REVIEW PLAN

Jamaica Bay, Marine Park, and Plumb Beach, New York
Interim Feasibility Report

New York District

MSC Approval Date: *June 2007*
Last Revision Date: *August 2010*

US Army Corps
of Engineers ®

REVIEW PLAN

Jamaica Bay, Marine Park, and Plumb Beach, New York
Interim Feasibility Report

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1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan defines the scope and level of peer review for the *Jamaica Bay, Marine Park and Plumb Beach, New York Interim Feasibility Report.*

b. References

(1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
(2) EC 1105-2-412, Assuring Quality of Planning Models, 2010
(3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
(4) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
(5) *New York District Quality Management Plan*

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 review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, decision documents are subject to cost engineering review and certification (per EC 1165-2-209) and planning model certification/approval (per EC 1105-2-412).

(1) District Quality Control/Quality Assurance (DQC). All **decision documents** (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). The home district shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home Major Subordinate Command (MSC).

(2) Agency Technical Review (ATR). ATR is mandatory for all **decision documents** (including supporting data, analyses, environmental compliance documents, etc.). The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published US Army Corps of Engineers (USACE) guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. ATR is managed within USACE by a designated Risk Management Organization (RMO) and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.

(3) Independent External Peer Review (IEPR). IEPR may be required for **decision documents** under certain circumstances. 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 is generally for decision documents and Type II is generally for implementation products.

(a) Type I IEPR. Type I IEPR reviews are managed outside the USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and an biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all the 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.

(b) Type II IEPR. Type II IEPR, or Safety Assurance Review (SAR), 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.

(4) Policy and Legal Compliance Review. All **decision documents** will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval or further recommendation to higher authority by the Chief of Engineers. DQC and ATR augment and complement the policy review processes by addressing compliance with pertinent published Army policies, particularly policies on analytical methods and the presentation of findings in decision documents.

(5) Cost Engineering Review and Certification. All **decision documents** shall be coordinated with the Cost Engineering Directory of Expertise (DX), located in the Walla Walla District. The DX, or in some circumstances regional cost personnel that are pre-certified by the DX, will conduct the cost ATR. The DX will provide certification of the final total project cost.

(6) 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. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and

opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The use of a certified/approved planning model does not constitute technical review of the planning product. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR. EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue and the professional practice of documenting the application of the software and modeling results will be followed. Use of engineering models is also subject to DQC, ATR, and IEPR.

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this Review Plan. The RMO for decision documents is typically either a Planning Center of Expertise (PCX) or the Risk Management Center (RMC), depending on the primary purpose of the decision document. The RMO for the peer review effort described in this Review Plan is *the Ecosystem Restoration PCX at Mississippi Valley Division (MVD).*

The RMO will coordinate with the Cost Engineering Directory of Expertise (DX) to conduct ATR of cost estimates, construction schedules and contingencies.

3. STUDY INFORMATION

a. Decision Document. *The study is the Jamaica Bay, Marine Park and Plumb Beach, New York interim Feasibility Report and Environmental Assessment. The purpose of the Feasibility Report is to document project evaluations and facilitate acceptance of the study conclusions and recommendations by the sponsor, public, state and local agencies, and the Federal government. The study recommends implementation of ecosystem restoration opportunities at eight distinct sites within Jamaica Bay. Following headquarters approval, the next step is Congressional authorization for implementation. .*

b. Study/Project Description. *Jamaica Bay lies within the Southern Long Island watershed (United States Geological Survey (USGS) Hydrologic Unit 2030202). Jamaica Bay, situated within the Boroughs of Brooklyn and Queens, New York City, is about 8 miles long, 4 miles wide, covers 26 square miles and opens into the Atlantic Ocean via Rockaway Inlet. Jamaica Bay opens to the Atlantic Ocean via Rockaway Inlet, which is about 17 miles by water southeast of the Battery. Jamaica Bay lies in an urban area and is connected to the lower bay of New York Harbor. The bay is located approximately 22 miles from midtown Manhattan in New York City and lies between the city's two most populated boroughs, Brooklyn and Queens. The bay is surrounded by salt marshes, disturbed upland ecosystems, parks, landfills, residential communities, commercial and retail facilities, parkways and major roadways, and public transportation, including the John F. Kennedy International Airport.*

A Beach Erosion Control and Hurricane Protection project for the Atlantic Coast of New York City between East Rockaway Inlet and Rockaway Inlet and Jamaica Bay was authorized by the Flood Control Act (1965). There is no existing Federal project for storm damage reduction at the Bay shoreline areas. There is, however, an existing Federally maintained navigation project for Jamaica

Bay. Over the past century, the Bay's fragile ecosystem has been degraded through human encroachment and increased urbanization. Combined Sewer Outfall (CSO) discharges have also exacerbated these effects. In effect, there are potential threats to human health based on a number of degradation factors, and valuable ecosystem services to attain environmental quality, social well being and economic benefits that are being adversely impacted.

A reconnaissance study for Jamaica Bay, Marine Park and Plumb Beach, NY was authorized by a resolution of the Committee on Public Works and Transportation of the United States House of Representatives adopted 1 August 1990 to determine the feasibility of improvements for beach erosion control, hurricane protection and environmental improvements in Jamaica Bay, including environmentally sensitive areas along Plumb Beach. The reconnaissance report was completed in January 1994. It recommended that a cost-shared feasibility study be undertaken to investigate restoration of the Bay environment, including its wetland and aquatic habitats and the water quality that supports them. The New York City Department of Environmental Protection (NYCDEP) is the Non-Federal sponsor for the feasibility study. A Feasibility Cost Sharing Agreement (FCSA) was executed between the Corps of Engineers and the NYCDEP in February 1996 and the Environmental Restoration feasibility study was initiated. Restoration sites were selected in conjunction with input from environmental resource agencies, the Harbor Estuary Program (HEP) and the local sponsor.

The feasibility study restoration alternatives were formulated in accord with Planning Guidance and Collaborative Planning Guidance. Restoration plans outlined in the draft feasibility report emphasize ecosystem restoration activities that involve modification of hydrology or aquatic substrates and are most likely to be appropriate for Corps initiatives. Habitats targeted include wetlands, riparian and other aquatic systems, but also include adjacent maritime forest and grasslands as appropriate, totaling about 550 acres across eight project sites. The first costs for the eight sites are as follows: Dead Horse Bay $59,873,406; Paerdegat Basin $69,265,650; Fresh Creek $37,252,938, Spring Creek $58,213,341; Hawtree Point $1,588,678; Bayswater State Park $4,767,238, Dubos Point $7,913,855 and Brant Point $7,681,167.

The non-Federal sponsor (NYCDEP) is fully supportive of measures to restore the degraded ecosystem of Jamaica Bay. New York State Department of Environmental Conservation (NYSDEC) has also committed to using funds from the Jamaica Bay Damages account it manages to assist in the construction of several of the recommended sites. Similarly, the New York City Department of Parks and Recreation (NYCDPR) has expressed an interest in partnering on post-feasibility activities related to their own lands in the bay. In addition, the U.S. Fish and Wildlife Service (USFWS), National Marine Fisheries Service (NMFS), National Park Service (NPS), and the U.S. Environmental Protection Agency (USEPA) have been involved in the study and support the project. Furthermore, the project compliments the goals and efforts of national programs such as the New York/New Jersey Harbor Estuary Program which is managed through the USEPA to conserve and restore estuaries of national significance, and the North American Waterfowl Management Plan, an international agreement signed in 1986 that seeks to increase waterfowl populations through increasing and restoring wetland habitat.

In combination with New York City's ongoing combined sewer overflow abatement projects, waste treatment plant upgrades, and landfill remediation to improve the overall water quality of Jamaica Bay, and the city's recently enacted law requiring the development and implementation for a comprehensive plan to protect and restore the bay and its habitats, the Jamaica Bay project will be positioned at a unique opportunity in time to make a substantial contribution to significantly

improving the environmental quality of this critically acclaimed and ecologically important ecosystem.

c. **Factors Affecting the Scope and Level of Review.** *This section should discuss the factors affecting the risk informed decisions on the appropriate scope and level of review. The discussion must be detailed enough to assess the level and focus of review and support the PDT, PCX, and vertical team decisions on the appropriate level of review and types of expertise represented on the various review teams. At minimum, this section should address:*

- *The National Park Service, Fish and Wildlife Service as well as the New York State Department of Environmental Conservation all support this ecosystem restoration study, as Jamaica Bay provides valuable foraging, nesting and nursery habitat for a wide variety of migratory birds, fish species as well as other forms of wildlife. Jamaica Bay is one of the largest contiguous wetland habitats within metropolitan NYC and the Gateway National Recreation Area (of which Jamaica Bay is part) is used by over 9 million visitors annually. This will not be a highly controversial study, as the resource agencies and members of the public all support ecosystem restoration in Jamaica Bay. Implementation of the Jamaica Bay project will provide National Ecosystem Restoration benefits to the Nation, in terms of habitat units. There is no influential scientific information presented in this study, as the study is essentially a large scale ecosystem restoration study, recommending alternatives on eight sites within Jamaica Bay. The decisions on which sites to move forward with utilize the IWR-Planning Suite, which is the accepted and certified method of choosing between sites, and therefore are not using unique or new scientific principles to make decisions.*

- *The risks of this project occur mostly in the implementation phase, where risk of not receiving federal and non-federal funds would drive the costs of the project higher and delay the implementation and receipt of benefits to the environment. This risk has been documented in a risk register developed for the cost and schedule risk analysis. There are no significant threats to human life or safety as the alternatives mainly involve restoration of salt marsh grasses and earth moving. The purpose of the project does not involve storm damage reduction or flood risk management and there is no expectation from any stakeholder that the implementation of this project would provide any storm damage protection.*

- *The alternatives identified in this ecosystem restoration study would be designed in such a way as they would be self-sustaining. The redundancy, resiliency and/or robustness discussion does not apply to this ecosystem restoration study, as the purpose of this study is to bring natural restoration to Jamaica Bay. The anticipated construction sequencing is dependent upon funding, however, it is anticipated that design of alternatives would occur prior to construction of that alternative. There may be overlap with design of one alternative and construction of the next alternative, if funds permit.*

d. **In-Kind Contributions.** Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. The in-kind products and analyses to be provided by the non-Federal sponsor include: *None.*

4. DISTRICT QUALITY CONTROL (DQC)

a. **Documentation of DQC.** *District Quality Control will be documented through the use of a Quality Control Report, which is managed in Dr Checks and signed by the members performing the DQC as well as the Division Chiefs of the major technical offices responsible for producing this report.*

b. **Products to Undergo DQC.** *At this point in the study, the products that will undergo a new round of DQC is the final feasibility report, prior to ATR.*

c. **Required DQC Expertise.** *The expertise of the DQC review team will consist of Section Chiefs and subject matter experts or regional technical specialists in the fields of Plan Formulation, NEPA compliance, Engineering Design and Analysis as well as Real Estate.*

5. AGENCY TECHNICAL REVIEW (ATR)

a. **Products to Undergo ATR.** *The products that will undergo ATR will be the Final Feasibility reports. The final report will include NEPA and supporting documentation. The expectation is that the final report will be available for ATR in April 2011.*

b. **Required ATR Team Expertise.** *The ATR team members is section should provide an estimate of the number of ATR team members and briefly describe the types of expertise that should be represented on the ATR team (not just a list of disciplines). The expertise represented on the ATR team should reflect the significant disciplines involved in the work effort and will generally mirror the expertise on the PDT. The PDT should make the initial assessment of what expertise is needed based on the PMP and the factors affecting the scope and level of review outlined in Section 3 of the review plan and may suggest candidates. The appropriate PCX(s) or RMC, in cooperation with the PDT and vertical team, will determine the final make-up of the ATR team. The following table provides examples of the types of disciplines that might be included on the ATR team and some sample descriptions of the expertise required. Pick from the listed disciplines and/or add additional disciplines as needed and provide a short description of the expertise required for each discipline. The names, organizations, contact information, credentials, and years of experience of the ATR members should be included in Attachment 1.*

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).
Planning	The Planning reviewer should be a senior water resources planner with experience in the plan formulation process. The reviewer should be familiar with evaluation of alternative plans for ecosystem restoration projects.
Economics	The economics reviewer should be able to evaluate the appropriateness of cost effectiveness and incremental cost analysis (CE/ICA), using IWR-Planning Suite, as applied to dollar costs and ecosystem restoration benefits. The reviewer should also have experience with National Ecosystem Restoration

	analysis procedures.
Environmental Resources	The Environmental Resources Reviewer should have particular knowledge of ecosystem restoration and should also be familiar with all National Environmental Policy Act (NEPA) requirements. The reviewer should have experience in wetland ecology of urban regions, preferably experience in the densely populated mid-Atlantic or Northeast.
Coastal Engineering	The coastal engineering reviewer should have experience with engineering analyses related to wetland restoration or related projects in the urban northeast.
Geotechnical Engineering	Team member will have experience in with geotechnical analyses for wetland restoration. A certified professional engineer is recommended.
Civil Engineering	The civil engineering reviewer should have experience with engineering analysis and design of wetland restoration or related projects in the urban northeast.
Cost Engineering	Team member will be familiar with cost estimating for similar projects using MII. Team member will be a Certified Cost Technician, Certified Cost Consultant, or Certified Cost Engineer. A separate process and coordination is also required through the Walla Walla District DX for cost engineering.
Real Estate	The real estate reviewer will be familiar with the Corps of Engineers ER on Real Estate.
Hazardous, Toxic and Radioactive Waste (HTRW)	The HTRW reviewer will be familiar with HTRW investigations and Corps of Engineers practices and ERs.

c. 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, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

a. Decision on IEPR. *Type I IEPR will be conducted on the draft feasibility report for this study. Although the study is neither controversial nor precedent setting, nor does it have highly significant national importance, the total project cost well exceeds the $45M threshold and therefore, Type 1 IEPR is required. Type II IEPR is not warranted, as this is an ecosystem restoration study and little to no threat to human life or safety is at risk if the project fails. The consequences of non-performance on project economics would mean that the region and nation do not realize the level of National Ecosystem Restoration benefits that this project would provide.*

b. Products to Undergo Type I IEPR. *The draft feasibility report and environment assessment are the products reviewed for the Type I IEPR.*

c. Required Type I IEPR Panel Expertise. *The expertise represented on the Type I IEPR panel is shown in the table below.*

IEPR Panel Members/Disciplines	Expertise Required
Economics	The Panel Member should have a degree in economics or a related field and should be able to evaluate the appropriateness

	of cost effectiveness and incremental cost analysis (CE/ICA), as applied to dollar costs and ecosystem restoration benefits, and preferably familiar with the Corps of Engineers tool for CE/ICA called IWR-Planning Suite. Panel member should also have experience with National Ecosystem Restoration analysis procedures.
Environmental	The Panel Member should have at minimum a Masters Degree in ecology or biology. Panelist should have particular knowledge of ecosystem restoration and should also be familiar with all National Environmental Policy Act (NEPA) requirements. Panel Member should have experience in wetland ecology of urban regions, preferably experience in the densely populated mid-Atlantic or Northeast.
Civil Engineering	The Panel Member should have degrees in civil engineering and have demonstrated experience in performing cost engineering/construction management for all phases of ecosystem restoration or related projects. Team member should be familiar with similar projects across US and related Cost Engineering. Experience in associated contracting procedures, total cost growth analysis and related cost risk analysis is desired. Panel member should be familiar with construction industry and practices used in wetland restoration.
Coastal Engineering	The Panel Member should be a Professional Engineer and have experience with engineering analyses related to wetland restoration or related projects in the urban northeast. Panel member will hold at a minimum a M.S degree in Civil Engineering or Coastal Engineering. The panel member should be familiar with the Corps Coastal Engineering Manual.
Civil Works Planning	The Panel Member should have a degree in planning or a related field and should have experience in the plan formulation process. Panelist should be familiar with evaluation of alternative plans for ecosystem restoration projects. Familiarity with USACE standards and procedures is required.

d. Documentation of Type I IEPR. The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-209, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models, and analyses used. IEPR comments should generally include the same four key parts as described for ATR comments in Section 4.d above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- 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; 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.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

7. MODEL CERTIFICATION AND APPROVAL

a. Planning Models. The following planning models are anticipated to be used in the development of the decision document: *The planning models used in this study include IWR-Plan for evaluation of alternatives and sites as well as the Evaluation of Planned Wetlands (EPW) model to determine the habitat benefits gained from the restoration of each of the proposed sites.*

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
Evaluation of Planned Wetlands	*The model was developed for use in assessing various functions of planned wetlands. The model is used to develop and evaluate alternative plans/designs for wetlands based on six major design parameters. EPW was developed as a tool to assess various design parameters for planned wetlands and to characterize potential desired or undesired changes in wetland structure and function likely to result from project activities. It is intended to complement applications of Habitat Evaluation Procedures and the Wetland Evaluation Technique, and is generally characterized as a tool that facilitates comparisons between a natural wetland in a characteristic wetland assessment area and a planned wetland.* *EPW provides a technique for comparing the functional capacity of a wetland assessment area and a planned wetland. There are six functional areas that are addressed during the planning process. These include:* *1) Shoreline bank erosion control* *2) Sediment stabilization* *3) Water quality* *4) Wildlife* *5) Fish* *6) Uniqueness/heritage*	*Review and approval pending- Contract awarded June 2010 for Model Approval*

IWR-Plan	*This is the approved, certified model developed by IWR that will be used to evaluate alternatives.*	*Certified*

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document: *None.*

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study
None	N/A

8. REVIEW SCHEDULES AND COSTS

a. ATR Schedule and Cost. *The ATR of the draft Feasibility Report and Environmental Assessment was completed in March 2010, including the Cost Risk Analysis through the Cost DX at Walla Walla District. The final Feasibility Report will require ATR in Spring 2011 at a cost of $50K.*

b. Type I IEPR Schedule and Cost. *Type I IEPR of the draft feasibility report and EA will be initiated in FY10 and will be completed in April 2011. The IEPR cost is approximately $150K.*

c. Model Certification/Approval Schedule and Cost. *The model approval process for the EPW model has been initiated and will be completed in October 2010.*

9. PUBLIC PARTICIPATION

Members of the public have provided comments on this study at public meetings and information sessions held throughout the study development. Additional public participation will occur with the release of the draft report to the public for their review and comment. These comments will be provided to the IEPR Panel as part of their review. It is anticipated that public review will occur concurrently with IEPR and comments received will be immediately forwarded for information. The peer reviewers were chosen through a contract with Battelle, which meets the criteria in WRDA 2007 as an Outside Eligible Organization. The final decision document, associated review reports, and USACE responses to IEPR comments will be made available to the public through the use of the District's Web site and mailing of notices that information is available to interested parties and stakeholders.

10. REVIEW PLAN APPROVAL AND UPDATES

The *North Atlantic Division* 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.

11. REVIEW PLAN POINTS OF CONTACT

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

- *Jodi McDonald, Chief, Flood Risk Management and Ecosystem Restoration Section, New York District, (917) 790-8720*
- *Chris Ricciardi, New York District Support Team, North Atlantic Division, (718) 765-7034*
- *Sue Ferguson, NAD Regional Program Manager, ECO-PCX, (615) 736-7192*

ATTACHMENT 1: TEAM ROSTERS

Jamaica Bay, Marine Park, and Plumb Beach Ecosystem Restoration Feasibility Study PDT, ATR, Vertical Team and OEO POCs.

PDT Members

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ATTACHMENT 2: 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 _____ Date _____
Name
ATR Team Leader
Office Symbol/Company

SIGNATURE _____ Date _____
Name
Project Manager
Office Symbol

SIGNATURE _____ Date _____
Name
Architect Engineer Project Manager[1]
Company, location

SIGNATURE _____ Date _____
Name
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 _____ Date _____
Name
Chief, Engineering Division
Office Symbol

SIGNATURE _____ Date _____
Name
Chief, Planning Division
Office Symbol

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

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number
4 August 2010	Re-format of RP to include reference to EC 209, no change to requirement to complete IEPR	All pages

ATTACHMENT 4: 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 Development
HQUSACE	Headquarters, U.S. Army Corps of Engineers	RMC	Risk Management Center
IEPR	Independent External Peer Review	RMO	Review Management Organization
ITR	Independent Technical Review	RTS	Regional Technical Specialist
LRR	Limited Reevaluation Report	SAR	Safety Assurance Review
MSC	Major Subordinate Command	USACE	U.S. Army Corps of Engineers
		WRDA	Water Resources Development Act