



DEPARTMENT OF THE ARMY
CORPS OF ENGINEERS, NORTHWESTERN DIVISION
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REPLY TO
ATTENTION OF

CENWD-PDD

04 SEP 2009

MEMORANDUM FOR Commander, Kansas City District (CENWK-DE)

SUBJECT: NWK Peer Review Plan Approval: Missouri River Ecosystem Restoration Plan and Environmental Impact Statement

1. Reference Engineering Circular (EC) 1105-2-410, 22 August 2008, Review of Decision Documents.
2. The enclosed Review Plan for the Missouri River Ecosystem Restoration Plan and Environmental Impact Statement has been prepared in accordance with the referenced guidance (encl).
3. The Review Plan is on the internet and available for public comment. The Review Plan has been coordinated with Ecosystem Restoration Planning Center of the Mississippi Valley Division which is the lead office to execute the Review Plan. The Review Plan includes external peer review.
4. I hereby approve this Review Plan, which is subject to change as study circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to the Review Plan or its execution will require new approval from this office.
5. Please contact Mr. Martin Hudson, at (503) 808-3851, if you have any further questions regarding this matter.

Encl


WILLIAM E. RAPP, P.E.
BG, USA
Commanding

CF:
CENWK-PM-P Combs
CENWO-PM-A Eckert-Uptmor
CEMVD-PD-N Wilbanks

**PEER REVIEW PLAN
MISSOURI RIVER ECOSYSTEM RESTORATION PLAN
AND ENVIRONMENTAL IMPACT STATEMENT
KANSAS CITY AND OMAHA DISTRICTS**

Final

June 2009

**PEER REVIEW PLAN
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AND ENVIRONMENTAL IMPACT STATEMENT
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1. PURPOSE AND REQUIREMENTS

A. Purpose. The purpose of this Peer Review Plan, which is a component of the MRERP Project Management Plan (PMP), is to outline the review process for the Missouri River Ecosystem Restoration Plan and Environmental Impact Statement (MRERP EIS). The MRERP EIS was authorized by Subsection (a) of Section 5018 of the Water Resources Development Act (WRDA) of 2007. The MRERP EIS will result in a comprehensive watershed plan that will be used to identify priorities for ecosystem restoration in the Missouri River Basin undertaken by the U.S. Army Corps of Engineers (USACE) and others. The MRERP EIS will not be used to seek specific authority for project implementation.

Engineer Circular 1105-2-410 entitled "Review of Decision Documents", dated 22 August 2008, provides the procedures for ensuring the quality and credibility of USACE decision documents through an independent review process. It complies with Section 515 of Public Law 106-554 (referred to as the "Information Quality Act "); and the Final Information Quality Bulletin for Peer Review by the Office of Management and Budget (referred to as the "OMB Bulletin"). It also provides guidance for the implementation of Section 2034 of WRDA 2007 (P.L. 110-114) and presents a framework for establishing the appropriate level and independence of review and detailed requirements of review documentation and dissemination.

B. Requirements All decision documents and their supporting analyses will undergo District Quality Control, Agency Technical Review, and also may require Independent External Peer Review, to "ensure the quality and credibility of the government's scientific information", in accordance with this circular and the quality management procedures of the responsible command. The Circular addresses review of the decision document as it pertains to both approaches and planning coordination with the appropriate Center. The Circular also requires that Dr. Checks (<https://www.projnet.org/projnet/>) be used to document all ATR and IEPR comments, responses, and associated resolutions accomplished.

C. Review Types. The types of technical review are described below. EC 1105-2-410 uses the terms "home district" or "home Major Subordinate Commands" (MSC) to refer to the office that has been assigned responsibility for a study or project and whose commander will sign any recommendations or the decision document. Where studies are conducted by non-Federal interests, the home district will be the district that contains the proposed project. As the MRERP EIS is a joint project between the Kansas City and Omaha Districts, they will collectively be the home districts.

(1) **District Quality Control (DQC)** is the review of basic science and engineering work products focused on fulfilling the project quality requirements defined in the PMP. It is managed in the home district and may be conducted by staff in the home district as long as they are not doing the work involved in the study, including contracted work that is being reviewed. Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, Project Delivery Team (PDT) reviews, etc. Additionally, the PDT is responsible for a complete reading of the report to assure the overall integrity of the report, technical appendices and the recommendations before approval by the District Commanders. It is expected that the MSC/District quality management plans address the conduct and documentation of this fundamental level of review.

(2) **Agency Technical Review (ATR)** is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of a project/product. The purpose of this review is to ensure the proper

application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assures that all the parts fit together into a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), 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) 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. IEPR is generally for feasibility and reevaluation studies and modification reports with EISs. IEPR is managed by an outside eligible organization (OEO) that is described in Internal Revenue Code Section 501(c)(3), is exempt from Federal tax under section 501(a), of the Internal Revenue Code of 1986; is independent; is free from conflicts of interest; does not carry out or advocate for or against Federal water resources projects; and has experience in establishing and administering IEPR panels. The scope of review will address all the underlying planning, engineering, including safety assurance, economics, and environmental analyses performed, not just one aspect of the project.

The application of IEPR also may be needed when: (1) the total project cost exceeds \$45 million; (2) there is a significant threat to human life; (3) it is requested by a State Governor of an affected state; (4) it is requested by the head of a Federal or state agency charged with reviewing the project if he/she determines the project is likely to have a significant adverse impact on resources under the jurisdiction of his/her agency after implementation of proposed mitigation (the Chief has the discretion to add IEPR under this circumstance); (5) there is significant public dispute regarding the size, nature, and effects of the project; (6) there is significant public dispute regarding the economic or environmental cost or benefit of the project; (7) the information is based on novel methods, presents complex challenges for interpretation, contains precedent-setting methods or models, or presents conclusions that are likely to change prevailing practices; or (8) the Chief of Engineers determines IEPR is warranted.

(4) Policy and Legal Compliance Reviews. In addition to the technical reviews described above, decision documents will be reviewed throughout the study process for their compliance with law and policy. Vertical teaming and policy reviews will provide 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. Guidance for policy and legal compliance reviews is addressed further in Appendix H, ER 1105-2-100. The technical review efforts addressed in this Circular are to augment and complement the policy review processes by addressing compliance with published Army policies pertinent to planning products, particularly policies on analytical methods and the presentation of findings in decision documents. DQC and ATR efforts are to include the necessary expertise to address compliance with published planning policy.

(5) Planning Center of Expertise (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 and appropriate consultation with the allied Communities of Practice. The MSC Commander's approval of the review plan is required to assure that the plan is in compliance with the principles of this Circular and the MSC Quality Management Plan (ER 5-1-11). The review plans must anticipate and define the appropriate level of review. All reviews are expected to be completed and documented before the District Commanders signs the report. HQUSACE policy review will be completed before the draft

decision and NEPA documents are released for public review and again before the Chief of Engineers signs his report. To the maximum extent practicable, reviews shall be scheduled and conducted in a manner to avoid or minimize delays in study or project completion.

2. PROJECT DESCRIPTION

A. Decision Document. The purpose of the MRERP EIS decision document is to present the results of a study undertaken to determine the actions required to mitigate losses of aquatic and terrestrial habitat, recover federally listed species, and restore the ecosystem to prevent further declines among other native species. The MRERP EIS is one-hundred percent federally funded, and many federal agencies, states, and Indian Tribes are participating as Cooperating Agencies. The MRERP EIS is being scoped to result in a comprehensive watershed plan that will be used to identify priorities for ecosystem restoration in the Missouri River Basin undertaken by the Corps and others. The MRERP EIS will not be used to seek specific authority for project implementation. Since many authorities already exist for implementation, the decision document for this MRERP EIS will recommend priorities and objectives for recovery, mitigation, and restoration. Where adequate authorities do not currently exist, new authorities for implementation would require follow-on feasibility studies.

B. General Site Description. The Missouri River Basin encompasses all or a portion of ten states extending over 530,000 square miles, covering approximately one-sixth of the continental United States. The boundary between the arid western states and the more humid mid-western states crosses the middle of the basin. The Missouri River begins at Three Forks, Montana, where the Gallatin, Jefferson, and Madison rivers merge on a low, alluvial plain. From there, the river flows to the east and southeast to its confluence with the Mississippi River just north of St. Louis.

C. Project Scope. The Missouri River Ecosystem Restoration Plan's draft geographic scope will include the Missouri River Mainstem, floodplain valley and bluff systems from Three Forks, Montana to the confluence with the Mississippi River. Tributary river systems will also be included in the study where there is a significant ecologic nexus to the study objectives.

D. Problems and Opportunities. Nearly 3 million acres of natural riverine and floodplain habitat (bluff to bluff along the Missouri River's mainstem) have been altered through land-use changes, inundation, channelization, and levee building. Of the 67 native fish species living along the mainstem, 51 are now listed as rare, uncommon, and/or decreasing across all or a portion of their ranges. In many reaches of the river, non-native fish species exist in greater abundance than native fish species. Cropland expansion and reservoir impoundments have caused reductions in natural vegetation communities. The amplitude and frequency of the Missouri River's natural peak flows have been sharply reduced. With the occasional exception of the downstream sections in the state of Missouri, the Missouri River no longer experiences natural spring and summer rises and ecologically-beneficial low flows at other times of year. Reproduction of cottonwoods, historically the most abundant and ecologically significant species on the river's extensive floodplain, has largely ceased along the Missouri River, except in downstream reaches that were flooded in the 1990s and in upstream reaches above the large dams.

3. AGENCY TECHNICAL REVIEW PLAN

A. PDT. The Districts are responsible for ensuring adequate technical review of decision documents. The responsible PDT members of this decision document are from the Kansas City and Omaha Districts. The PDT members and their disciplines are shown in Appendix A, Table 1.

B. General ATR Responsibilities. An ATR Manager from outside of Northwestern Division (NWD) will be designated to lead the ATR process. In general, the ATR Manager is responsible for providing information necessary for setting up the review, communicating with the Project Managers, providing a summary of critical review comments, collecting grammatical and editorial comments from the ATR team (ATRT), ensuring that the ATRT has adequate funding to perform the review, facilitating the resolution of the comments, and certifying that the ATR has been conducted and resolved in accordance with USACE policy.

C. ATR Team. The ATRT 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. It is requested that the National Ecosystem Planning Center of Expertise (ECO-PCX) nominate the team members. The members will roughly mirror the composition of the PDT. The ATRT members and their disciplines are shown in Appendix A, Table 2.

4. MRERP EIS FOCUSED REVIEW

A. Challenges. Due to the size, scope, and complexity of the MRERP EIS, preparation of specific portions of the Plan will likely be challenging and, therefore, will likely require intense focus and review by peer reviewers. The sections of the Plan requiring this increased review are provided below along with brief descriptions as to why increased review may be warranted.

In Chapter 2: Alternatives, completing the Action Strategy will likely require intense review. The Action Strategy will identify the specific, measurable statements of the outcome that restoration and management actions aim to achieve (potential objectives). Because of the broad collaboration with the public and cooperating agencies needed to achieve this milestone, conflicts among stakeholders will likely arise. Intense review of this section will be required to ensure each stakeholder's views are addressed and adequately satisfied.

In Chapter 3: Affected Environment, completing the Target Health Assessment will likely require intense review. The Target Health Assessment framework will be designed to support the underlying need for the MRERP. The Assessment will provide those factors critical for sustaining the selected target species and habitats (key attributes), provide metrics to track the condition or status of each selected target species and habitats (indicators), determine what is necessary to sustain the target species and habitats (ranges of variation), and determine appropriate success conditions (rankings). Because these factors will determine general success or failure of the overall Plan, preparation will likely be challenging and intense review will be required.

In Chapter 4: Environmental Consequences, completing the Cumulative Effects will likely require intense review. Preparation of this section requires an assessment of all of the reasonably foreseeable future actions from the various agencies and states involved throughout the study area. Challenges associated with the preparation of the Cumulative Effects section will stem from identifying exactly what is important to assess, determining how large of an area around the action area will need to be assessed, predicting what will likely happen in the future based on the broad expanse of human influences and ecosystem responses in the action area, determining the

multiple actions and additive effects over the broad area, and determining the institutional barriers (legal mandates and organizational interests) that rarely match the boundaries of cumulative effects problems. Because of the broad action area under consideration, intense review will be required.

B. Risks. A number of potential risks could occur as the MRERP EIS is being developed. The following list outlines some of those risks.

i) Legislative Authority and Funding – At present, the MRERP EIS is outlined in Section 5018 of the Water Resources Development Act of 2007. Should funding become uncertain, the project would likely become significantly delayed or reduced. Although the probability of not receiving funding for this project is unlikely, the affects to the MRERP EIS scheduling and quality would be considered extremely problematic.

ii) Conflict among Stakeholders – Tensions between Upper and Lower Basin states and parties have long dominated relations and decisions concerning the management of the Missouri River. Tensions in the Missouri River Basin Association and in the formation of the Missouri River Association of States and Tribes are continuing to impact the states' involvement in a collaborative MRRIC process. These tensions will inevitably add to the challenges of a comprehensive MRERP. Involving the various cooperating agencies and stakeholders early in the process to fully vet concerns, the probability of conflict is diminished but still very likely to occur. The affects to the MRERP EIS cost, schedule, and quality would be considered extremely problematic.

iii) Turn over of the PDT and Stakeholders – Due to the project duration, it is safe to assert that PDT and individual stakeholders turnover would occur. This could result in schedule delays, a change in political support for the project, interjections of new or additional data into the planning process, and additional conflict between members due to the lack of history with the project the new members may have. The probability of PDT and stakeholder turnover is very likely and the adverse effects to cost and scheduling are medium whereas the adverse effects to the quality of the Plan would be considered extremely problematic.

iv) New or Up-dated Data and Information – Due to the proposed duration for completion of the MRERP, it is safe to assert the new and/or updated data will become available, which may have implications on the future direction of the MRERP. The probability of new information being introduced is very likely, and the adverse effects to cost, scheduling, and quality of the Plan would be considered medium.

v) Listing and Delisting of Species – During preparation of the MRERP, species could either be listed or delisted from the Threatened and Endangered Species list and could cause schedule delays or redirect MRERP efforts. The probability of listing or delisting of species occurrence is very likely, and the adverse effects to costs, scheduling, and quality of the Plan would be considered medium.

vi) Continued Ecological Degradation – Due to project duration, it is safe to assert that although the USACE will continue restoration projects under the Fish and Wildlife Mitigation Program, further degradation of the Missouri River basin may occur. The probability of continued degradation occurrence is likely, and the adverse effects to costs, scheduling, and quality of the Plan would be considered low.

C. Influential Scientific Information. The scope of the Plan is very broad and crosses many political and social boundaries. The affects of the Plan will be far-reaching and certainly influence the scientific community. With this in mind, the Plan will require not only ATR but IEPR as well.

D. Significant National Affects. The proposed MRERP will result in the preparation of an Environmental Impact Statement. Because an EIS will be prepared, it is safe to assert that that the proposed project would have significant impacts. It should be recalled that the intent of the MRERP EIS is to mitigate losses of aquatic and terrestrial habitat, recover federally listed species under the Endangered Species Act, and restore the ecosystem to prevent further declines among other native species. Thus, it is safe to assert that that proposed plan would not have more than negligible adverse impacts on scarce or unique cultural, historic or tribal resources; no substantial adverse impacts on fish and wildlife species or the habitats upon which they depend; and negligible adverse impacts on species listed as endangered or threatened, or to the designated critical habitat of such species under protection of the Endangered Species Act. However, to ensure the action agencies are not being pre-decisional in their determinations, a full assessment will be conducted, in association with cooperating agencies, to ensure potential impacts to the nation's economy, and environmental and cultural resources are fully vetted.

E. Significant Interagency Interest. Because of the scope of the project and the number of states, agencies, and stakeholders involved, the proposed Plan has Significant Interagency Interest. This interest was demonstrated during the February 2009 Cooperating Agency Team meeting in which numerous agencies and stakeholders attended.

F. Health and Human Safety. The study conducted under Section 5018(a) will be utilized to develop a single, comprehensive and integrated plan to guide the implementation of Federal programs associated with mitigation, recovery, and restoration activities in the Missouri River Basin. The Plan will not provide details on any site-specific actions so the study and Plan will not involve significant adverse threats to health and human life.

G. Estimated Costs. Funding for Section 5018(a) is to be derived from funds made available to carry out Missouri River recovery and mitigation program as authorized in section 601(a) of WRDA 1986 and as subsequently amended by Section 334 of the WRDA of 1999. The study shall be 100 percent federally funded. Anticipated implementation costs to study and prepare the proposed Plan will exceed \$45 Million.

H. Public Controversy. The size, nature, and likely effects of the project as well as potential economic and environmental costs and benefits will span 10 states and numerous Federal, state, tribal, and local interests. A Notice of Intent has been prepared and submitted to the *Federal Register* notifying the public that an Environmental Impact Statement will be prepared for the proposed Plan. No public comments have yet been received. The Corps of Engineers will start holding Public Meetings in May 2009 to solicit input from the public on the proposed Plan.

I. Precedent-Setting Methods. Currently, no comprehensive plan or holistic approach to ecosystem restoration exists in the Missouri River Basin that coordinates Corps programs and activities with other Federal, state, tribal, or local interests policies, authorities, or mandates. Thus, the outcome of this Plan will likely be precedent-setting in the Missouri River Basin.

5. INDEPENDENT EXTERNAL PEER REVIEW PLAN

A. General. The MRERP EIS will present the details of an ecosystem restoration plan to address the problems and opportunities described in Section 2. An IEPR, conducted by an Outside Eligible Organization external to the Corps, will be performed for the following reasons:

- (1) Cost – The total project cost will exceed \$45 Million.
- (2) Environmental Impact Statement – The study will produce an EIS.
- (3) Complexity – The study involves the evaluation of a large complex system.

B. IEPR Method. The IEPR reviewers will be selected by an Outside Eligible Organization. The public, including scientific or professional societies, will be asked, during public forums, to nominate potential external peer reviewers who possess the necessary expertise to affectively assess study products. The IEPR will focus on the formulation of the restoration plan and will address river restoration principles, hydraulic and hydrology analyses pertaining to bank stabilization and ecology. The IEPR panel will address all underlying planning, safety assurance, engineering, economic, and environmental analyses, not just one aspect of the project. The review panel will be composed of individuals with expertise in regional riverine systems ecology, water quality, socioeconomics, hydraulic and hydrology modeling, and planning. The entire MRERP EIS, including appendices, will be provided to the IEPR team. It is recommended that the panel conduct a site visit if possible.

To the extent possible, IEPRs will be coordinated through the Missouri River Recovery Implementation Committee (MRRIC), a committee of basin stakeholders established in WRDA 2007 to advise the Secretary of the Army on study and recovery actions in the Missouri River basin. The strategy of engaging MRRIC in the IEPR process allows concerns and issues to be addressed early in the project lifecycle to minimize large changes at the Draft Plan/EIS stage.

The IEPR will be conducted by a contractor and managed by the ECO-PCX. The ECO-PCX will follow the process established in EC 1105-2-410 in managing the IEPR.

6. IEPR DOCUMENTATION

A. Review Report. Documentation should be prepared to support work performed and the conclusions reached during the course of the IEPR. The process for reporting must be discussed and agreed to prior to the start of the review. At a minimum, a written Review Report should be issued at the conclusion of the review and contain a transmittal letter, an opinion, findings, and recommendations. The reviewer's opinion should state whether the reviewed document is adequate or not. Findings should be supported by sufficient, competent, and relevant evidence. Recommendations should be made to rectify the causal factors noted in the findings. Recommendations should be constructive, action oriented, specific, achievable, and cost effective. Presentation of the findings should be complete, fair, and conveyed in a positive and constructive manner. Matters of lesser importance that are none-the-less of interest should be noted as such at the end of the report.

B. Agency Response.

To ensure the objectivity, accuracy, and completeness of the IEPR findings, the IEPR team should obtain the views of responsible agency officials. If deficiencies are found in the IEPR teams Review Report during the course of the agency review, the agency shall so note the deficiencies for discussion with the IEPR team. Noted deficiencies shall be discussed internally prior to preparing a Draft response document. The agency's Draft response may be conveyed

back to the IEPR team informally (orally) to facilitate discussion but should ultimately be conveyed in writing. Upon conveyance of the agency's Draft response to the IEPR team, a conference should be requested and held, modifications made to the Draft response document as necessary, and then finalized in a Final agency response. Once agreement on the Review Report and Agency response is finalized, the documents will be prepared in PDF form for inclusion in applicable decision documents and to facilitate dissemination.

C. Dissemination of Review Report and Agency Response. The finalized PDF Review Report, PDF Agency response, and any other pertinent information shall be placed on the Missouri River Recover Program's webpage by the Corps for broad distribution.

7. PEER REVIEW OF SPONSOR CONTRIBUTIONS

A. In-Kind Contributions. Because the study will be 100 percent Federally funded, there will be no in-kind contributions that would require peer review.

B. Technical Products Provided by Stakeholders. Various technical products will likely be provided by stakeholders throughout the study process. Products likely to be received will range widely depending on stakeholders' particular areas of expertise. There are a total of 28 stakeholders, 18 tribes, 14 Federal agencies, and eight state agencies participating in the study effort. Some general types of products anticipated could include, and would not be limited to, information on species and habitat, weather, recreational, agricultural, and power related analyses; cultural, tribal, and socio-economic summaries; and physical, chemical, and environmental documentation. All of this information would receive agency technical review and be incorporated into the larger planning products as appropriate.

8. PUBLIC AND AGENCY REVIEW

A. Release of the draft EIS for public review will occur after issuance of the Alternatives Formulation Briefing (AFB) policy guidance memo and concurrence by HQUSACE. Whenever feasible and appropriate, the District will make the draft decision document available to the public for comment at the same time it is submitted for review (or during the review process) and sponsor public meetings where oral presentations on scientific issues can be made to the reviewers by interested members of the public. ATR and IEPR reviewers will be provided with all public comments.

B. Public review of this document will begin approximately one month after the completion of the ATR process and issuance of the HQUSACE policy guidance memo. The estimated time frame for this review is September 2013. The period will last 60 days. Public concern regarding this plan is anticipated.

C. The public review of necessary State or Federal permits will also take place during this period.

D. A formal State and Federal Agency review will occur after the release of the final report is approved by the Civil Works Review Board. However, intensive coordination with these agencies will occur concurrently with the planning process. There may be possible coordinating parties' regarding this project but no specific issues have been raised to date.

E. Upon completion of the review period, comments will be consolidated in a matrix and addressed, if needed. A summary of the comments and resolutions will be included in the final document.

9. MODEL CERTIFICATION

According to the CECW-CP Memorandum, entitled Policy Guidance on Certification of Ecosystem Models, dated August 13, 2008, the requirements for certifying and documenting the quality of planning models have been issued in EC 1105-2-407, dated May 31, 2005, and still remains in effect. Moreover, the CECW-CP Memorandum established additional policy and procedures regarding the certification requirements for ecosystem output models used in all planning activities. These additions and clarifications are based in large part on recommendations from the Ecosystem Planning Center of Expertise (ECO-PCX) White Paper. The White Paper has been extensively coordinated among the Major Subordinate Commands and with the US Army Corps of Engineers Head Quarters and its recommendations have been adopted.

The high-level conceptual ecological model to be developed as part of MRERP will need to be reviewed by the PCX and approved by the MSC and certification via IEPR will be completed. The conceptual model will be used to identify and prioritize restoration projects/objectives throughout the study area. The model will not be used as the basis for specific project justification and authorization. Conceptual models are a tentative description of a system or sub-system that serves as a basis for intellectual organization and represents the modeler's current understanding of the relevant system processes and characteristics. Conceptual models provide a basis for establishing the Future-Without-Project condition and the benefits of proposed alternatives; as such, they should be developed and documented for every ecosystem restoration project. The process for review and certification of the conceptual model is summarized in the tables below.

Funding for model certification is estimated at approximately \$125,000, in addition to ATR and IEPR expenses.

10. PCX COORDINATION

The proposed project is a single-purpose project aimed at ecosystem mitigation, restoration, and recovery. The lead PCX for this document is, therefore, the National Ecosystem Planning Center of Expertise (ECO-PCX). This review plan will be submitted through the PDT Districts Planning Chiefs to the PCX Director, Rayford Wilbanks, for review and eventual concurrence. The ECO-PCX will coordinate with the Flood Risk Management PCX and the Planning Center of Expertise for Water Management and Reallocation Studies, if necessary. The ECO-PCX will manage the review of the ATRT and the IEPR. The approved review plan will be posted to the ECO-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.

11. ESTIMATED TIMING, SCHEDULE, AND COSTS. This study is in its initiation phase.

The first two IEPRs of interim products will be conducted concurrently with ATRs. The third IEPR of the Draft Plan/EIS will be conducted after ATR is completed. A more detailed draft schedule for reviews, comment submittal, and responses will be developed in coordination with the PCX.

(1) The table below describes the estimated timing for reviews of key project outcomes within the project development process.

Timing of Key Project Outcomes						
Activity/Milestone Name	Reviews					
	DCQ	NWD DST	HQ	ASA (CW)	ATR (PCX)	IEPR (PCX)
Establish Rational and Focus (2) <i>O: Problems, opportunities, and ecological target identification/refinement, purpose and need statements</i>	X	X	IPR			
Public Workshops and Scoping						
Assess Resource Conditions (3) <i>O: High-level conceptual ecological model, model requirements (for plan formulation)</i>	X	X			I	I
Evaluate Future Issues and Situation (4) <i>O: Affected environment, future without project condition</i>	X	X	IPR			
Formulate Restoration and Adaptive Management Alternatives (5) <i>O: Adaptive management and monitoring plan, preliminary alternatives (packaging of alternative elements into discrete alternatives), and model development and beta testing</i>	X	X			I	I
Compare Impacts of Alternatives (6) <i>O: Impact Analysis</i>	X	X	IPR			
Consider Preferred Alternatives (7) <i>O: Recommended Preferred Alternative, model implementation</i>	X	X				X
Develop Draft MRERP/EIS (8)	X	X				X
Develop Final MRERP/EIS (9)	X					
Develop Record of Decision (10)						
NWD approves Final Report/ROD		✓				

Final Report/ROD to HQ		→	X			
Final Report/ROD to ASA(CW)			→	X		
Final Report/ROD forwarded to Congress			→			
Note: O: = Outcomes; I = Interim product reviews. ATR and IEPR of Interim products will occur concurrently. The “→” indicates transmittal to the next reviewer from the reviewer over the arrow. Thus, when NWD approves the Final Report/ROD, it will transmit the Final Report/ROD to HQ.						

(2) Estimated schedule and costs for ATRs and IEPRs

Reviews	Date	Cost
Interim Products Review: <i>Problems, opportunities, and ecological target identification/refinement, purpose and need statements, high-level conceptual ecological model, model requirements (for plan formulation)</i>	Summer 2010	ATR \$80,000 IEPR \$175,000
Interim Products Review: <i>Affected environment, future without project condition, Adaptive management and monitoring plan, preliminary alternatives (packaging of alternative elements into discrete alternatives), and model development and beta testing</i>	Spring 2012	ATR \$80,000 IEPR \$175,000
Product Review: <i>Recommended Preferred Alternative, model implementation</i>	Winter 2013	ATR \$80,000 IEPR \$175,000

12. POINTS OF CONTACT

For questions concerning this Peer Review Plan, please contact the following U.S. Army Corps of Engineers Missouri River Ecosystem Restoration Program Project Managers: Jennifer Switzer, Kansas City District, 818-389-3062, Jennifer.L.Switzer@usace.army.mil; or Randy Sellers, Omaha District, 402-995-2689, Randy.P.Sellers@usace.army.mil. Questions for the National Ecosystem Planning Center of Expertise should be directed to: Jodi Staebell, 309-794-5548, Jodi.K.Staebell@usace.army.mil.

Appendix A
PDT and ATR Member Tables

Table 1. Project Delivery Team Members*

First	Last	Discipline	Phone	Email
Brad	Thompson	Plan Formulation	402-995-2678	Bradley.E.Thompsom@usace.army.mil
Jennifer	Switzer	Project Manager	816-389-3062	Jennifer.L.Switzer@usace.army.mil
Randy	Sellers	Project Manager	402-995-2689	Randy.P.Sellers@usace.army.mil
Curtis	Hoagland	Biology/NEPA	816-389-3401	Curtis.R.Hoagland@usace.army.mil
David	Crane	Biology	402-995-2676	David.J.Crane@usace.army.mil
Mike	Chapman	Hydraulics/Hydrology	816-389-3310	Michael.D.Chapman @usace.army.mil
Jason	Sheeley	GIS	816-389-3612	Jason.T.Sheeley@usace.army.mil
Matt	Jeppson	Legal	816-389-3724	Matthew.P.Jeppson@usace.army.mil
Wayne	Nelson-Stasny	USFWS	402-667-2884	Wayne_NelsonStasny@fws.gov
Carol	Hale	USFWS	402-667-2887	Carol_Hale@fws.gov

*PDT also consists of a number of contact staff.

Table 2. ATR Team Members

First	Last	Discipline	Phone	Email
TBD		ATR Manager/Plan Formulation		@usace.army.mil
TBD		Civil Design		@usace.army.mil
TBD		Biology/NEPA		@usace.army.mil
TBD		Hydraulics/Hydrology		@usace.army.mil
TBD		Socio-economics		@usace.army.mil
TBD		Cost Engineering ¹		@usace.army.mil
TBD		Real Estate/Lands		@usace.army.mil
TBD		Cultural Resources		@usace.army.mil
TBD		Geotechnical Engineering		@usace.army.mil
TBD		Water Quality		@usace.army.mil
TBD		Riverine Ecology		@usace.army.mil

¹ 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.