



REPLY TO  
ATTENTION OF

**DEPARTMENT OF THE ARMY**  
SOUTH PACIFIC DIVISION, CORPS OF ENGINEERS  
1455 MARKET STREET  
SAN FRANCISCO, CALIFORNIA 94103-1399

17 Sep 14

CESPD-DE

MEMORANDUM FOR Commander, U.S. Army Corps of Engineers, Los Angeles District,  
P.O. Box 532711, Los Angeles California, 90053-2325 (ATTN: CESPL-PM-C, Ms. Raina Fulton)

Subject: Seven Oaks Dam, San Bernardino County, California, Water Control Manual Update,  
Review Plan Approval

1. Seven Oaks Dam, San Bernardino County, California, Water Control Manual Update, Review Plan that is enclosed is in accordance with Engineering Circular (EC) 1165-2-214, Review of Decision Documents, dated 15 Dec 2012. The South Pacific Division (SPD), Planning and Policy Division, Regional Business Technical Division, and Los Angeles District Support Team have reviewed the Review Plan that has been submitted. The South Pacific Division approves the Seven Oaks Dam, Water Control Manual Update Review Plan.
2. With MSC approval the Review Plan will be made available for public comment via the internet and the comments received will be incorporated into future revisions of the Review Plans. SPD is designated as the Review Management Organization (RMO) for the Seven Oaks Dam, Water Control Manual Update. The Review Plan excludes Independent External Peer Review.
3. I hereby approve the Review Plan which is subject to change as study circumstances require. This is consistent with study development under the Project Management Business Process. Subsequent revisions to the Review Plan after public comment or during project execution will require new written approval from this office.
4. Points of contact for this action are Mr. Cuong Ly, CESPD-RBT, (213) 452-3445, [cuong.ly@usace.army.mil](mailto:cuong.ly@usace.army.mil) and Mr. Paul Bowers, CESPD-PDC, 415-503-6556, [paul.w.bowers@usace.army.mil](mailto:paul.w.bowers@usace.army.mil).

***BUILDING STRONG and Taking Care of People!***

R. MARK TOY  
Brigadier General, USA  
Commanding

Encl

# REVIEW PLAN

**Seven Oaks Dam  
San Bernardino County, California  
Water Control Manual Update**

**Los Angeles District**

**MSC Approval Date: <dd-mmm-yyyy>**

**Last Revision Date: 28 July 2014**



**US Army Corps  
of Engineers®**

**REVIEW PLAN**  
**SEVEN OAKS DAM**  
**SAN BERNARDINO COUNTY, CALIFORNIA**  
**WATER CONTROL MANUAL UPDATE**

**TABLE OF CONTENTS**

<b>1. PURPOSE AND REQUIREMENTS .....</b>	<b>1</b>
<b>2. REVIEW MANAGEMENT ORGANIZATION COORDINATION .....</b>	<b>1</b>
<b>3. PROJECT INFORMATION .....</b>	<b>2</b>
<b>4. DISTRICT QUALITY CONTROL .....</b>	<b>5</b>
<b>5. AGENCY TECHNICAL REIVEW .....</b>	<b>6</b>
<b>6. INDEPENDENT EXTERNAL PEER REVIEW .....</b>	<b>8</b>
<b>7. POLICY AND LEGAL COMPLIANCE REVIEW .....</b>	<b>9</b>
<b>8. MODEL CERTIFICATION AND APPROVAL .....</b>	<b>10</b>
<b>9. REVIEW SCHEDULE AND COSTS .....</b>	<b>10</b>
<b>10. PUBLIC PARICIPATION .....</b>	<b>11</b>
<b>11. REVIEW PLAN APPROVAL AND UPDATES .....</b>	<b>11</b>
<b>12. REVIEW PLAN POINTS OF CONTACT .....</b>	<b>11</b>
<b>ATTACHMENT 1: TEAM ROSTER .....</b>	<b>14</b>
<b>ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR IMPLEMENTATION DOCUMENTS .....</b>	<b>15</b>
<b>ATTACHMENT 3: REVIEW PLAN REVISIONS .....</b>	<b>16</b>
<b>ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS .....</b>	<b>17</b>

## 1. PURPOSE AND REQUIREMENTS

**Purpose.** This Review Plan has been prepared for the review of specific components that will be updated within the existing approved implementation document called "*Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California*, dated September 2003" (2003 WCM). The main component within the 2003 WCM being updated/replaced is the existing approved Water Control Plan (WCP). The new proposed WCP is a "*WCP for Water Quality*" (WCP-WQ), which is based on findings from a water quality analysis performed by the Corps' Engineer and Research Development Center (ERDC), and recommendations for improving water quality within the reservoir. Update of the WCP also requires other minor updates throughout the existing implementation document, such as, pertinent text that references the old WCP, and inclusion of the Supplemental Environmental Assessment report.

Upon completion of review and finding all proposed updates to the 2003 WCM acceptable, an updated Water Control Manual called, "*Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California*", dated September 2014 (2014 WCM) will be produced and implemented.

### a. References.

- (1) EC 1165-2-214, Civil Works Review Policy, 15 Dec 2012
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 May 2010
- (3) ER 1110-1-12, Quality Management, 20 Sep 2006
- (4) ER 1110-2-240, Water Control Management
- (5) ER 1110-2-8156, Preparation of Water Control Manuals
- (6) Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California, September 2003 (WCM 2003)

**b. Requirements.** This regional model review plan was developed in accordance with the Engineering Circular (EC) 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, 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.

## 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 implementation documents is the home Major Subordinate Command (MSC). The MSC will coordinate and approve the review plan and manage the ATR. The home

District will post the approved review plan on its public website. A copy of the approved review plan (and any updates) will be provided to the Water Management and Reallocation Studies (Risk Management Center [RMC]) (WMRS-Planning Center of Expertise [PCX]) to keep the PCX apprised of requirements and review schedules.

### 3. PROJECT INFORMATION

**a. Implementation Document.** The “*Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California*, dated September 2003, is the current implementation document for the Seven Oaks Dam and Reservoir project (2003 WCM), which was prepared by the U.S. Army Corps of Engineers (USACE), Los Angeles District (SPL). The Seven Oaks Dam and Reservoir project was constructed for flood risk management, completed, and became operational in 1999. It is a Section 7 project, owned, regulated/operated, and maintained by the Local Sponsors (i.e., San Bernardino, Orange, and Riverside Counties). It is located on the Santa Ana River in San Bernardino County, California, and provides flood risk reduction benefits to communities in Orange, Riverside and San Bernardino counties. The presence of this project, however, has also unavoidably impacted the water quality with its current approved plan of regulation/operation. The first significant impoundment following the construction of the dam occurred in 2005, and a turbid pool was maintained behind the dam for several months. Local water districts approached Congress for a water quality study, resulting in authorization for the Seven Oaks Dam Water Quality Analysis in the Energy and Water Development Appropriations Bill in 2006, which was approved on May 18, 2005, stating that:

*“Santa Ana River Mainstem, California...; and \$1,000,000 is available for the Seven Oaks Dam Water Quality Study.”*

Section 3036 of the Water Resources Development Act of 2007, 110<sup>th</sup> Congress, 2<sup>nd</sup> Session, Public Law 110-114, amended the original project authorization with the following language:

*“The project for flood control, Santa Ana Mainstem, authorized by section 401 (a) of the Water Resources Development Act of 1986 (100 Stat. 4113) and modified by section 104 of the Energy and Water Development Appropriations Act, 1988 (101 Stat. 1329-11), section 102(e) of the Water Resources Development Act of 1990 (104 Stat. 4611), and section 311 of the Water Resources Development Act of 1996 (110 Stat. 3713), is modified to direct the Secretary – (1) to include ecosystem restoration benefits in the calculations of benefits for the Seven Oaks Dam, California, portion of the project; and (2) to conduct a study of water conservation and water quality at the Seven Oaks Dam.”*

Further Congressional direction was provided in the Consolidated Appropriations Act, 2008 (H.R. 2764; Public Law 110-161), which states:

*“Santa Ana River Mainstem, California – Funding in addition to the budget request for this project is included to continue studies to ascertain the nature and extent of water quality degradation in the Santa Ana River resulting from the construction and operation*

*of Seven Oaks Dam and to amend the Seven Oaks Dam water control plan in light of current conditions and requirements.”*

The water quality analyses were performed by the USACE’s Engineer and Research Development Center (ERDC) to evaluate alternative configurations, and current dam regulations/operations. Water quality sampling and study began in 2006, culminating in the final report called “*Water Quality in Seven Oaks Reservoir and Influences on Receiving Waters of the Santa Ana River, California*”, dated November 2011 (WQ Report). While returning the system to a pre-dam condition is not possible, the findings of the water quality analyses suggest that water quality characteristics of the river that are deemed most important or desirable can be optimized with the reconfiguration of the runoff channel within the reservoir and reoperation of the debris pool.

The existing WCP for Seven Oaks Dam consists of restricting releases from the dam starting on 1 October, to approximately 3 cfs so that a debris pool can be formed and maintained throughout the winter runoff months, and gradually drained during the non-flood season. The WQ Report suggests that since turbid runoff waters are largely collected during the winter runoff months, runoff impounded during those months not be held long-term within the reservoir. The recommendation, therefore, is that the debris pool regulation/operation be changed, where it will be built only at the start and during each observed runoff event, and then drained as quickly and as safely as possible, after passing of each runoff event.

As previously mentioned, upon completion of review and finding all proposed updates to the 2003 WCM acceptable, an updated implementation document called, “*Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California*”, dated September 2014 (2014 WCM) will be produced and the updated WCP, the WCP-WQ, will be implemented.

**b. Factors Affecting the Scope and Level of Review.** The following are items that will be updated for the updated in the 2003 WCM, and implemented as part of the 2014 WCM:

- Replace Water Control Plan (Chapter 7)
- Replace Water Control Plan Diagram (Plate 7-01)
- Replace Area-Storage Capacity Tables (Exhibit B)
- Inclusion of Environment Documentation (Supplemental Environmental Assessment, as an additional Exhibit)
- General update throughout 2003 WCM of pertinent text, plates, and discussions that reference the old WCP, to reference the new WCP-WQ.

The 2014 WCM will contain the WCP-WQ (Chapter 7) and updated pertinent text and plates in relationship to the WCP-WQ. In addition, there will be an updated environmental assessment prepared, a Supplemental Environmental Assessment (SEA), which will evaluate the minimal impacts, if any, introduced by the WCP-WQ. All pertinent updates in the 2014 WCM will remain consistent with the policies as provided in the guidance for Water Control Management

ER 1110-2-240, and also adhere to the format for the Preparation of Water Control Manuals, ER 1110-2-8156. The approval level for all updates made within the updated implementation document, the 2014 WCM (if policy compliant), is at the home MSC.

EC 1165-2-214 established thresholds that trigger IEPR: “In cases where there are public safety concerns, a high level of complexity, novel or precedent-setting approaches; where the project is controversial, has significant interagency interest, has a total project cost greater than \$45 million, or has significant economic, environmental and social effects to the nation, IEPR will be conducted.”

The WCP-WQ is changing the debris pool regulation/operation *only*, which allows for more mimicking of “pre-dam conditions” by releasing all runoff that comes through the dam. All discharge from the dam will still following the same rate of release change schedule established with the original approved WCP within the 2003 WCM. The WCP-WQ is also a safer regulation/operation practice as additional storage behind the dam is made available at the start of each runoff event, in addition to decreasing the duration in which a stagnant pool behind the dam would be maintained.

The recommended changes to the regulation of the debris pool do not change the hydrology or hydraulics considered in the original design of this project, nor introduces any new economic impacts. No adverse impacts are anticipated to the primary authorized purpose for Seven Oaks Dam and Reservoir project of flood risk management, by this minor change to the debris pool regulation/operation.

All components listed above for the updated 2014 WCM implementation document will require only two types of review: DQC and ATR. The specific disciplines required for ATR reviewers include personnel within water control and within environmental support. No other components of the WCM, (i.e., hydrology and hydraulics and economics data) will be updated for the 2014 WCM, as the implementation of the WCP-WQ does not impact the existing hydrology and hydraulics, or economic data, as presented in the 2003 WCM document. Additionally, the preparation of the 2014 WCM does not involve novel methods, present complex challenges to interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing flood risk management practices. The cost of the updating pertinent sections of the approved implementation document, the 2003 WCM, will not exceed \$45 million. The governor of California has not requested an IEPR for this project to update the 2003 WCM.

Therefore, for the reasons stated above, a Type I IEPR, Type II IEPR, or Safety Assurance Review (SAR), will not be required as part of the technical review of the 2014 WCM.

#### **4. DISTRICT QUALITY CONTROL (DQC)**

All implementation documents (including supporting data, analyses, environmental compliance documents, etc.) 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). The home District shall manage DQC. Documentation of DQC activities is required and should be in accordance with the Quality Manual of the District and the home MSC. DQC will be managed in SPL. DQC applies to the tools outlined in the quality management plans for SPL and the South Pacific Division (SPD), the District's MSC. Basic quality control tools include a Quality Management Plan providing for seamless review, quality checks and reviews, supervisory reviews, etc.

The quality control objectives in the preparation of the 2014 WCM include ensuring that the product:

- meets customer (Federal and non-Federal sponsor) requirements;
- complies with applicable laws, regulations, policies, and sound technical practices of the disciplines involved;
- are of adequate scope and level of detail;
- are consistent, logical, accurate, and comprehensive; and
- is based on convincing and consistent assumptions.

Design checks, if applicable, and other internal reviews will be carried out as routine management practices in technical divisions. This includes checking work to assure basic assumptions and calculations are error-free. These checks will be performed by staff responsible for the work.

Supervisory review will be managed by the section chief and branch chief to ensure that appropriate criteria is established, correct methodology is followed, appropriate data is used, and computations are accurate.

The SPL's Office of Counsel is responsible for the legal review. Legal review involves a critical examination of the documents to ensure compliance with applicable laws, policies, and regulations.

## **5. AGENCY TECHNICAL REVIEW (ATR)**

ATR is an in-depth review that ensures the proper application of clearly established criteria, regulations, laws, codes, principles, and professional practices. ATR also assures that all work products coherently fit together. ATR will be managed within USACE and conducted by a qualified team from outside of the home district. ATR team will be comprised of senior USACE personnel (Regional Technical Specialists (RTS), etc.), and may be supplemented by outside experts as appropriate. The ATR team leader shall be outside of SPD. Candidates may be nominated by the home District.

If the draft document contains an updated WCP, a public review and/or public meeting may be held, where oral presentations on scientific issues can be made to the reviewers by interested

members of the public. ATR reviewers will be provided with all public comments. Public review of this document, if necessary, would occur after the completion of the ATR process. The public review period would last 45 days. As the updated WCP, the WCP for Water Quality, has been coordinated through the Local Sponsors (i.e., Orange, San Bernardino, and Riverside Counties), a public review of the proposed updates to the implementation document (2003 WCM) is not anticipated.

ATR is mandatory for all implementation documents (including supporting data, analyses, environmental compliance documents, etc.). 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. 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 and may be supplemented by outside experts as appropriate. The ATR team lead will be from outside the home MSC, as indicated in the Director of Civil Works' Policy Memorandum #1, 19 Jan 2011.

**a. Products to Undergo ATR.** The preparation of the 2014 WCM will be in accordance with the District and MSC Quality Management Plans, and ER1110-2-8156. The ATR shall be conducted according to protocol set forth in this regional model review plan. Certification of the ATR will be provided prior to the Division Commander approving the update implementation document, the 2014 WCM.

Products requiring ATR are the following: 1) the draft 2014 WCM; and 2) the Supplemental Environmental Assessment (SEA) that is currently being prepared with respect to WCP-WQ.

**b. Required ATR Team Expertise.** The ATR team will be comprised of individuals that have experience as listed below. All Engineering and Construction ATR reviewers must be registered in the CERCAP system, per ECB 2013-28. It is anticipated that the team will consist of approximately two (2) reviewers. The ATR lead will be identified as soon as practical after completion of the draft 2014 WCM. ATR team members will be identified after the ATR lead has been identified, as the ATR lead will assist with assembling the review team, and will track and document the ATR process. The ATR lead will also oversee the ATR Certification process, and provide copies of all documentation to the home District for inclusion into the updated implementation document.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional preferably with experience in preparing water management 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

ATR Team Members/Disciplines	Expertise Required
	also serve as a reviewer for a specific discipline (such as planning, hydraulics/hydrology, economics, environmental resources, etc). The ATR lead must be from outside of the SPD.
Reservoir Regulation/H&H or Water Management	The reviewer of this draft water control document should be a senior professional, preferably within a water management group, with experience evaluating water control operations and developing water control manuals.
Environmental Resources	Integration of environmental evaluation and compliance requirements pursuant to the "Procedures for Implementing NEPA" (ER 200-2-2), national environmental statutes, applicable executive orders, and other Federal requirements, with respect to evaluating impacts of implementation documents.

**c. Documentation of ATR.** The Design Review and Checking System (DrChecks) 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 normally include:

- (1). The review concern – identify the product’s information deficiency or incorrect application of policy, guidance, or procedures;
- (2). The basis for 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 section, 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 then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the Project Delivery Team (PDT) response, and as applicable, a brief summary of the pertinent points in any discussion, including any vertical team coordination (the vertical team includes the District, RMO, MSC, and HQUSACE), and the agreed upon resolution. The ATR team will prepare a Review Report which includes a summary of each unresolved issue; each unresolved issue will be raised to the vertical team for resolution. Review Reports will be considered an integral part of the ATR documentation and shall:

- Identify the document(s) reviewed and the purpose of the review;
- Disclose the names of the reviewers, their organizational affiliations, and include a short paragraph on both the credentials and relevant experiences of each reviewer;
- Include the charge to the reviewers;
- Describe the nature of their review and their findings and conclusions;
- Identify and summarize each unresolved issue (if any); and
- 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.

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 Completion of Agency Technical Review should be completed for updated implementation document, the 2014 WCM. In addition to the ATR Lead preparing the Statement of Completion of Agency Technical Review, District Leadership will provide Certification of Agency Technical Review in accordance with EC 1165-2-214. A sample Statement of Technical Review is included in Attachment 2.

## **6. INDEPENDENT EXTERNAL PEER REVIEW (IEPR)**

IEPR may be required for decision documents under 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. A risk-informed decision, as described in EC 1165-2-214, is made as to whether IEPR is appropriate. IEPR panels will consist of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of areas of expertise suitable for the review being conducted. There are two types of IEPR:

- **Type I IEPR.** Type I IEPR reviews are managed outside of USACE and are conducted on project studies. Type I IEPR panels assess the adequacy and acceptability of the economic and environmental assumptions and projections, project evaluation data, economic analysis, environmental analyses, engineering analyses, formulation of alternative plans, methods for integrating risk and uncertainty, models used in the evaluation of environmental impacts of proposed projects, and biological opinions of the project study. Type I IEPR will cover the entire decision document or action and will address all underlying engineering, economics, and environmental work, not just one aspect of the study. For decision documents where a Type II IEPR (Safety Assurance Review) is anticipated during project implementation, safety assurance shall also be addressed during the Type I IEPR per EC 1165-2-214.

- **Type II IEPR.** Type II IEPR, or Safety Assurance Review (SAR), are managed outside of USACE and are conducted on design and construction activities for hurricane, storm, and flood risk management projects or other projects where existing and potential hazards pose a significant threat to human life. Type II IEPR panels will conduct reviews of the design and construction activities prior to initiation of physical construction and, until construction activities are completed, periodically thereafter on a regular schedule. The reviews shall consider the adequacy, appropriateness, and acceptability of the design and construction activities in assuring public health, safety, and welfare.

**a. Decision on IEPR.** The updated implementation document, the 2014 WCM, does not contain influential scientific information nor contain a highly influential scientific assessment. There are no changes to existing policy, or anticipated impacts to public health, life, and safety are unlikely to be of concern due to the proposed updates. This project to produce the updated implementation document will not exceed a total project cost of \$45M.

For the reasons stated above, a Type I or Type II IEPR will not be required in the technical review of the draft 2014 WCM implementation document.

## **7. POLICY AND LEGAL COMPLIANCE REVIEW**

All decision documents 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 in decision documents.

## **8. MODEL CERTIFICATION AND APPROVAL**

EC 1105-2-412 mandates the use of certified or approved models for all planning activities to ensure the models are technically and theoretically sound, compliant with USACE policy, computationally accurate, and based on reasonable assumptions. Planning models, for the purposes of the EC, are defined as any models and analytical tools that planners use to define water resources management problems and opportunities, to formulate potential alternatives to address the problems and take advantage of the opportunities, to evaluate potential effects of alternatives and to support decision making. The selection and application of the model and the input and output of data is still the responsibility of the users and is subject to DQC, ATR, and IEPR.

EC 1105-2-412 does not cover engineering models used in planning. The responsible use of well-known and proven USACE developed and commercial engineering software will continue

and the professional practice of documenting the application of the software and modeling results will be followed. As part of the USACE Scientific and Engineering Technology (SET) Initiative, many engineering models have been identified as preferred or acceptable for use on Corps studies and these models should be used whenever appropriate. The selection and application of the model and the input and output data is still the responsibility of the users and is subject to DQC, ATR, and IEPR.

In preparing the updated implementation document, the 2014 WCM, no planning or engineering models were necessary.

## 9. REVIEW SCHEDULES AND COSTS

**a. ATR Schedule and Cost.** The ATR process for this document will follow the following timeline. Timing is dependent on the completion of the draft SEA, satisfying all public review comments, and finalizing this document. The table following summarizes the tentative dates for each anticipated ATR event.

<b>Activity</b>	<b>Budget</b>	<b>Start</b>	<b>Finish</b>
ATR of draft 2014 WCM	\$10,000	01-Sep-14	01-Oct-14
ATR of Draft Supplemental Environmental Assessment (SEA)	\$10,000	01-Sep-14	01-Oct-14

**b. Type I IEPR Schedule and Cost.** None

**c. Model Review Schedule and Cost.** None

## 10. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to review the updates to the 2003 WCM implementation document, as identified in this Review Plan, as partner agencies or as technical members of the PDT, as appropriate. Agencies with regulatory review responsibilities will be contacted for coordination as required by applicable laws and procedures. The ATR team will be provided copies of public and agency comments.

It is not anticipated, however, that the public, including scientific or professional societies, will be asked to nominate potential external peer reviewers in the technical review of the updated implementation document, the 2014 WCM.

## **11. REVIEW PLAN APPROVAL AND UPDATES**

The home MSC Commander is responsible for approving this review plan and ensuring that use of the regional 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 MSC Commander approval are documented, as needed, in a form provided in Attachment 3. Significant changes to the review plan (such as changes to the scope and/or level of review) should be re-approved by the MSC Commander following the process used for initially approving the plan. Significant changes may result in the MSC Commander following the process used for initially approving the plan. Significant changes may result in the MSC Commander determining that use of the Regional Model Review Plan is no longer appropriate. In these cases, a project specific Review Plan will be prepared and approved in accordance with EC 1165-2-214 and Director of Civil Works' Policy Memorandum #1. The latest version of the review plan, along with the Commander's 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:

- Home District: Kim Gilbert, (213) 452-3533; Raina Fulton, (213) 452- 3998
- SPD: Cuong T. Ly, (213) 452-3445



**ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR  
IMPLEMENTATION DOCUMENTS**

**COMPLETION OF AGENCY TECHNICAL REVIEW**

The Agency Technical Review (ATR) has been completed for the updated implementation document, called "*Water Control Manual, Seven Oaks Dam & Reservoir, Santa Ana River, San Bernardino County, California*", dated September 2014 (2014 WCM). The ATR of the draft 2014 WCM and the ATR of the Supplemental Environmental Assessment (SEA) were 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 consistent with law and existing U.S. 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 DrChecks<sup>sm</sup>.

\_\_\_\_\_  
TBD  
ATR Team Leader  
(Office Symbol)

\_\_\_\_\_  
Date

\_\_\_\_\_  
Raina Fulton  
Project Manager  
CESPL-PM-C

\_\_\_\_\_  
Date

\_\_\_\_\_  
Rene A. Vermeeren  
District Support Team Lead  
CESPL-ED-H

\_\_\_\_\_  
Date

**CERTIFICATION OF AGENCY TECHNICAL REVIEW**

All concerns resulting from the Agency Technical Review of this project have been fully resolved.

*SIGNATURE*

\_\_\_\_\_  
Richard J. Leifield  
Chief, Engineering Division  
CESPL-ED

\_\_\_\_\_  
Date

**ATTACHMENT 3: REVIEW PLAN REVISIONS**



#### ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<b>Term</b>	<b>Definition</b>	<b>Term</b>	<b>Definition</b>
AFB	Alternatives Formulation Briefing	OMRR&R	Operation, Maintenance, Repair, Replacement, and Rehabilitation
ATR	Agency Technical Review	PCX	Planning Center of Expertise
CELRD	Great Lakes and Ohio River Division	PDT	Project Delivery Team
CERCAP	Corps of Engineers Reviewer Certification and Access Program	PMP	Project Management Plan
CWMS	Corps Water Management System	RMC	Risk Management Center
DQC	District Quality Control/Quality Assurance	RMO	Review Management Organization
EA	Environmental Assessment	RTS	Regional Technical Specialist
EC	Engineer Circular	SAR	Safety Assurance Review
EIS	Environmental Impact Statement	SET	Scientific and Engineering Technology
EM	Engineering Manual	SPD	South Pacific Division
ER	Engineering Regulation	SPL	Los Angeles District
ERDC	Engineering and Research Development Center	TBD	To be determined
HQUSACE	Headquarters, U.S. Army Corps of Engineers	USACE	U.S. Army Corps of Engineers
IEPR	Independent External Peer Review	WCM	Water Control Manual
MSC	Major Subordinate Command	WCP	Water Control Plan
NEPA	National Environmental Policy Act	WMRS-PCX	Water Management and Reallocation Studies Planning Center of Expertise
NGVD29	National Geodetic Vertical Datum of 1929	WQ	Water Quality

## For Implementation Documents

Date: 28-July-2014

Originating District: Los Angeles District

Project/Study Title: Water Control Manual Update, Seven Oaks Dam, San Bernardino County, California  
PWI #:

District POC: Kim Gilbert

SPD Review Coordinator: Paul Bowers

Please fill out this checklist and submit with the draft Review Plan when coordinating with the appropriate Review Management Organization (RMO). For DQC, the District is the RMO; for ATR of Dam and Levee Safety Studies, the Risk Management Center is the RMO; and for non-Dam and Levee Safety projects and other work products, SPD is the RMO; for Type II IEPR, the Risk Management Center is the RMO. Any evaluation boxes checked 'No' indicate the RP possibly may not comply with EC 1165-2-214 and should be explained. Additional coordination and issue resolution may be required prior to MSC approval of the Review Plan.

REQUIREMENT	REFERENCE	EVALUATION
<b>1. Is the Review Plan (RP) a stand alone document?</b>	EC 1165-2-214, Appendix B Para 4a	Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
a. Does it include a cover page identifying it as a 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 and EC 1165-2-214 referenced?	EC 1165-2-214 Para 7a	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 including P2 Project #?	EC 1165-2-214 Para 7a (2)	d. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
e. Does it include a paragraph stating the title, subject, and purpose of the work product to be reviewed?	EC 1165-2-214 Appendix B Para 4a	e. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>
f. Does it list the names and disciplines in the home district, MSC and RMO to whom inquiries about the plan may be directed?*	EC 1165-2-214, Appendix B, Para 4a	f. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/>

<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><b>2. Documentation of risk-informed decisions on which levels of review are appropriate.</b></p>	<p>EC 1165-2-214, Appendix B, Para 4b</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>a. Does it succinctly describe the three levels of peer review: District Quality Control (DQC), Agency Technical Review (ATR), and Independent External Peer Review (IEPR)?</p> <p>b. Does it contain a summary of the CW implementation products required?</p> <p>c. DQC is always required. The RP will need to address the following questions:</p> <p>i. Does it state that DQC will be managed by the home district in accordance with the Major Subordinate Command (MSC) and district Quality Management Plans?</p> <p>ii. Does it list the DQC activities (for example, 30, 60, 90, BCOE reviews, etc)</p> <p>iii. Does it list the review teams who will perform the DQC activities?</p> <p>iv. Does it provide tasks and related resource, funding and schedule showing when the DQC activities will be performed?</p> <p>d. Does it assume an ATR is required and if an ATR is not required does it provide a risk based decision of why it is not required? If an ATR is required the RP will need to address the following questions:</p> <p>i. Does it identify the ATR District, MSC, and RMO points of contact?</p> <p>ii. Does it identify the ATR lead from outside the home MSC?</p>	<p>EC 1165-2-214 7a</p> <p>EC1165-2-214 Para 15</p> <p>EC1165-2-214 Para 15a</p> <p>EC1165-2-214 Para 8a</p> <p>EC 1165-2-214 Appendix B (1)</p> <p>EC 1165-2-214 Appendix B 4g</p> <p>EC 1165-2-214 Appendix B Para 4c</p> <p>EC1165-2-214 Para 15a</p> <p>EC 1165-2-214 Para 7a</p> <p>EC 1165-2-214 Para 9c</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>i. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>ii. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>iii. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>iv. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>d. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>i. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>ii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>

<p>iii. Does it provide a succinct description of the primary disciplines or expertise needed for the review (not simply a list of disciplines)? 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>iv. Does it provide tasks and related resource, funding and schedule showing when the ATR activities will be performed?</p> <p>v. Does the RP address the requirement to document ATR comments using Dr Checks?</p>	<p>EC 1165-2-214 Appendix B 4g</p> <p>EC 1165-2-214 Appendix C Para 3e</p>	<p>iii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>The ATR reviewer req'd is water control manager familiar with water control manual contents. This contact will be provided through POC in SPD.</p> <p>iv. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>See above.</p> <p>v. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>See above.</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>EC 1165-2-214 Para 7d (1)</p>	
<p>e. Does it assume a Type II IEPR is required and if a Type II IEPR is not required does it provide a risk based decision of why it is not required including RMC/ MSC concurrence? If a Type II IEPR is required the RP will need to address the following questions:</p>	<p>EC1165-2-214 Para 15a</p>	<p>e. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>i. Does it provide a defensible rationale for the decision on Type II IEPR?</p>	<p>EC 1165-2-214 Para 7a</p>	<p>i. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>ii. Does it identify the Type II IEPR District, MSC, and RMO points of contact?</p>	<p>EC 1165-2-214 Appendix B Para 4a</p>	<p>ii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>N/A</p>
<p>iii. Does it state that for a Type II IEPR, it will be contracted with an A/E contractor or arranged with another government agency to manage external to the Corps of Engineers?</p>		<p>iii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>N/A</p>
<p>iv. Does it state for a Type II IEPR, that the selection of IEPR review panel members will be made up of independent, recognized experts from outside of the USACE in the appropriate disciplines, representing a balance of expertise suitable for the review being conducted?</p>	<p>EC 1165-2-214 Appendix B Para 4k (4)</p>	<p>iv. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>N/A</p>

<p>v. Does it state for a Type II IEPR, that the selection of IEPR review panel members will be selected using the National Academy of Science (NAS) Policy which sets the standard for "independence" in the review process?</p>	<p>EC 1165-2-214 Appendix B, Para 4k(1) &amp; Appendix E, Para's 1a &amp; 7</p>	<p>v. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/> N/A</p>
<p>vi. If the Type II IEPR panel is established by USACE, has local (i.e. District) counsel reviewed the Type II IEPR execution for FACA requirements?</p>	<p>EC 1165-2-214 Para 6b (4) and Para 10b</p>	<p>vi. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>vii. Does it provide tasks and related resource, funding and schedule showing when the Type II IEPR activities will be performed?</p>	<p>EC1165-2-214 Appendix E, Para 7c(1)</p>	<p>vii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>viii. Does it establish a milestone schedule aligned with critical features of the project design and construction?</p>	<p>EC1165-2-214 Appendix E, Para 5a</p>	<p>viii. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p>ix. Does the project address hurricane and storm risk management or flood risk management or any other aspects where Federal action is justified by life safety or significant threat to human life?</p>	<p>EC1165-2-214 Appendix E, Para 6c</p>	<p>ix. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p><i>Is it likely? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></i> <i>If yes, Type II IEPR must be addressed.</i></p>		
<p>x. Does the RP address Type II IEPR factors?</p> <p>Factors to be considered include:</p> <ul style="list-style-type: none"> <li>• Does the project involve the use of innovative materials or techniques where the engineering is based on novel methods, presents complex challenges for interpretations, contains precedent setting methods or models, or presents conclusions that are likely to change prevailing practices?</li> <li>• Does the project design require redundancy, resiliency and robustness</li> <li>• Does the project have unique construction sequencing or a reduced or overlapping design construction schedule; from example, significant project features</li> </ul>	<p>EC1165-2-214 Appendix E Para 2</p>	<p>x. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Updates to the 2003 WCM do not require a SAR.</p>

<p>accomplished using the Design-Build or Early Contractor Involvement (ECI) delivery systems.</p> <p><i>Is it likely? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></i>  <i>If yes, Type II IEPR must be addressed.</i></p> <p>g. Does it address policy compliance and legal review? If no, does it provide a risk based decision of why it is not required?</p>	<p>EC 1165-2-214          Para 14</p>	<p>g. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>The RP is for implementation documents that do not include analytical methods that require compliance with any pertinent published Army policies.</p>
<p><b>3. Does the RP present the tasks, timing, and sequence of the reviews (including deferrals)?</b></p>	<p>EC 1165-2-214,          Appendix B,          Para 4c</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>
<p>a. Does it provide and 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>EC 1165-2-214,          Appendix C,          Para 3g</p> <p>EC 1165-2-214,          Appendix E,          Para 6c</p>	<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>          N/A</p>
<p><b>4. Does the RP address engineering model certification requirements?</b></p>	<p>EC 1165-2-214,          Appendix B,          Para 4i</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>          N/A</p>
<p>a. Does it list the models and data anticipated to be used in developing recommendations?</p> <p>b. Does it indicate the certification /approval status of those models and if certification or approval of any model(s) will be needed?</p> <p>c. If needed, does the RP propose the appropriate level of certification?? /approval for the model(s) and how it will be accomplished?</p>		<p>a. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>c. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>

<p><b>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?</b></p>	<p>EC 1165-2-214, Appendix B, Para 4d</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>a. Does it discuss posting the RP on the District website?</p> <p>b. Does it indicate the web address, and schedule and duration of the posting?</p>		<p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p><b>6. Does the RP explain when significant and relevant public comments will be provided to the reviewers before they conduct their review?</b></p>	<p>EC 1165-2-214, Appendix B, Para 4e</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>a. Does it discuss the schedule of receiving public comments?</p> <p>b. Does it discuss the schedule of when significant comments will be provided to the reviewers?</p>		<p>a. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p><b>7. Does the RP address whether the public, including scientific or professional societies, will be asked to nominate professional reviewers?*</b></p>	<p>EC 1165-2-214, Appendix B, Para 4h</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> Not needed for this review type</p>
<p>a. If the public is asked to nominate professional reviewers then does the RP provide a description of the requirements and answer who, what, when, where, and how questions?</p> <p>* Typically the public will not be asked to nominate potential reviewers</p>		<p>a. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p><b>8. Does the RP address expected in-kind contributions to be provided by the sponsor?</b></p>	<p>EC 1165-2-214, Appendix B, Para 4j</p>	<p>Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p>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?</p>		<p>a. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> N/A</p>
<p><b>9. Does the RP explain how the reviews will be documented?</b></p> <p>a. Does the RP address the requirement to</p>	<p>EC 1165-2-214, Para 7d</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p> <p>a. Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>

<p>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?</p> <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/PCX/MSC and CECW-CP 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>EC 1165-2-214 Appendix B Para 4k (14)</p> <p>EC 1165-2-214 Appendix B Para 4k (14)</p> <p>EC 1165-2-214 Appendix B Para 5</p>	<p>b. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>c. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p> <p>d. Yes <input type="checkbox"/> No <input checked="" type="checkbox"/></p>
<p><b>10. Has the approval memorandum been prepared and does it accompany the RP?</b></p>	<p>EC 1165-2-214, Appendix B, Para 7</p>	<p>Yes <input checked="" type="checkbox"/> No <input type="checkbox"/></p>