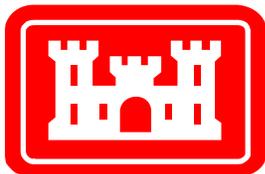


Brunswick County Beaches,
North Carolina

**Integrated General Reevaluation Report and
Environmental Impact Statement for Brunswick
County Beaches, North Carolina**

PEER REVIEW PLAN

5 December 2007



**US Army Corps
of Engineers**
Wilmington District

ACRONYMS & ABBREVIATIONS

AFB – Alternative Formulation Briefing

CESAW – US Army Corps of Engineers, South Atlantic, Wilmington

CWRB – Civil Works Review Board

EIS – Environmental Impact Statement

EPR – External Peer Review

FCSA – Feasibility Cost Sharing Agreement

FEIS – Final Environmental Impact Statement

FSM – Feasibility Scoping Meeting

GRR – General Reevaluation Report

HQ – Headquarters

ITR – Independent Technical Review

LOI – Letter of Intent

NEPA – National Environmental Policy Act

OVEST -- Office of the Chief of Engineers Value Engineering Study Team

PCX-CSDR – National Planning Center of Expertise for Coastal Storm Damage
Reduction

PDT – Project Delivery Team

PMP – Project Management Plan

PRP - Peer Review Plan

P&S – Plans & Specifications

SAD – South Atlantic Division

Walla Walla DX – Walla Walla District Directorate of Expertise for Civil Works Cost
Engineering

1. Introduction

This Peer Review Plan (PRP) is a collaborative product of the Project Delivery Team (PDT), the National Planning Center of Expertise for Coastal Storm Damage Reduction (PCX-CSDR) and the Walla Walla District Directorate of Expertise for Civil Works Cost Engineering (Walla Walla DX). The PCX-CSDR will manage the PRP. Each of the following paragraphs (a. through j.) correspond to the guidance provided in paragraphs 6a through 6j of Engineering Circular 1105-2-408, Planning - Peer Review of Decision Documents, 31 MAY 2005.

2. The Peer Review Plan

a. Title, Subject, and Purpose of the Decision Document. The *Integrated General Reevaluation Report and Environmental Impact Statement for Brunswick County Beaches, NC* shall be the decision document. The Brunswick County Beaches General Reevaluation is being pursued under the Corps of Engineers' Construction General (CG) Program. The project was authorized by the Flood Control Act of 1966 (PL 89-789), which states:

The project for hurricane-flood control protection from Cape Fear to the North Carolina-South Carolina State line, North Carolina, is hereby authorized substantially in accordance with the recommendations of the Chief of Engineers in House Document Numbered 511, Eighty-ninth Congress, at an estimated cost of \$12,310,000.

This General Reevaluation is being conducted in response to written requests from the Towns of Long Beach (July 13, 1994), Yaupon Beach (July 18, 1994), Caswell Beach (July 28, 1994), and Holden Beach (September 6, 1994).

The study area focus is the communities located on the two barrier islands known as Oak Island and Holden Beach. Oak Island, which is 13 miles long, is occupied by the Towns of Oak Island (formerly Long Beach and Yaupon Beach) and Caswell Beach. West of Oak Island is the island of Holden Beach, which is 11 miles long and occupied by the town of the same name. Due to the east-west orientation of the coastline, both islands face the Atlantic Ocean on the south. Other waterbodies in the vicinity include the Cape Fear River to the east, Shallotte Inlet to the west, and the Atlantic Intracoastal Waterway (AIWW) to the north. The two islands are separated by Lockwoods Folly Inlet. The study area also includes offshore borrow areas lying 1 to 8 miles from the shoreline and borrow areas in Jaybird Shoals, Lockwood Folly Inlet and Shallotte Inlet.

The two other communities for which improvements were authorized in the Brunswick County Beaches project are not included in this General Reevaluation Report (GRR). The authorized shore protection improvements for Ocean Isle Beach have been reevaluated, approved, and constructed. The Sunset Beach portion of the Brunswick County Beaches project remains inactive, and there has been no request for a restudy.

The Brunswick County Beaches General Reevaluation is investigating measures and plans for hurricane and storm damage reduction. The study is also documenting incidental recreation benefits. Located between Cape Romaine and Cape Fear, Brunswick County is a frequent landfall site for hurricanes and tropical storms tracking along the mid-Atlantic coast. In addition to direct landfalling storms, many other storms have passed offshore and impacted the study area. Local impacts to the study area varied depending on the landfall location and strength of the storm.

Typical solutions considered for this study area are berm and dune beachfills using material dredged from offshore borrow sites, and in some cases building relocations, or coastal structures such as groins or breakwaters.

The estimated range of initial construction cost for the various alternatives varies between \$40 million and \$80 million, and estimated annual renourishment costs are approximately \$5 million. Renourishment would continue through 50 years if the project is authorized.

Key PDT members are shown in the table below:

ROLE	NAME	ORGANIZATION
Project Manager	Glenn McIntosh	CESAW-PM-C
Program Manager	Tony Carter	CESAW-PM-P
Lead Planner	Doug Greene	CESAW-TS-PF
Biologist	Jeff Richter	CESAW-TS-PE
Biologist	Doug Piatkowski	CESAW-TS-PE
Cultural Resources	Richard Kimmel	CESAW-TS-PE
Coastal/H&H	Mike Wutkowski	CESAW-TS-EC
Geotechnical	Ben Lackey	CESAW-TS-EG
Cost Engineering	John Caldwell	CESAW-TS-EE
Economist	Frank Snipes	CESAW-TS-PF
Economist	George Ebai	CESAW-TS-PF
Real Estate	Belinda Estabrook	CESAS-RE-RP

The PDT also includes the non-Federal Sponsor, stakeholders, and resource agencies.

For more information regarding the PRP, the project manager for the General Reevaluation study may be contacted as follows:

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 US Army Corps of Engineers – Wilmington District
 CESAW-PM-C
 69 Darlington Avenue
 Wilmington, North Carolina 28403
Phone: (910) 251-4671 **Fax:** (910) 251-4965
Email: Glenn.McIntosh@SAW02.usace.army.mil

Independent Technical Review Team Leaders

ITR will be led by PCX-CSDR, with participation by Walla Walla DX.

Joseph Vietri

National Planning Center of Expertise for Coastal Storm Damage
Reduction PCX-CSDR

US Army Corps of Engineers – North Atlantic Division

CENAD-PSD-P

<https://rbc.nado.ds.usace.army.mil/Hurricane%20and%20Storm%20Damage/HSDP-PCX%20Web%20Page.htm>

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CENWW-EC-X

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b. External Peer Review. EC 1105-2-408 provides the process for deciding whether or not to employ EPR. The following is an excerpt of EC 1105-2-408, section 9a:

Decision documents covered by this Circular will undergo EPR if there is a vertical team consensus (involving district, major subordinate command and Headquarters members) that the covered subject matter (including data, use of models, assumptions, and other scientific and engineering information) is novel, is controversial, is precedent setting, has significant interagency interest, or has significant economic, environmental and social effects to the nation. Decision documents covered by this Circular that do not meet the standard shall undergo ITR as described in paragraph 8, above.

Please see the EPR Decision Checklist below (1 - 5).

1. Novel subject matter? No, this is a typical storm damage reduction project.
2. Controversial subject matter? No, this is a typical storm damage reduction project with no controversial subject matter anticipated.
3. Precedent setting? No, this is a typical storm damage reduction project similar to several preceding projects.

4. Unusually significant interagency interest? No, this is a typical storm damage reduction project and normal coordination with other agencies is anticipated.

5. Unusually significant economic, environmental, and social effects to the nation? The anticipated costs and effects are not unusual, however, estimated construction costs exceed \$40 million, which is the threshold amount suggested for recommendation of an EPR.

Decision: New methodologies are not anticipated for the analysis or preparation of the Integrated GRR and EIS. Similarly, neither data being collected, nor any associated analysis would be considered scientifically influential. However, due to the estimated initial project cost projected to exceed \$40 million, CESAW recommends that EPR should be conducted for the Draft GRR and EIS to meet the requirements of EC 1105-2-408.

Based upon recent HQUSACE discussions, if one discipline of a report triggers EPR, then the entire report must undergo EPR. Therefore, based upon CESAW's initial assessment, PCX-CSDR recommends EPR for the entire draft GRR and EIS.

c. Anticipated Peer Review Schedule.

REVIEW PHASE	COMPLETION DATE	
Independent Technical Review AFB Materials	Summer	2008
Alternative Formulation Briefing (AFB)	Fall	2008
ITR and EPR, for Draft GRR & EIS	Spring	2009
Draft GRR & EIS / NEPA Public Review	Summer	2009
Civil Works Review Board	Winter	2010
Final EIS / NEPA Public Review (MSC Commanders Public Notice)	Spring	2010

d. External Peer Review and Procedure. For this General Reevaluation study, PCX-CSDR will make a recommendation whether or not External Peer Review is to be conducted, and if an EPR is conducted, the procedure to be followed.

e. Public Comment on Decision Document. As each is completed, the Draft and the Final Integrated GRR/EIS will be disseminated to resource agencies, interest groups, and the public as part of the National Environmental Policy Act (NEPA) environmental compliance review, shown in the Anticipated Peer Review Schedule. Public entities and private individuals may also review and comment on draft documents as members of the PDT. Resources agencies will be sent copies of the AFB Pre-conference Materials along with an invitation to attend the AFB.

f. Provision of Public Comments to Reviewers. All significant and relevant public comments will be provided as part of the review package to Peer Reviewers. Such

information may include, but is not limited to, scoping letters, meeting minutes, other correspondence received, and email.

g. Anticipated Number of Reviewers. The final determination of the number of reviewers required is the made by PCX-CSDR. The number of reviewers may vary as required. (See Attachment 2.)

h. Primary Review Disciplines and Expertise. The PCX-CSDR will make the final determination for the discipline type and number needed of reviewers. The minimal number of different disciplines expected is nine, as shown in the table below. As the Brunswick County Beaches GRR proceeds, additional reviewing disciplines may be added if needed.

PRELIMINARY REVIEW DISCIPLINES FOR ITR/EPR
Planning
Environmental / NEPA Compliance
Cultural Resources
Economics
Recreation
Coastal Engineering / Hydrology & Hydraulics
Geotechnical Engineering
Cost Estimating
Real Estate

i. Selection of External Peer Reviewers. The PCX-CSDR and associated Vertical Team will make the final determination for the discipline type and number of reviewers, as well as which, if any, External Peer Reviewers are needed. For this General Reevaluation study, this decision is the responsibility of PCX-CSDR.

j. Public Review. The public will have opportunities to review the Integrated GRR/EIS as required by the NEPA compliance process. The public will also have access to the PCX-CSDR documentation on the ITR and EPR

k. Miscellaneous Items.

(1) **DrChecks.** A software program useful to coordinate various document comments and responses electronically, DrChecks, will be used to conduct the ITR.

(2) **Model Certification.** All models developed or modified during for use in this study will be subjected to ITR and will be certified as required by Engineer Circular (EC) 1105-2-407, Planning Models Improvement Program: Model Certification. Wilmington District is currently coordinating GRANDUC with the PCX-CSDR.

ATTACHMENT 1

PEER REVIEW PLAN CHART

PEER REVIEW PLAN	
FEASIBILITY PHASE	
Study Product or Milestone	Review by
Feasibility Scoping Meeting	(not part of this study)
Value Engineering Package	OVEST PDT
Alternative Formulation Briefing	PDT, Supervisors, ITR Team
Draft GRR & EIS Risk Analysis Cost Engineering Policy	PDT, Supervisors, ITR Team, EPR Team, OC, Public, State and Federal Agencies Walla Walla DX Walla Walla DX HQ, SAD
CWRB Review Package	PDT, Supervisors
Final GRR & EIS	CWRB, Public, State and Federal Agencies
Chief of Engineers Report	HQ→ ASA(CW)→ OMB→ Congress

Reference External Peer Review Decision Checklist in Paragraph 2. b., questions 1 - 5: if any changes occur in checklisted items, the vertical team will determine if External Peer Review (EPR) will be required. A decision regarding EPR is requested in writing from SAD and HQ Regional Integration Team Leader (RIT).

A Scoping Letter during the Reconnaissance Phase provides the Public the opportunity to share any known concerns.

ATTACHMENT 2

ITR APPROVAL REQUEST

Establishment of ITR responsibility has been an evolving process. Skilled and experienced personnel who have not been associated with the development of the Brunswick County Beaches GRR products have been previously requested by Wilmington District Plan Formulation and Economics to serve as ITR members. EPR members will be determined by the PCX-CSDR.

Key ITR members are shown in the table below (to be determined by PCX-CSDR)

ROLE	NAME	ORGANIZATION
Planning / Plan Formulation	To be determined	CE-
Environmental	To be determined	CE-
Cultural Resources	To be determined	CE-
Coastal/H&H	To be determined	CE-
Geotechnical	To be determined	CE-
Cost Engineering	To be determined	CE-
Economics	To be determined	CE-
Recreation	To be determined	CESWT
Real Estate	To be determined	CENAB-

It is requested that these ITR Team Members be evaluated and approved to perform the upcoming ITR for the Draft GRR/EIS.

Below are the biographies for the ITR Team Members.

Plan Formulation / Planning

Name: To be determined

Grade and position title: GS-XX, XXIST

Organization: XX District, XX Division (CEXXX)

Education: XX

Years of experience: XX

Major achievements and projects: XX

Other awards and relevant accomplishments: XX

Professional Memberships: XX

Training: XX

Environmental

Name: To be determined
Grade and position title: GS-XX, XXIST
Organization: XX District, XX Division (CEXXX)
Education: XX
Years of experience: XX
Major achievements and projects: XX
Other awards and relevant accomplishments: XX
Professional Memberships: XX
Training: XX

Economics

Name: To be determined
Grade and position title: GS-XX, XXIST
Organization: XX District, XX Division (CEXXX)
Education: XX
Years of experience: XX
Major achievements and projects: XX
Other awards and relevant accomplishments: XX
Professional Memberships: XX
Training: XX

Cost Estimating

Name: To be determined
Grade and position title: GS-XX, XXIST
Organization: XX District, XX Division (CEXXX)
Education: XX
Years of experience: XX
Major achievements and projects: XX
Other awards and relevant accomplishments: XX
Professional Memberships: XX
Training: XX

Coastal Engineering / Hydrology & Hydraulics

Name: To be determined
Grade and position title: GS-XX, XXIST
Organization: XX District, XX Division (CEXXX)
Education: XX
Years of experience: XX
Major achievements and projects: XX
Other awards and relevant accomplishments: XX
Professional Memberships: XX
Training: XX

Geotechnical Engineering

Name: To be determined

Grade and position title: GS-XX, XXIST

Organization: XX District, XX Division (CEXXX)

Education: XX

Years of experience: XX

Major achievements and projects: XX

Other awards and relevant accomplishments: XX

Professional Memberships: XX

Training: XX

Real Estate

Name: To be determined

Grade and position title: GS-XX, XXIST

Organization: XX District, XX Division (CEXXX)

Education: XX

Years of experience: XX

Major achievements and projects: XX

Other awards and relevant accomplishments: XX

Professional Memberships: XX

Training: XX

Recreation

Name: To be determined

Grade and position title: GS-XX, XXIST

Organization: XX District, XX Division (CEXXX)

Education: XX

Years of experience: XX

Major achievements and projects: XX

Other awards and relevant accomplishments: XX

Professional Memberships: XX

Training: XX

Cultural Resources

Name: To be determined

Grade and position title: GS-XX, XXIST

Organization: XX District, XX Division (CEXXX)

Education: XX

Years of experience: XX

Major achievements and projects: XX

Other awards and relevant accomplishments: XX

Professional Memberships: XX

Training: XX