18, 2010

***Timeline varied due to weather and water clarity.

Budget:

<u>Item</u>	<u>Description</u>	<u>Subtotal</u>
Aircraft	Aircraft costs, fuel	\$2,500
Per Diem	3 nights in Mississippi	\$600
Salaries		\$2,000
Administration		\$400
Total		\$5,500

The Parties acknowledge that this budget is an estimate, and that actual costs may prove to be higher. BP agrees to reimburse the actual costs incurred for collecting the aerial imagery described in this plan.

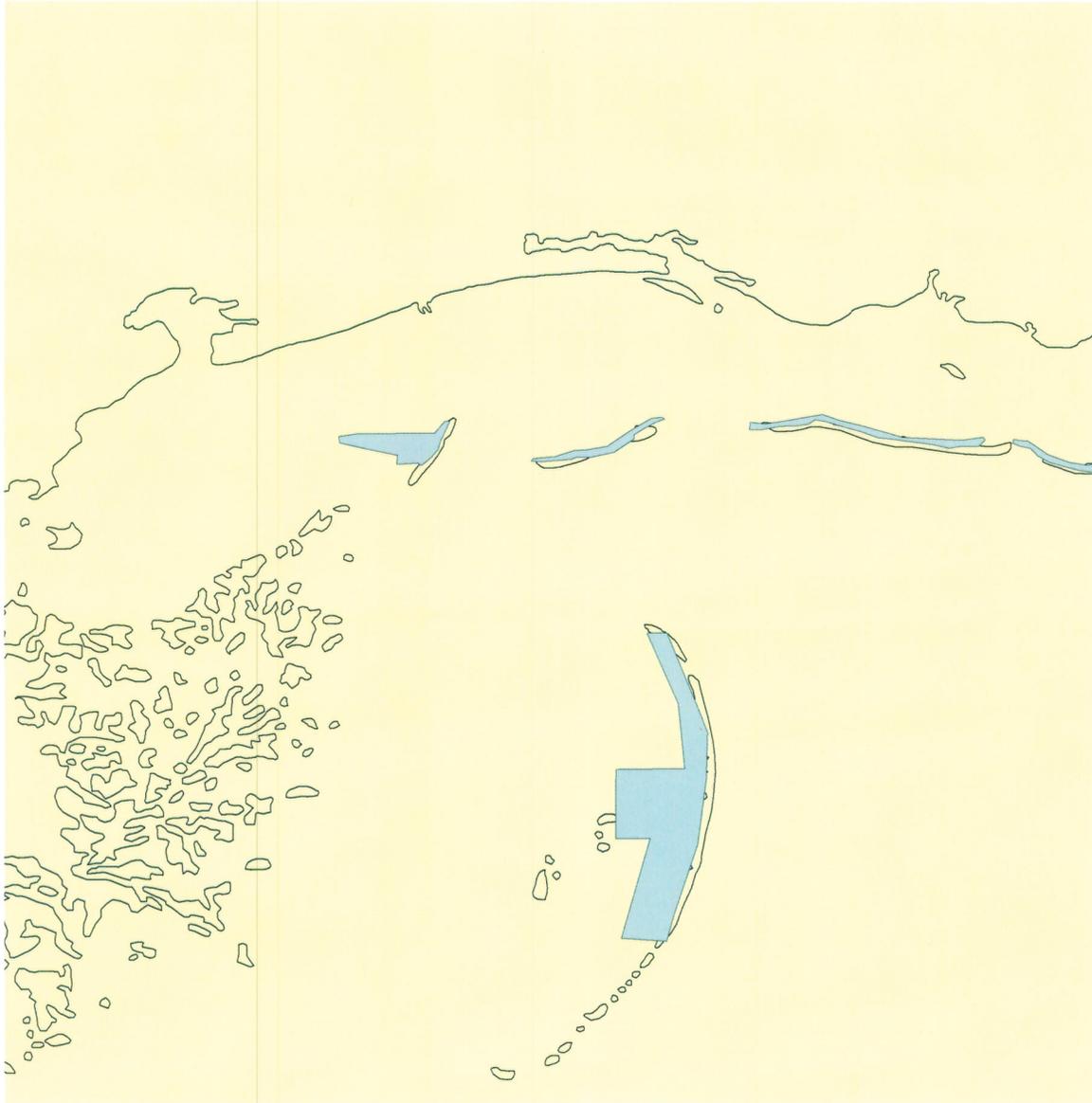


Figure1. Areas for imagery data collection

Table1. Meta Data.

Mission ID	Vendor	Vendor ID	Mission Date Start	Mission Time Start	Mission Date End	Mission Time End	Date/Time/Zone	Mission Type	Mission Primary Sensor	Mission Secondary Sensor	Mission Description
SAV_092010	USGS/NWRC	NA	9/1/2010	TBA	9/14/2010	TBA	CDT (GMT-5)	Vertical imaging of seagrass beds	Nikon D-80 Natural color digital still image	NA	Two pass low altitude (6000 ft AGL & 2000 ft AGL) vertical natural color stereo (60% overlap) digital still photography for survey of seagrass beds in preparation for ground plot sampling. This imagery will guide sampling of the seagrass beds in LA & MS.

Platform Name	Platform ID	Mission min speed	Mission Max speed	Mission AMSL Min	Mission AMSL Max	AMSL Units	Project Number	Client Detail
Dept of the Interior Cessna 187 amphibious aircraft	N727	90 kts	120 kts	2000	6000	ft	NA	Chris Wells, USGS/NWRC, 700 Cajundome Blvd Lafayette LA 70506 Ph 337 266 8651 cell 337 288 0737 email wellsc@usgs.gov

Project Name	Mission Status	UL_LAT	UL_LONG	UR_LAT	UR_LONG	LR_LAT	LR_LONG	LL_LAT	LL_LONG	Area of Coverage Shapefile Name
NA	Pending approval	N 30.259255	W 89.191686	N 30.405335	W 88.367892	N 29.741142	W 88.886592	N 29.741142	W 88.929425	Seagrass_LA-MS