



DEPARTMENT OF THE ARMY
MISSISSIPPI VALLEY DIVISION, CORPS OF ENGINEERS
P.O. BOX 80
VICKSBURG, MISSISSIPPI 39181-0080

REPLY TO
ATTENTION OF:

CEMVD-PD-SP

2 JUL 14

MEMORANDUM FOR Commander, St. Louis District

SUBJECT: Request for Approval of the Updated Review Plan for the Upper Mississippi River Restoration, Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project

1. References:

- a. Memorandum, CEMVS-PD-P, 26 June 2014, subject as above (encl 1).
- b. Memo, CEMVD-RB-T, 1 July 2014, subject: Review Plan for Upper Mississippi River Restoration, Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project (encl 2).
- c. Memorandum, CECW-MVD, 16 May 2012, subject: Request for Approval of a Model Peer Review Plan for the Upper Mississippi River System Environmental Management Program (encl 3).
- d. EC 1165-2-214, CECW, 15 December 2012, subject: Civil Works Review Policy.

2. The enclosed Review Plan (RP) (encl 4) is a combined decision document and implementation document review plan. It includes the MVD EMP Checklist and has been prepared in accordance with EC 1165-2-214. The RP has been coordinated between the Business Technical Division and the Upper District Support Team.

3. MVD hereby approves the Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project RP, which is subject to change as circumstances require. Any subsequent revisions to this RP or its execution will require new written approval from this office. Non-substantive changes to this RP do not require further approval. The district should post the approved RP to its website.

CEMVD-PD-SP

SUBJECT: Request for Approval of the Updated Review Plan for the Upper Mississippi River Restoration, Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project

4. The MVD point of contact for this action is [REDACTED]
[REDACTED], CEMVD-PD-SP, [REDACTED]

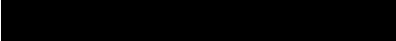
4 Encls

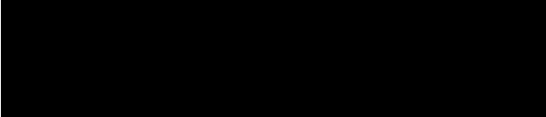
[REDACTED]
Director of Programs

1 Jul 14

MEMORANDUM FOR CEMVD-PD-SP (Mark Moore)

SUBJECT: Review Plan (RP) Rip Rap Landing, Upper Mississippi
River Restoration

1. Reference documents, subject as above.
2. This office concurs with subject Review Plan.
3. RB-T point of contact is 


Chief, Business Technical
Division

Encl 2



DEPARTMENT OF THE ARMY
ST. LOUIS DISTRICT CORPS OF ENGINEERS
1222 SPRUCE STREET
ST. LOUIS, MISSOURI 63103-2833

REPLY TO
ATTENTION OF:

JUN 26 2014

CEMVS-PD-P

MEMORANDUM FOR Commander, U.S. Army Engineer Division, Mississippi Valley
(CEMVD-PD-SP [REDACTED]), P.O. Box 80, 1400 Walnut Street, Vicksburg, MS 39181-0080

SUBJECT: Request for Approval of the Updated Review Plan for the Upper Mississippi River Restoration, Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project

1. The purpose of this memorandum is to request approval for the May 2014 update of the Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project Review Plan. An initial review plan was prepared in 2010. The May 2014 updates cost and schedule information and formats the review plan to match the Upper Mississippi River Restoration Programmatic Review Plan model.
2. This review plan follows the guidance provided in Engineering Circular (EC) Review of Decision Documents, EC 1165-2-214, 15 December 2012, which (a) establishes procedures to ensure the quality and credibility of Corps' decision documents by adjusting and supplementing the review process and (b) requires that documents have a peer review plan.
3. The Rip Rap Landing Project is an integral part of the Upper Mississippi River Restoration Program and strongly supported by the state of Illinois and the United States Fish and Wildlife Service.
4. Enclosures include the review plan, review plan checklist, project Independent External Review waiver exclusion memo, and the programmatic Independent External Peer Review waiver exclusion memo.
5. The St. Louis District point of contact is [REDACTED] or email, [REDACTED]

- 4 Encls
1. Review Plan
 2. Review Plan Checklist
 3. Project IEPR Waiver
 4. Programmatic IEPR Waiver

[REDACTED]

COL, EN
Commanding

Encl (

MODEL REVIEW PLAN
Using the MVD Model Review Plan
for the
Upper Mississippi River Restoration Program (UMRR), formerly the
Environmental Management Program (EMP)
and
Referencing the EMP Programmatic Review Plan

Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

MVS

MSC Approval Date: 7/2/014

Last Revision Date: 5/2/14



**US Army Corps
of Engineers®**

**Review Plan
Using the MVD Model Review Plan**

**Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL**

TABLE OF CONTENTS

1. Purpose and Requirements	1
2. Review Management Organization (RMO) Coordination	1
3. Project Information	2
4. District Quality Control (DQC)	5
5. Agency Technical Review (ATR)	5
6. Policy and Legal Compliance Review	5
7. Cost Engineering Directory of Expertise (DX) Review and Certification	5
8. Model Certification and Approval	5
9. Review Schedules and Costs	7
10. Public Participation	9
11. Review Plan Approval and Updates	10
12. Review Plan Points of Contact	10
Attachment 1: Team Rosters	11
Attachment 2: Review Plan Revisions	14
ATTACHMENT 3: UMRRP Review Plan Checklist	15
ATTACHMENT 4: Statement of Technical Review for Decision and Implementation Documents	20

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

1. Purpose and Requirements

a. Purpose

This Review Plan defines the scope and level of peer review for the Rip Rap Landing Habitat Rehabilitation and Enhancement Project, Pool 25, Calhoun County, IL products. Products included for review consist of the following:

- **Draft Definite Project Report:** The purpose of the DPR and integrated Environmental Assessment (EA) is to document the planning process for ecosystem restoration of the Rip Rap Landing study area on the Upper Mississippi River, to provide the opportunity for participation in the planning process for river management partners and the public, to meet USACE planning guidance and to meet NEPA requirements. The DPR and EA will document existing and predict future habitat conditions and deficiencies; identify problems and opportunities; define measureable habitat goals and objectives to meet the goals and objectives; document the effects of the alternatives in accordance with NEPA and other environmental laws and regulations; and recommend a selected plan for habitat restoration and enhancement.
- **Final Definite Project Report:** A supplemental ATR would be completed if there were substantial changes to the project from the Draft DPR based on comments received during the public and agency review.
- **Implementation Document (Plans and Specifications):** An ATR would be completed on 95% documents for Plans and Specifications. The RP will be supplemented to include implementation requirements.

The Upper Mississippi River Restoration Program (UMRRP) study and construction authority is contained in the UMRRP Programmatic Review Plan (UMRRP PRP), Section IV.

b. Applicability

This review plan is based on the MVD Model Review Plan, which is applicable to projects that do not require Independent External Peer Review (IEPR), as defined by the mandatory Type I IEPR triggers contained in EC 1165-2-214, Civil Works Review Policy. An individual IEPR waiver was granted by HQUASCE on 23 September 2011. A programmatic waiver for the Upper Mississippi River Restoration Program was approved 22 February 2012.

The applicability regarding the UMRRP is contained in the UMRRP PRP, Section II.

c. References

Reference materials are shown in the UMRRP PRP.

2. Review Management Organization (RMO) Coordination

RMO coordination will be in accordance with the EMP PRP, Sections I, III, VI, and VIII. The RMO for the ATR will be MVD in lieu of ECO-PCX. The PCX will continue to serve in its advisory role.

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

3. Project Information

a. Decision and/or Implementation document

The Rip Rap Landing Habitat Rehabilitation and Enhancement Project, Pool 25, Calhoun County, IL decision document and implementation documents will be prepared in accordance with ER 1105-2-100, Appendix F, Amendment #2. The approval level of the decision document (if policy compliant) is MVD. An Environmental Assessment (EA) will be prepared along with the decision document. An implementation document (Plans and Specifications), or P&S, will also be prepared for implementation of the project and will undergo ATR review.

b. Study/Project Description

The project area is located on the left descending bank of the Mississippi River in Pool 25 between Upper Mississippi River Miles (RM) 260.5 and 267, adjacent to the village of Mozier, IL, in Calhoun County, Illinois. The project area is unique because it includes a large contiguous tract (2,338 acres) of primarily river bottomlands. All lands within Rip Rap Landing (RRL) are managed by the Illinois Department of Natural Resources (IDNR). The IDNR owns 2,055 acres of the project lands, while the remaining 283 acres Dog Island Complex is in federal ownership by the U.S. Army Corps of Engineers (Corps or USACE). The Dog Island Complex is part of the General Plan lands owned by the Corps, which is managed by IDNR through a three party agreement with the Corps, the US Fish and Wildlife Service (USFWS), and IDNR Corps-owned lands. Approximately 793 acres of the IDNR-owned land known as the Rust Land Company tract has an easement in place from the Natural Resource Conservation Service (NRCS) under the Wetland Reserve Program (WRP)¹. IDNR purchased this acreage and incorporated it into the Rip Rap Landing Management Area. Restoration features already built on this portion of the management area under the WRP program are incorporated into the planning of the larger Corps ecosystem restoration project. Any features implemented under the Corps project will comply with the terms of the WRP easement.

The natural habitat value on the Rip Rap Landing Fish and Migratory Wildlife Management Area has been diminished by sedimentation of wetlands and water bodies, loss of bottomland forest, disruption of the hydrologic cycle, loss of connection between water bodies and the river, and clearing for row crop agricultural production.

Historically, RRL provided high quality habitat for a diversity of plant and animal species, including migratory birds and other wetland species. When the Sny Island Drainage and Levee District (D&LD) was originally constructed in the late 1890s, the main levee extended southward, west of Waverly Lake and along Sny Creek. At that time, landowners occupying the RRL project area decided they did not want to be included in the Sny D&LD, so the D&LD constructed a closure levee north of Waverly Lake. This left an extension of the Sny levee that extended south for several miles, but was open on the southern end. The Sny Levee consists of

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

50 miles of riverside levee constructed to 100-year protection.

The project area's hydrology has been impacted by the operation of locks and dams for navigation purposes. The dams maintain an unnaturally high water level throughout the navigation pool during summer and other naturally low river seasons. This has severely altered the natural flooding and drying cycles necessary for natural wetland functions. The project area's proximity to the hinge point, or middle area of the navigation pool, results in frequent localized river level fluctuations that impact plant growth in neighboring wetlands.

The project area is also impacted by river-borne sediments. RRL is the first opportunity for the Mississippi River to widen and slowdown downstream of the Sny D&LD. With this slowdown, river-borne sediments are deposited within the project area during overbank flooding events degrading wetland habitats. RRL is unique because a portion of the original levee extended south along the west side of Sny Creek acting like a sediment deflection structure, buffering the impacts of overbank flows from the Mississippi River and creating a backwater flooding effect not typically observed in the region.

Land purchases by IDNR in 2001 and 2003 increased the size of the state holdings by 836 acres, providing an opportunity to improve management capabilities in the project area. These additional acres were partially under the WRP easement and located in the central portion of the management area, south of the access road and bordering the Mississippi River. Water movement capabilities in the area are inadequate and the opportunity to manage additional areas of habitat has been greatly increased due to land acquisition.

A portion of the project area is designated as a State Natural Area. It was given this status because of the extensive bottomland hardwood forest composition that was present when the tract was acquired. The major Mississippi River flood in 1993 did a tremendous amount of damage to the natural area forest, as well as other wetland and aquatic habitats within the project area due to the height and duration of inundation as well as a breach in the old Sny levee extension causing extensive tree mortality, especially among mature pin oak trees, as well as sedimentation. In addition, river-borne sediment have severely impacted the Sny Creek channel and associated backwater lakes.

Significant opportunities exist to restore, rehabilitate, enhance and increase wetland and aquatic habitat through reforestation of bottomland forest, enhanced water level management and supply, improved side channel and slough habitat and improved depth diversity at RRL. Rip Rap Landing and other floodplain conservation areas located in the vicinity of the confluence of the Illinois, Missouri and Mississippi Rivers provide mid-migration habitat for the Mississippi Flyway, one of the major flight corridors in North America for migratory birds. The Mississippi River and floodplain are the center of this flyway. This mid-migration habitat is recognized in the North American Migratory Wildlife Management Plan as a habitat of major concern. The proposed HREP at RRL has the opportunity to contribute to improving this mid-migration habitat, ecosystem structure and function of Pool 25, and the Upper Mississippi River System as a whole.

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Features examined include pumps, wells, levees, water control structures, vegetation plantings, dredging, excavation, and reconnection of water bodies with the river. All features examined were generally designed to work to restore a more natural hydrograph on the site.

After the Incremental Cost and Cost Effective Analyses were run a tentatively selected plan (TSP) was chosen. The TSP consists of features in zones 1, 3, 4, and 5. Zone 1 features include drilling a well in the southeast corner of the zone, installing a pump, closing the existing levee district channel with a water control structure, and excavating a channel to Goose Pasture Lake to enhance water level management. Agricultural fields in Zone 1 would be restored to forest.

Water control features including a 35,000 gallon per minute pump, spillway, and associated pipes and channels to move water from the pump would be built in Zones 3 and 4. This would allow for water control in these zones to mimic a more natural hydrography. Forest restoration is proposed for parts of Zone 3. Also there would be construction of earthen embankment segments across two scour locations in order to reduce scouring and sedimentation of wetlands in Zone 4.

Finally the TSP would include excavating and restoring depth to approximately 6,500 feet of Sny Creek from the Mississippi River to Roadside Lake. A reconnection structure would be built between the lake and the creek to allow for fish passage. A small portable pump would be made available to manage lake water levels if needed for plant growth or invasive species control.

Project features are located on lands owned by Illinois Department of Natural Resources or federally owned (Dog Island, 283 acres). As a result, first cost funding for project features located on non-federal lands will be cost-shared with 65% Federal and 35% non-Federal. The Dog Island excavation feature is located on Federally-owned lands, as a result first cost funding for this feature would be 100% Federal. Based on October 2014 price levels, the estimated project first cost is [REDACTED] which includes monitoring and adaptive management costs of [REDACTED]. In accordance with the cost share provisions in Section 1103 of the Water Resources Development Act of 1986 (P.L. 99-662) as amended by Section 509 of the Water Resources Development Act of 1999 (P.L. 106-53), the Federal share of the project first cost is estimated to be [REDACTED] and the non-Federal share is estimated to be [REDACTED] which equates to 69% Federal and 31% non-Federal. The non-Federal costs include the value of lands, easements, rights-of-way, relocations, and dredged or excavated material disposal areas (LERRD) estimated to be [REDACTED]. Project operations, maintenance, repair, rehabilitation, and replacement (OMRR&R) at an estimated average annual cost of [REDACTED] would be accomplished by the cost-sharing project sponsor.

Current LERRDs credit exceeds 25% of the total project cost. This policy issue has been coordinated with MVD, HQUSACE, and the ASA(CW) offices. A waiver to this policy for the project was signed on 20 February 2014. The sponsor will not be reimbursed for any excess LERRD credit over the 35% cost share.

c. Factors Affecting the Scope and Level of Review

The factors affecting the scope and level of review are discussed in the UMRRP PRP, Section V.

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

d. In-Kind Contributions

Products and analyses provided by non-Federal sponsors as in-kind services are subject to District Quality Control (DQC) and ATR, similar to any products developed by USACE. No in-kind contributions are anticipated for this project.

4. District Quality Control (DQC)

District Quality Control (DQC) will be conducted in accordance with the UMRRP PRP, Section III.A. DQC has been an ongoing process throughout the project. DQC will use Dr. Checks for tracking comments. The last DQC was certified complete on 5/20/14.

5. Agency Technical Review (ATR)

The Agency Technical Review (ATR) will be conducted in accordance with the UMRRP PRP, Section III.B and VI.C. An initial ATR was conducted before the Alternative Formulation Briefing. This ATR was certified as complete on 09 March 2011. The ATR lead was from outside of the MSC and Dr. Checks was used to document comments.

6. Policy and Legal Compliance Review

The Policy and Legal Compliance Reviews will be conducted in accordance with the UMRRP PRP, Section III.D. Policy and Legal Compliance Review was completed prior to the Alternatives Formulation Briefing on 5/21/2014. An additional policy and legal compliance review will be done before final report submittal.

7. Cost Engineering Directory of Expertise (DX) Review and Certification

Cost Engineering Directory of Expertise (DX) Review and Certification will be conducted in accordance with the UMRRP PRP, Section VIII.D. The most recent cost estimate has been reviewed by the Cost Engineering DX and certified on 04 February 2014.

8. Model Certification and Approval

Approval of planning and engineering models used in UMRRP projects will be in accordance with the UMRRP PRP, Section III.E, and Section VII.

Planning Models:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
Wildlife Habitat Appraisal Guide	The WHAG is a field evaluation procedure designed to measure the quality of wildlife habitat for purposes of facilitating land-use decision making (Encl 2). The WHAG was adapted from early habitat modeling efforts and has	Approved for single use on 11/5/2013

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
	<p>been applied on a variety of project types and spatial scales. The WHAG has been used by local, state, and federal agencies to evaluate and document habitat quality effects resulting from small scale tree plantings, habitat conservation plans, and ecosystem restoration projects and to document status and trends of wildlife habitat resources.</p> <p>The WHAG consists of sub-models for bottomland hardwood, flooded cropland, flooded grassland, and non-forested wetland habitat types. Each sub-model includes land use, vegetation, and physical variables for a subset of twelve species, which represent a range of special habitat needs (e.g., cavity nesters), habitat rarity (e.g., old growth), or to represent sensitivity to particular habitat modifications (e.g., forest fragmentation).</p> <p>The WHAG uses either measured or estimated inputs for each variable. Values for each input variable for a particular point in time (e.g., target years) are input to calculate a habitat suitability index (HSI) score (scale of 0 to 1) for each species for that point in time. These HSI values are computed using habitat suitability relationships developed along the lines of examples first described by Schamberger and Farmer and the U.S. Fish and Wildlife Service. After computing HSI values for each species, the AHAG and WHAG models compute an average HSI value and multiply this average by the area of habitat.</p>	
Aquatic Habitat Appraisal Guide	<p>The AHAG is based on the concept of the Habitat Evaluation Procedures and was developed by ERDC Environmental Lab as a planning tool to evaluate fish habitat in the UMRS. The model includes fish species selected to represent an array of fish guilds, defined in terms of habitat preference and reproductive strategy. AHAG numerically rates habitat quality for each species and life stage under varying environmental conditions to document habitat benefits of environmental features (e.g., removal of backwater sediments, placement of water control structures, and restoration of side channel flow) proposed for ecosystem restoration projects.</p> <p>The AHAG uses either measured or estimated inputs for each variable. Values for each input variable for a particular point in time (e.g., target years) are input to calculate a</p>	Approved for single use on 11/5/2013

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Certification / Approval Status
	habitat suitability index (HSI) score (scale of 0 to 1) for each species for that point in time. These HSI values are computed using habitat suitability relationships developed along the lines of examples first described by Schamberger and Farmer and the U.S. Fish and Wildlife Service. After computing HSI values for each species, the AHAG and WHAG models compute an average HSI value and multiply this average by the area of habitat.	
IWR-Plan	USACE cost-effectiveness and incremental cost analysis software; used in the formulation, evaluation and comparison of alternative plans. In addition, IWR-Plan identifies “best buy” plans from the range of alternative plans and performs incremental cost analysis to provide insight on cost-effectiveness.	Certified

Engineering Models:

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

9. Review Schedules and Costs

a. Decision Documents-Definite Project Report (DPR) – The DQC team will provide a review of DPR. DQC review should consist of the members listed in the table below. Dr Checks was used to document all DQC reviews. The total cost of this review should not exceed \$10,000. It is anticipated that this review should not exceed 4 weeks.

DQC Schedule

Event	Kick-Off	Reviewers Comments End	PDT Evaluation	Back-Check	Complete*
DQC Decision Document	04/07/14	04/18/14	05/12/14	05/16/14	05/20/14

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

DQC Cost (DPR)

Reviewer	Cost
Plan Formulation/DQC Lead	
Environmental Planner	
Structural Engineer	
Civil Engineer	
Economics	
Total	

The Definite Project Report (DPR) also underwent ATR. The ATR team will provide a review of the AFB documents after initial DQC review. DrChecks was used to document ATR review Following MSC concurrence of the AFB conference call the ATR team will continue to review any changes that occur, as feasibility documents are prepared. The ATR Lead was from outside the MSC. The ATR lead participated in the original AFB discussions with the MSC. The ATR team provided ATR Certification with the project feasibility submittal. The total cost of this review should not exceed [REDACTED]. The ATR review lasted longer than originally scheduled due to delays in contractor products.

ATR Schedule

Event	Kick-Off	Reviewers Comments End	PDT Evaluation	Back-Check	Complete*
ATR Decision Document	08/17/10	08/31/10	09/10/10	09/21/10	03/09/11

*ATR certification was delayed due to contractor schedule changes causing the ATR review team to not receive all products on time.

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

ATR Cost (DPR)

Reviewer	Cost
ATR Lead	
Plan Formulation	
Environmental Planner	
Cultural Resource Planner	
Mechanical Engineer	
Geotechnical/Civil Engineer	
H&H	
Cost Engineer	
Real Estate	
Economics	
Total	

b. Implementation Documents (Plans and Specifications) – ATR shall be performed on the project plans and specifications and any supporting design documentation prior to BCOE sign-off. The review team at a minimum should consist of the members listed in the table below. The ATR Lead will be from outside the MSC. The total cost of this review should not exceed \$20,000. It is anticipated that this review should not exceed 5 weeks.

Estimated ATR Schedule (Implementation)

Event	Kick-Off	Reviewers Comments End	PDT Evaluation	Back-Check	Complete
ATR Implementation	TBD	TBD	TBD	TBD	TBD

Estimated ATR Cost (Implementation)

Reviewer	Cost
ATR Lead	
Environmental	
H&H	
Geotechnical Engineer	
Civil Engineer	
Total	

10. Public Participation

Public review will be in accordance with the UMRRP PRP, Section VI.F

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

11. Review Plan Approval and Updates

The Review Plan approval process will be in accordance with the UMRRP PRP, Section VIII.B.

12. Review Plan Points of Contact

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

- Program Manager, [REDACTED], 314-331-8455
- Plan Formulator/Ecologist, [REDACTED], 314-331-8450
- St. Louis Program Manager, [REDACTED], 601-634-5293
- [REDACTED], Ecosystem Restoration Planning Center of Expertise, (MVD), 309-794-5448

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Attachment 1: Team Rosters

Project Delivery Team				
Last	First	Role	Phone	Email
		UMRRP Engineering Coordinator		
		UMRRP Engineering Coordinator		
		Project Manager		
		Ecologist		
		Operations		
		Hydraulic Engineer		
		Environmental Quality		
		Economist		
		Economist		
		Economist		
		Real Estate		
		Real Estate		
		Contracting Officer		
		Cultural Resources		
		Civil Design Engineer		
		Structural Engineer		
		Cost Engineer		
		Attorney		
		CEMVS-OC		
		Geospatial and Surveys		
		Construction		

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Project Delivery Team				
Last	First	Role	Phone	Email
		Non-Federal Sponsor - Illinois Department of Natural Resources		
		USFWS		
		Contractor - Value Engineer		
		Contractor - PM Support		
		Contractor – Biologist, DPR Preparation		
		Contractor – Civil Engineer, Project Management and DPR Preparation		

*No longer with USACE

Agency Technical Review Team				
Last	First	Role	Phone	Email
		Lead/ Environmental CELRNPM-P		
		Lead/ Environmental CELRHPM-PD-R		
		Geotech/Civil/Site CELRNEC-CD-S		
		Mechanical CELRHEC-DE		
		Economics CESPk-PD		
		H&H CELRHEC-WH		
		Cost Estimate CENWWEC-X		
		Plan Formulation CELRHPM-PD-F		

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Agency Technical Review Team				
Last	First	Role	Phone	Email
		Cultural Resources CEMVN-PDC-UDC		
		Real Estate CELRN-RE		
		Models CESWFPER-E		

*No longer with USACE

Major Subordinate Command Review Team				
Last	First	Role	Phone	Email
TBD				
TBD				
TBD				
TBD				
TBD				
TBD				
TBD				
TBD				
TBD				

*No longer with USACE

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Attachment 2: Review Plan Revisions

Revision Date	Description of Change	Page/Paragraph Number
5/2/2014	Update to follow model review plan and project review results	All

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

ATTACHMENT 3: UMRRP Review Plan Checklist

MVD UMRRP Review Plan Checklist

Date:	5/2/14
Originating District:	MVS
Project/Study Title:	Rip Rap Landing Habitat Rehabilitation and Enhancement Project
P2# and AMSCO#:	
District POC:	[REDACTED]
PCX Reviewer:	[REDACTED]

Please fill out this checklist and submit with the draft Review Plan when coordinating with the MSC. Any evaluation boxes checked “No” may indicate the project may not be able to use the MVD Model Review Plan. Further explanation may be needed or a project specific review plan may be required. Additional coordination and issue resolution may be required prior to MSC approval of the Review Plan. Checklist may be limited to Section I or Section II or Both, depending on content of review plan (or subsequent amendments).

Section I - Decision Documents

REQUIREMENT	EVALUATION
Is the Review Plan (RP) for an UMRRP Project?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it include a cover page identifying it as following the Model RP and listing the project/study title, originating district or office, and date of the plan?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
b. Does it include a table of contents?	b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
c. Is the purpose of the RP clearly stated?	c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
d. Does it reference the Project Management Plan (PMP) of which the RP is a component?	d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
e. Does it succinctly describe the levels of review: District Quality Control (DQC), and Agency Technical Review (ATR)?	e. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f. Does it include a paragraph stating the title, subject, and purpose of the decision document to be reviewed?	f. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
g. Does it list the names and disciplines of the Project Delivery Team (PDT)?*	g. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

REQUIREMENT	EVALUATION
<p><i>*Note: It is highly recommended to put all team member names and contact information in an appendix for easy updating as team members change or the RP is updated.</i></p> <p>Comments:</p>	
2. Is the RP detailed enough to assess the necessary level and focus of the reviews?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the RP define the appropriate level of review for the project/study?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>a. Does it state that DQC will be managed by the home district in accordance with the MVD and district Quality Management Plans?</p> <p>b. Does it state that ATR will be managed by MVD?</p> <p>Comments:</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
4. Does the RP explain how ATR will be accomplished?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>a. Does it identify the anticipated number of reviewers?</p> <p>b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)?</p> <p>c. Does it indicate that ATR team members will be from outside the home district?</p> <p>d. Does it indicate where the ATR team leader will be from?</p> <p>e. If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?*</p> <p><i>*Note: It is highly recommended to put all team member names and contact information in an appendix for easy updating as team members change or the RP is updated.</i></p> <p>Comments:</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>e. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
5. Does the RP address review of sponsor in-kind contributions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
6. Does the RP address how the review will be documented?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does the RP address the requirement to document ATR comments	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

REQUIREMENT	EVALUATION
using Dr Checks? Comments:	
7. Does the RP address Policy Compliance and Legal Review?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. Does the RP present the tasks, timing and sequence (including deferrals), and costs of reviews?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it provide a schedule for ATR including review of the Alternative Formulation Briefing (AFB) materials and final report? b. Does it include cost estimates for the reviews?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
9. Does the RP indicate the study will address Safety Assurance factors? Factors to be considered include: <ul style="list-style-type: none"> ● Where failure leads to significant threat to human life ● Novel methods\complexity\ precedent-setting models\policy changing conclusions ● Innovative materials or techniques ● Design lacks redundancy, resiliency of robustness ● Unique construction sequence or acquisition plans ● Reduced\overlapping design construction schedule 	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Comments: No UMRRP project has Safety Assurance factors.
10. Does the RP address opportunities for public participation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
11. Does the RP indicate ATR of cost estimates will be conducted by pre-certified district cost personnel who will coordinate with the Walla Walla Cost DX?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
12. Has the approval memorandum been prepared and does it accompany the RP?	Yes <input type="checkbox"/> No <input type="checkbox"/>

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

Section II - Implementation Documents

Please fill out this checklist and submit with the draft Review Plan or subsequent Review Plan amendments when coordinating with the MSC. For DQC, the District is the RMO; for ATR and Type II IEPR, MVD is the RMO. Any evaluation boxes checked “No” indicate the RP possibly may not comply with MVD Model Review Plan and should be explained. Additional coordination and issue resolution may be required prior to MVD approval of the Review Plan.

REQUIREMENT	EVALUATION
1. Are the implementation documents/products described in the review or subsequent amendments?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
2. Does the RP contain documentation of risk-informed decisions on which levels of review are appropriate?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
3. Does the RP present the tasks, timing, and sequence of the reviews (including deferrals)?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>a. Does it provide an overall review schedule that shows timing and sequence of all reviews?</p> <p>b. Does the review plan establish a milestone schedule aligned with the critical features of the project design and construction?</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
4. Does the RP address engineering model review requirements?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
<p>a. Does it list the models and data anticipated to be used in developing recommendations?</p> <p>b. Does the RP identify any areas of risk and uncertainty associated with the use of the proposed models?</p> <p>c. Does it indicate the certification/approval status of those models and if review of any model(s) will be needed?</p> <p>d. If needed, does the RP propose the appropriate level of review for the model(s) and how it will be accomplished?</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
5. Does the RP explain how and when there will be opportunities for the public to comment on the study or project to be reviewed?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
6. Does the RP address expected in-kind contributions to be provided by the sponsor?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
If expected in-kind contributions are to be provided by the sponsor, does the RP list the expected in-kind contributions to be provided by	Yes <input type="checkbox"/> No <input type="checkbox"/>

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

REQUIREMENT	EVALUATION
the sponsor?	
7. Does the RP explain how the reviews will be documented?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does the RP address the requirement to document ATR comments using Dr Checks published comments and responses pertaining to the design and construction activities summarized in a report reviewed and approved by the MSC and posted on the home district website?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
8. Has the approval memorandum been prepared and does it accompany the RP?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

ATTACHMENT 4: Statement of Technical Review for Decision and Implementation Documents

Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project
Upper Mississippi River Restoration – Environmental Management Program
Definite Project Report with Integrated Environmental Assessment and Appendices
Draft Final

STATEMENT of TECHNICAL REVIEW
COMPLETION OF AGENCY TECHNICAL REVIEW

CERTIFICATION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the Draft Final version of the Definite Project Report with Integrated Environmental Assessment for the Rip Rap Landing State Fish and Wildlife Area Habitat Rehabilitation and Enhancement Project. ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. 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 made the determination that the previous review activities (e.g., District Quality Control, initial ATR, and Alternative Formulation Briefing) employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

_____	_____
ATR Team Leader	Date
CELRH	
_____	_____
Project Manager	Date
CEMVS	
_____	5/19/14
Chief, Engineering & Construction Division	Date
CEMVS	
_____	_____
Thomas Crump	Date
Chief, Planning and Environmental Division North	
CEMVP-RPEDN	
_____	_____
Review Management Office	Date
Representative, CEMVD-PD-SP	

REVIEW PLAN
Rip Rap Landing Habitat Rehabilitation and Enhancement Project
Pool 25 Calhoun County, IL

From: [REDACTED]
To: [REDACTED]
Cc: [REDACTED]
Subject: Rip Rap Landing ATR Report (UNCLASSIFIED)
Date: Wednesday, March 09, 2011 8:23:52 AM
Attachments: [Rip rap Lndg ATR Rpt.pdf](#)

Classification: UNCLASSIFIED
Caveats: NONE

[REDACTED]

The final comment was closed yesterday.

Enclosed you will find the ATR Report. Let me know if you need anything else from me.

I appreciate the opportunity to work on this...

[REDACTED]

Classification: UNCLASSIFIED
Caveats: NONE



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET, NW
WASHINGTON, DC 20314-1000

REPLY TO
ATTENTION OF

CECW-P

12 November 2013

MEMORANDUM FOR Director, National Ecosystem Restoration Planning Center of Expertise (ECO-PCX)

SUBJECT: Summary of Model Review Results and Recommendations for Approval for Single-Use of the Aquatic Habitat Appraisal Guide (AHAG) and Wildlife Habitat Appraisal Guide (WHAG) on Four Upper Mississippi River System Restoration Projects

1. The HQUSACE Model Certification Panel has reviewed the AHAG and WHAG models in accordance with EC 1105-2-412 and has determined that the models and their accompanying documentation are sufficient to support their use on four ecosystem restoration project sites in the upper Mississippi River watershed (Rip-Rap Landing, Clarence Cannon National Wildlife Refuge, Emiquon Preserve and Spunky Bottoms). The panel has considered the assessments of the ECO-PCX and an external review team from Abt Associates, Inc.

2. The AHAG is based on the concept of the Habitat Evaluation Procedures (Reference h.) and was developed by ERDC Environmental Lab as a planning tool to evaluate fish habitat in the UMRS (Encl 1). The model includes fish species selected to represent an array of fish guilds, defined in terms of habitat preference and reproductive strategy. AHAG numerically rates habitat quality for each species and life stage under varying environmental conditions to document habitat benefits of environmental features (e.g., removal of backwater sediments, placement of water control structures, and restoration of side channel flow) proposed for ecosystem restoration projects.

3. The WHAG is a field evaluation procedure designed to measure the quality of wildlife habitat for purposes of facilitating land-use decision making (Encl 2). The WHAG was adapted from early habitat modeling efforts and has been applied on a variety of project types and spatial scales. The WHAG has been used by local, state, and federal agencies to evaluate and document habitat quality effects resulting from small scale tree plantings, habitat conservation plans, and ecosystem restoration projects and to document status and trends of wildlife habitat resources.

4. Review of the AHAG resulted in 12 comments of high significance and 2 of medium significance. Generally, the reviewers found the AHAG to be an appropriate ecological framework for aquatic habitat assessment and functional for Corps planning studies as an approximate index of habitat quality. The reviewers offered several short-term and long-term recommendations to increase the model's overall effectiveness. The reviewers recommended updating the scientific literature foundation to reflect contemporary theory and provide scientific justification, defining the spatial and temporal resolution of the model, development of empirically validated species habitat relationship curves for model variables, improvements to the user's manual to increase consistency and accuracy in model application, and address spreadsheet errors. The reviewers indicated incorporating these recommendations would improve the model for widespread use.

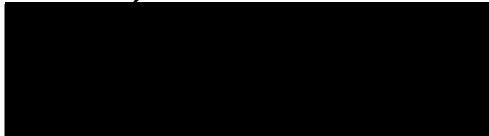
CECW-PC

SUBJECT: Request for Exclusion from Independent External Peer Review (IEPR) for [Project Name].

5. Review of the WHAG resulted in 9 comments of high significance and 4 of medium significance. Similar to the AHAG, the model reviewers found the WHAG to be an appropriate habitat quality assessment tool, which generally meets its intended design uses and is useful in Corps planning. To increase its effectiveness in habitat assessment and address non-fatal flaws the reviewers suggested several recommendations including: field validation of model variables, SI curves, and predictive ability; model variables, indicator species list, and response relationships require literature review and documentation; the user manual requires updates to ensure consistency and accuracy during application; and address spreadsheet errors.

6. The model meets the criteria contained in EC 1105-2-412. The various errors in the spreadsheets noted in the model reviews have been corrected. While these models are of adequate quality to assess the restoration at the four locations identified in paragraph 1 above, the HQUSACE model certification panel strongly encourages that additional work be done on these models if they are likely to be used on future Corps projects in the upper Mississippi River watershed. Specifically, the models should address the issues noted in the technical reviews concerning updating the scientific literature foundation to reflect contemporary theory and provide scientific justification, better defining the spatial and temporal resolution of the models and developing empirically validated species habitat relationship curves for model variables.

7. **APPLICABILITY:** This approval for use is limited to the four projects identified in paragraph 1 of this memorandum.



Deputy Chief, Planning and Policy Division
Directorate of Civil Works



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF

CECW-MVD

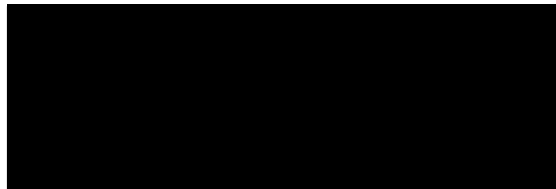
MAY 16 2012

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Mississippi Valley
Division (ATTN: CEMVD-PD-SP)

SUBJECT: Request for Approval of a Model Peer Review Plan for the Upper Mississippi River
System Environmental Management Program

1. HQUSACE has reviewed the draft model peer review plan for the Upper Mississippi River System Environmental Management Program. The model peer review plan is consistent with programmatic review plans developed and in use for the Continuing Authorities Program. The model Peer Review Plan is to be used for all projects within the program except those that include an Environmental Impact Statement or that meet the mandatory triggers for Type I IEPR as stated in EC 1165-2-209.
2. Questions or concerns should be directed to [REDACTED] Deputy Chief, Mississippi Valley Division Regional Integration Team, at [REDACTED]

FOR THE COMMANDER:



Chief, Planning and Policy Division
Directorate of Civil Works

Enc 13