

**EMIQUON WEST  
ECOSYSTEM RESTORATION PROJECT  
PROJECT IMPLEMENTATION REPORT WITH  
INTEGRATED ENVIRONMENTAL ASSESSMENT**

**PEER REVIEW PLAN**

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**I. PURPOSE AND REQUIREMENTS**

This document outlines the peer review plan for Emiquon West Project Implementation Report (PIR) with Integrated Environmental Assessment (EA) and Appendices. Engineering Circular 1105-2-408 dated 31 May 2005, *Peer Review of Decision Documents*:

- establishes procedures to ensure the quality and credibility of Corps decision documents by adjusting and supplementing the review process; and
- requires that documents have a peer review plan. The Circular applies to all feasibility studies and reports and any other reports that lead to decision documents that require authorization by Congress. The feasibility level reports (PIRs) in this program will lead to Congressional Authorization and are therefore covered by the Circular.

The Circular outlines the requirement of the two review approaches (independent technical review (ITR) and external peer review (EPR)) and provides guidance on Corps Planning Centers of Expertise (PCX) involvement in the approaches. This document addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate Center.

**ITR.** Districts are responsible for reviewing the technical aspects of the decision documents through the ITR approach. Internal Technical Review is a critical examination by a qualified person or team that was not involved in the day-to-day technical work that supports the decision document. Internal Technical Review is intended to confirm that such work was done in accordance with clearly established professional principles, practices, codes, and criteria. In addition to technical review, documents should also be reviewed for their compliance with laws and policy. The Circular also requires that DrChecks (<https://www.projnet.org/projnet/>) be used to document all ITR comments, responses, and associated resolution accomplished.

**EPR.** The Circular added external peer review to the existing Corps review process. This approach does not replace the standard ITR process. The peer review approach applies in special cases where the magnitude and risk of the project are such that a critical examination by a qualified person outside the Corps is necessary. External peer review can also be used where the information is based on novel methods, presents complex interpretation challenges, contains precedent-setting methods or models, or is likely to affect policy decisions that have a significant impact. The degree of independence required for technical review increases as the project magnitude and project risk increase.

- Projects with low magnitude and low risk may use a routine ITR

- Projects with either high magnitude/low risk or low magnitude/high risk would require both Corps and outside reviewers on the ITR team to address the portions of the project that cause the project to rate high on the magnitude or risk scale.

Projects with high magnitude and high risk require a routine ITR as well as an EPR.

**PCX Coordination.** The Circular outlines PCX coordination in conjunction with preparation of the review plan. Districts should prepare the plans in coordination with the appropriate PCX. The Corps PCX are responsible for the accomplishment and quality of ITR and EPR for decision documents covered by the Circular. Centers may conduct the review or manage the review to be conducted by others. Reviews will be assigned to the appropriate Center based on business programs. The Circular outlines alternative procedures to apply to decision documents. Each Center is required to post review plans to its website every three months as well as links to any reports that have been made public. The Office of Water Project Review (OWPR) will consolidate the lists of all review plans and establish a mechanism for soliciting public feedback on the review plans.

## **II. PROJECT DESCRIPTION**

**A. Decision Document.** The purpose of the decision document entitled Emiquon West Project Implementation Report (PIR) with Integrated Environmental Assessment (EA) and Appendices is to present the results of a feasibility study undertaken to restore, to the extent practical, high-quality, functional floodplain habitat and ecological processes that will sustain plant and animal communities that were native to the Illinois River Valley in the LaGrange Pool. Based on the recommendation of the recently completed UMR-IWW System Navigation Feasibility Study that examined system needs over the next 50 years, the Navigation and Ecosystem Sustainability Program (NESP) was implemented to achieve the dual purposes of UMRS ecosystem restoration and navigation improvements. Forestry Management at Emiquon West is one of 23 initial NESP ecosystem restoration projects. This project does not address multiple purposes. This report provides planning, engineering, and implementation details of the recommended restoration plan to allow final design and construction to proceed subsequent to the approval of the plan.

**B. General Site Description.** The Emiquon West complex is located on the Illinois River Floodplain in the LaGrange Pool of the Illinois River, between river miles 120.4 – 124.0 in Fulton County, Illinois. The project area is currently owned by the United States Fish and Wildlife Service (USFWS) and The Nature Conservancy (TNC). The USFWS property includes the former South Globe Drainage and Levee District (712 acres), the “Wilder tract” (486 acres), and the “Oxbow tract” (251 acres). The USFWS also owns two properties along the Spoon River, the “Vaughn tract” (45 acres), and the “Proehl tract” (142.5 acres). The Nature Conservancy currently owns the former North Globe Drainage and Levee District (540 acres).

**C. Project Scope.** The potential project area encompasses approximately 1500 acres of land owned by the USFWS and/or TNC. The project may provide aquatic connections between various tracts, the Spoon River, the Illinois River, and surrounding creeks by installing gates and culverts. Adjacent land

could be purchased to increase management flexibility and expand floodplain habitat. The project may also improve the reliability of levees, and /or allow periodic flooding of the project area and reduce damages to levees during floods by controlling the location of overtopping through the creation of a hardened overflow section. Recreation and education features will be primarily access related (roadways, parking lots, trails). The preliminary estimated total project cost is \$2 million.

**D. Problems and Opportunities.** The principle problem for the Emiquon West Project is the limited numbers of species of plants in wetland, prairie, and bottomland forests; woody and invasive species vegetation encroachment; lack of water level control; and damage to levees. Anthropogenic changes to the landscape have severely altered the topography, plant community, and drainage patterns of the area. In order to convert the project area to agricultural production, the existing bottomland hardwood forest was clearcut, the surrounding creeks were channelized, and multiple flood protection levees were constructed. Runoff control ditches were constructed on the interior of the levee district, and drain tiles were installed. Native vegetation was replaced with row crops. Sedimentation of the existing creeks has caused the channel beds to rise, perching both creeks above their surrounding grade. The current flood protection levees isolate the river from the floodplain, limiting fish passage, nutrient processing, flood reduction, and spawning potential.

The opportunity exists to restore floodplain habitat in the Emiquon West project area and improve wetland and floodplain functions to provide habitat that will benefit numerous species of fish, wildlife, and vegetation.

**E. Potential Methods.** Potential methods for addressing project goals would focus on the following potential features:

- Vegetative Planting: Mast producing trees and/or wetland species could be planted to restore desirable species
- Restore mesic/ wet prairie, semi-permanent wetland by establishing suitable conditions and through periodic disturbance
- Gates and Culverts: Provide aquatic connections between various tracts, the Spoon River, the Illinois River, and surrounding creeks.
- Land Acquisition: Adjacent land could be purchased to increase management flexibility and expand floodplain habitat
- Rehabilitate Levees: Improve stability, facilitate maintenance and maintain protection.
- Hardened overflow section of levee: Allow periodic flooding of the project area and reduce damages to levee during floods by controlling the location of overtopping.
- Creek Diversions: Coal/Crabtree Creek and Dickson Creek could have measures placed on them to divert water into portions of the former Globe Levee and Drainage District to increase water availability, enhance wetland habitat, and improve water quality (nutrient/sediment reduction in wetlands prior to reaching Illinois River).
- Recreation and education features will be primarily access related (roadways, parking lots, trails)

It is anticipated that standard Habitat Evaluation Procedures (HEP) models will be utilized to evaluate the project alternatives. PCX will need to determine if model certification is required.

**F. Product Delivery Team.** The product delivery team (PDT) is comprised of those individuals directly involved in the development of the decision document. Contact information and disciplines are as follows:

<b>Name</b>	<b>Discipline</b>	<b>Phone</b>	<b>Email</b>
<i>Corps of Engineers, Rock Island District</i>			
REMOVED	Project Manager	REMOVED	REMOVED
REMOVED	Team Leader/Project Engineer	REMOVED	REMOVED
REMOVED	Plan Formulation	REMOVED	REMOVED
REMOVED	Project Biologist	REMOVED	REMOVED
REMOVED	Hydraulics/Hydrology	REMOVED	REMOVED
REMOVED	Socio-economics	REMOVED	REMOVED
REMOVED	Cost Engineering	REMOVED	REMOVED
REMOVED	Real Estate/Lands	REMOVED	REMOVED
REMOVED	Archaeologist	REMOVED	REMOVED
REMOVED	Geotechnical Engineering	REMOVED	REMOVED
REMOVED	Structural Engineer	REMOVED	REMOVED
REMOVED	Forester	REMOVED	REMOVED

**G. Vertical Team.** The Vertical Team includes District management, District Support Team (DST) and Regional Integration Team (RIT) staff as well as members of the Planning of Community of Practice (PCoP).

District Program Manager	REMOVED, CEMVR-PM-F, at REMOVED.
DST Manager	REMOVED, CEMVD-PD-SP at REMOVED.
RIT Manager	REMOVED at REMOVED.
PCoP Contact	REMOVED, CEMVD-PD-N at REMOVED.

### **III. ITR PLAN**

As outlined above in Section I, the District is responsible for ensuring adequate technical review of decision documents. The responsible PDT District of this decision document is Rock Island (MVR).

**A. General.** An ITR Manager shall be designated for the ITR process. The PDT recommends the Kansas City District perform this ITR, as they have extensive big river forestry experience. Additionally, the PDT requests that the PCX recommend an ITR Manager and ITR team from the Kansas City District. The ITR Manager must be working in a district that is outside of the Mississippi Valley Division (MVD). In general, the ITR Manager is responsible for providing information necessary for setting up the review, communicating with the Team Leader, providing a summary of critical review comments, collecting grammatical and editorial comments from the ITR team (ITRT), ensuring that the ITRT has adequate funding to perform the review, facilitating the resolution of the comments, and certifying that the ITR has been conducted and resolved in accordance with policy.

**B. Team.** The ITRT will be comprised of individuals that have not been involved in the development of the decision document and will be chosen based on expertise, experience, and/or skills. The members will roughly mirror the composition of the PDT. The ITRT members and their areas of expertise are:

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<b>First</b>	<b>Last</b>	<b>Discipline</b>	<b>Phone</b>	<b>Email</b>
		ITR Manager/plan formulation		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Civil design		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Biology/NEPA		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Hydraulics/hydrology		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Socio-economics		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Cost engineering <sup>1</sup>		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Real estate/Lands		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Cultural resources		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Structural Engineering		<a href="mailto:@usace.army.mil">@usace.army.mil</a>
		Forestry		<a href="mailto:@usace.army.mil">@usace.army.mil</a>

<sup>1</sup> The cost engineering team member nomination will be coordinated with the NWW Cost Estimating Directory of Expertise as required. The Directory will decide if the cost estimate will need to be reviewed by Directory Staff.

**C. Communication.** The communication plan for the ITR is as follows:

(1) The team will use DrChecks to document the ITR process. The Team Leader will facilitate the creation of a project portfolio in the system to allow access by all PDT and ITRT members. An electronic version of the document, appendices, and any significant and relevant public comments in Word format shall be posted at: <ftp://ftp.usace.army.mil/pub/> at least one business day prior to the start of the comment period.

(2) The PDT shall send the ITR manager one hard copy (with color pages as applicable) of the document and appendices for each ITRT member such that the copies are received at least one business day prior to the start of the comment period.

(3) The PDT shall host an ITR kick-off meeting virtually to orient the ITRT during the first week of the comment period. If funds are not available for an on-site meeting, the PDT shall provide a presentation about the project, including photos of the site, for the team.

(4) The Study Manager shall inform the ITR manager when all responses have been entered into DrChecks and the ITR manager and Study Manager shall conduct an in progress review to summarize comment responses.

(5) A revised electronic version of the report and appendices with comments incorporated shall be posted at <ftp://ftp.usace.army.mil/pub/> for use during back checking of the comments.

(6) Team members shall contact ITRT members or leader as appropriate to seek clarification of a comment's intent or provide clarification of information in the report. Discussions shall occur outside of DrChecks but a summary of discussions may be provided in the system.

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(7) Reviewers will be encouraged to contact PDT members directly via email or phone to clarify any confusion. DrChecks shall not be used to post questions needed for clarification.

(8) The ITRT, PDT, and vertical team shall conduct an after action review (AAR) no later than three weeks after the policy guidance memo is received

#### **D. Funding**

(1) The PDT district shall provide labor funding by cross charge labor codes. Funding for travel, if needed, will be provided through government order. The Team Leader will work with the ITR manager to ensure that adequate funding is available and is commensurate with the level of review needed. The current cost estimate for this review is \$25,000. Any funding shortages will be negotiated on a case by case basis and in advance of a negative charge occurring.

(2) The team leader shall provide organization codes for each team members and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes.

(3) Reviewers shall monitor individual labor code balances and alert the ITRT Team Leader to any possible funding shortages.

#### **E. Timing and Schedule**

(1) Throughout the development of this document, the team will hold planning charrettes to ensure planning quality. Senior staff and subject matter experts from the PDT District and members of the vertical team (DST, Planning CoP, RIT) will attend the charrettes and provide comments on the product to date.

(2) The ITR will begin once a recommended plan has been selected, the preliminary design is complete, and the environmental assessment has been performed.

(3) The PDT will hold a “page-turn” session to review the draft report to ensure consistency across the disciplines and resolve any issues prior to the start of ITR. Writer/editor services will be performed on the draft prior to ITR as well.

(4) The ITR process for this document will follow the timeline below. Actual dates will be scheduled once the period draws closer. It is estimated that review of AFB pre-conference document will begin in the 3rd Quarter of FY 2009:

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<b>Task</b>	<b>Date</b>
ITR of Draft Report Comment Period	Begin Week 1
Kickoff Meeting	Week 1
ITR Comments	Due Week 4
PDT Responses	Due Week 6
Responses Backcheck	Week 8
Certification	Week 10
Alternative Formulation Briefing (AFB)	Week 14
AFB Policy Memo Issued	Week 18
ITR Re-certification (if needed)	Week 20
After Action Review	NLT Week 22
Policy Guidance Memo	Week 25
Public Review of Draft Report	Begin Week 27
Final Report	Completed Week 42

## **F. Review**

ITR Team responsibilities are as follows:

- Reviewers shall review the draft report to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Comments on the report shall be submitted into DrChecks.
- Reviewers shall pay particular attention to one's discipline but may also comment on other aspects as appropriate. Reviewers that do not have any significant comments pertaining to their assigned discipline shall provide a comment stating this.
- Grammatical and editorial comments shall not be submitted into DrChecks. Comments should be submitted to ITR manager via electronic mail using tracked Changes feature in the Word document or as a hard copy mark-up. The ITR manager shall provide these comments to the Team Leader.
- Review comments shall contain these principal elements:
  - A clear statement of the concern;
  - The basis for the concern, such as law, policy, or guidance;
  - Significance for the concern; and
  - Specific actions needed to resolve the comment
- The "Critical" comment flag in DrChecks shall not be used unless the comment is discussed with the ITR manager and/or the Team Leader first

PDT Team responsibilities are as follows:

- The team shall review comments provided by the ITRT in DrChecks and provide responses to each comment using "Concur", "Non-Concur", or "For Information Only". *Concur* responses shall state what action was taken and provide revised text from the report if applicable. *Non-Concur* responses shall state the basis for the disagreement or clarification of the concern and suggest actions to negotiate the closure of the comment.

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- Team members shall contact the PDT and ITRT managers to discuss any “non-concur” responses prior to submission.

### **G. Resolution**

- Reviewers shall back check PDT responses to the review comments and either close the comment or attempt to resolve any disagreements. Conference calls shall be used to resolve any conflicting comments and responses.
- Reviewers may “agree to disagree” with any comment response and close the comment with a detailed explanation. ITRT members shall keep the ITR manager informed of problematic comments. The vertical team will be informed of any policy variations or other issues that may cause concern during Headquarters review.

**H. Certification.** To fully document the ITR process, a statement of technical review will be prepared. Certification by the ITR manager and the Team Leader will occur once issues raised by the reviewers have been addressed to the review team’s satisfaction. Indication of this concurrence will be documented by the signing of a certification statement (Appendix 1). A summary report of all comments and responses will follow the statement and accompany the report throughout the report approval process.

**I. Alternative Formulation Briefing (AFB).** The AFB for this project will occur after ITR certification. It is possible that the briefing will result in additional technical or policy comments from higher level reviewers for resolution. After resolution of significant comments, the ITR will be recertified, if needed. Re-certification will be needed if significant policy comments result in major changes to the document.

## **IV. EPR PLAN**

A. This decision document will present the details of a feasibility study undertaken to restore habitat in LaGrange Pool as described in paragraph 2 above. This ecosystem restoration project is part of the Navigation and Ecosystem Sustainability Program. This project does not meet the EPR standards outlined in the Circular.

- **Project Magnitude.** The magnitude of this project is determined as low. The cost of the project will likely not exceed \$2.0 million. The USFWS property includes the former South Globe Drainage and Levee District (712 acres), the “Wilder tract” (486 acres), and the “Oxbow tract” (251 acres). The USFWS also owns two properties along the Spoon River, the “Vaughn tract” (45 acres), and the “Proehl tract” (142.5 acres). The Nature Conservancy currently owns the former North Globe Drainage and Levee District (540 acres). This project will also contribute to the overall goals of NESP. The project is not considered complex and involves restoration of habitat through the implementation of standard concepts. The project will likely have positive long term and cumulative effects. It is anticipated that the report will not present influential scientific information or influential scientific assessments, thus only an ITR is anticipated to be required.

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- **Project Risk.** This project is considered low risk overall. The potential for failure is low because restoration of habitat is a straight forward concept with numerous successful applications. The potential for controversy regarding project implementation is low because the recommended plan will take into account the public concerns regarding construction of a project feature to restore habitat. A socio-economic analysis will be prepared and at least one public meeting will be held. The uncertainty of success of the project is low because the methods used for evaluating the project are standard and the concept of constructed habitat is not innovative. The ecosystem has not reached an irreversible state so it is likely that a restoration effort of the magnitude proposed will be successful.
- **Vertical Team Consensus.** The vertical team concurs that the subject matter covered in the decision document is not novel, controversial, nor precedent-setting, and the project will not have significant interagency interest or significant economic, environmental, or social effects.

Therefore, a separate EPR will not be conducted on the decision document and external members will not be part of the ITR team. The ITR and Public and Agency Reviews will serve as the main review approaches.

## **V. PUBLIC AND AGENCY REVIEWS**

- Public review of the document will occur after issuance of the AFB policy guidance memo and concurrence by HQUSACE that the document is ready for public release. As such, public comments other than those provided at any public meetings held during the planning process will not be available to the review team.
- Public review of the draft report will begin approximately 1 month after the completion of the ITR process and policy guidance memo. The period will last 30 days as required by ER 200-2-2.
- The public review of necessary state or Federal permits will also take place during this period.
- A formal state and Agency review will occur concurrently with the public review. However, it is anticipated that intensive coordination with these agencies will have occurred concurrent with the planning process.
- Upon completion of the review period, comments will be consolidated in a matrix and addressed, if needed. A comment resolution meeting will take place if needed to decide upon the best resolution of comments. A summary of the comments and resolutions will be included in the document.

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## **VI. PCX COORDINATION**

The appropriate PCX for this document is the National Ecosystem Planning Center of Expertise located at MVD. This review plan will be submitted through the PDT District (MVR) Planning Chief, to the PCX Director, REMOVED (REMOVED), and PCX Deputies, REMOVED (REMOVED) and REMOVED (REMOVED), for approval. Since it was determined that this project is low magnitude and low risk, an EPR will not be required. As such, the PCX will not be asked to manage the review, but is requested to review and comment on the sufficiency of the ITR team proposed in paragraph 3.b. above. The approved review plan will be posted to the PCX website. Any public comments on the review plan will be collected by the Office of Water Project Review (OWPR) and provided to the PDT District for resolution and incorporation if needed.

## **VII. APPROVALS**

The PDT will carry out the review plan as described. The Team Leader will submit the plan to the PDT District Planning Chief for approval. Coordination with PCX will occur through the PDT District Planning Chief. Signatures by the individuals below indicate approval of the plan as proposed.

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**ATTACHMENT**

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**STATEMENT OF TECHNICAL REVIEW**

**COMPLETION OF INDEPENDENT TECHNICAL REVIEW**

The Army Corps of Engineers, Rock Island District has completed the project implementation report (feasibility report) with integrated environmental assessment and appendices of the Emiquon West Ecosystem Restoration Project. Notice is hereby given that an independent technical review, that is appropriate to the level of risk and complexity inherent in the project, has been conducted as defined in the Review Plan. During the independent technical review, 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 result, including whether the product meets the customer's needs consistent with law and existing Corps policy. The independent technical review was accomplished by an independent team composed of Kansas City District staff. All comments resulting from ITR have been resolved.

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Team Leader, Emiquon West Project  
Independent Technical Review Team

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Date

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REMOVED, P.E.  
Team Leader, Emiquon West Project

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Date

**CERTIFICATION OF INDEPENDENT TECHNICAL REVIEW**

A summary of all comments and responses are attached. Significant concerns and the explanation of the resolution are as follows:

*(Describe the major technical concerns, possible impact and resolution)*

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

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REMOVED, P.E.  
Chief, Planning and Policy Branch  
Rock Island District

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Date