

**Subject:** DWH-Early Restoration- Essential Fish Habitat Consultation Initiation-St. Joseph Bay Seagrass Recovery Project-Florida

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**Date:** 3/5/2014 1:28 PM

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Mr. Thompson,

Attached is the Essential Fish Habitat Assessment for the St. Joseph Bay Seagrass Recovery Project-Florida . This project is being proposed in the Deepwater Horizon Draft Phase III Early Restoration plan and Programmatic Environmental Impact Statement. Please consider this our initiation of our Essential Fish Habitat consultation. If you anticipate this consultation requiring more than 30 days (April 4, 2014) please let me know.

If you have any questions or require additional information, please contact me at [409-621-1248](tel:409-621-1248) or at [jamie.schubert@noaa.gov](mailto:jamie.schubert@noaa.gov).

Thanks,

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— Attachments: —

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## **Determination of Effect on Essential Fish Habitat from Florida St. Joseph Bay Seagrass Recovery project**

### ***EFH overview from Magnuson Stevens Act***

The 1996 Magnuson-Stevens Act requires cooperation among the National Marine Fisheries Service (NMFS), anglers, and federal and state agencies to protect, conserve, and enhance Essential Fish Habitat (EFH). EFH is defined as those waters and substrates necessary to fish for spawning, breeding, feeding, or growth to maturity. The designation and conservation of EFH seek to minimize adverse effects on habitat caused by fishing and non-fishing activities.

### ***Project description***

The proposed St. Joseph Bay Seagrass Recovery project would restore select shallow seagrass beds in the Florida Panhandle that were damaged by boat traffic. Restoration will occur over approximately 2 acres of existing seagrass propeller scars located primarily in turtle grass (*Thalassia testudinum*) habitats in St. Joseph Bay Aquatic Preserve in Gulf County. Should additional sites need to be restored outside of St. Joseph Bay to meet this acreage goal, locations in Alligator Harbor Aquatic Preserve in Franklin County and St. Andrews Aquatic Preserve in Bay County will be evaluated and restored if appropriate (see Figure 1 at end of document for the location of these areas).

In addition to these direct habitat restoration efforts, the proposed project would also include a boater outreach and education component. Outreach actions would include installing non-regulatory *Shallow Seagrass Area* signage, updating existing signage and buoys where applicable, and installing educational signage and providing educational brochures about best practices for protecting seagrass habitats at popular boat ramps in St. Joseph Bay, Alligator Harbor, and St. Andrews Bay.

The seagrass scars to be restored are made when boat propellers cut up roots, stems, and leaves of seagrasses, producing long, narrow furrows devoid of vegetation. Turtle grass is a commonly-found species of submerged aquatic vegetation (SAV) in the Panhandle that is particularly slow to rejuvenate naturally when injured. Turtle grass with propeller damage can take many years to rejuvenate. In severely scarred areas Turtle grass may never completely recover and may continue to erode and destroy more of the healthy SAV habitat surrounding the injured areas.

The proposed project activity would start with surveying and mapping existing seagrass scarring within the three Aquatic Preserves. Sediment tubes would then be manufactured, filled with local fine grain sediment selected to match the characteristics of the sediment in scarred areas, and deployed in approximately 2 acres of targeted seagrass propeller scars. The tubes, which are

made of biodegradable cotton fabric filled with sediment, would be placed into propeller scars by hand - the water in the project areas is roughly 2-6 feet deep - to enhance seagrass recovery by raising the elevation of the propeller scar to ambient grade. Restoring the grade provides suitable habitat for seagrass recruitment. Seagrass planting units collected from approved donor sites will then be installed in the sediment tubes after the tubes complete a 90-day in-water curing period. The seagrass restoration would further be facilitated by placing bird stakes in the restoration project area. These stakes, see Figure 2 for an example, would attract birds who then supply natural fertilizer to the restoration area in the form of phosphorous and nitrogen rich feces.

This project would also incorporate a mix of monitoring efforts to ensure project designs are correctly implemented during construction and in a subsequent period, defined by contract, where corrective actions could be taken.

Post construction performance monitoring will initially focus on seagrass survival and revegetation of the restored scars. Monitoring may include collection of habitat information such as the depth of the scar at different points in time and percent vegetative cover of the restored scar. Additional information collected may include use and integrity of the bird stakes over time and the nature and extent of any subsequent seagrass habitat scarring in areas where the new non-regulatory buoys are placed.

Pre- and post-restoration monitoring will compare restoration progress in both control and study areas. Changes in the number, length, and cover of propeller scars will be determined in large replicate photograph plots within each study area. Aerial photography will be performed annually, in late summer. Data layers will be created using ArcMap to determine the increase or decrease in scar number, length, and area over time.

Field surveys will be performed biannually in the early spring and late summer to monitor the progress of the restoration activities. The criteria for choosing both treated and untreated prop scars for comparison will require that they do not have statistically significant differences in dimension (length and width), and that they are located within areas that contain similar seagrass densities. Methods designed to measure percent-cover and shoot counts will be used to compare recovery rates of prop scars located within treated and untreated locations of the project area. A minimum of four quarter-meter quadrats, subdivided into 10-cm by 10-cm cells, will be randomly positioned along each prop scar for the purpose of measuring percent-cover. Within each quadrat, five 10-cm by 10-cm cells will be randomly chosen for shoot counts. These two techniques have been adopted from Virnstein and Morris, 1996. Permanent (fixed) transects will be incorporated into the study in order to monitor changes in the number of untreated prop scars. Underwater photographs and video will also be taken to document site characteristics prior to and following restoration efforts.

The St. Joseph Bay Aquatic Preserve staff would be responsible for maintenance of the project after the initial 3 year monitoring period.

***Federally managed fisheries and EFH***

Information on designated EFH in the Gulf of Mexico was obtained in September, 2013 from the NMFS' EFH web site at <http://www.habitat.noaa.gov/protection/efh/newInv/index.html>. Table 1 provides a summary of the federally managed highly migratory species (HMS) identified as having designated EFH for one or more life stages within the potential project implementation areas in Figure 1.

**Table 1. Federally managed fisheries with designated Essential Fish Habitat (EFH) in the proposed project areas.**

<b>EFH Category</b>	<b>Species</b>	<b>St Joe Bay</b>	<b>St Andrews</b>	<b>Alligator Harbor</b>
<b>Atlantic Highly Migratory Species</b>				
	Atlantic Sharpnose Shark - Adult	X	X	X
	Atlantic Sharpnose Shark - Juvenile	X	X	X
	Atlantic Sharpnose Shark - Neonate	X	X	X
	Blacknose Shark - Adult	X	X	X
	Blacknose Shark - Juvenile	X	X	X
	Blacknose Shark - Neonate	X	X	X
	Blacktip Shark - Adult	X	X	X
	Blacktip Shark - Juvenile	X	X	X
	Blacktip Shark - Neonate	X	X	X
	Bonnethead Shark - Adult	X	X	X
	Bonnethead Shark - Juvenile	X	X	X
	Bonnethead Shark - Neonate	X	X	X
	Bull Shark - Juvenile	X	X	X
	Finetooth Shark - Adult and Juvenile	X	X	X
	Great Hammerhead Shark - All	X	X	X
	Nurse Shark - Juvenile	X	X	X
	Scalloped Hammerhead Shark - Juvenile	X	X	X
	Scalloped Hammerhead Shark - Neonate	X	X	X
	Tiger Shark - Juvenile	X	X	X
	Finetooth Shark - Neonate	X	X	
	Nurse Shark - Adult	X	X	
	Sandbar Shark - Adult	X	X	

<b>EFH Category</b>	<b>Species</b>	<b>St Joe Bay</b>	<b>St Andrews</b>	<b>Alligator Harbor</b>
	Scalloped Hammerhead Shark - Adult	X	X	
	Spinner Shark - Juvenile	X	X	
	Spinner Shark - Neonate	X	X	
	Lemon Shark - Adult	X		X
	Lemon Shark - Juvenile	X		
	Lemon Shark - Neonate	X		
	Spinner Shark - Adult	X		
	Sailfish - Juvenile		X	
	Tiger Shark - Neonate		X	
	Bull Shark - Adult			X
<b>Coastal Migratory Pelagics of the Gulf of Mexico AND South Atlantic</b>				
	Cobia	X	X	X
	King Mackerel	X	X	X
	Spanish Mackerel	X	X	X
<b>Gulf of Mexico Red Drum</b>				
	Red Drum	X	X	X
<b>Gulf of Mexico Shrimp</b>				
	Brown Shrimp	X	X	X
	Pink Shrimp	X	X	X
	Rock Shrimp	X	X	X
	Seabob Shrimp	X	X	X
	White Shrimp	X	X	X
<b>Reef Fish Resources of the Gulf of Mexico</b>				
	Almaco Jack	X	X	X
	Banded Rudderfish	X	X	X
	Black Grouper	X	X	X
	Blackfin Snapper	X	X	X
	Blueline Tilefish	X	X	X
	Cubera Snapper	X	X	X
	Gag	X	X	X
	Goldface Tilefish	X	X	X
	Gray (Mangrove) Snapper	X	X	X
	Gray Triggerfish	X	X	X
	Greater Amberjack	X	X	X

<b>EFH Category</b>	<b>Species</b>	<b>St Joe Bay</b>	<b>St Andrews</b>	<b>Alligator Harbor</b>
	Hogfish	X	X	X
	Lane Snapper	X	X	X
	Lesser Amberjack	X	X	X
	Mutton Snapper	X	X	X
	Nassau Grouper	X	X	X
	Queen Snapper	X	X	X
	Red Grouper	X	X	X
	Red Snapper	X	X	X
	Scamp	X	X	X
	Silk Snapper	X	X	X
	Snowy Grouper	X	X	X
	Speckled Hind	X	X	X
	Tilefish	X	X	X
	Vermilion Snapper	X	X	X
	Warsaw Grouper	X	X	X
	Wenchman	X	X	X
	Yellowedge Grouper	X	X	X
	Yellowfin Grouper	X	X	X
	Yellowmouth Grouper	X	X	X

There are no Habitat Areas of Particular Concern (HAPC) identified in the proposed area of restoration activity.

***Assessment of effects to EFH***

It is unlikely that use of transplants or bird stakes will have any adverse effect on federally managed species or designated EFH, since any initial disturbance will be very brief; would not interfere with EFH used for migration, spawning or refuge areas; and eventually would be likely to benefit many federally managed species. Placement of the stakes can occur quickly and any disturbance would be brief. Movement of HMS will not be impeded by the stakes. The possibility for bird stakes interfering with vessel navigation is also low, as bird stakes would be positioned in shallow water areas that should be avoided by motorized or wind powered vessels.

It is anticipated that seagrass replacement will have only brief and minor effects on any federally managed species or designated EFH. The duration and extent of disturbance will not significantly interfere with species migration, nesting or refuge areas, since adjacent areas of

similar habitat will be available and undisturbed, and most organisms could easily move away from the minor and temporary disturbance activity to undisturbed areas when it occurs. The project would result in a net benefit to the existing benthic and seagrass communities, including improving the quality of the habitat and benefiting biological resources dependent on them.

The placement and use of the biodegradable tubes, signage, and buoys are not likely to adversely affect any federally managed species or designated EFH. Best management practices for construction will be followed to minimize impacts. The duration and extent of this disturbance will not significantly interfere with migration, nesting, or refuge areas. During restoration activities, adjacent areas with similar habitat will be available and undisturbed, and most organisms could move away from disturbed areas when it occurs.

Seagrass transplants will be selectively removed from healthy seagrass beds designated previously by the Trustees as “donor” beds. Donor material will be collected in accordance with necessary permits, using best management practices to ensure that the donor seagrass beds are not degraded. No adverse impacts to the ecological health of neighboring seagrass communities are anticipated from collection of seagrass transplant materials.

Further, the project will have a relatively small spatial impact relative to the designated potential project areas. This project would address 2 acres of habitat within a potential project implementation area covering more than 14,000 acres.

### ***Conclusion***

Potential impacts to EFH in the proposed locations for the seagrass restoration project have been assessed and it has been determined that the restoration would not be likely to adversely affect EFH. Implementing the project would not result in the creation or conversion of one EFH habitat type to another type, as seagrass planting is proposed to occur in areas that supported seagrass prior to propeller scarring. Disturbance to any EFH and species using the seagrass habitat in areas adjacent to locations where scars would be restored would be brief and insignificant, with risks further mitigated by following identified best management practices during construction. No adverse impacts to other EFH types will result from the proposed restoration techniques.

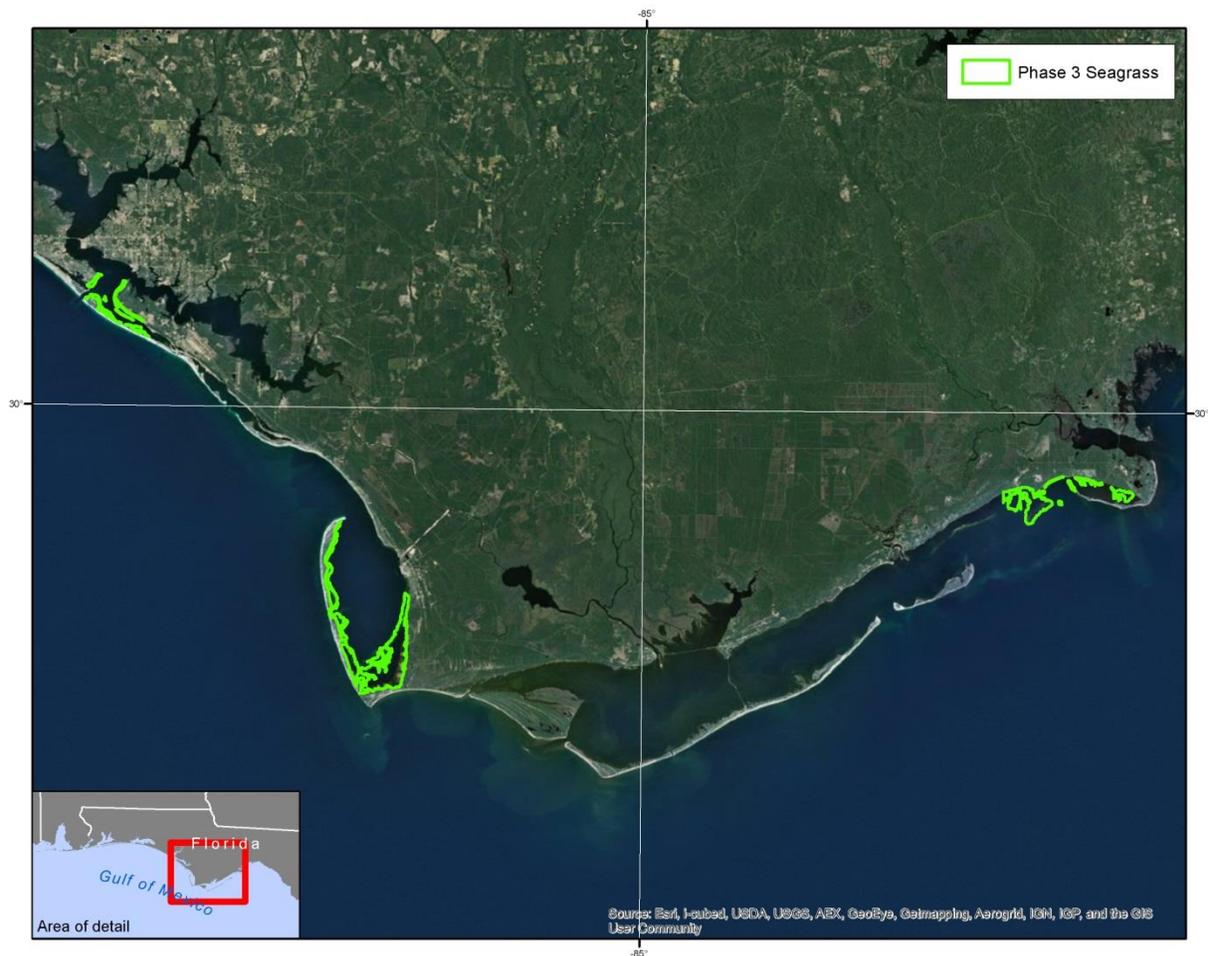
## References

Virnstein, R. W. and L.J. Morris. 1996. Seagrass Preservation and Restoration: A Diagnostic Plan for the Indian River Lagoon. St. Johns River Water Management District, Technical Memorandum No. 14. Palatka, Florida.

NOAA. 2013. Coastal Ecosystem Restoration.

<http://www.csc.noaa.gov/archived/coastal/implementation/implementation.htm>. Accessed September 6, 2013.

**Figure 1. Potential locations for restoration activity in the envisioned St. Joseph Bay Seagrass Recovery Project.**



Note: moving from West to East the highlighted areas are: St. Andrews Aquatic Preserve, in Bay County; St. Joseph Bay Aquatic Preserve in Gulf County; and Alligator Harbor Aquatic Preserve in Franklin County.

**Figure 2. Examples of bird stakes being used in a seagrass restoration project in the Florida Keys.**



**Source: NOAA (2013)**