



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

27 April 2011

MEMORANDUM FOR Commander, Rock Island District

SUBJECT: Review Plan Approval for North Raccoon River, CAP
Section 14, Perry Iowa

1. Reference memorandum, CEMVR-PM-M, 10 March 2011, subject: MVD Continuing Authorities Program (CAP) Model Review Plan and MVD CAP Model Review Plan Checklist, North Raccoon River, Perry, Iowa, Section 14.
2. The enclosed Review Plan (encl) is a combined decision document and implementation document review plan. It includes the MVD Review Plan Checklist for CAP and has been prepared in accordance with EC 1165-2-209. The Review Plan has been coordinated between the Business Technical Division and the Upper District Support Team.
3. The North Raccoon River, Section 14 Project Review Plan, is approved and in compliance with all applicable policy, engineering, and environmental analyses, and other aspects of plan development. Non-substantive changes to this Review Plan do not require further approval. The District should post the approved Review Plan to its web site.
4. The MVD point of contact is Ms. Elizabeth Ivy, CEMVD-PD-SP, (601) 634-5310.

A handwritten signature in cursive script that reads "Charles B. Barton".

CHARLES B. BARTON
Chief, Upper District Support
Team, St. Louis, Rock Island,
St. Paul

Encl

**US ARMY CORPS OF ENGINEERS' MISSISSIPPI VALLEY DIVISION
CAP REVIEW PLAN CHECKLIST**

Date:	February 28, 2011
Originating District:	Rock Island
Project/Study Title:	North Raccoon River, Perry, Iowa
P2# and AMSCO#:	145642
District POC:	Removed
MSC Reviewer:	
CAP Authority:	Section 14
Other Program Directed to follow CAP Processes:	

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
1. Is the Review Plan (RP) for a Continuing Authorities Project? Or Other Program Directed to follow CAP Processes?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes <input 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? b. Does it include a table of contents? c. Is the purpose of the RP clearly stated? d. Does it reference the Project Management Plan (PMP) of which the RP is a component? e. Does it succinctly describe the three levels of review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR) if applicable for Sec 103 or Sec 205? f. Does it include a paragraph stating the title, subject, and purpose of the decision document to be reviewed? g. Does it list the names and disciplines of the Project Delivery Team (PDT)?* <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>	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> e. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> f. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> g. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Comments: Sec 14 IEPR not Required
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"/>

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3. Does the RP define the appropriate level of review for the project/study?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it state that DQC will be managed by the home district in accordance with the MVD and district Quality Management Plans? b. Does it state that ATR will be managed by MVD? c. Does it state whether IEPR will be performed? For Sec 103 and Sec 205, see additional questions in 5 below.	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> c. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Comments: Sec 14 no IEPR required
4. Does the RP explain how ATR will be accomplished?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it identify the anticipated number of reviewers? b. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)? c. Does it indicate that ATR team members will be from outside the home district? d. Does it indicate where the ATR team leader will be from? e. If the reviewers are listed by name, does the RP describe the qualifications and years of relevant experience of the ATR team members?* <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>	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> e. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Comments:
5. For Sec 103 and Sec 205 projects, does the RP explain how IEPR will be accomplished?	Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/>
a. Is an exclusion being requested, requiring CG approval? b. Does it provide a defensible rationale for the decision on IEPR? c. If IEPR is required, does it state that IEPR will be managed by an Outside Eligible Organization, external to the Corps of Engineers? d. If IEPR is required, does the RP indicate which PCX will manage the IEPR and whether any coordination with the PCX has occurred?	a. Yes <input type="checkbox"/> No <input type="checkbox"/> b. Yes <input type="checkbox"/> No <input type="checkbox"/> c. Yes <input type="checkbox"/> No <input type="checkbox"/> d. Yes <input type="checkbox"/> No <input type="checkbox"/> Comments: Sec 14 IEPR not required
6. Does the RP address review of sponsor in-kind contributions?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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7. 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 and IEPR comments using Dr Checks? b. Does the RP explain how the IEPR will be documented in a Review Report? c. Does the RP document how written responses to the IEPR Review Report will be prepared? d. Does the RP detail how the district will disseminate the final IEPR Review Report, USACE response, and all other materials related to the IEPR on the internet and include them in the applicable decision document?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> c. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> d. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Comments: Sec 14 IEPR not Required
8. Does the RP address Policy Compliance and Legal Review?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
9. 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 present the timing and sequencing for IEPR? c. Does it include cost estimates for the reviews?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
10. 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 type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Comments: Sec 14 IEPR not Required
11. Does the RP address opportunities for public participation?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
12. 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"/>
13. Has the approval memorandum been prepared and does it accompany the RP?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

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 type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" 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"/>
a. Does it provide an overall review schedule that shows timing and sequence of all reviews? b. Does the review plan establish a milestone schedule aligned with the critical features of the project design and construction?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> Referenced in the PMP
4. Does the RP address engineering model review requirements?	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it list the models and data anticipated to be used in developing recommendations? b. Does the RP identify any areas of risk and uncertainty associated with the use of the proposed models? c. Does it indicate the certification/approval status of those models and if review of any model(s) will be needed? d. If needed, does the RP propose the appropriate level of review for the model(s) and how it will be accomplished?	a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> b. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> c. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> d. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/>
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"/>
a. 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 the sponsor?	a. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> No In-kind contributions
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 and Type II IEPR 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"/> Sec 14 Projects excluded from Type II IEPR

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<p>b. Does the RP explain how the Type II IEPR will be documented in a Review Report?</p> <p>c. Does the RP document how written responses to the Type II IEPR Review Report will be prepared?</p> <p>d. Does the RP detail how the district/MVD will disseminate the final Type II IEPR Review Report, USACE response, and all other materials related to the Type II IEPR on the internet?</p>	<p>b. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/></p> <p>c. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/></p> <p>d. Yes <input type="checkbox"/> No <input type="checkbox"/> n/a <input checked="" type="checkbox"/> Sec 14 Projects excluded from Type II IEPR</p>
<p>8. Has the approval memorandum been prepared and does it accompany the RP?</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

REVIEW PLAN
USING THE MVD MODEL REVIEW PLAN
for
Continuing Authorities Program
Section 14, 107, 111, 204, 206, 208, or 1135 Projects, or Projects directed by
Guidance to use CAP processes

North Raccoon River, Perry, Iowa

Section **14** Project

Rock Island District

MSC Approval Date: **27 April 2011**

Last Revision Date: **29 Nov 2012**



US Army Corps
of Engineers ®

**REVIEW PLAN
USING THE MVD MODEL REVIEW PLAN**

**North Raccoon River, Perry, Iowa
Section 14 Project**

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1. PURPOSE AND REQUIREMENTS

A. Purpose. This Review Plan defines the scope and level of peer review for the North Raccoon River, Perry, Iowa, Section 14 Project.

Section 14 of the Flood Control Act of 1946, as amended, authorizes the US Army Corps of Engineers (USACE) to study, design and construct emergency streambank and shoreline works to protect public services including (but not limited to) streets, bridges, schools, water and sewer lines, National Register sites, and churches from damage or loss by natural erosion. This is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. Unlike the traditional Corps' civil works projects that are of wider scope and complexity, the Continuing Authorities Program is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization.

Additional Information on this program can be found in Engineering Regulation 1105-2-100, Planning Guidance Notebook, Appendix F, Amendment #2.

B. Applicability. This review plan is based on the MVD Model Review Plan for Section 14, 107, 111, 204, 206, 208, or 1135 Projects or Programs directed by guidance to follow CAP processes, 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 1165-2-209, Civil Works Review Policy.

C. References

- (1) Engineering Circular (EC) 1165-2-209, Civil Works Review Policy, 31 Jan 2010
- (2) Director of Civil Works' Policy Memorandum #1, CECW-P, dated 19 Jan 2011
- (3) EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2010
- (4) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007
- (6) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this review plan. The RMO for Section 14 projects is MVD. MVD will coordinate and approve the review plan and manage the Agency Technical review (ATR). The home District will post the approved review plan on its public website.

3. PROJECT INFORMATION

A. Decision and Implementation Documents. The North Raccoon River, Perry, Iowa decision document 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. Plans and Specifications will also be prepared for implementation of the project and will undergo ATR review.

B. Factors Affecting Scope and Level of review

No technical or institutional challenges are expected. Planning, constructing and operating stream bank stabilization projects have been completed by the district numerous times. Social issues should not be a challenge as the City of Perry is in favor of the project and the public is generally in favor of protecting the N. Raccoon river from the release of waste water.

Project risks/uncertainties include high water & construction funding availability. High water events are typically overcome with schedule extensions for construction contracts and are typically less than 6 month delays depending on the weather and season. So this is a low to medium probable event with a low impact to project success. Construction funding could delay the project and the impact could possibly delay the project for a year or more. Given the current economic times and budget cuts this risk has medium to likely probable event. The impact could be high if construction funding is delayed for two or more years allowing further erosion to continue with the possibility of failure to the waste water containment cell.

This project will not have significant economic, environmental or social impacts to the Nation. The City and public are in favor of protecting the waste water treatment facility from river erosion.

This project will not involve significant threat to human life/safety assurance.

Agencies involved in coordinating this project are the FWS, Iowa DNR, and the Iowa State Historic Preservation Office. There will be no significant interest by other agencies on this project as the first response to any environmental issues will be to avoid them.

This stream bank protection project is not likely to involve significant public dispute as to the size, nature, or effects of the project.

This project report will not contain influential scientific information or be a highly influential scientific assessment. The plan calls for the placement riprap on the stream bank to protect public infrastructure from damage due to stream bank erosion. This type of protection and construction is typical for our stream bank erosion projects.

The anticipated project design will not be based on novel methods, involve the use of innovative materials or techniques, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices.

The anticipated project design does not require redundancy, resiliency, and/or robustness. No unique construction sequencing or a reduced or overlapping design construction schedule is anticipated.

C. Study/Project Description. The City of Perry, Iowa (population 7,600) is located in Dallas county, just Northwest of Des Moines. The City of Perry has requested Army Corps of Engineers assistance in seeking a solution to severe erosion problem occurring on the North Raccoon River adjacent to the City's sewage treatment lagoons. The left descending bank is being eroded and is endangering the City's sewage treatment lagoons. Multiple alternatives including rip rap, bankline weirs, vegetative buffers, gabion baskets will be investigated before the streambank is repaired.

The waste water treatment plant treats up to 1,000,000 gal/day. During rain fall events (a typical 1" rainfall event) the waste water treatment plant can receive 5,000,000 to 6,000,000 gal/day to treat. The sewage lagoons hold this extra water until the waste water treatment plant can process it. If immediate action is not taken, it is expected that future significant flood events on the N. Raccoon River - which normally occur during snowmelt and ice jams during February through April - will continue to threaten lagoon embankments. If the lagoon fails, raw sewage would be released to the North Raccoon River causing impacts to human health and the environment because of high biological oxygen demand, pathogens, and elevated nutrient levels from the direct flow of wastewater. The City of Perry would incur fines up to \$10,000 per day for dumping sewage and would incur significant costs to replace the lagoon. The estimated DI cost for the recommended plan is \$475,000 with the non Federal portion of this cost equaling \$166,250.

No policy waiver requests are anticipated for this project.

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. There are no expected In-Kind Contributions for this project.

4. DISTRICT QUALITY CONTROL (DQC)

All decision documents (including supporting data, analyses, environmental compliance documents, etc.) shall undergo DQC prior to ATR. The home district shall manage DQC in accordance with MVD and district Quality Management Plan.

All work products including supporting data, analyses, environmental compliance documents, etc. shall undergo District Quality Control (DQC). District Quality Control is an internal review process of basic science and engineering work products focused on fulfilling the Project quality requirements defined in the PMP. The home District shall manage DQC. Documentation of DQC activities is required and will be in accordance with the Quality Manual of the District and the home MSC. Any discrepancies between a reviewer and a Product Delivery Team (PDT) member will be resolved face to face. If a concern cannot be satisfactorily resolved between the DQC team and the PDT, it will be elevated to the section supervisor for further resolution.

A. Feasibility Phase. Technical supervisors will assure that experienced personnel, who have been involved with similar work, check team members' technical work for completeness, accuracy and clarity. The DQC of the Feasibility portion of the Project will be documented by a completed (signed) memorandum for record of technical review. A District Quality Control Review (DQCR) will be conducted prior to ATR.

B. Plans and Specifications Phase. The DQC consists of at least one technical check; a DQCR; and a Biddability, Constructability, Operability, Environmental (BCOE) Review. DQRC will be conducted at the 95 percent design level prior to ATR. Review comments and resolutions will be entered into DrChecks, in accordance with ER 1110-1-8159. The review will be documented by a completed (signed) Statement of Technical Review and Certification, to which all review comments and resolutions will be attached.

BCOE occurs in the plans and specifications phase of the Project. In accordance with ER 415-1-11, the Project Engineer will conduct a BCOE review at the final design level, after all ATR comments have been resolved and incorporated. The review documents will include a complete drawing set, complete specifications (with special clauses), and Engineering Considerations. The review will commence at least 30 days prior to advertisement. Review comments and resolutions will be entered into DrChecks. The BCOE review will be documented by a completed (signed) BCOE certification, to which all review comments and resolutions will be attached.

5. AGENCY TECHNICAL REVIEW (ATR)

One ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.), however additional ATRs may be performed if deemed warranted. ATR will normally be performed on the AFB documentation. ATR is managed within USACE by the designated RMO and is conducted by a qualified team from outside the home district that is not involved in the day-to-day production of the project/product. ATR teams will be comprised of senior USACE personnel. The ATR team lead will be from within the home MSC.

A. Products to Undergo ATR. Products to undergo ATR include: 1. The North Raccoon River Perry, Iowa Section 14 Feasibility document with supplemental documents, 2. The EA and 3. plans and specifications for construction of the streambank protection project.

B. Required ATR Team Expertise. The Feasibility ATR team should consist of an ATR Lead, Plan Formulation, NEPA Compliance, Engineering/Hydraulics and Hydrology, Real Estate, Economics and Cost Estimating with the individual requirements of each discipline listed in the following table.

Review Plan
Using the MVD Model Review Plan

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ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing Section <u>14</u> decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. Typically, the ATR lead will also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc). <u>The ATR Lead must be from outside the Rock Island District but may be within MVD.</u>
Planning	The Planning reviewer should be a senior water resources planner with experience in <u>Section 14 planning.</u>
Economics	<u>The Economics reviewer should have experience in economic analysis and the development of benefit-cost ratios.</u>
Environmental Resources	<u>The Environmental reviewer should have experience in NEPA compliance and the development of Environmental Assessments.</u>
Hydraulic /Hydrological Engineering	<u>The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of open channel dynamics, computer modeling techniques, and sizing of streambank protection measures such as riprap.</u>
Cost Engineering	<u>The cost engineering reviewer will be a pre-certified cost specialist as described in section 7. The cost reviewer shall also have professional experience in preparing cost estimates using MII software, and will have experience in preparing Total Project Cost Summaries for erosion protection project. The cost engineering reviewer will coordinate with Walla Walla District for Cost DX Certification during ATR as described in section 7.</u>
Real Estate	<u>The Real Estate reviewer will have experience in developing real estate plans, working with engineers and surveyors to determine adequate project footprints and access areas for typical streambank protection projects, and complying with the terms of cost-share agreements with regard to LERRD acquisition and crediting.</u>

C. Documentation of ATR - DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. Any editorial comments should be provided informally by email to the PDT.

6. POLICY AND LEGAL COMPLIANCE REVIEW

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

7. COST ENGINEERING DIRECTORY OF EXPERTISE (DX) REVIEW AND CERTIFICATION

For CAP projects, ATR of the costs may be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost DX. The pre-certified list of cost personnel has been established and is maintained by the Cost DX at: <https://kme.usace.army.mil/EC/cost/CostAtr/default.aspx>. The cost ATR member will coordinate with the Cost DX for execution of cost ATR and cost certification. The Cost DX will be responsible for final cost certification and may be delegated at the discretion of the Cost DX.

8. MODEL CERTIFICATION AND APPROVAL

Approval of planning models under EC 1105-2-412 is not required for CAP projects. MSC commanders remain responsible for assuring the quality of the analyses used in these projects. ATR will be used to ensure that models and analyses are compliant with Corps policy, theoretically sound, computationally accurate, transparent, described to address any limitations of the model or its use, and documented in study reports.

Planning and Engineering Models. The following models are anticipated to be used in the development of the decision document: [No planning models will be used for this study. Standard calculations will be used to calculate costs and damages and to conduct cost analysis.](#) The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study	Approval Status
<u>HEC-RAS 4.0 (River Analysis System)</u>	<u>The Hydrologic Engineering Center's River Analysis System (HEC-RAS) program provides the capability to perform one-dimensional steady and unsteady flow river hydraulics calculations. The program will be used for steady flow analysis to evaluate the future without- and with-project conditions along the N. Raccoon River the model could be used for unsteady flow analysis or both steady and unsteady flow analysis.</u>	<u>HH&C CoP Preferred Model</u>

9. REVIEW SCHEDULES AND COSTS

ATR Schedule and Cost. [Reviews will be conducted in sequence of necessary milestones. Refer to North Raccoon River Perry, Iowa approved PMP for milestone schedule.](#)

Review Plan
Using the MVD Model Review Plan

North Raccoon River, Perry, Iowa
Section 14 Project

A. DQC & BCOE Cost Estimate

Reviewer	DQC Feasibility	P&S DQC	P&S BCOE	Cost
Planner	500			500
Engineer	500	500	500	1,500
Natural Resources	500	500		1,000
Economist	500			500
Cost Engineer	500	500	500	1,500
Real Estate	500	500	500	1,500
Geotech	500	500	500	1,500
H&H	500	500	500	1,500
Construction POC			500	500
Construction ACO			500	500
Contracting			500	500
Safety Office			500	500
TOTAL	4,000	3,000	4,500	\$11,500

B. DQC Estimated Schedule

	Kick-off	Reviewer Comments End	PDT Evaluation	Back Check	Complete
DQC Feasibility	4/07/11				4/14/11
DQC P&S Schedule	8/02/11	08/16/11	08/23/11	08/30/11	09/02/11
BCOE P&S Schedule	10/11/11	10/14/11	10/18/11	10/20/11	10/24/11

C. ATR Estimated Cost

Reviewer	ATR Feasibility	ATR P&S	Cost
ATR Lead	1,500	2,000	3,500
Planner	1,000		1,000
Engineer	1,000	2,000	3,000
Natural Resources	1,000		1,000
Economist	1,000		1,000
Cost Estimate	1,500		1,500
Real Estate	1,000		1,000
Geotech		1,500	1,500
H&H		1,500	1,500
TOTAL	8,000	7,000	\$15,000

D. ATR Estimated Schedule

	Kick-off	Reviewer Comments End	PDT Evaluation	Back Check	Complete
AFB Conference	3/29/11	NA	NA	NA	3/29/11
ATR Feasibility Schedule	04/18/11	05/02/11	05/09/11	05/16/11	05/19/11
ATR P&S Schedule	09/06/11	09/20/11	09/27/11	10/04/11	10/07/11

10. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. *There will be a public review of the EA document for this project in March 2011. The Environmental Analysis will describe the alternatives considered and why the recommended plan was chosen, as well as any environmental impacts the recommended plan will have.*

11. REVIEW PLAN APPROVAL AND UPDATES

The **MVD DST Chief** is responsible for approving this review plan and ensuring that use of the MVD Model Review Plan is appropriate for the specific project covered by the plan. The review plan is a living document and may change as the study progresses. The home district is responsible for keeping the review plan up to date. Minor changes to the review plan since the last MVD approval are documented in Attachment 2. Significant changes to the review plan (such as changes to the scope and/or level of review) should be re-approved by MVD following the process used for initially approving the plan. Significant changes may result in MVD determining that use of the MVD Model Review Plan is no longer appropriate. In these cases, a project specific review plan will be prepared and approved in accordance with EC 1165-2-209. The latest version of the review plan, along with the MVD approval memorandum, will be posted on the home district's webpage.

12. REVIEW PLAN POINTS OF CONTACT

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

POC INFORMATION REMOVED for posting

ATTACHMENT 1: TEAM ROSTER

<u>Name</u>	<u>Organization</u>	<u>Discipline</u>
REMOVED		Project Manager
REMOVED		Program Manager
REMOVED		Project Engineer
REMOVED		Senior Project Engineer
REMOVED		Hydraulic Engineer
REMOVED		Cost Engineer
REMOVED		Geotechnical Engineer
REMOVED		Specifications
REMOVED		Resident Engineer/ACO
REMOVED		Construction Representative
REMOVED		Construction Management
REMOVED		Contracting
REMOVED		Survey
REMOVED		Real Estate
REMOVED		Environmental Resources
REMOVED		
REMOVED		Economics
REMOVED		Cultural Resources
REMOVED		Office of Counsel

Review Plan
Using the MVD Model Review Plan

North Raccoon River, Perry, Iowa
Section 14 Project

ATTACHMENT 2: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page /Paragraph Number
29 Nov	Updated to current, removed names, contacts for posting	