DEPARTMENT OF THE ARMY
NORTH ATLANTIC DIVISION, US ARMY CORPS OF ENGINEERS
FORT HAMILTON MILITARY COMMUNITY
BROOKLYN, NEW YORK 11252-6700

REPLY TO
ATTENTION OF

DEC 5 2012

CENAD-PD-PP

MEMORANDUM FOR Commander, Baltimore District, ATTN: CENAB-PL

SUBJECT: Review Plan Approval for Paul S Barnes Ecosystem Restoration Project at Poplar Island, Talbot County, Maryland

1. The attached Review Plan for the subject study has been prepared in accordance with EC 1165-2-209, Civil Works Review Policy.

2. The Review Plan has been coordinated with the Ecosystem Planning Center of Expertise of the Mississippi Valley Division, which is the lead office to execute this plan. For further information, contact Ms. Jodi Creswell at 309-794-5448. The Review Plan does not include independent external peer review, as it was deemed not applicable by Headquarters, US Army Corps of Engineers.

3. I hereby approve this Review Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.

Encl

KENT D. SAVRE
Colonel, EN
Commanding

REVIEW PLAN FOR THE PAUL S. SARBANES ECOSYSTEM RESTORATION PROJECT AT POPLAR ISLAND, TALBOT COUNTY, MARYLAND

BALTIMORE DISTRICT

MSC Approval Date:

1. PURPOSE AND REQUIREMENT

a. **Purpose:** The purpose of this review plan is to identify the requirements and plan of action for the review of the products for the Paul S. Sarbanes Ecosystem Restoration Project at Poplar Island (Poplar Island). Since the project is in construction, the products being generated are implementation documents necessary for construction such as plans and specifications and the cost estimate.

b. **References:**
- EC 1165-2-209, Civil Works Review Policy, 31 Jan 2012
- ER 1110-2-1150, Engineering and Design for Civil Works Projects, 31 Aug 1999
- ER 1110-1-12, Engineering and Design Quality Management, 21 Jul 2006 as revised through 31 March 2011
- WRDA 2007 H.R. 1495 Public Law 110-114, 8 Nov 2007

c. **Requirements:** This review plan was developed in accordance with EC 1165-2-209, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for all Civil Works projects from initial planning through design, construction, operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC's outline includes three levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review and Independent External Peer Review (IEPR), and Policy and Legal Compliance Review.

d. **Review Management Organization (RMO):** The RMO responsible for managing the overall peer review effort described in this review plan is the North Atlantic Division (MSC), Mr. Alan Huntley, P.E., Business Technical Division, Regional Technical Directorate.

2. PROJECT INFORMATION

a. **Project Description:** The project is focused on restoring/expanding remote island habitat to provide hundreds of acres of wetland and terrestrial habitat for fish, shellfish, reptiles, amphibians, birds, and mammals through the beneficial use of approximately 68 million cubic yards (MCY) of dredged material from the approach channels of the Baltimore Harbor and Channels navigation project. The project develops a long-term strategy for providing viable placement alternatives that meet the dredging needs of the Port of Baltimore while maximizing the use of dredged materials as a beneficial resource. The dredged material will restore 1,715 acres of remote island habitat consisting of 840 acres of upland habitat at an elevation up to +25 feet, 737 acres of wetland habitat that would be further divided into low marsh and high marsh, and approximately 138 acres of open water embayment. This will provide direct benefits of improved health, richness, and sustainability to aquatic and wildlife species. The project will support two supporting strategies of Executive Order 13508 by expanding citizen stewardship and strengthening science.

Restoration of island habitat is necessary and valuable to the Chesapeake Bay ecosystem. In the last 150 years, it has been estimated that 10,500 acres have been lost in the middle-eastern portion of Chesapeake Bay. This remote island habitat is valuable as resting and nesting sites for migratory and shore birds.

Construction on the project began in 1998 and the project is forecasted to be an active construction project until 2041.

In 2005 a General Reevaluation Report was completed which addressed expansion of the project from that which was authorized in WRDA 1996. The project was subsequently authorized in Section 3087 of WRDA 2007.

A Limited Reevaluation Report (LRR) is currently being prepared to address an increase in the total project cost estimate. This is scheduled to be submitted to the MSC in December 2012 and has a separate review plan which was endorsed by

the National Ecosystem Restoration Planning Center on 27 Apr 2012 and pending approval by NAD.

b. **Implementation Documents:** This review plan has been prepared for the plans and specifications and supporting cost estimates for the construction elements that remain on the Poplar Island project.

3. DISTRICT QUALITY CONTROL (DQC)

All implementation documents shall undergo DQC fulfilling the project quality requirements defined in the Project Management Plan (PMP) and ER 1110-2-1150. DQC will be documented through the use of DrChecks and a DQC report, which will be signed by all reviewers. Products that will undergo DQC include the plans and specifications and the supporting cost estimates. DQC will be performed by staff at the Baltimore District that have not been involved in the preparation of the documents as well as by the State of Maryland acting through the Maryland Port Administration (MPA) or their consultants. The MPA is the cost sharing partner for the Poplar Island project and they take an active role in the review of all documents related to the construction of the project.

4. AGENCY TECHNICAL REVIEW (ATR)

ATR is mandatory for all implementation documents. The objective of ATR is to ensure consistency with established criteria, guidance, procedures and policy. He ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonable clear manner. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home District that is not involved with the day-to-day production of the project. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. The ATP lead should be a senior professional with experience in preparing Civil Works implementation documents and conducting ATR. The lead should have the necessary skills and experience to lead a virtual team. The ATR lead may also serve as a reviewer for a specific discipline. Additional ATR team members should be experts in the respective fields that the implementation report is addressing, for instance if an Engineering Documentation Report was required to address a substantive change in the design then the appropriate Civil, Geotechnical, Hydrology and Hydraulics, Cost, etc. engineering experts would be require as a part of the ATR team. All comments from an ATR will be captured in DrChecks so that a record of the comment and response can be formally documented.

Products to Undergo ATR. ATR will occur prior to major decision points in the planning process so that the technical results can be relied upon in setting the course for further study. It is not anticipated that there will be any key technical products for which interim review will be required; however, as circumstances warrant it may be determined that ATR will be necessary for read-ahead materials or other products. All ATR will be coordinated with the Eco-PCX. The ATR will be accomplished by an independent entity outside the Baltimore District, within USACE, as designated by the PCX. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices of all project decision documents. The intent is for an ATR to not only ensure technical analyses are correct, but also ensure compliance with all pertinent USACE guidance early in the study prior to MSC review. As discussed in paragraph 2.a. above, a LRR is currently being prepared and already has an approved review plan. Aside from this, no further implementation documents are anticipated to be prepared for this project.

Required ATR Team Expertise.

ATR Team Members/Disciplines	Expertise Required
Civil Engineering	The Civil Engineering reviewer should have experience with dredged material placement and habitat restoration.
Cost Engineering	The Cost Engineering reviewer should have experience in dredged material placement and habitat restoration.
Environmental Resources	The Environmental Resources reviewer should be a senior biologist/ecologist with experience evaluating environmental benefits and effects of beneficial use of dredged material projects.

Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

(1) The review concern – identify the product's information deficiency or incorrect application of policy, guidance, or procedures;
(2) The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not be properly followed;
(3) The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components,

efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and

(4) The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the district, RMO, MSC, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in either ER 1110-1-12 or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed, based on work reviewed to date.

5. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

Under certain circumstances, an IEPR may be required for implementation documents. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted. A risk-informed decision, as described in EC 1165-2-209, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- Type I IEPR. Type I IEPRs are managed outside USACE and are conducted on project studies. Type I panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analyses, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address al underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-209.

- Type II IEPR. Type II IEPRs, or Safety Assurance Review), are managed outside the USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health safety and welfare.

Type I IEPR is not applicable as per ER 1165-2-209 since the Polar Island project is in the Construction Phase. Type II IEPR is also not applicable since the Poplar Island is an environmental restoration project and life safety is not an issue.

6. POLICY AND LEGAL COMPLIANCY REVIEW

All implementation documents will be reviewed for their compliance with law and policy. DQC and ATR facilitate the policy review processes by addressing compliance with pertinent

published Army policies, particular policies on analytical methods and the presentation of results in implementation documents.

7. COST ENGINEERING DIRECTORATE OF EXPERTISE (DX) REVIEW AND CERTIFICATION

Any cost estimate updates shall be coordinated with the Cost Engineering DX which is located in the Walla Walla District. The DX will assist in determining the expertise required for an ATR and in the development of the associated review charges. The DX will provide the Cost Engineering DX certification. The RMO is responsible for coordination with the Cost Engineering DX.

8. REVIEW PLAN APPROVAL AND UPDATES

The Baltimore District Commander is responsible for approving this Review Plan. The Commander's approval reflects vertical team input (involving district, MSC, RMO, and HQUSACE members) as to the appropriate scope and level of review for the decision document. Like the PMP, the Review Plan is a living document and may change as the study progresses. The home district is responsible for keeping the Review Plan up to date. Minor changes to the review plan since the last MSC Commander approval are documented in Attachment 3. Significant changes to the Review Plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. The latest version of the Review Plan, along with the Commanders' approval memorandum, should be posted on the Home District's webpage. The latest Review Plan should also be provided to the RMO and home MSC.

9. REVIEW PLAN POINTS OF CONTACT

Public questions and/or comments on this review plan can be directed to the following points of contact:

Kevin Brennan, Project Manager, Programs and Project Management Division, Baltimore District (410) 962-6113

Daniel Bierly, Acting Chief, Civil Projects Development Branch, Planning Division, Baltimore District (410) 962-6139

Alan Huntley, P.E., Business Technical Division, North Atlantic Division, (347) 370-4664.

ATTACHMENT 1: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECSION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the *<type of product>* for *<project name and location>*. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrChecks^{sm}.

SIGNATURE _____ _____

Name Date

ATR Team Leader

Office Symbol/Company

SIGNATURE _____ _____

Name Date

Project Manager

Office Symbol

SIGNATURE _____ _____

_____ _____

Name Date

Architect Engineer Project Manager[1]

Company, location

SIGNATURE

_____ _____

Name Date

Review Management Office Representative

Office Symbol

CERTIFICATION OF AGENCY TECHNICAL REVIEW

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

As noted above, all concerns resulting from the ATR of the project have been fully resolved.

SIGNATURE

_____ _____

Name Date

Chief, Engineering Division

Office Symbol

SIGNATURE

_____ _____

Name Date

Chief, Planning Division

Office Symbol

[1] Only needed if some portion of the ATR was contracted

ATTACHMENT 2: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 3: ACRONYMS AND ABBREVIATIONS

Term	Definition	Term	Definition
AFB	Alternative Formulation Briefing	NED	National Economic Development
ASA(CW)	Assistant Secretary of the Army for Civil Works	NER	National Ecosystem Restoration
ATR	Agency Technical Review	NEPA	National Environmental Policy Act
CSDR	Coastal Storm Damage Reduction	O&M	Operation and maintenance
DPR	Detailed Project Report	OMB	Office and Management and Budget
DQC	District Quality Control/Quality Assurance	OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
DX	Directory of Expertise	OEO	Outside Eligible Organization
EA	Environmental Assessment	OSE	Other Social Effects
EC	Engineer Circular	PCX	Planning Center of Expertise
EIS	Environmental Impact Statement	PDT	Project Delivery Team
EO	Executive Order	PAC	Post Authorization Change
ER	Ecosystem Restoration	PMP	Project Management Plan
FDR	Flood Damage Reduction	PL	Public Law
FEMA	Federal Emergency Management Agency	QMP	Quality Management Plan
FRM	Flood Risk Management	QA	Quality Assurance
FSM	Feasibility Scoping Meeting	QC	Quality Control
GRR	General Reevaluation Report	RED	Regional Economic

Term	Definition	Term	Definition
			Development
Home District/MSC	The District or MSC responsible for the preparation of the decision document	RMC	Risk Management Center
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMO	Review Management Organization
IEPR	Independent External Peer Review	RTS	Regional Technical Specialist
ITR	Independent Technical Review	SAR	Safety Assurance Review
LRR	Limited Reevaluation Report	USACE	U.S. Army Corps of Engineers
MSC	Major Subordinate Command	WRDA	Water Resources Development Act