

**Continuing Authorities Program
Section 206, Water Resources Development Act of 1996, as Amended
Aquatic Ecosystem Restoration Projects**

**DECISION DOCUMENT REVIEW PLAN
USING THE NATIONAL PROGRAMMATIC REVIEW PLAN MODEL**

**Horner Park
Chicago, Cook County, Illinois
Feasibility Report**

Nashville District

MSC Approval Date: February 4, 2011

Last Revision Date: February 3, 2011



**US Army Corps
of Engineers ®**

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1. PURPOSE AND REQUIREMENTS

- a. **Purpose.** This Review Plan defines the scope and level of peer review for the Horner Park Aquatic Ecosystem Restoration project decision document developed under Section 206, Water Resources Development Act of 1996, as amended.

Section 206 of the Water Resources Development Act of 1996, Public Law 104-305, authorizes the Secretary of the Army to carry out a program of aquatic ecosystem restoration with the objective of restoring degraded ecosystem structure, function, and dynamic processes to a less degraded, more natural condition considering the ecosystem's natural integrity, productivity, stability and biological diversity. This authority is primarily used for manipulation of the hydrology in and along bodies of water, including wetlands and riparian areas. This authority also allows for dam removal. It is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization. The Federal share of costs for any one Section 206 project may not exceed \$5,000,000.

- b. **Applicability.** This review plan is based on the model National Programmatic Review Plan for Section 206 project decision documents, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined in ER 1165-2-209 Civil Works Review Policy. A Section 206 project does not require IEPR if ALL of the following specific criteria are met:

- The project does not involve a significant threat to human life/safety assurance;
- The total project cost is less than \$45 million;
- There is no request by the Governor of an affected state for a peer review by independent experts;
- The project does not require an Environmental Impact Statement (EIS),
- The project is not likely to have significant economic, environmental, and/or social effects to the Nation;
- The project/study is not likely to have significant interagency interest;
- The project/study is not likely highly controversial;
- The decision document is not likely to contain influential scientific information or be a highly influential scientific;
- 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; and
- The project has not been deemed by the USACE Director of Civil Works or Chief of Engineers to be controversial nature.

If any of the above criteria are not met, the model National Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the National Ecosystem Planning Center of Expertise (ECO-PCX) and approved by the home Major Subordinate Command (MSC) in accordance with EC 1165-2-209.

Applicability of the model National Programmatic Review Plan for a specific project is determined by the home MSC. If the MSC determines that the model plan is applicable for a specific study, the MSC Commander may approve the plan (including exclusion from IEPR) without additional coordination with the ECO-PCX or Headquarters, USACE. The initial decision as to the applicability of the model plan should be made no later than the Federal Interest Determination milestone (as defined in Appendix F of ER 1105-2-100, F-10.e.1) during the feasibility phase of the project. In addition, the home district and MSC should assess at the Alternatives Formulation Briefing (AFB) whether the initial decision on the use of the model plan is still valid or if a project specific review plan should be developed based on new information. If a project specific review plan is required, it must be approved prior to execution of the Feasibility Cost Sharing Agreement (FCSA) for the study.

This review plan does not cover implementation products. A review plan for the design and implementation phase of the project will be developed prior to approval of the final decision document in accordance with EC 1165-2-209.

c. 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
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (6) PMP for Horner Park Feasibility Study
- (7) District Quality Management Plan
- (8) EC 1165-2-209, Civil Works Review Policy, 31 January 2010

d. Requirements. This programmatic 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 Review 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.

For decision documents prepared under the model National Programmatic Review Plan, the leader of the ATR team shall be from outside the home district, but may be from within 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 biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all 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.

For decision documents prepared under the model National Programmatic Review Plan, Type I IEPR is not required.

(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.

For decision documents prepared under the model National Programmatic Review Plan, Type II IEPR is not required.

- (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 home MSC Commander. 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 DX Review and Certification. All **decision documents** shall be coordinated with the Cost Engineering Directory of Expertise (DX), located in the Walla Walla District.

For decision documents prepared under the National Programmatic Review Plan Model, Regional cost personnel that are pre-certified by the DX will conduct the cost estimate ATR. The DX will provide the Cost Engineering DX certification.

- (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 (if required). 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. The use of engineering models is also subject to DQC, ATR, and IEPR (if required).

For decision documents prepared under the model National Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved model are used, approval of the model for use will be accomplished through the ATR process. The ATR team will apply the principles of EC 1105-2-412 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

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 Section 206 decision documents is the home MSC. The MSC will coordinate and approve the review plan and manage the ATR. The home District will post the approved review plan on its public website. A copy of the approved review plan (and any updates) will be provided to the National Ecosystem Planning Center of Expertise (ECO-PCX) to keep the PCX apprised of requirements and review schedules.

3. STUDY INFORMATION

- a. **Decision Document.** The Horner Park Definitive Project Report (DPR) and Integrated Environmental Assessment and Appendices decision document will be prepared in accordance with ER 1105-2-100, Appendix F. The approval level of decision documents (if policy compliant) is the home MSC. An Integrated Environmental Assessment (EA) will be prepared along with the decision document.
- b. **Study/Project Description.** Horner Park lies along the North Branch of the Chicago River in the City of Chicago, IL. The restoration area is bounded by Montrose Avenue to the north and Irving Park Road to the south (Figures 1). The slope of the bank varies from being almost vertical in many areas, to more gently sloping in the southern part of the site. The project site encompasses approximately 2,600-feet of riverbank and at some points extends inland about 300-feet. The site totals nearly 14-acres. The Chicago Park District (CPD) will act as the project sponsor and currently owns the project lands. CPD currently leases one side of the stream bank from the Metropolitan Water Reclamation District of Greater Chicago (MWRD). The opposite bank is owned by MWRD but abuts private development and will fall outside of the study area. The land is currently being used as recreational park facilities.

Historically, the North Branch Chicago River flowed shallow and meandering in the vicinity of Horner Park (Hill 2002). Since the river did not have a defined channel or bank structure, it sprawled out over the Glacial Lake Chicago plain creating a landscape of oxbows, marshes, bottomlands, and ponds. All of these landscape features were densely populated with native plant species that no longer exist in the project area. The aquatic system that exists at Horner Park consists of stream that has been severely impacted through development. The Chicago River North Branch system has been drained and forced into an unnatural channel. This channel primarily consists of fine silts and soils. Flows are flashy and stream development is poor (development: the lack of riffle-pool sequences or submergent vegetation). Floodplain features are absent in this reach of river due to surrounding development and flood events that are confined within the channel. The riparian zone consists of primarily non-native trees and mowed turf grasses. These trees provide minimal habitat for tolerant species typical to urban settings.

Potential project components have been identified through information gathered during reconnaissance planning meetings. A list of potential measures and alternatives for further consideration and possible inclusion in the recommended project was compiled.

Major project features that could be implemented are as follows:

- Restoration of stream morphology and hydraulics
 - Wetland creation
 - Riffle (Jhooks)/pool
 - Bank contouring
 - Foreshore dikes

- Riparian zone restoration
 - Restoration of hydrology
 - Native plant community reestablishment
- Prevention and/or removal of invasive species
 - Herbicide
 - Clearing



Figure 1 – Location and Vicinity Map of Horner Park within the Great Lakes Region

Total Project Cost Estimate

The Feasibility Study (FS) will complete the plan formulation process, identify cost effective plans for ecosystem restoration purposes and complete 30% design for the selected plan. This FS will serve as the decision document for the approval of design and implementation funding. The Report is being prepared with 100% Federal funding with no cost-share or in-kind contributions to be provided by the sponsors.

| | |
|-----------------------------------|--------------|
| Determination of Federal Interest | \$ 10,000 |
| Feasibility Study | \$ 250,000 |
| Plans & Specifications | \$ 200,000 |
| Construction | \$ 5,520,000 |
| LERRDs | \$ 789,992 |
| Total | \$ 6,769,992 |
| AAOMR&R | \$ 10,000 |

- c. **Factors Affecting the Scope and Level of Review.** Initial Quality Control (QC) review will be performed within LRN, or by the staff of the non-Federal Sponsor, Chicago Park District. QC will be performed by the PDT during the course of completing the Interim Feasibility Study. District Quality Control (DQC) processes for review are well established. Pursuant to EC 1105-2-410, it is recommended that the Agency Technical Review (ATR) be handled within the Corps, as the scope and technical complexity do not warrant an Independent External Peer Review. The ATR review team should be comprised of senior USACE personnel, preferably recognized subject matter experts with the appropriate technical expertise such as regional technical specialists (RTS). It is anticipated that this study will not be novel, controversial, or precedent setting, nor will it have significant national importance. This project is considered to have low overall risk and health and human safety factors are minimal.

This project study does not require an IEPR and will not include an Environmental Impact Statement (EIS) since the PDT has determined that the study/project:

- Is not expected to be controversial; this is not an expectation that there will be any public dispute as to the size, nature or effects of the project. It is not expected that there will be any public dispute as to the economic or environmental cost or benefit of the project. It is well known among the Chicago Park District and the Water Reclamation District of Greater Chicago, and the local governments of the project area that LRC has an ongoing ecosystem restoration project within the study area. No governmental agencies have demonstrated any concerns to date;
- Is not expected to have adverse impacts on scarce or unique cultural or historic resources;
- Is not expected to have adverse impacts on any fish or wildlife species or their habitat whether or not they are listed as endangered or threatened under the Endangered Species Act of 1973; Anticipated direct positive benefits would be improvement to aquatic habitat quality and riparian habitat quality from wetland creation, invasive removal and native plantings;
- Is not likely to contain influential scientific information, not is it likely to be a highly influential scientific assessment;
- Does not involve rehabilitation or replacement of existing hydropower turbines, lock structures, or flood control gates;
- Is not expected to be based on novel methods, does not present complex challenges for interpretation, does not contain precedent-setting methods or models, and will not present conclusion that are likely to change prevailing practices.
- During similar ecosystem restoration within the city of Maryville, TN LRN acquired ample experience and industry to treat this activity as routine and to be able to determine what methods and models will be used. Specifically, the Pistol Creek Section 206 aquatic ecosystem restoration study became the guide from which Section 206 CAP projects were initiated.

- Has minimal life safety risk;
- Is expected to have a total project cost of approximately \$6.7 million which is less than \$45 million;
- Is not expected to receive a request from the head of any Federal or state agency for either an EIS or an IEPR.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC and ATR, similar to any products developed by USACE. No in-kind contributions are expected to be provided by the sponsor. The feasibility study is to be completed with 100% federal funding as it is a grandfathered CAP 206 project with a Preliminary Restoration Plan approved in 2003.

4. DISTRICT QUALITY CONTROL (DQC)

a. Documentation of DQC. The DQC will be conducted in DrChecks and the ATR team will be able to review the DQC comments and responses and will be provided the DQC certification. The PDT is responsible for producing quality services and/or products. Methodology, concurrence, technical adequacy and product quality (i.e., format, grammar, spelling, consistency, computations, etc.) are obtained through periodic internal reviews by the product team and technical supervisors.

5. AGENCY TECHNICAL REVIEW (ATR)

a. Products to Undergo ATR. ATR will be performed throughout the study in accordance with the District and MSC Quality Management Plans. The ATR shall be documented and discussed at the AFB milestone. Certification of the ATR will be provided prior to the District Commander signing the final report. Products to undergo ATR include existing conditions and with-project hydrology and hydraulics modeling, ecosystem restoration preliminary alternatives modeling, environmental assessment, feasibility study report and engineering appendices.

b. Required ATR Team Expertise. The ATR team will be comprised of senior USACE personnel, preferably recognized subject matter experts with the appropriate technical expertise such as regional technical specialists (RTS), and may be supplemented by outside experts as appropriate. To ensure independence, the leader of the ATR team will be from outside the Lakes and Rivers Division. An LRN Review Management Organization (RMO) will select a qualified team from outside the home district as follows:

| | |
|---------------|---------------------------|
| Team Member 1 | Planning-Plan Formulation |
| Team Member 2 | Hydrology & Hydraulics |
| Team Member 3 | Cost Engineering |
| Team Member 4 | Biologist/NEPA Specialist |
| Team Member 5 | Geotechnical Engineering |

The ATR Team Leader role can be assigned to any of the ATR team members. An ATR Team member may serve more than one role if the scope of the study and the level of effort warrant. The ATR Team Leader will follow the requirements as outlined in the “ATR Lead Checklist” developed by the National Planning Centers of Expertise. 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 experience in preparing Section 206 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 riparian corridor restoration. |
| Hydrology & Hydraulic Engineering | Senior hydrologist or hydraulic engineer with HEC-RAS computer modeling and ecosystem restoration experience. |
| Biologist/NEPA Specialist | Environmental Resources reviewer should be a senior biologist/ecologist/environmental engineer, preferably with significant experience in ecosystem restoration and familiarity with freshwater systems. Should be able to review for NEPA compliance (including cultural resources coordination) and quality and applicability of ecosystem benefits evaluations. |
| Geotechnical Engineering | Geotechnical Engineering reviewer should be a senior civil or geotechnical engineer with experience designing grading plans, bank-protection, removal, or modification, and habitat structures. |
| Cost Engineering | Cost engineer from Cost_DX with ecosystem restoration experience |

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 1110-2-12 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 prior to the District Commander signing the final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)

- a. **Decision on IEPR.** Based on the information and analysis provided in paragraph 3(c) of this review plan, the project covered under this plan is excluded from IEPR because it does not meet the mandatory IEPR triggers and does not warrant IEPR based on a risk-informed analysis. If any of the criteria outlined in paragraph 1(b) are not met, the model National Programmatic Review Plan is not applicable and a study specific review plan must be prepared by the home district, coordinated with the National Ecosystem Planning Center of Expertise (ECO-PCX) and approved by the home Major Subordinate Command (MSC) in accordance with EC 1165-2-209.
- b. **Products to Undergo Type I IEPR.** Not applicable.
- c. **Required Type I IEPR Panel Expertise.** Not Applicable.
- d. **Documentation of Type I IEPR.** Not Applicable.

7. MODEL CERTIFICATION AND APPROVAL

- a. **Planning Models.** The following planning models are anticipated to be used in the development of the decision document:

| Model Name and Version | Brief Description of the Model and How It Will Be Applied in the Study | Certification / Approval Status |
|------------------------|--|---------------------------------|
|------------------------|--|---------------------------------|

| | | |
|------------------------------|--|---------------|
| Floristic Quality Assessment | This assessment tool was designed to be used as an all inclusive method, not just as a way to identify high quality sites. The FQA was originally developed for the Chicago Region, but has since been developed for regions and states throughout North America. This method assesses the sensitivity of individual plant species that inhabit an area. Each native species is assigned a coefficient of conservatism ranging from 0 to 10. A 0 is assigned to species that are highly tolerant to disturbance and are considered general in their habitat distribution and a 10 is assigned to species with a very low tolerance to disturbance and displays a very specific relationship to a certain habitat type. This model is used in this study to assess the ecological value of the existing site (future-without-project) condition and any proposed management measures, based on the function of the plant community. | Not Certified |
| Fish Species Richness Score | This study will use the species richness of fishes occurring in the Chicago River, at the immediate project site and at a reference site approximately 1 mile upstream near the Foster Avenue Bridge. A habitat suitability index will be calculated using the number of species occurring/16 (16 represents the number of native species occurring at the reference site) and then multiplied by 10 to normalize the score to be equivalent to the FQA score. It is assumed that the fish species richness of the river adjacent to the project site will increase due to proposed management measures providing currently missing life requisites (i.e. structure, spawning habitat, vegetation, etc.). | Not Certified |
| IWR Planning Suite | IWR Planning Suite assists with plan formulation by combining user-defined solutions to planning problems and calculating the effects of each combination, or “plan.” The program can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are best financial investments and displaying the effects of each on a range of decision variables. | Certified |

b. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document:

| Model Name and Version | Brief Description of the Model and How It Will Be Applied in the Study |
|------------------------|--|
| HEC-RAS Latest Version | The Hydrologic Engineering Center’s River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used for steady flow analysis to evaluate the future without- and with-project conditions along the North Branch Chicago River and its tributaries. |

8. REVIEW SCHEDULES AND COSTS

- a. **ATR Schedule and Cost.** LRN shall provide labor funding by MIPR. Funding for travel, if needed, will be provided through a government order. The Project Manager will work with the ATRT Leader to ensure that adequate funding is available and is commensurate with the level of review needed. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring. The ATRT leader shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes. Reviewers shall monitor individual labor code balances and alert the ATRT Leader to any possible funding shortages. Each ATR reviewer will have \$5000 with an additional \$3000 for the ATRT lead to set up the review team. Once actual costs are determined, this RP will be revised. Until then, ATR and assistance is estimated at \$28,000 for the study. An estimated schedule is presented below pending approval of the Review Plan and completion of the report by LRN and LRC.

| Task | Date |
|---------------------------------|---------------------------------|
| AFB Package ATR | March 3, 2011 – March 16, 2011 |
| Evaluate AFB ATR | March 17, 2011 – March 23, 2011 |
| AFB ATR Back Check | March 24, 2011 – March 30, 2011 |
| Agency Technical Review | April 26, 2011 – May 9, 2011 |
| PDT Evaluation of ATR | May 10, 2011 – May 23, 2011 |
| Back Check and Close Out of ATR | May 24, 2011 – June 6, 2011 |

- b. **Type I IEPR Schedule and Cost.** Not applicable.
- c. **Model Certification/Approval Schedule and Cost.** For decision documents prepared under the model National Programmatic Review Plan, use of existing certified or approved planning models is encouraged. Where uncertified or unapproved model are used, approval of the model for use will be accomplished through the ATR process. The ATR team will apply the principles of EC 1105-2-412 during the ATR to ensure the model is theoretically and computationally sound, consistent with USACE policies, and adequately documented. If specific uncertified models are identified for repetitive use within a specific district or region, the appropriate PCX, MSC(s), and home District(s) will identify a unified approach to seek certification of these models.

9. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments. This study will include a public involvement program designed to meet NEPA requirements; solicit public and government agency input about the North Branch Chicago River and its problems; ensure that public and agency concerns are addressed; and keep the public and agencies involved in the development of the study goals, study progress, and proposed projects. Community input will be solicited through the Chicago Park District when establishing study goals and objectives and when developing project alternatives. The public's commitment to a comprehensive restoration package will be sought. Agencies will be notified of public meetings, provided with copies of newsletters, and solicited for report review comments. Federal agencies to be solicited for comments include the US Fish & Wildlife Service, U.S. Forest Service,

National Marine Fisheries Service, and the Environmental Protection Agency. State and local agencies and organizations to be included in the coordination are the Illinois Historic Preservation Agency, Illinois Department of Natural Resources, affiliated tribes, Chicago Park District, and the Water Reclamation District of Greater Chicago. Others to be coordinated with include the city of Chicago and Cook County.

The draft report will be placed on the Chicago District home page for public comment. Public review of the draft report will occur after completion of Agency Technical Review when the report will go out for NEPA compliance review. Public review comments will be provided to the ATR Team for review and inclusion in the final report.

10. REVIEW PLAN APPROVAL AND UPDATES

The home MSC Commander is responsible for approving this review plan and ensuring that use of the Model Programmatic Review Plan is appropriate for the specific project covered by the plan. 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. Significant changes may result in the MSC Commander determining that use of the Model Programmatic Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209. The latest version of the review plan, along with the Commanders' approval memorandum, will be posted on the home district's webpage.

11. REVIEW PLAN POINTS OF CONTACT

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

- USACE Chicago District POC – Nicole Roach, Project Manager (312) 846 – 5517
Nicole.L.Roach@usace.army.mil

ATTACHMENT 1: TEAM ROSTERS

Names were removed before public review.

| Discipline | Office |
|-----------------------------------|-----------------------|
| Project Manager / Plan Formulator | LRN-PM-P |
| Biologist | LRN-PM-P |
| Economist | LRN-PM-P |
| Real Estate | LRN-RE |
| Cost Estimating | LRN-EC-E |
| Hydraulics and Hydrology | LRN-EC-H |
| Geotech | LRN-EC-CD-S |
| HRTW | LRC-TS-D-HE |
| Cultural & Arch. Resources | LRC-PM-PL-E |
| Botanist | LRC-PM-PL-E |
| Project Manager | LRC-PM-PM |
| Fisheries Biologist | LRC-PM-PL-E |
| Sponsor | Chicago Park District |

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION 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 DrCheckssm.

| | |
|--|-------------|
| <u>Name</u> ATR Team Leader <u>Office Symbol/Company</u> | <u>Date</u> |
|--|-------------|

| | |
|--|-------------|
| <u>Name</u> Project Manager <u>Office Symbol</u> | <u>Date</u> |
|--|-------------|

| | |
|--|-------------|
| <u>Name</u> Review Management Office Representative <u>Office Symbol</u> | <u>Date</u> |
|--|-------------|

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.

| | |
|--|-------------|
| <u>Name</u> Chief, Engineering Division <u>Office Symbol</u> | <u>Date</u> |
|--|-------------|

| | |
|---|-------------|
| <u>Name</u> Chief, Planning Division <u>Office Symbol</u> | <u>Date</u> |
|---|-------------|

ATTACHMENT 3: REVIEW PLAN REVISIONS

| Revision Date | Description of Change | Page / Paragraph Number |
|----------------------|------------------------------|--------------------------------|
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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 |
| CAP | Continuing Authorities Program | O&M | Operation and maintenance |
| CSDR | Coastal Storm Damage Reduction | OMB | Office and Management and Budget |
| DPR | Detailed Project Report | OMRR&R | Operation, Maintenance, Repair, Replacement and Rehabilitation |
| DQC | District Quality Control/Quality Assurance | OEO | Outside Eligible Organization |
| DX | Directory of Expertise | OSE | Other Social Effects |
| EA | Environmental Assessment | PCX | Planning Center of Expertise |
| EC | Engineer Circular | PDT | Project Delivery Team |
| EIS | Environmental Impact Statement | PAC | Post Authorization Change |
| EO | Executive Order | PMP | Project Management Plan |
| ER | Ecosystem Restoration | PL | Public Law |
| FDR | Flood Damage Reduction | QMP | Quality Management Plan |
| FEMA | Federal Emergency Management Agency | QA | Quality Assurance |
| FRM | Flood Risk Management | QC | Quality Control |
| FSM | Feasibility Scoping Meeting | RED | Regional Economic Development |
| GRR | General Reevaluation Report | 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 |
| | | | |