

**Review Plan
For
For Ozark Mountain Regional Public Water Authority
Water Supply Storage Reallocation Report
And Environmental Assessment**

**U. S. Army Corps of Engineers, Little Rock District
September 22, 2009/Updated October 13, 2009**

Ozark Mountain Regional Public Authority Water Supply Storage Reallocation Report and Environmental Assessment

Peer Review Plan

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1. Purpose. This document presents the process that helps to insure quality products for the Ozark Mountain Regional Public Water Alliance Water Supply Reallocation Report and Environmental Assessment in accordance with the guidance set forth in EC 1105-2-410. This Review Plan (RP) defines the responsibilities and roles of members of the study and technical review team. This plan is in compliance with the Little Rock District (SWL) Quality Assurance (QA) Plan. The basis for the QA Plan is the SWL Quality Management Plan. The QA Plan will be followed in verifying that the QC process operates as planned. This RP is a component of the Project Management Plan.

2. References.

- ER 1105-2-100 “Planning Guidance Notebook & Appendices D, F, G and H
- EC 1105-2-408 “Peer Review of Decision Documents”, dated May 31, 2005
- EC 1105-2-410 “Review of Decision Documents”, dated August 22, 2008

3. Applicability. All decision documents and their supporting analysis are required to undergo District Quality Control (DCQ) and Agency Technical Review (ATR). ATR is an in-depth review, managed within USACE, and conducted by a qualified team outside of the home district that is not involved in the day-to-day production of the project/product. The purpose of this review is to ensure the proper application of clearly established criteria, regulations, laws, codes, principles and professional practices. The ATR team reviews the various work products and assure that all the parts fit together in a coherent whole. ATR teams will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. To assure independence, the leader of the ATR team shall be from outside the home MSC.

The RP applies to all feasibility and reevaluation studies and reports needing authorization. Although the OMRPWA Water Supply Reallocation Report and Environmental Assessment do not need Congressional authorization, as a decision document, it requires ATR. The RP identifies the ATR process for all work conducted as part of the study, including in-house, non-Federal sponsor in kind and contract work efforts. According to the guidance set out in EC 1105-2-410, the OMRPWA Water Supply Reallocation Report and Environmental Assessment does not need to complete an Independent External Peer Review (IEPR).

4. Background and Purpose: OMRPWA is a coalition of 22 water systems that was formed in 2004 to pursue a future water supply for the north central Arkansas area. Currently the water authority serves about 22,000 people in the Newton, Searcy, and parts of Boone, Marion, Johnson, and Pope Counties. Current water sources include shallow wells, deep wells, springs, or ground water purchases from neighboring water systems. Several member water systems have elevated levels of radium and fluoride which exceeds the national primary drinking water standards. The majority of the member water systems struggle to meet customer demands from their existing sources. In February 2007 OMRPWA requested that the Little Rock District reallocate storage sufficient to supply 6 MGD from Bull Shoals Lake for their use as a clean reliable water source.

A pending water supply request, dated November 7, 2007, is on back-log for Marion County Regional Water District (MCRWD) for an additional water reallocation to yield 1 MGD. Once this study was underway, it was decided to include Marion County's request. Therefore, a 7 MGD reallocation will be analyzed in this study, but there will be two separate water supply agreements. The approval of the Marion County agreement will take place after the Ozark Mountain approval to ensure that the August 2010 deadline is met

5. Project Title, Subject and Purpose of the Decision Document: The project subject is water supply storage reallocation. The proposed decision document will be titled, "Ozark Mountain Regional Public Water Authority, (OMRPWA) Water Supply Storage Reallocation Study; Bull Shoals Lake Arkansas" In February 2007 OMRPA requested a change in use of storage at Bulls Shoals Lake, Arkansas from its present use to a Municipal & Industrial (M&I) water supply use. The request is authorized by the Water Supply Act of 1958. This report will determine if storage should be reallocated and from which pool. No apparent challenging risks are involved with this study.

6. Peer Review In accordance with Engineering Circular 1105-2-410 dated 22 August 2008, the peer review along with close public and agency coordination will be a part of the development of the study report. The purpose of this review plan is to insure that the review of the study's analyses and documentation meets the spirit of independent review as well as complying with the most current regulation related to Corps of Engineers Civil Works decision documents. Specifically, the review plan will be developed in accordance with Appendix B of EC 1105-2-410, with the content following that which is identified in paragraph 4 of that appendix. The selected review team is required to have expertise in multipurpose reservoir economics, flood risk management, hydropower, National Environmental Policy Act (NEPA) related analysis, and water resources plan formulation

Questions regarding the review plan should be directed to the following:

Analysis and Report Preparation: Renee Wright, Project Manager, Little Rock District

Agency Technical Review: John Grothaus, Kansas City District

Planning Center of Expertise: Peter Shaw, Water Management and Reallocation Studies, Southwestern Division

Southwestern Division POC: Margaret Johanning, Southwestern Division

7. Influential Scientific Information and Level of Review: The study analyses, while complex, are well within the scope that is typical of similar reallocation studies. Due to the large size and multipurpose definition of the inactive pool at Bull Shoals Lake, it is anticipated that reallocation from the inactive pool may be considered as an alternative. Current authorities and guidance do not prohibit consideration of reallocating storage from the inactive pool and the Institute for Water Resources (IWR) "Water Supply Handbook" (IWR, 1998) states that reallocation from inactive and/or sediment pools may be considered. While some previous studies within the Little Rock District have not included reallocation from a project's inactive or sediment pool, there are several studies nationwide where it has been considered as an alternative. Therefore this study report will not contain novel or precedent-setting approaches or influential scientific information.

Consequently, the recommendation of the District, with Major Subordinate Command (MSC) concurrence, is that the level of review be Agency Technical Review (ATR) only. The Little Rock District has concluded that the OMRPWA Water Supply Storage Reallocation Report does not require independent external peer review, (IEPR) as defined in the Water Resources Development Act (WRDA) of 2007 (Public Law 110-114), and EC 1105-2-410 for the following reasons:

a. WRDA 2007 Section 2034, Paragraph (3)(A)(i), states peer review is mandatory if a project has an estimated total project cost of more than \$45 million and is not determined by the Chief of Engineers to be exempt. The total study cost is estimated to be \$450,000.

b. EC 1105-2-410, Appendix D, requires Independent External Peer Review (IEPR) if the project poses a significant threat to human life. No significant threat is anticipated.

c. EC 1105-2-410, Appendix D, requires IEPR if the Governor of the affected state requests an IEPR. No request is anticipated.

d. EC 1105-2-410, Appendix D, requires IEPR if the head of a Federal or state agency charged with reviewing the project study has requested a review because he/she has determined that the project is likely to have a significant adverse impact on resources under jurisdiction of the agency after implementation of proposed mitigations plans. The study will likely include alternatives of reallocation from either the conservation pool or the inactive pool, both of which have defined purposes for use in hydropower generation. The Southwestern Power Administration (SWPA) is a Federal agency under the U.S. Department of Energy. SWPA has stated their opposition to reallocation from either the conservation or inactive pools. However, the anticipated pool level modifications are on the order of inches to one foot, and no significant adverse impacts are anticipated to hydropower. Comparisons of alternatives for water supply will include consideration of benefits foregone in hydropower generation and mitigation in terms of credits to SWPA per current regulations.

e. EC 1105-2-410, Appendix D, requires IEPR if there is public dispute of size\nature\effects of the project. No public dispute is anticipated.

f. EC 1105-2-410, Appendix D, requires IEPR if there is public dispute of economic\environmental benefits\costs of the project. No public dispute is anticipated.

g. EC 1105-2-410, Appendix D, requires IEPR if the project has novel methods\complexity. No novel or complex methods are anticipated.

h. EC 1105-2-410, Appendix D, requires IEPR if the project has precedent setting models\policy changing conclusions. No precedent setting is anticipated.

8. Timing and Sequencing of Reviews Each section of the draft EA will be reviewed as the draft section is completed. These sections include Purpose and Need, Alternatives Considered, Affected Environment, and Environmental Consequences. Each section of the report will be reviewed as the draft section is completed. These sections include the water supply and demand

analysis, description of alternatives, hydropower evaluation, H&H appendix, and Dam Safety Considerations.

The study schedule includes a 30-day public review of the draft EA, internal quality control and quality assurance reviews, and policy compliance reviews. Final report approval resides with Headquarters, U.S. Army Corps of Engineers and must occur prior to the Assistant Secretary of the Army for Civil Works approving the draft water storage agreement.

Ozark Mountain Water Storage Reallocation Schedule Review and Approval Schedule	
TASK	COMPLETION DATE
Coordination Meeting (SWL/SWD/HQ/B&V/SWPA/PCX/HAC)	Sep 24, 2009
ATR – H&H spreadsheet/write-up of reallocation calculations	Oct 13 – 30, 2009
Feasibility Scoping Meeting (FSM)	Dec 16, 2009
ATR – H&H Appendix/SWPA Info	Jan 4 – 15, 2010
Draft Water Reallocation Report, Draft EA, and Draft Water Storage Agreement	Feb 1, 2010
ATR - Draft Report Package	Feb 16 – 26, 2010
Alternative Formulation Briefing (AFB)	April 7, 2010
30 Day Public Review of Draft EA/Report	May 11 – June 11, 2010
ATR – Final Report Package	June 6 – 13, 2010
Final Reallocation Report Approved	Aug 11, 2010
Water Storage Agreement Approved	Aug 16, 2010

9. Opportunities for Public Comment. As part of the National Environmental Policy Act (NEPA) public involvement process, a draft environmental assessment along with a draft reallocation report will be made available for public comment

10. Significant Comments Provided to Reviewers. Comments will be documented in the EA and will be provided to ATR Reviewers, Division, and Headquarters.

11. Number and Expertise of Reviewers. The review team consists of four reviewers (to be determined). The team is required to have extensive experience in plan formulation, water supply studies, reallocation studies with hydropower implications, water supply contracts, and the NEPA process. The team lead will be chosen by the PCX and will be from outside the MSC.

The review team includes an

- a. Economist (1), the reviewer shall have extensive knowledge of the principles and guidelines of economic analysis as it relates to models for water supply.
- b. Engineers (2), the reviewers will have extensive knowledge of their field as it applies to water supply. The reviewers will be professionally licensed.

c. Water supply contract specialist (1). - The reviewer(s) will have an extensive knowledge of current planning policies as they relate to water supply.

12. Nomination of Professional Reviewers. Not Applicable to ATR process

13. Models Used. The hydrologic model, SUPER, an engineering model will be used in assessing the engineering aspects of reservoir operations, lake recreation analysis, flood damage analysis, and water supply yield analysis.

14. In-Kind Contributions. None.

15. Execution Plan. Execution of the review plan is described in the following paragraphs:

a. **Expertise.** Southwestern Division, as the Planning Center of Expertise (PCX) for Water Management and Reallocation Studies, has responsibility for certifying the review plan, the level of review, and the review team for approval by the Division Commander

b. **Rotation** To be Determined.

c. **Conflicts of Interest.** There are no conflicts of interest, as the reviewers are all Federal employees. All reviewers have complied with Federal and Department of Army Ethics requirements.

d. **Independence.** Participating Reviewers will not participate in the development of the report, appendices or other work products reviewed.

e. **Reviewers' Privacy.** Participating Reviewers will be informed that the names and other personal information of the reviewers will not be disclosed in the final report.

f. **Reviewers' Compensation.** The Little Rock District provides all labor funds for the review. The actual cost will be determined.

g. **Reviewers' Charge.** The PCX charges the review team to review all scientific and technical materials to include review of methods, analysis and formulation of the alternatives and recommended plan; compliance with the NEPA process and completeness of supporting technical documentation. The ATR team will review the documentation and make clear, concise comments, with notation of the section and paragraph to which the comment is directed. The reviewer will state why the comment is important and the consequences of failure to address the comment. The review will also suggest how to address the comment. In a similar fashion the reviewer may offer broad evaluation of the overall document on the basis of scientific and technical merit. All policy determination is the responsibility of Headquarters and the Assistant Secretary of Army.

h. **Confidentiality.** Review will be conducted in a manner that respects business information and intellectual property.

i. **Review Mechanism.** For reasons stated earlier, Agency Technical Review is recommended using a team of reviewers with specialized expertise in water reallocation studies affecting hydropower and other purposes. The purpose of the ATR is to provide in depth review of the technical, engineering and scientific work, managed within the USACE through the appropriate PCX and using a qualified review team outside the home district

j. **Access to Information.** Reviewers will have access to all information used in the analysis and documentation of the report. Any other information maintained by the District will be made available to the ATR team. The study's project manager is Renee Wright, who will serve as a POC for all requests for information.

k. **Disclaimer.** Information distributed for review includes the following statement: "This information is distributed solely for the purpose of pre-dissemination review under applicable information quality guidelines. It has not been formally disseminated by USACE. It does not represent and should not be construed to represent any agency determination or policy."

l. **Public Participation.** The Little Rock District will make the draft documents available for public review. Draft documents will be mailed to interested stakeholders and posted on the district website. All the public involvement requirements for NEPA have been and will continue to be met.

m. **Transparency.** The PCX instructs the review team to prepare a review report. The report will disclose the names, background and affiliation of all reviewers. The nature of the review and the ATR team's charge will be presented in the report. A copy of the comments and the associated reviewer will be included. DrChecks will be used to document the ATR process and will aid in production of the review report.

n. **Responses to the Review Report.** Written responses to the review report will be prepared using DrChecks. Responses will include an explanation of how the responses/actions are expected to satisfy the comments/concern documented in the review report. Back check by the reviewers will be documented in DrChecks. The review report and comment resolution will be included as an appendix in the final report. The reviewer's names will be removed from the review report prior to its inclusion in the final report appendix, as per paragraph 11.e. above.

16. Approval of the Review Plan. Southwestern Division, the MSC for the Little Rock District, will approve the review plan in accordance with EC 1105-2-410, dated August 22, 2008, Appendix B (page B-5). The MSC will provide a copy of the signed approval memorandum to the Headquarters Southwestern Division Regional Integration Team. The Review Plan is a living document and may be modified as the study continues. Approval of any revisions will follow the process of the original approval. The approved review plan, along with the MSC approval memorandum, will be posted on the District webpage with links to the MSC, PCX, and HQUSACE.

17. Policy Compliance and Legal Review. Legal Review will be the responsibility of the district. Policy review and approval will be the responsibility of HQUSACE.

18. Project Delivery Team Members:

PROJECT DELIVERY TEAM MEMBERS

NAME	TITLE
Renee Wright	Project Manager
Mike Rodgers	Biologist
Glen Raible	Hydraulic & Hydrology Engineer
Cherilyn Gibbs	Economist
Virginia House	Contracting
Elliott Carman	Regulatory
Peter Shaw/Margaret Johanning/Brad Hudgens	Southwestern Division Vertical Team
Sue Hughes/Andrea Walker	Headquarters Vertical Team
Russ Davidson	Hydropower Analysis Center
Jeff Henson/Patrick MacDanel	Black & Veatch/GEC
Andy Anderson	Chairman, OMRPWA
Walter Reed	President, MCRWD

19. Agency Technical Review Team Members (ATR): The ATR team members list is as follows:

AGENCY TECHNICAL REVIEW TEAM MEMBERS

NAME	TITLE
John Grothaus	ATR Team Lead Chief, Plan Formulation Section Kansas City District
Gene Sturm	Economics, Plan Formulation Omaha District
Mary Ann Duke	Hydrology & Hydraulics H&H Branch Fort Worth District
Stephen Nolen	Chief, Planning Section Environmental Tulsa District
Julia Smethurst	Regional Technical Expert for Plan Formulation Little Rock District