

Deepwater Horizon/Mississippi
Canyon 252 Oil Spill 2013 Plan for
Assessing Recovery of Submerged
Aquatic Vegetation Propeller Scars at
Gulf
Islands National Seashore

MISSISSIPPI CANYON 252

ADDENDUM: 2013 PLAN FOR ASSESSING RECOVERY OF SUBMERGED AQUATIC

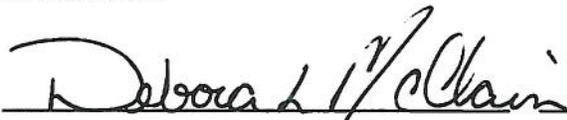
VEGETATION PROPELLER SCARS AT GULF ISLANDS NATIONAL SEASHORE

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.

All materials associated with the collection or analysis of samples under these protocols or pursuant to any approved work plan, including any remains of samples and, including remains of extracts created during or remaining after analytical testing, must be preserved and disposed of in accordance with the preservation and disposal requirements set forth in Pretrial Orders ("PTOs") # 1, # 30, #35, # 37, #39 and #43 and any other applicable Court Orders governing tangible items that are or may be issued in MDL No. 2179 IN RE: Oil Spill by the Oil Rig "DEEPWATER HORIZON" (E.D. LA 2010). Destructive analytical testing of oil, dispersant or sediment samples may only be conducted in accordance with PTO # 37, paragraph 11, and PTO # 39, paragraph 11. Circumstances and procedures governing preservation and disposal of sample materials by the trustees must be set forth in a written protocol that is approved by the state or federal agency whose employees or contractors are in possession or control of such materials and must comply with the provisions of PTOs # 1, # 30, # 35, #37, #39 and #43.

APPROVED:



7/12/13

Department of the Interior Trustee Representative

Date



7/17/13

BP Representative *Lisa Hanke*

Date

Introduction

This document presents a plan to monitor submerged aquatic vegetation (SAV) prop scars within the boundaries of Gulf Islands National Seashore (GUIS) that were identified by the Trustees as caused by response actions to the Deepwater Horizon/Mississippi Canyon 252 (MC 252) Oil Spill. The physical injuries to SAV in GUIS include propeller (prop) scars and blowholes. NOAA (on behalf of the Trustees) and BP negotiated an Emergency Restoration Plan for Response Impacts to Seagrasses in the Northern Gulf of Mexico (NOAA 2011b).

During the initial efforts of the Emergency Restoration Plan, the Trustees identified 52 prop scars and 5 blowholes within the boundaries of GUIS as potential response injuries. The Trustees identified 7 of these prop scars and 5 of the blowholes as injuries from response. Of these 12 scars/blowholes, the Trustees determined 9 to be no-action scars/blowholes. Pursuant to the Plan, "Deepwater Horizon/Mississippi Canyon 252 Oil Spill Plan for Assessing Recovery of Submerged Aquatic Vegetation Propeller Scars at Gulf Islands National Seashore" in 2012, the DOI and BP worked cooperatively to monitor those 9 no-action scars/blowholes for natural recolonization

(http://www.doi.gov/deepwaterhorizon/adminrecord/upload/FINAL_Executed_GUIS-Monitoring-Plan_Redacted-2.pdf). As described in the 2012 plan, Braun-Blanquet for percent cover was used to assess recovery of the scars/blowholes, using reference sites paired with each injury to determine if there are any background impacts. Results from the 2012 field work indicate that although all scars/blowholes show some level of natural recolonization, 5 of the no-action scars/blowholes have not yet met the agreed upon criteria for recovery.

At this time, active restoration is not needed at any of the sites, however additional monitoring is needed to make sure each remaining scar/blowhole fully recovers. This Assessment Plan will monitor the 5 no-action scars that have not yet successfully met performance standards for recolonization (Table 1). A map of these 2013 monitoring locations is provided in Appendix A.

Table 1: Site locations for the five scars/blowholes that are recommended for monitoring in 2013.

Site ID	Type	Location	Length (m)	Area (m ²)	Longitude (centroid)	Latitude (centroid)
BIGLAGOON_I_BH1	Blowhole	Big Lagoon - Eastern end of Big Lagoon		2.0	-87.3347747786	30.319791
BIGLAGOON_I_BH2	Blowhole	Big Lagoon - Eastern end of Big Lagoon		0.5	-87.3347907373	30.319794
BIGLAGOON_I_SCAR1	Scar	Big Lagoon - Eastern end of Big Lagoon	33.4		-87.334706	30.319723
BIGLAGOON_WPT009_BM	Blowhole	Big Lagoon - Eastern end of Big Lagoon		22.6	-87.327747	30.325068
NPS_SANTAROSA_BH1	Blowhole	Santa Rosa Island - Fort Picken		27.7	-87.236447	30.321587

Project Description

Based on the importance of SAV within GUIS, and the state of this habitat, it is critical to monitor each seagrass scar within GUIS that the Trustees identified as response injury. This will help ensure that natural recovery within the Gulf Islands National Seashore occurs. If recovery falters or fails in these areas, the erosion of healthy seagrass in the surrounding area could trigger further seagrass loss. This project will monitor the 5 no-action scars identified in GUIS that did not meet performance standards as of November 2012 monitoring. All monitoring will follow the Trustee/BP agreed upon protocols used in the 2012 signed “Deepwater Horizon/Mississippi Canyon 252 Oil Spill Plan for Assessing Recovery of Submerged Aquatic Vegetation Propeller Scars at Gulf Islands National Seashore” and described in the signed Emergency Restoration Plan for Response Impacts to Seagrasses in the Northern Gulf of Mexico” (NOAA 2011b) and excerpted below where applicable to the monitoring of no-action scars.

Monitoring

Monitoring of the no-action sea grass scars is necessary to permit the detection of, and if warranted, response to, significant changes in seagrass recovery rates.

Monitoring Parameters and Methodology

The 5 remaining no-action injury sites will be monitored to assess natural recolonization to ensure that no corrective actions (e.g., transplanting) will be needed in these areas. The execution and application of the monitoring effort is adapted from “Guidelines for the Conservation and Restoration of Seagrasses in the United States and Adjacent Waters” (Fonseca et al. 1998). Percent cover and shoot density of seagrass will be observed and/or measured at each of the GUIs no-action sites.

Methodologies are provided in Table 2 and include use of similar methodologies as in reconnaissance efforts (e.g., Braun-Blanquet for percent cover) and monitoring performed in 2012. Local reference sites near the injured areas will be assessed to determine if background impacts (that cannot be controlled nor affected through a mid-course correction), such as poor water quality or disease might affect natural re-colonization of the sites. Disturbances affecting the performance of recovery of the injured sites that also impact surrounding unimpacted seagrass beds to a similar degree will be considered baseline events for which BP will not be held responsible. Furthermore, it will be assumed that conditions within reference sites adjacent to prop scars represent the condition of injured areas at baseline, which makes them an appropriate benchmark for determining progress towards recovery. Monitoring will include documentation of percent cover by Braun-Blanquet quadrat analysis and shoot density.

Video transects will be performed to provide an unambiguous record of the status of the no-action site restoration. This methodology should be used to confirm the Braun-Blanquet quadrat analysis and is particularly valuable to parties not familiar with seagrass systems and interpretation of statistical data.

Performance Criteria and Corrective Action

Monitoring data will be used to determine if natural recovery is successful for injured sites. If not, these data will be used to plan and execute mid-course corrective actions, which may include active restoration.

Percent Cover (Braun-Blanquet)

Percent cover measured by the Braun-Blanquet method will be a primary performance metric used to eventually determine the success of natural recovery in GUIS no-action scars. Natural Recovery will be deemed successful for individual no-action scars when the mean percent cover within the scar equals or exceeds the lower bound of the 95% confidence interval of percent cover within the adjacent reference area.

Shoot Density

As with percent cover, shoot density measurements will be collected during monitoring. Natural recovery will be deemed successful for individual no-action scars when the mean shoot density within the scar equals or exceeds the lower bound of the 95% confidence interval of shoot density within the adjacent reference area.

TABLE 2: Monitoring methods

	Monitoring Parameter	Methodology	Corrective Action
1	Percent cover of no-action scar	Ten random Braun-Blanquet percent cover measurements within 0.04m ² quadrat (20 cm sides) taken within 1-3 meters laterally of the injury to determine reference percent cover of surrounding SAV and 10 random Braun-Blanquet quadrat measurements taken within the injured areas.	Potential corrective action for percent cover to be determined, if indicated by the lack of natural recovery.
2	Shoot Density of no-action scar	Ten random shoot count measurements within a 0.01m ² quadrat (10 cm sides) within scar/blowhole and 10 comparable random counts within reference areas 1-3 meters laterally of the injured site.	Potential corrective action for shoot density to be determined, if indicated by the lack of natural recovery.

Monitoring Scheduling

Seagrasses in the northern GOM exhibit a distinct growing period from spring through early fall followed by an over-winter dormancy period. Prior to entering dormancy, seagrasses senesce or shed their leaves. Monitoring should not occur after the onset of senescence or during the winter months as results obtained during this period will not accurately represent the actual status of restored seagrasses. Instead, monitoring should occur during the active growing season.

During 2013, monitoring will be performed between September 15th and October 31st.

No action sites will be evaluated to verify that natural recovery is actually occurring. If based on such assessment, technical representatives of the Trustees and BP concur that implementing one or more of the restoration actions outlined in the Emergency Restoration plan (NOAA 2011b) would be beneficial, restoration treatment(s) will be developed and implemented, subject to BP review, in a timely manner subject to seasonal considerations.

In the event that adequate natural recovery has not been demonstrated based on the performance criteria defined above, or offsetting compensatory restoration has not been executed or planned, the parties will enter into an agreement to conduct monitoring during the 2014 northern GOM SAV growing season.

Data Sharing

Copies of all data collected in accordance with this Plan, including raw data, field sheets, and field notes, will be provided to BP and its representatives within one month of completion of field work of each monitoring period, e.g., by December 2 for the September 15 to October 31 monitoring. Non-analytical data includes field sheets, photos, photologger forms and GPS files.

BP or its representative will be provided an opportunity to observe all sampling events occurring after the Plan is signed, subject to logistical feasibility and permit requirements. BP or its representative will be notified no less than 72 hours prior to each sampling event, and the Trustees will make all reasonable efforts to accommodate a designated observer.

Cost Estimate

The total field cost for this 2013 Assessment Plan is \$12,517. The Parties acknowledge that this budget is an estimate, and that actual costs may prove to be higher. BP's commitment to fund the costs of this work includes any additional reasonable costs within the scope of this approved work plan that may arise. The Trustees will make a good faith effort to notify BP in advance of any such increased costs.

Reservations

Except as explicitly set forth herein, nothing in this plan shall limit, restrict, or derogate any rights, recourse, or remedy that the Parties may have.

BP reserves the right to challenge the Trustees' determination that SAV injury is a result of response activity in relation to the Deepwater Horizon spill.

The Parties agree that references to literature cited herein are for background and context only and do not constitute endorsement of, or agreement with, the methods, analysis, or conclusions of any study cited.

References

Fonseca, M.S., Kenworthy W.J., Thayer G.W. 1998. “Guidelines for the Conservation and Restoration of Seagrasses in the United States and Adjacent Waters”. NOAA Coastal Ocean Program Decision Analysis Series No. 12. NOAA Coastal Ocean Office, Silver Spring, MD. 222pp.

National Oceanic and Atmospheric Administration (NOAA). 2011a. “Mississippi Canyon 252/Deepwater Horizon Scope of Work for Emergency Restoration Project: Response Impacts to Seagrass within Alabama, Florida, Louisiana, and Mississippi Coastal Waters”.
<http://www.doi.gov/deepwaterhorizon/adminrecord/Emergency-Restoration.cfm>

National Oceanic and Atmospheric Administration (NOAA). 2011b. “Mississippi Canyon 252/Deepwater Horizon Emergency Restoration Plan for Response Impacts to Seagrasses in the Northern Gulf of Mexico”.

Schwenning, L.M. December 2001. Seagrass management plan for Big Lagoon and Santa Rosa Sound. Florida Department of Environmental Protection (FDEP). Pensacola, FL.
Available at <http://www.epa.gov/gmpo/habitat/seagrassmanagementplan.pdf>

Appendix A

Map: 2013 GUIS SAV Monitoring Locations



Scar and Blowhole Locations

