

GENERAL SEAGRASS RESTORATION PLAN
FLORIDA KEYS NATIONAL MARINE SANCTUARY
MONROE COUNTY, FL

Prepared by:

National Oceanic and Atmospheric Administration
Florida Department of Environmental Protection

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Table of Contents

1. INTRODUCTION	2
1.1 Economic and Ecological Importance of Seagrass	2
2. RESTORATION AUTHORITY	2
3. PROJECT CATEGORIES	3
3.1 Project Categories	3
3.2 Criteria for Restoration Alternatives	5
4. ENVIRONMENTAL REVIEW, SUPERVISION AND PERMITTING	
5	
4.1 Categorical Exclusion	5
4.2 Permitting	5
4.3 Supervision of Restoration Activities	6
4.4 Project Approval	6
5. PROJECT COSTS	6
6. REFERENCES	6

1. Introduction

NOAA's Office of National Marine Sanctuaries (ONMS) maintains and manages the settlement monies that are received as a result of Natural Resource Damage Assessment (NRDA) actions pursuant to § 312 of the National Marine Sanctuaries Act (NMSA). In some cases, the original restoration plans to which settlement funds are attached become obsolete and the corresponding funds become available for other uses. This can occur for a variety of reason, but generally is seen when either natural recovery of resources is greater than anticipated, or restoration cost less than expected, and funds remain in the case account; or when storms, additional injuries, or other intervening incidents make the originally-intended restoration impossible. ONMS will develop two accounts for these monies—one for seagrass cases and one for coral—out of which other restoration projects may be funded.

The conclusion of work on restoration and monitoring on each of these cases will be justified and documented with an individual "close-out" memorandum, and any remaining funds can then be pooled or combined with similar funds from other cases into a General Seagrass Restoration Fund. These funds will be redirected toward the range of restoration and prevention activities described in this plan and meeting the requirements of the NMSA. This alternative restoration plan describes the categories of projects that will be considered for funding out of the residual or redirected restoration and monitoring account from cases involving injuries to seagrass.

1.1 Economic and Ecological Importance of Seagrass

Healthy seagrass communities serve critical ecological and economic functions in the Florida Keys. From an ecological perspective, seagrass beds serve as nursery habitat and as a source of food for numerous species of fish. In turn, the viability of the recreational and commercial fishing industries depends on healthy seagrass communities. Seagrass beds function as effective storm surge buffers for the Keys and also serve as natural filters to reduce the level of sediment and nutrients in the water. Seagrass injuries from vessel groundings in the Florida Keys National Marine Sanctuary (FKNMS) typically include a combination of propeller scars, berms, and blowholes (Sargent et al. 1995). Prevention and restoration of seagrass injuries represents an important step in reducing the cumulative impact of seagrass groundings throughout the FKNMS and in preserving this important ecosystem.

2. RESTORATION AUTHORITY

The National Marine Sanctuaries Act (NMSA), 16 U.S.C. §1443(d)(2) (A), (B), and (C), defines the appropriate uses of recovered restoration monies in order of priority as "(A) to restore, replace, or acquire the equivalent of the sanctuary resources that were the subject of the action...; (B) to restore degraded sanctuary resources of the national marine sanctuary that was the subject of action, giving priority to sanctuary resources and habitats that are comparable to the sanctuary resources that were the subject of the action; and (C) to restore degraded sanctuary resources of other national marine sanctuaries." Under the NMSA, the Florida Keys National Marine Sanctuary and Protection Act (Florida Keys Act), Public Law 101-605, and state law, NOAA and the State of Florida serve as co-trustees in recovering seagrass damages and implementing restoration projects in the FKNMS.

A more complete description of the need for seagrass restoration and a detailed account of the environmental and socioeconomic impacts of various seagrass restoration techniques can be found in the Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary (PEIS) (US DOC, 2004) and the Record of Decision for that document dated November 1, 2004. The documents are available at <http://www.darp.noaa.gov/partner/mini312/relate.html>.

3. PROJECT CATEGORIES

3.1 Project Categories

Redirected settlement monies in this fund may be used for the types of projects described below. Any projects that involve seagrass restoration (categories A - C) will use standard FKNMS seagrass restoration methods, including seagrass transplants, bird stakes, and sediment tubes. These techniques have been fully described in the PEIS (US DOC, 2004).

A. Assessment, restoration and monitoring of orphan groundings: An orphan grounding is one for which no responsible party (RP) can be identified. In the absence of an RP, restoration funds are not readily available from other sources. The application of residual settlement monies in this account will provide an opportunity to restore some of these injuries that would otherwise remain un-restored, and to conduct subsequent monitoring. Monitoring for restoration projects is necessary to determine whether the projects are providing services in a manner consistent with restoration goals and to assess the potential need for mid-course corrections to ensure that the projects meet designated restoration performance standards. The design of any monitoring program should ensure the detection of, and response to, significant changes in seagrass recovery rates or damage to restoration components (bird stakes, seagrass transplants, sediment fill, etc.) as a result of external events, such as major storms or vandalism. Restoration monitoring may vary depending on the location of the project and the nature of the injury.

B. Emergency response and restoration: Resource injuries are best addressed when the vessel is removed promptly and subsequent restoration occurs as soon as possible after injury. In situations where the RP is not able to remove the vessel, using these funds to enable vessel removal and salvage activities will save live coral and limit further loss of reef resources. Immediate, or emergency, restoration preserves the greatest amount of injured resource, and allows rehabilitation of the injury area prior to invasion by algae or expansion of blowholes, and decreases the amount of use loss. Emergency restoration also reduces the number personnel and vessel resources required by completing assessment of the injury at the time of restoration, eliminating the need for reassessment months after the incident. This approach also keeps the size of claims down, because when the injury is addressed sooner, the compensatory restoration component of the claim is lowered commensurate with the reduction in lost use time. Moreover, when coral injuries are not addressed immediately, the injuries often result in a complete loss of the resources, increasing the claim. However, funding for emergency restoration is rarely available, given that damages are generally recovered only after negotiation and settlement. Therefore,

making pooled restoration funds available for emergency restoration would provide great benefits by providing a means to restore resources as soon as possible, and would also decrease resource losses that often occur after prolonged negotiation.

C. Completion of restoration and monitoring for cases with insufficient funds: Occasionally, the restoration and monitoring costs of an NRDA case exceed the amount received under the settlement and action is still required despite the depletion of funds. Given the lack of other funds for this work, use of these residual settlement monies to complete the required restoration and monitoring will provide services similar to those intended under the original restoration plan (i.e., direct restoration or monitoring of an injured site) and will contribute to increased health of the seagrass ecosystem.

D. Prevention activities: Certain types of prevention activities, such as installation of navigation aids, targeted outreach projects, and enhanced enforcement presence, can be highly effective in preventing future vessel groundings and thus decreasing the likelihood of future seagrass injuries. Navigation aids are often very effective in reducing groundings on surrounding banks when placed on seagrass banks in areas with high vessel traffic or those that experience chronic groundings. Likewise, certain outreach activities, such as TeamOcean or direct communication to boaters at marinas, can be highly effective in educating boaters about safe boating practices and appropriate protocols in the event of grounding. Enhanced enforcement patrols and response can be effective in raising boater awareness and creating more cautious operating practices because of the presence of officers on the water, and can help reduce additional seagrass injury from attempts to “motor off” seagrass banks by providing guidance and assistance to boaters. Each of these prevention activities can be highly effective in reducing seagrass injuries, and thus can provide great contribution to the long-term health of the ecosystem.

E. Seagrass bank ecosystem restoration assessment and management: FKNMS is concerned about the ongoing loss of seagrass habitat, particularly in areas of high vessel traffic and chronic groundings. Although the primary focus of the ONMS NRDA program is restoration of individual injuries, the overall goal is to protect and restore the entire ecosystem. One project that would focus on ecosystem restoration would be to concentrate restoration efforts on a few specified seagrass banks, thus preserving a core of healthy seagrass to populate surrounding areas. Use of the General Seagrass Restoration Fund monies to fund these seagrass bank restoration activities would be appropriate because it would fall under the § 312(B) of the NMSA, which calls for restoration monies to be spent on projects to restore other degraded sanctuary resources.

3.2 Criteria for Restoration Projects

General criteria are considered for selecting the appropriate restoration alternatives for specific injuries. The criteria in Table 1 would be used to evaluate and select the preferred restoration alternatives identified in this plan. These criteria satisfy prevention and restoration objectives while taking into account technical, environmental, economic and social factors.

Table 1 - Criteria for Evaluating Restoration Options

Criteria	Definition
Technical Feasibility	Likelihood that a given restoration action will work at the site and that the technology and management skills exist to implement the restoration action.
Reduce Recovery Time	Measures that accelerate or sustain the long-term natural processes important to recovery of the affected resources and/or services injured or lost in the incident.
Reduce Potential for Additional Injury	Likelihood that the requirements, materials, or implementation of a restoration action minimizes the potential for additional injury.
Aesthetic Acceptability	Restoration alternatives that create substrates and topography that most closely resemble the surrounding habitat and minimize visual degradation.
Site Specific Context	Restoration alternatives are selected depending on the site specific context of environmental conditions at the site including but not limited to location, extent and severity of the injury, hydrological characteristics of the site, seagrass species composition, and other social and resource management concerns.

4. ENVIRONMENTAL REVIEW, SUPERVISION AND PERMITTING

Restoration and some prevention projects are subject to local, state, and federal regulations that require project review and issuance of appropriate environmental permits. The costs of these activities are also part of the project expense.

4.1 Categorical Exclusion

NOAA believes, because of the scope and nature of the activities outlined in this plan, that they will qualify for a categorical exclusion (CE) under the National Environmental Policy Act (NEPA), because the projects undertaken pursuant to this plan are not expected to be novel and have already been reviewed within the environmental assessment undertaken as part of the FKNMS Sanctuary Management Plan review process and as part of the review process for the Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary. A CE would eliminate the requirement to conduct a more detailed and costly Environmental Assessment.

4.2 Permitting

Implementation of restoration and some prevention projects requires environmental permitting. NOAA believes these activities can be implemented under a Letter of Authorization under the FKNMS Manager's Permit. In addition, a de-minimis exemption letter will be requested from the Florida Department of Environmental Protection for compliance with Environmental Resource Permit Requirements. If seagrass transplants are used, an Aquatic Plant Permit is also required under Florida Statutes Chapter 369. For restoration projects requiring sediment fill, a permit will be requested from the U.S. Army Corps of Engineers.

4.3 Supervision of Restoration Activities

NOAA and/or the State of Florida will supervise any contractor activities to ensure compliance with restoration goals, objectives and performance criteria. Construction activities undertaken by the selected contractors will require on-site supervision by NOAA and/or State field staff.

4.4 Project Approval

Prior to undertaking any project for the uses described above, NOAA's Office of General Counsel for Natural Resources will review the project proposal and approve fund allocation.

5. PROJECT COSTS

Any project proposed for funding out of the General Seagrass Restoration Fund may require NEPA review, permitting, GCNR approval, and possible other planning efforts. Therefore, a required element of each project will be to include a component to fund reasonable restoration planning costs.

6. REFERENCES

Sargent, F.J., Leary, T.J., Crewz, D.W., and Kruer, C.R. 1995. "Scarring of Florida's seagrasses: Assessment and Management Options". Florida Marine Research Institute Technical Report TR-1.

USDOC (U.S. Department of Commerce). 1996. Florida Keys National Marine Sanctuary Final Management Plan/Environmental Impact Statement. National Oceanic and Atmospheric Administration, Silver Spring, MD. Volumes I-III.

USDOC (U.S. Department of Commerce). 2004. Final Programmatic Environmental Impact Statement for Seagrass Restoration in the Florida Keys National Marine Sanctuary,(Record of Decision, November 1, 2004).