



DEPARTMENT OF THE ARMY
US ARMY CORPS OF ENGINEERS
SOUTH ATLANTIC DIVISION
60 FORSYTH ST, SW, ROOM 10M15
ATLANTA, GEORGIA 30303-3490

REPLY TO
ATTENTION OF:

12 JAN 2015

CESAD-CG

MEMORANDUM FOR Commander, Jacksonville District (CESAJ-PM/J. Couch)

SUBJECT: Cooperative Agreement Package for the St. Lucie River Oyster Reef Estuary Habitat Restoration Project (EHRP), Phase II

1. References:

- a. Memorandum, CESAJ-PM, 16 October 2014, subject as above.
- b. Memorandum, CESAD-PDP, 24 April 2014, subject as above.
- c. Memorandum, CESAJ-PM, 19 March 2014, subject as above.
- d. Implementation Guidance, Estuary Restoration Program, Cooperative Agreement, June 2011.
- e. EC 1165-2-214, Civil Works Review Policy, 15 December 2012.

2. The Cooperative Agreement (CA), including attachments A-G and the Review Plan, for the St. Lucie River Oyster Reef Estuary Habitat Restoration Project (EHRP), Phase II, Estuary Restoration Program is approved (enclosure 1). The Review Plan has been prepared in accordance with Engineer Circular (EC) 1165-2-214. The District should take steps to post the approved Review Plan and a copy of this approval memorandum to the SAJ District public internet website.

3. The District Commander is hereby authorized to execute the approved CA, and is responsible for complying with requirements set forth in reference 1.d. (enclosure 2).

4. The point of contact for this action is Ms. Karen Dove-Jackson at (404) 562-5225.

2 Encls
as


C. DAVID TURNER
Brigadier General, USA
Commanding



**US Army Corps
of Engineers®**

**ESTUARY RESTORATION ACT OF 2000
ESTUARY HABITAT RESTORATION PROGRAM**

**REVIEW PLAN FOR THE
ST. LUCIE RIVER OYSTER REEF ESTUARY HABITAT RESTORATION PROJECT,
PHASE II
MARTIN COUNTY, FLORIDA**

JACKSONVILLE DISTRICT

PROJECT NUMBER: 406023

SOUTH ATLANTIC DIVISION APPROVAL: December 2014

Last Revision Date: December 2014



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1. PURPOSE AND REQUIREMENTS

a. Review Plan Purpose

The purpose of the review plan is to define the scope and level of Government's review of documents prepared and provided by Martin County, Florida (Recipient) for the St. Lucie River Oyster Reef Estuary Habitat Restoration Project, Phase II. Reviews need to be conducted on certain documents associated with the Cooperative Agreement (CA) package, including all documents and reports prepared throughout implementation of the project. The following documents in the CA package are not planning, engineering, or scientific work and are not subject to the review process set forth in EC 1165-2-214 and in this review plan: cooperative agreement, standard terms and conditions, and certifications and representations.

b. Applicability

The documents to be reviewed are "other work products" as defined by EC 1165-2-214. The documents to be prepared and reviewed include:

- 1) Monitoring Plan, Operations and Maintenance Manual, and documentation of required real estate;
- 2) Construction request documents or task orders,
- 3) Construction/environmental resource and other permit(s) documentation; and
- 4) Amendment to approved documents, if any.

c. References

- 1) Engineering Circular 1165-2-214, Civil Works Review, 15 Dec 2012
- 2) Engineer Circular 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
- 3) Engineering Regulation (ER) 1110-1-12, Quality Management, 21 Jul 2006
- 4) Implementation Guidance for the Estuary Habitat Restoration Program (Cooperative Agreement), June 2011

d. Requirements

This Review Plan was developed in accordance with EC 1165-2-214, which outlines four applicable general levels of reviews. These levels of reviews consist of:

- 1) District Quality Control / Quality Assurance (DQC),
- 2) Agency Technical Review (ATR),
- 3) Independent External Peer Review (IEPR), and
- 4) Policy and Legal Compliance Review.

Consistent with the guidance received for Estuary Habitat Restoration Program (EHRP) implementation, compliance with the EC 1165-2-214 will be:

“at a level appropriate for the nature of the project; including but not necessarily limited to performance of appropriate District Quality Control/Quality Assurance, and application of the Risk Informed Decision process as appropriate to determine if Agency Technical Review is appropriate.”

The decision to fund the St Lucie River Oyster Reef EHR project has been made by the Estuary Habitat Restoration Council (EHRC). The individual project actions were reviewed through the Regulatory permit process and associated State’s permitting process. The National Environmental Policy Act (NEPA) documentation was prepared for the project and reviewed to ensure coverage of U.S. Army Corps of Engineers (USACE) involvement during project implementation.

District Quality Control / Quality Assurance (DQC). All documents covered by this Review Plan shall undergo DQC as provided in EC 1165-2-214, paragraph 8. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements and also includes supporting functions such as real estate interest as well. DQC review will be completed before the start of construction phase(s). For this project, the USACE Jacksonville District Planning Division, Environmental Branch will be responsible for DQC efforts, including coordinating with other SAJ functional divisions as needed. Project plans and specifications, or similar documents that are developed by the Recipient will undergo DQC review by USACE Jacksonville District. The DQC team responsibilities will include:

- 1) reviewing report contents for compliance with established principles and procedures, using clearly justified and valid assumptions;
- 2) reviewing plans and specifications, or equivalent, to ensure they are correct and reasonable; and
- 3) providing the PDT leader with documentation of comments, issues, and decisions arising from DQC’s review process.

Comments will be evaluated and discussed with the Recipient and resolutions will be documented in the project files. Corrections will be made to the reviewed documents before construction begins.

Agency Technical Review (ATR). The implementation guidance for the Estuary Habitat Restoration Program (reference c (4)) clarifies that the *Risk Informed Decision process* is applied, as appropriate to determine if an Agency Technical Review is appropriate. Responses to guidance questions are provided below:

1. **Does it include any design (structural, mechanical, hydraulic, etc)?** Yes. However, the restoration design intended for the St. Lucie River Oyster Reef Estuary Habitat Restoration Project, Phase II is not complex and requires no in-depth technical designs.

The County has used the restoration approach successfully in the past and the low level of complexity associated with the restoration reduces the risk of failure.

2. **Does it evaluate alternatives?** No. The project uses a design that the County has successfully applied at other estuarine sites. No other alternative designs were evaluated.
3. **Does it include a recommendation?** Yes. The project report proposes using a design that the County has successfully applied at other estuarine sites.
4. **Does it have a formal estimate?** Project costs were outlined in the Recipient's application evaluated by the EHRC. USACE has reviewed the expected/estimated costs and found that the costs are reasonable to complete the entire project as scoped in the approved grant application.

FY 2014 Estimate

Federal Cost (65% of total costs)	\$228,044.44
Estimated Recipient Cost (35% of total costs)	\$123,206.59
Total Estimated Project Cost	\$351,251.03

5. **Does it have or will it require a NEPA document?** Yes. The project has had NEPA review completed during the grant process through the EHRC.

Note: As part of the permitting process the USACE conducted a NEPA review as part of the Environmental Assessment, 404(b)(1) evaluation. (Permit #: SAJ-2009-01072 and SAJ-2009-01073)

6. **Does it impact a structure or feature of a structure whose performance involves potential life safety risks?** No. The project does not affect any structures or features of a structure and there are no foreseen life safety risks associated with project implementation.
7. **What are the consequences of non-performance?** There is no anticipated risk that would be associated with the consequences of non-performance of the project as proposed. The restoration technique has previously been used by the County successfully. There are no foreseen risks of failure to perform as expected.
8. **Does it support a significant investment of public monies?** No. The project is cost shared 65% Federal and 35% Non-Federal with the Recipient, and does not involve significant investment of public monies. Public funds will be used for construction and monitoring activities associated with the project.
9. **Does it support a budget request?** No. The project is receiving Federal funding (USACE, NOAA and USFWS grant funding), and Recipient (Martin County) funds for the successful project completion. Federal funds have been approved through the EHRC Grant Approval process.

10. **Does it change the operation of the project?** No. This is a new project. There are no impacts or changes to any existing projects.
11. **Does it involve excavation, subsurface investigations (drilling or sampling or both), or placement of soil?** No. The proposed project does not involve subsurface investigations or placement of soil.
12. **Does it affect any special features, such as cultural resources, historic properties, survey markers, etc, that should be protected or avoided?** No. The project does not impact/affect any special features.
13. **Does it involve activities that trigger regulatory permitting such as Section 404 or stormwater/NPDES related actions?** Yes. The placement of oyster shell for oyster reef establishment requires a related 404 permit. USACE issued a 404 permit to Martin County for this project on March 30, 2009.
14. **Does it involve activities that could potentially generate hazardous wastes and/or disposal of materials such as lead based paints or asbestos?** No. This project does not include any hazardous waste risks.
15. **Does it reference use of or reliance on manufacturers' engineers and specifications for items such as prefabricated buildings, playground equipment, etc?** No. There is no reliance on manufacturers' engineers and specifications for this project.
16. **Does it reference reliance on local authorities for inspection/certification of utility systems like wastewater, stormwater, electrical, etc?** No. The project does not affect/impact utility systems.
17. **Is there or is there expected to be any controversy surrounding the Federal action associated with the work product?** There is no expectation for controversy surrounding the proposed project. The project has received the support of USACE, FDEP, Senator Bill Nelson, Representative Patrick Murphy, Martin County Board of Commissioners, SFWMD, Keep Martin Beautiful NGO, Port Salerno NGO, and other stakeholders. The Environmental Resources Permits have also been approved for the project as previously indicated.

The Recipient has experience preparing construction documents and constructing this type of restoration project as evidenced by other similar projects in the area. The project is not technically complex and consists of 1) placing 1600 cu. yds. of recycled oyster cultch material and 2) planting mangroves, cordgrass, and other appropriate plant species to stabilize the shoreline to restore estuarine habitat at the selected location within the County.

Conclusion: Based on the above analysis, the Jacksonville District has determined that an ATR is not necessary for the documents covered by this Review Plan.

Independent External Peer Review (IEPR). An IEPR is applied in cases meeting risks and magnitude criteria requiring the need to conduct a higher, independent examination by a qualified team outside of the USACE. The USACE recognizes two types of IEPR:

- Type I IEPR: generally for decision documents, and
- Type II IEPR: generally for implementation products.

The following criteria are part of the risk evaluation process to determine the need and appropriateness of conducting IEPR on the products addressed by this Review Plan.

1. The project does not involve a significant threat to human life/safety assurance;
2. The total project cost is less than \$45 million;
3. There is no request by the Governor of an affected state for a peer review by independent experts;
4. The project does not require an Environmental Impact Statement (EIS),
5. The project is not likely to have significant economic, environmental, and/or social effects to the Nation;
6. The project is not likely to have significant interagency interest;
7. The project/study is not likely highly controversial;
8. The decision document is not likely to contain influential scientific information or be a highly influential scientific project; and
9. The information in the decision document or proposed project design is not likely to be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices.

The project has not been deemed by the USACE Director of Civil Works or Chief of Engineers to be controversial in nature. This project is a relatively small estuary restoration project. It has been reviewed by local federal and state resource agencies and gone through a public review process during the permitting phase over the past two years. There have not been any significant public disputes over the size, nature, or environmental effects or benefits of the project. All questions and concerns have been thoroughly addressed and all outstanding issues have been resolved through the Environmental Resource Permitting (ERP) processes.

The Jacksonville District Chief of Engineering, as the Engineer-In-Responsible-Charge, does not recommend a Type II IEPR Safety Assurance Review for this project. The project purpose is not hurricane and storm risk management or flood risk management, and the project does not have potential hazards that pose a significant threat to human life. Innovative materials or novel engineering methods will not be used. Redundancy, resiliency, or robustness is not required for design. Also, the project has no unique construction sequencing, or a reduced or overlapping

design construction schedule. Therefore, a Type II IEPR of implementation documents will not be undertaken. If the project scope is changed, this determination will be reevaluated.

Conclusion: Based on the types of documents to be reviewed, the Estuary Habitat Restoration Project implementation guidance, and the factors discussed above, the Jacksonville District has determined that neither a Type I IEPR nor a Type II IEPR is required for the St. Lucie River Oyster Reef EHR project documents. If the project scope is changed, this determination will be reevaluated.

Policy and Legal Compliance Review. Project documents will be reviewed for their compliance with applicable laws and policies.

Cost Engineering Review and Certification. There are no decision documents requiring cost review. The basic material, labor and construction costs for this project were reviewed by the Jacksonville District.

Model Certification/Approval. EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. This estuary habitat restoration project does not require any modeling.

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION OF PEER REVIEW

The RMO is responsible for managing the overall peer review effort described in this review plan. The RMO for this EHRP project is the South Atlantic Division (SAD).

3. PROJECT INFORMATION

a. Project Description.

This project will directly restore approximately 2 acres of unproductive soft bottom to oyster habitat within the middle estuary portion of the St. Lucie River in Martin County, Florida. (**Figure 1**). Shoreline stabilization, habitat enhancement and climate change readiness, accomplished through a “living shoreline” project component, will complement the oyster restoration project. Restoration of historic oyster habitat and populations is a goal in the Indian River Lagoon-South (IRL-S) component of the Comprehensive Everglades Restoration Plan (CERP). The 2-acre site will incorporate a reef building technique to deploy oyster shell that has been used in previous projects and proved very successful. The result of this project will be to increase the surface area available for oyster recruitment and growth. The restoration project is in a “no harvest” area for shellfish. Construction will help improve and sustain water quality as well as increase the current oyster population, thereby enhancing its resiliency. The construction of the living shoreline will use bagged shell and Reef Balls in the nearshore area for wave attenuation in combination with vegetative bank stabilization to reduce erosion and filter runoff and further protect water quality, (**Figure 2**).

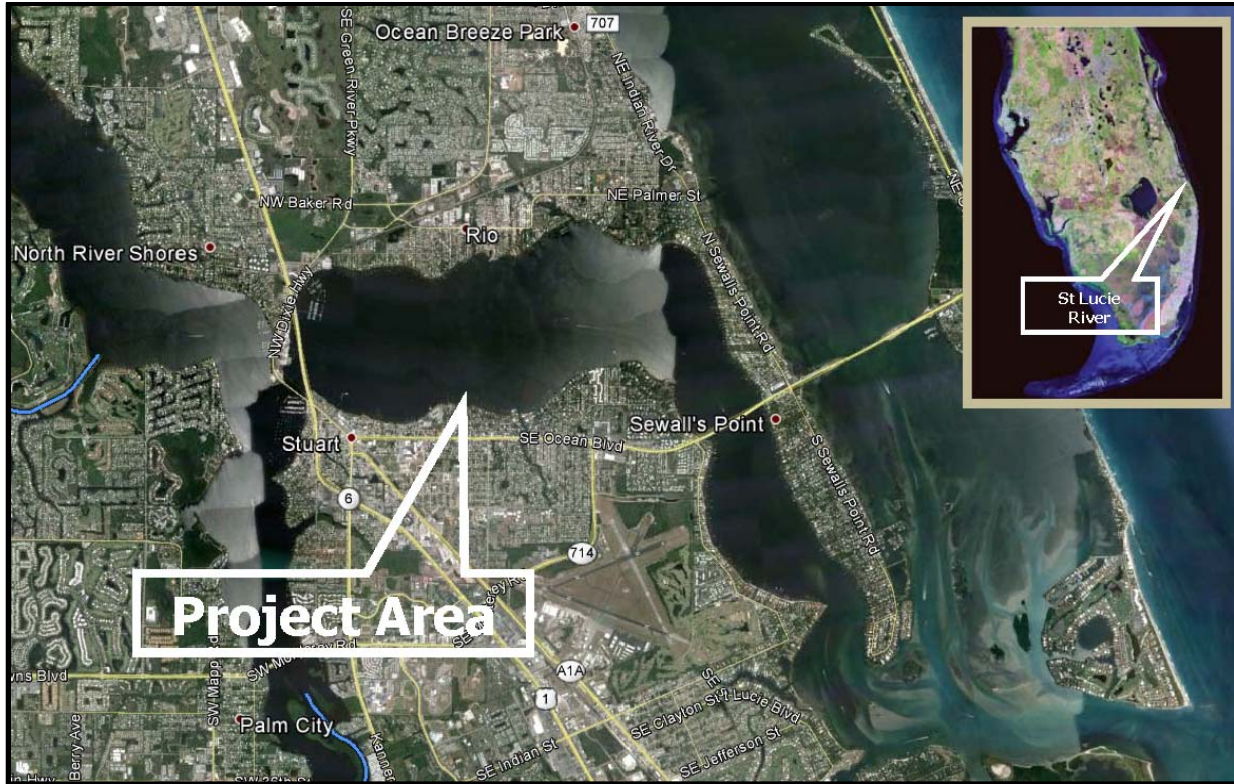


Figure 1: Project Location

Establishing this reef will also help to foster formation and expansion of naturally occurring oyster reefs by increasing the oyster spat that will be available for recruitment to all sites, further increasing larval production within the estuary. Direct and indirect ecosystem services such as increased filtering capacity, benthic-pelagic coupling, nutrient dynamics and sediment stabilization, are expected benefits from this reef. The project will enhance the productivity of the state's primary and secondary fish nursery areas and will benefit recreationally and commercially important finfish species, including gag grouper, gray snapper, sheepshead, redfish, and spotted sea trout. Prior restoration studies have documented the recruitment of prey species necessary to sustain the many recreationally important fish species that utilize the estuary during some aspect of their life cycle. The living shoreline will provide intertidal habitat for both prey species and wading bird foragers.

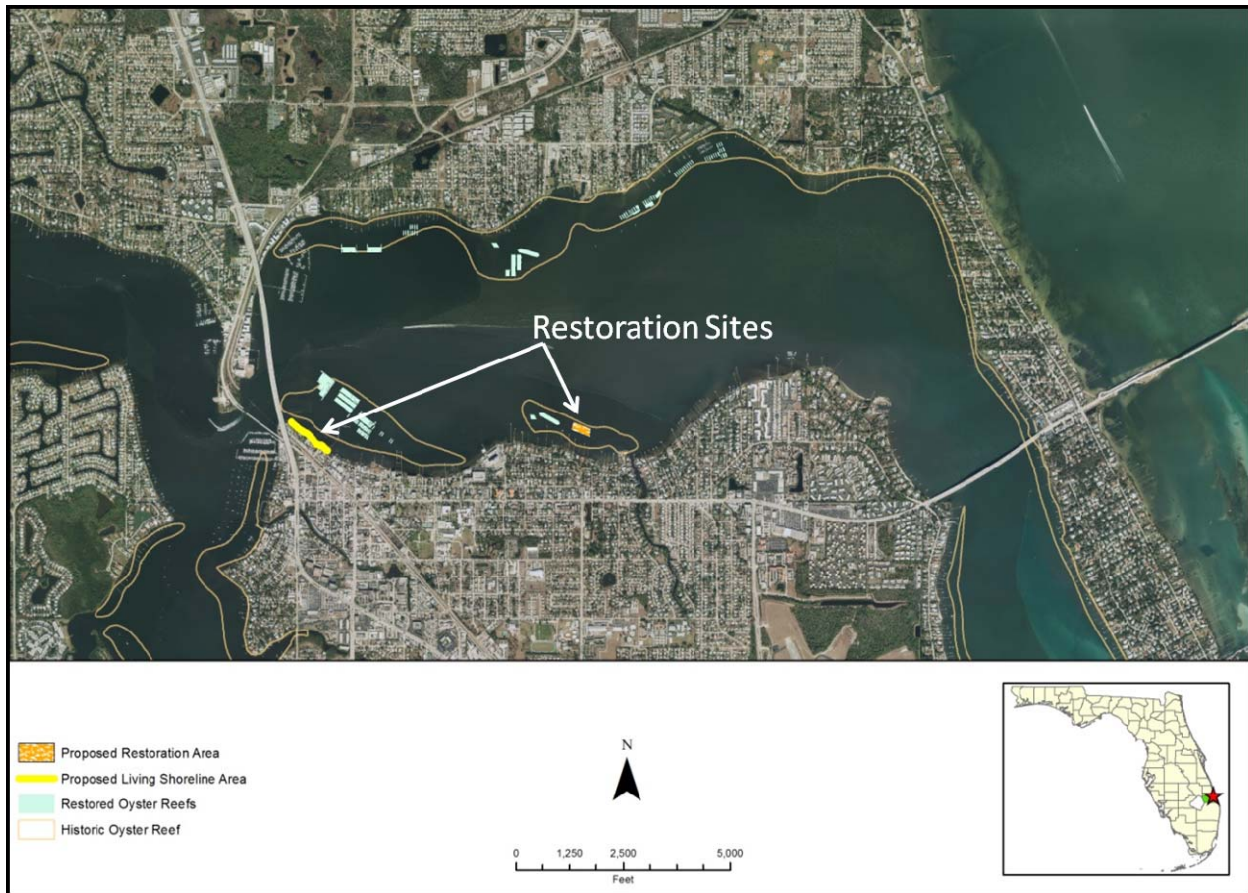


Figure 2: Restoration Sites

b. Economic and Environmental Impacts

The project is not likely to have significant economic, environmental, or social effects to the Nation or involve a significant threat to human life/safety. The project is an estuary habitat restoration project consisting of oyster reefs construction and placement within the Saint Lucie River Estuary. The project is designed to enhance the biological productivity of the areas. The project will also provide educational and research opportunities. The project is not likely to have significant interagency interest, be highly controversial, contain influential scientific information or be a highly influential scientific assessment due to the relatively small footprint of the projects. The information in the Project Management Plan or proposed project design is not based on novel methods, nor does it involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices.

c. In-Kind Contributions

Products and analyses provided by the Recipient as in-kind services are subject to review by the Jacksonville District.

4. PUBLIC PARTICIPATION

State and Federal resource agencies have been involved in this project and have granted the necessary permits to implement the project. The agencies were contacted by the Recipient for coordination as required by applicable laws and procedures. The public was provided the opportunity to comment on the project during the ERP application process. Public comment will not be sought for modifications; the review plan will be posted on the District website and the District will evaluate comments as received.

5. REVIEW PLAN APPROVAL AND UPDATES

The South Atlantic Division (SAD) Commander is responsible for approving this Review Plan. The Review Plan is a living document and may change as the project progresses. The Jacksonville District Project Manager is responsible for keeping the Review Plan updated. After approval by SAD, minor changes made to the Review Plan will be documented in Attachment 2 of this plan. Significant changes to the Review Plan (such as changes to the scope and/or level of review) will require approval by SAD, following the process used for initially approving the plan. The latest approved version of the Review Plan and the SAD approval memo will be posted on the home district's webpage.

6. REVIEW PLAN POINT OF CONTACTS

Public questions and/or comments on this Review Plan can be directed to:

- Jacksonville Senior Project Manager at (904) 232-1662, or
- SAD designated Point of Contact at (404) 562-5226.

Attachment 1 – District Review Team and Project Delivery Team

Project Management and Resources	Team Member's Name	Phone Number
Project Manager		
Grants Officer		
Environmental		
Design Engineer		
Legal Counsel		
Cost Engineer		
Real Estate		

Attachment 2: Review Plan Revisions

Revision Date	Description of Change	Page