**OTHER WORK PRODUCT REVIEW PLAN**

**for**

**Winter Pool Raise Analysis**

**and**

**Water Control Plan Update**

**Barren River Lake, Kentucky**

**Louisville District, Corps of Engineers**

**MSC Initial Approval Date: Pending**

**Last Revision Date:** **None**



LRD Rev. 2, June 2014

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# PURPOSE AND REQUIREMENTS

**a. Purpose.** This Review Plan (RP) defines the scope and level of peer review for an engineering analysis of the current verses proposed winter pool elevation and a possible revision to the Barren River Lake, Kentucky, Water Control Plan (WCP) and incorporation of revised WCP into Barren River Lake’s Water Control Manual (WCM).

Reservoirs, locks and dams, re-regulation and major control structures and inter-related water resources systems are required to have an up-to-date WCM as required by Engineering Regulation (ER) [ER 1110-2-240](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-240.pdf). The Water Control Plan (WCP) contained in the WCM must be prepared giving appropriate consideration to the original project authorizing legislation and subsequent specific authorizations as well as all applicable Congressional Acts relating to operation of Federal facilities (e.g. Fish and Wildlife Coordination Act, National Environmental Policy Act, the Clean Water Act). WCMs should comply with Engineering Circular (EC) [EC 1165-2-214](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerCirculars/EC_1165-2-214.pdf), Water Resources Policy and Authorities, Civil Works Review. Guidance on the content and format of a WCM is contained in [ER 1110-2-8156](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-2-8156.pdf) with additional guidance in Engineering Manual (EM) [EM 1110-2-3600](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerManuals/EM_1110-2-3600.pdf). The level of review is predicated on the criteria as detailed in this RP. As outlined in ER 1110-2-8156, the WCP is Chapter 7 of a WCM.

Additional Information on WCPs can be found in [ER 1105-2-100](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1105-2-100.pdf), Planning Guidance Notebook and in [ER 1165-2-119](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1165-2-119.pdf), Modifications to Completed Projects.

**b. Applicability.** The National Programmatic Review Plan for Routine Operations and Maintenance (O&M) Products, reference 1.c.10, is applicable to all routine O&M products that only require District Quality Control (DQC) and revisions to WCMs that are 1) administrative or informational in nature and do not substantially change the WCP and 2) do not require public meetings in accordance with ER 1110-2-240. WCM updates that include changes to the operation of the project or revisions to the WCP require a separate individual RP be prepared and submitted for approval. While this update will not include changes to the conceptual operation of the project or substantive revisions to the WCP, 1) operation of the facility is a key element to reducing flood damages in the Green River basin and 2) the winter conservation pool will be permanently raised. For these two reasons, this WCM update requires the preparation of an individual RP and an Agency Technical Review (ATR) of the WCM update.

This individual RP is for WCMs and is prepared in accordance with EC 1165-2-214.

**c. References**

* + 1. Engineering Circular (EC) EC 1165-2-214, Water Resources Policy and Authorities, Civil Works Review, December 2012.
    2. EC 1105-2-412, Assuring Quality of Planning Models, 31 Mar 2011
    3. Engineering Regulation (ER) ER 1110-1-12, Quality Management, 30 Sep 2006
    4. ER 1110-2-240, Water Control Management, 8 Oct 1982
    5. ER 1110-2-8156, Preparation of Water Control Manuals, 31 Aug 1995
    6. Engineering Manual (EM) EM 1110-2-3600 Management of Water Control Systems, 30 Nov 1987
    7. ER 1105-2-100, Planning Guidance Notebook, 22 Apr 2000
    8. ER 1165-2-119, Modifications to Completed Projects, 20 Sep 1982
    9. Memorandum, CELRD-DE, Subject: CWMS Implementation and Water Control Manual Revisions, 25 March 2011
    10. Memorandum for Distribution, CECW, Subject: Programmatic Review Plan for Routine Operations and Maintenance Products, 20 Dec 2012
    11. Memorandum for Commanders, Major Subordinate Commands, CECW-CE, Subject: Policy Guidance Letter - Peer Review of Updates to Water Control Manuals, 2 Jul 2013
    12. Engineering and Construction Bulletin (ECB) ECB-2013-28, Subject: Use of Certified Engineering and Construction (E&C) Community of Practice (CoP) Members for Agency Technical Reviews (ATRs) on Civil Works Projects

**d. Requirements.** This RP was developed in accordance with EC 1165-2-214, which establishes an accountable, comprehensive, life-cycle review strategy for Civil Works products by providing a seamless process for review of all Civil Works projects from initial planning through design, construction, and operation, maintenance, repair, replacement and rehabilitation (OMRR&R). The EC outlines four general levels of review: District Quality Control/Quality Assurance (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, per EC 1105-2-412, any models and analysis used in the update of the WCM must be 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.

# REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

The RMO is responsible for managing the overall peer review effort described in this RP. The RMO for WCM updates is the LRD Water Management (LRD WM) Division. LRD WM will coordinate approval of the review plan and will manage the ATR. Louisville District will post the approved RP on its public website.

# WATER CONTROL MANUAL INFORMATION

**a. Document.** The Barren River Lake WCM will be prepared in accordance with ER 1110-2-240 and ER 1110-2-8156. The approval level of the updated WCM is LRD WM. An Environmental Assessment (EA) was prepared in August of 2014. This EA resulted in a Finding of no Significant Impact (FONSI) and will be included as part of the WCM update.

**b. Description of the action.** Barren River Lake Dam is located on the Barren River in south-central Kentucky, approximately 95 air miles south of Louisville, Kentucky and 13 air miles southwest of Glasgow, Kentucky. The proposed revision to Barren’s WCP, reflects the actual operation of Barren River Lake since 1999. During December of 1999, drought conditions resulted in the decision to temporarily raise the winter conservation level from elevation 525 to elevation 532. The following year, the Commonwealth of Kentucky requested an elevation of 530 to facilitate construction of a new marina. Since that time, a combination of drought and sedimentation issues have resulted in winter conservation pools ranging from elevation 528 to 532. Some of these deviations from the authorized winter pool elevation of 525 were approved deviations, others were not. In order to reflect the actual operation of Barren River Lake since 1995 and bring Barren’s operation into compliance with the authorized WCP, LRL WM has initiated the effort to revise the WCP and incorporate the revision into the WCM.

The revision to Barren River Lake’s WCM will be limited to the Barren’s WCP, since no other aspect of the WCM will change. All flood operations and operations for ancillary purposes will remain unchanged.

**c. Factors Affecting the Scope and Level of Review.** The change to the WCP and resulting WCM update is a minor change, involving approximately 1.9 percent of the original flood control storage available, as measured from the winter conservation pool of elevation 525. Sedimentation has claimed much of the storage once available between elevation 525 and 528. Historical reservoir operations comparing a winter conservation pool of 525 to 528 and resulting pool elevation frequency comparisons will comprise the engineering analysis. This analysis will quantify the change in risk as a result of this change. The revision to the WCP is not expected to involve a significant threat to human life/safety. There is no request by the Governor of an affected state for a peer review by independent experts. The information in the updated WCM 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 WCM update does not involve any design, thus it is not anticipated to require redundancy, resiliency, and/or robustness, unique construction sequencing, or a reduced or overlapping design construction schedule. The pool elevation frequency analysis will illustrate the impact of the proposed change and its impact to public interests.

# PROJECT DELIVERY TEAM (PDT)

The PDT (Attachment 1) shall be comprised of Louisville District personnel who are directly involved with the day-to-day operation of Barren River Lake and are familiar with the current WCM. The PDT’s primary responsibilities are to 1) write and update this RP, 2) update the WCP and WCM as outlined in Section 3.b. of this RP, 3) produce a draft final updated WCP and WCM, 4) submit the final WCP and WCM to the DQC and ATR for their review, 5) respond to the DQC and ATR comments, and 6) finalize and distribute a final updated Barren River Lake WCP and WCM.

1. **DISTRICT QUALITY CONTROL (DQC)**

All WCM updates (including supporting data, analyses, environmental compliance documents, etc., if applicable) shall undergo DQC. DQC is an internal review process of basic science and engineering work products focused on fulfilling the project quality requirements defined in the Project Management Plan (PMP). Louisville District shall manage the DQC. Documentation of DQC activities is required and should be in accordance with the Louisville District and the LRD Regional Quality Management Systems.

The DQC will be conducted by in-house staff and reviewers who will not be directly involved in the WCP / WCM update. DrCheckssm review software will be used to document all DQC comments, responses, and associated resolutions accomplished throughout the review process. A DrCheckssm report documenting the comments and resolutions will be provided to the ATR team along with the DQC certification.

1. **AGENCY TECHNICAL REVIEW (ATR)**

**a.** **Description.** The updated WCM must be evaluated against EC 1165-2-214, paragraph 15 and Reference 3, to determine if ATR is required. As outlined in Section 1.b. of this RP, an ATR will be conducted for this WCM update. The objective of ATR is to ensure consistency with established criteria, guidance, procedures, and policy. The ATR will assess whether the analyses presented are technically correct and comply with published USACE guidance, and that the document explains the analyses and results in a reasonably clear manner for the public and decision makers. The ATR will be managed by LRD WM and will be conducted by a qualified team from outside Louisville District that is not involved in the day-to-day operation of Barren River Lake. The ATR team lead will be from outside of the Great Lakes and Ohio River Division and will have specific knowledge and expertise regarding WCM updates. All Engineering ATR team members will be compliant with ECB 2013-28; requirement for the Corps of Engineers Reviewer Certification and Access Program (CERCAP).

**b. Products to Undergo ATR.** The ATR of the winter pool analysis and WCM will be performed throughout the study in accordance with the Louisville District and the LRD Regional Quality Management System (08504– QC/QA Procedures for Civil Works). Certification of the ATR will be provided prior to the Louisville District and LRD Commanders approving the final Barren River Lake WCM.

**c. Required ATR Team Expertise.** The ATR Team will be comprised of individuals representing the expertise in the disciplines listed in Table 1. The ATR Team Lead role preferably would be assigned to the water management ATR team member. The ATR Team Lead will use the “ATR Lead Checklist” and “ATR Charge Template” developed by the National Planning Centers of Expertise as resources when conducting the review.

**Table 1**

**Agency Technical Review (ATR) Team Requirements**

|  |  |
| --- | --- |
| **ATR Team Members/Disciplines** | **Expertise Required** |
| ATR Lead | The ATR lead should be a senior professional preferably with experience in preparing Water Control Manuals 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, hydraulics/hydrology, environmental resources, etc). The ATR Lead MUST be from outside LRD. ATR Team Lead can be a separate role or include the role of Water Management and/or Hydraulics ATR Team member. For this analysis and Water Control Plan Update, the ATR Lead will serve as the Water Management and Hydraulics reviewer. |
| Water Management | The water management reviewer will be an expert in the field of water management. |
| Hydraulics | The hydraulics reviewer will be an expert in the field of hydraulics. This includes a thorough understanding of hydrology and hydraulics as it pertains to flood control, and the operation of multi-purpose flood control reservoir projects. |
| Dam Safety | The dam safety reviewer will be an expert in the field of dam safety, including assessment of the potentially higher winter pool elevation on the project’s ability to function as designed during infrequent events. |

**d. Documentation of ATR.** DrCheckssm review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. The four key parts of a quality review comment will normally include:

* + 1. The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
    2. The basis for the concern – cite the appropriate law, policy, guidance, or procedure that has not been properly followed;
    3. The significance of the concern – indicate the importance of the concern with regard to its potential impact on the plan selection, recommended plan components, efficiency (cost), effectiveness (function/outputs), implementation responsibilities, safety, Federal interest, or public acceptability; and
    4. The probable specific action needed to resolve the concern – identify the action(s) that the reporting officers must take to resolve the concern.

In some situations, especially addressing incomplete or unclear information, comments may seek clarification in order to assess whether further specific concerns may exist.

The ATR documentation in DrCheckssm will include the text of each ATR concern, the PDT response, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes Louisville District, the RMO, LRD, and HQUSACE), and the agreed upon resolution. If an ATR concern cannot be satisfactorily resolved between the ATR team and the PDT, it will be elevated to the vertical team for further resolution in accordance with the policy issue resolution process described in EC 1165-2-214, Civil Works Review, [ER 1110-1-12](http://www.publications.usace.army.mil/Portals/76/Publications/EngineerRegulations/ER_1110-1-12.pdf), Quality Management or ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrCheckssm with a notation that the concern has been elevated to the vertical team for resolution.

**e. ATR Review Report.** At the conclusion of each ATR effort, the ATR team will prepare an ATR Review Report summarizing the review. ATR Review Reports will be considered an integral part of the ATR documentation and shall:

1. Identify the document(s) reviewed and the purpose of the review;
2. Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
3. Include the review instructions (charge) to the reviewers;
4. Describe the nature of their review and their findings and conclusions;
5. Identify and summarize each unresolved issue (if any); and
6. Include a verbatim copy of each reviewer's comments (either with or without specific attributions), or represent the views of the group as a whole, including any disparate and dissenting views.

**f. ATR Certification – Statement of Technical Review.** The ATR may be certified when all ATR concerns are either resolved or referred to the vertical team for resolution and the ATR documentation is complete. The ATR Lead will prepare a Statement of Technical Review certifying that the issues raised by the ATR team have been resolved (or elevated to the vertical team). A Statement of Technical Review should be completed prior to the District Commander signing the final report. A sample Statement of Technical Review for Other Work Products is included in Attachment 2.

1. **INDEPENDENT EXTERNAL PEER REVIEW (IEPR)**

**a.** **IEPR Types.** Type I and/or Type II IEPR may be required for the update of a WCM, but onlyunder certain circumstances. IEPR is the most independent level of review, and is applied in cases that meet certain criteria where the risk and magnitude of the proposed project are such that a critical examination by a qualified team outside of USACE is warranted.

**b. Decision on IEPR.** Based on guidance presented in EC 1165-2-214, and the results of a vertical team telecom on 11 October 2013, the update of the Barren River Lake WCM does not require either Type I or Type II IEPR. Therefore, the district is requesting that the RMO pursue a Type I IEPR exclusion from HQUSACE. Only HQUSACE can provide the exclusion to not conduct a Type I IEPR (see reference 1.c.11).

IEPR exclusion was granted and documented via several E-mails included in Appendix 4 of this RP. See pages 13 and 14.

1. **POLICY AND LEGAL COMPLIANCE REVIEW**

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

1. **MODEL CERTIFICATION AND APPROVAL**

HEC-RESIM will be utilized to perform the engineering analysis. The update of the Barren River Lake WCM does not require the use of either planning or engineering models, other than the aforementioned.

1. **REVIEW SCHEDULES AND COSTS**
   1. **ATR Schedule and Cost.** Louisville District shall provide labor funding for the PDT, DQC and ATR Team members. The PDT Program Manager will coordinate with the RMO and ATR Lead to ensure adequate funding is available and is commensurate with the level of review needed. Any funding shortages will be negotiated on a case-by-case basis and in advance of a negative charge occurring. The ATR Lead shall provide organization codes for each team member and a responsible financial point of contact (CEFMS responsible employee) for creation of labor codes. Reviewers shall monitor individual labor code balances and alert the ATR Lead to any possible funding shortages. The ATR is estimated to cost $10,000. An estimated schedule is presented in Table 2 pending approval of the RP and availability of reviewers.

**Table 2**

**ATR Schedule**

|  |  |  |
| --- | --- | --- |
| Task | Start Date | End Date |
| ATR of Barren River Lake Engineering Analysis | 31Oct2015 | 01Dec2015 |
| PDT Evaluation of ATR Comments | 02Dec2915 | 31Jan 2016 |
| ATR Backcheck | 01Feb2016 | 28Feb2016 |
| ATR of Barren River Lake WCM | 04Oct2016 | 10Nov2016 |
| PDT Evaluation of ATR Comments | 11Nov2016 | 31Dec2016 |
| ATR Backcheck | 01Jan2017 | 31Jan2017 |

* 1. **Type I and Type II IEPR Schedule and Cost.** Not applicable.
  2. **Model Review Schedule and Cost.** Not applicable**.**

1. **PUBLIC PARTICIPATION**

No public meetings are expected as part of the Barren River Lake WCM update. Public involvement will be addressed via an internet webpage with efforts coordinated through the Louisville District Public Affairs Office.

1. **REVIEW PLAN APPROVAL AND UPDATES**

LRD is responsible for reviewing this RP and ensuring that use of the RP is appropriate for the update of the Barren River Lake WCM update. The RP is a living document and may change as the WCM update progresses. The PDT Program Manager is responsible for keeping the RP up-to-date. Minor changes to the RP since the last LRD approval shall be documented in Attachment 3. Significant changes to the RP, such as changes to the scope and/or level of review, should be re-approved by LRD following the process used for initially approving the RP. Significant changes may result in LRD determining that use of the RP is no longer appropriate. In these cases, a new RP will be prepared and approved in accordance with EC 1165-2-214 and Director of Civil Works’ Policy Memorandum (reference 1.c.11). The latest version of the RP, along with the LRD Commanders’ approval memorandum, will be posted on Louisville District’s webpage.

1. **REVIEW PLAN POINTS OF CONTACT**

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

* Mark O. Philips, Hydraulic Engineer, Water Management Team, (502) 315-6470

**ATTACHMENT 1: TEAM ROSTERS.** Include contact information for the PDT, DQC Team, ATR Team, MSC (LRD) Team and the HQUSACE Vertical Team. The credential and years of experience for the ATR team should be included when it is available.

|  |  |  |  |
| --- | --- | --- | --- |
| **Product Delivery Team (PDT) Roster** | | | |
| **Team Member** | **Expertise** | **Telephone** | **Email** |
| Mark Philips PM | Water Management | (502) 315-6470 | Mark.O.Philips@usace.army.mil |
| Mike Turner | Environmental | (502) 315-6900 | William.M.Turner@usace.army.mil |
| Ken Meffert | Economics | (502) 315-6796 | Kenneth.Meffert@usace.army.mil |

PM- Program Manager

|  |  |  |  |
| --- | --- | --- | --- |
| **District Quality Control (DQC) Team Roster** | | | |
| **Team Member** | **Expertise** | **Telephone** | **Email** |
| Adam Connelly | Hydraulics, **Team Lead** | 502-315-6364 | Adam.M.Connelly@usace.army.mil |

|  |  |  |  |
| --- | --- | --- | --- |
| **Agency Technical Review (ATR) Team Roster** | | | |
| **Team Member** | **Expertise** | **Telephone** | **Email** |
| Kevin Grode | Water Management, Hydraulics, **Team Lead** | 402-996-3870 | Kevin.R.Grode@usace.army.mil |
| Damon Amlung | Dam Safety | 502-315-6453 | Damon.P.Amlung@usace.army.mil |

|  |  |  |  |
| --- | --- | --- | --- |
| **Major Subordinate Command (MSC, LRD) Team Roster** | | | |
| **Team Member** | **Expertise** | **Telephone** | **Email** |
| Kyle Mccune | Water Management | 513-684-3070 | Kyle.C.Mccune@usace.army.mil |

|  |  |  |  |
| --- | --- | --- | --- |
| **Vertical Team (HQUSACE) Roster** | | | |
| **Team Member** | **Expertise** | **Telephone** | **Email** |
| Jerry Webb | Hydrology, Hydraulics & Coastal CoP Leader | 202-761-0673 | Jerry.W.Webb@usace.army.mil |

**.**

**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR OTHER WORK PRODUCTS**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the revision of Barren River Lake’s Water Control Plan for Barren River Lake, Kentucky. The ATR was conducted as defined in the project’s Review Plan to comply with the requirements of EC 1165-2-209. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer’s needs consistent with law and existing US Army Corps of Engineers policy. The ATR also assessed the District Quality Control (DQC) documentation and made the determination that the DQC activities employed appear to be appropriate and effective. All comments resulting from the ATR have been resolved and the comments have been closed in DrCheckssm.

|  |  |  |
| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Kevin R. Grode* |  | Date |
| ATR Team Lead |  |  |
| *CENWD-PDR* |  |  |

|  |  |  |
| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Mark O, Philips* |  | Date |
| Project Manager (Louisville District) |  |  |
| *CELRL-ED-TH* |  |  |

|  |  |  |
| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Robert B. Sneed* |  | Date |
| Review Management Office Representative |  |  |
| *CELRN-EC-H* |  |  |

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

Significant concerns and the explanation of the resolution are as follows: *Describe the major technical concerns and their resolution.*

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

|  |  |  |
| --- | --- | --- |
| *SIGNATURE* |  |  |
| *Eugene A. Dowell* |  | Date |
| Chief, Operations Division (Louisville District) |  |  |
| *CELEL-OP* |  |  |

|  |  |  |
| --- | --- | --- |
| *SIGNATURE* |  |  |
| *John Bock* |  | Date |
| Chief, Engineering Division (Louisville District) |  |  |
| *CELRL-ED* |  |  |

**ATTACHMENT 3: REVIEW PLAN REVISIONS**

|  |  |  |
| --- | --- | --- |
| **Revision Date** | **Description of Change** | **Page / Paragraph Number** |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |
|  |  |  |

**ATTACHMENT 4. Documentation of no IEPR for Barren’s winter pool raise analysis**

**Emery, Erich LRD**

**From:** Webb, Jerry W HQ02

**Sent:** Tuesday, June 09, 2015 12:45 PM

**To:** Emery, Erich LRD; Tilly, Philip LRD

**Cc:** Halpin, Eric C HQ02; Schuelke, Barbara R HQ02; Webb, Jerry W HQ02

**Subject:** RE: Barren Lake Review Plan - decision on IEPR (UNCLASSIFIED)

**Signed By:** jerry.w.webb.civ@mail.mil

Classification: UNCLASSIFIED

Caveats: NONE

I have reviewed the documents and have no problem with the identified path

forward. Regarding to the decision that IEPR is not required in this case, I

concur.

Jerry W. Webb, P.E.,D.WRE

Principal Hydrologic & Hydraulic Engineer

Hydrology, Hydraulics & Coastal Community of Practice Leader

U.S. Army Corps of Engineers, Headquarters

CECW‐CE (3I66)

Washington, DC 20314‐1000

Email: Jerry.W.Webb@USACE.Army.mil

Work Phone: 202‐761‐0673

Work Cell: 571‐216‐0470

‐‐‐‐‐Original Message‐‐‐‐‐

From: Emery, Erich LRD

Sent: Thursday, June 04, 2015 11:01 AM

To: Webb, Jerry W HQ02

Cc: Emery, Erich LRD; Tilly, Philip LRD; Mccune, Kyle C LRD

Subject: Barren Lake Review Plan ‐ decision on IEPR (UNCLASSIFIED)

Importance: High

Classification: UNCLASSIFIED

Caveats: NONE

Jerry

The Review Plan covering the Barren Lake engineering analysis and change to

the water control plan is attached. I've also attached the vertical team

call minutes and the exception memo for Barren. LRD staff are now completing

their full review of the RP with an expected completion date of 17‐June.

As you and I have discussed, LRD is seeking HQ concurrence on the decision

to not include IEPR as a level of review.

The LRD team members (listed below) have reviewed the document and agree

with the district's position that IEPR is not warranted for this action.

Please review the documents and share with others at HQ or the RMC as you

deem necessary and get back to me at your earliest convenience. The

'Decision on IEPR' is found in section 7.b. on page 7 of the document.

LRD reviewers:

‐ Robert E. Taylor, P.E. ‐ LRD Dam Safety Program Manager

‐ Hank Jarboe, Ph.D. ‐ Regional Senior Environmental Expert, Planning and

Policy Division

‐ Yi Zhang, Ph.D. ‐ Hydraulic Engineer ‐ LRD Water Management Division

‐ Kyle McCune ‐ Chief, LRD Water Management Division

‐ Robert Iseli ‐ LRD Operations

Phil Tilly (Cc'd above) is the DST overseeing this document. Please copy him

on your response in case I am out of the office.

Thanks for your assistance and prompt attention to this issue.

Please let me know if you have any questions.

Erich

Erich B. Emery

Water Quality Specialist / Biologist

Water Management Division

U.S. Army Corps of Engineers

Great Lakes & Ohio River Division

550 Main Street, Room 10‐032

Cincinnati, OH 45202‐3222

513‐684‐3041

Classification: UNCLASSIFIED

Caveats: NONE

**ATTACHMENT 5: ACRONYMS AND ABBREVIATIONS**

| **Term** | **Definition** | **Term** | **Definition** |
| --- | --- | --- | --- |
| AFB | Alternative Formulation Briefing | NED | National Economic Development |
| ASA(CW) | Assistant Secretary of the Army for Civil Works | NER | National Ecosystem Restoration |
| ATR | Agency Technical Review | NEPA | National Environmental Policy Act |
| CAP | Continuing Authorities Program | O&M | Operation and maintenance |
| CSDR | Coastal Storm Damage Reduction | OMB | Office and Management and Budget |
| DST | District Support Team Leader | OMRR&R | Operation, Maintenance, Repair, Replacement and Rehabilitation |
| DPR | Detailed Project Report | OEO | Outside Eligible Organization |
| DQC | District Quality Control/Quality Assurance | OSE | Other Social Effects |
| DX | Directory of Expertise | PCX | Planning Center of Expertise |
| EA | Environmental Assessment | PDT | Project Delivery Team |
| EC | Engineer Circular | PAC | Post Authorization Change |
| EIS | Environmental Impact Statement | PMP | Project Management Plan |
| EO | Executive Order | PL | Public Law |
| ER | Ecosystem Restoration | QMP | Quality Management Plan |
| FDR | Flood Damage Reduction | QA | Quality Assurance |
| FEMA | Federal Emergency Management Agency | QC | Quality Control |
| FRM | Flood Risk Management | RED | Regional Economic Development |
| FSM | Feasibility Scoping Meeting | RMC | Risk Management Center |
| GRR | General Reevaluation Report | RMO | Review Management Organization |
| HQUSACE | Headquarters, U.S. Army Corps of Engineers | RTS | Regional Technical Specialist |
| IEPR | Independent External Peer Review | SAR | Safety Assurance Review |
| ITR | Independent Technical Review | USACE | U.S. Army Corps of Engineers |
| LRR | Limited Reevaluation Report | WRDA | Water Resources Development Act |
| MSC | Major Subordinate Command |  |  |
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