



REPLY TO
ATTENTION OF

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

12-Sep 2013

CESPD-PDC

MEMORANDUM FOR Commander, Sacramento District US Army Corps of Engineers,
ATTN: Ms. Karin Lee (CESPK-PD-F)

Subject: Review Plan Approval for the Battle Mountain, Nevada, Section 205 Feasibility Study

1. The enclosed Review Plan for the Battle Mountain, Nevada, Section 205 Feasibility Study, dated August 2013, has been prepared in accordance with EC 1165-2-214. The Review Plan has been coordinated internally within the South Pacific Division, Planning and Policy Division, Regional Business Technical Division and District Support Team. The South Pacific Division Planning and Policy Division will serve as the Review Management Office for the study.
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. The Review Plan includes independent external peer.
3. I hereby approve this Review Plan, which is subject to change as circumstances require, consistent with study development under the Project Management Business Process. Subsequent revisions to this Review Plan or its execution will require new written approval from this office.
4. For any additional information or assistance, contact Karen Berresford, District Support Team Lead, (415) 503-6557, Karen.G.Berresford@usace.army.mil.

Building Strong From New Mexico All The Way To The Pacific!

Encl
Review Plan


JOSEPH F. CALCARA
Director, Programs

REVIEW PLAN
For
CONTINUING AUTHORITIES PROGRAM

Battle Mountain, Nevada
Section 205

Sacramento District
August 2013



**US Army Corps
of Engineers ®**

MSC APPROVAL DATE:
LAST REVISION DATE: 21 August 2013

REVIEW PLAN For CONTINUING AUTHORITIES PROGRAM

Battle Mountain, Nevada
Section 205

TABLE OF CONTENTS

1.	PURPOSE AND REQUIREMENTS.....	1
2.	REVIEW MANAGEMENT ORGANIZATION COORDINATION.....	1
3.	STUDY INFORMATION.....	2
4.	DISTRICT QUALITY CONTROL	7
5.	AGENCY TECHNICAL REVIEW	8
6.	INDEPENDENT EXTERNAL PEER REVIEW	10
7.	POLICY AND LEGAL COMPLIANCE REVIEW	14
8.	COST ENGINEERING DIRECTORY OF EXPERTISE REVIEW AND CERTIFICATION.....	14
9.	MODEL CERTIFICATION AND APPROVAL.....	14
10.	REVIEW SCHEDULES AND COSTS	15
11.	PUBLIC PARTICIPATION	15
12.	REVIEW PLAN APPROVAL AND UPDATES	16
13.	REVIEW PLAN POINTS OF CONTACT.....	17
ATTACHMENT 1: TEAM ROSTERS		17
ATTACHMENT 2: STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS		20
ATTACHMENT 3: REVIEW PLAN REVISIONS		23
ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS.....		24
ATTACHMENT 5: CESPd SUPPLEMENTAL REVIEW PLAN CHECKLIST.....		24

1. PURPOSE AND REQUIREMENTS

a. Purpose. This Review Plan (RP) defines the scope and level of peer review for the Battle Mountain, Nevada project life cycle, including an update of the 1997 Detailed Project Report (DPR).

Section 205 of the Flood Control Act of 1948, as amended, authorizes the United States Army Corps of Engineers (USACE) to study, design and construct flood risk management projects. It is a Continuing Authorities Program (CAP) which focuses on water resource related projects of relatively smaller scope, cost and complexity. The traditional USACE civil works projects are of wider scope and complexity and are specifically authorized by Congress. The CAP is a delegated authority to plan, design, and construct certain types of water resource and environmental restoration projects without specific Congressional authorization. The Federal share of costs for any one Section 205 project may not exceed \$7,000,000.

b. References.

- (1) Engineering Circular (EC) 1165-2-214, Civil Works Review Policy, 15 Dec 2012
- (2) EC 1105-2-412, Assuring Quality of Planning Models, 31 March 2011
- (3) Engineering Regulation (ER) 1110-1-12, Quality Management, 30 Sep 2006
- (4) ER 1105-2-100, Planning Guidance Notebook, Appendix F, Continuing Authorities Program, Amendment #2, 31 Jan 2007.
- (5) ER 1105-2-100, Planning Guidance Notebook, Appendix H, Policy Compliance Review and Approval of Decision Documents, Amendment #1, 20 Nov 2007
- (6) Engineering Technical Letter (ETL) 1110-2-571, Engineering and Design; Guidelines for Landscape Planting and Vegetation Management at Levees, Floodwalls, Embankment Dams, and Appurtenant Structures, 10 April 2009.
- (7) Battle Mountain, Nevada, Section 205 Detailed Project Report For Flood Control and Environmental Assessment, July 1997
- (8) EC 1165-2-214, Sec 7, Biddability, Constructability, Operability, Environmental Sustainability (BCOES) reviews, Policy and Legal Review
- (9) Army Regulation 15-1, Committee Management, 27 November 1992
(Federal Advisory Committee Act Requirements).

c. Requirements.

This RP was developed in accordance with EC 1165-2-214 and Director of Civil Works' Policy Memorandum #1, which establishes an accountable, comprehensive, life-cycle review strategy for CAP 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 (DQC), Agency Technical Review (ATR), Independent External Peer Review (IEPR), and Policy and Legal Compliance Review. In addition to these levels of review, CAP decision documents are subject to cost engineering review and certification (per EC 1165-2-214 and Director of Civil Works' Policy Memorandum #1).

2. REVIEW MANAGEMENT ORGANIZATION (RMO) COORDINATION

South Pacific Division (SPD) is responsible for managing the overall peer review effort described in this review plan. SPD for Section 205 decision documents is the home Major Subordinate Command (MSC). The MSC will coordinate and approve the review plan and manage the ATR. The MSC will coordinate the Type I IEPR with the Flood Risk Management Planning Center of Expertise (FRM-PCX), which will be responsible for administering the Type I IEPR. The home District will post this review plan on its

public website once approved. A copy of the approved review plan (and any updates) will be provided to the FRM-PCX to keep the PCX apprised of requirements and review schedules.

The South Pacific Division will coordinate with the Cost Engineering Mandatory Center of Expertise (MCX) as needed to ensure the appropriate expertise is included on the review teams to assess the adequacy of cost estimates, construction schedules and contingencies.

The RMO is responsible for ensuring the panels are established in accordance with EC 1165-2-214. All Type I and Type II – IEPR panels shall be established in accordance with EC 1165-2-214. The RMO shall define the required competencies for each of the panel members insuring a balance of perspectives and may specify a particular expertise as the team lead. It can recommend candidates for consideration.

For the SAR Type II IEPR, review of the Plans and Specifications will be conducted by the RMC which is the RMO for Engineering documents. The RMO for Planning decision documents is SPD.

3. STUDY INFORMATION

- a. **Decision Document.** The Battle Mountain Section 205 decision document will be prepared in accordance with ER-1105-2-100, Appendix F. The approval level of decision documents (if policy compliant) is SPD. An Environmental Assessment (EA) will be prepared along with the decision document. A Value Engineering (VE) Study will not be required during the feasibility phase for the decision document; however, it will be required in the Planning Engineering Design (PED) phase at 35% design complete.
- b. **Study/Project Description.** The primary study area is the community of Battle Mountain and vicinity. The area extends for about 3 miles along the Reese River from 1.5 miles upstream from I-80 to 1 mile downstream from the railroad tracks at Battle Mountain (see Figure 1).

Battle Mountain is located in north-central Nevada about 210 miles east of Reno. The area can experience flooding from rain on snow, spring snowmelt, and summer cloudbursts. A reconnaissance study was authorized by House Resolution 2362 dated May 21, 1991. That investigation completed in August 1994, recommended proceeding under Section 205 of the Corps Continuing Authorities program authorized in the Flood Control Act of 1948. It also concluded that most of the community is within the 100-year flood plain and that damages from flooding of the Reese River can be substantial. The feasibility study was initiated with the signing of the Feasibility Cost Sharing Agreement (FCSA) on Aug 29, 1995.

Currently, it is necessary to update the economic justification, environmental effects of revised policy, and project formulation. However, pending the outcome of the current hydraulic analyses using the TUFLOW model, new, and less costly alternatives may be developed. An Engineering Design Report (EDR) is recommended to include the new hydraulic analysis information and to update of the July 1997 Detailed Project Report.

The Battle Mountain Section 205 DPR for Flood Control and Environmental Assessment, dated July 1997, presented the results of studies on flood problems along the Reese River at Battle Mountain, Nevada. It identified a Selected Plan to resolve these problems. It included a main report and a series of appendices, including an environmental assessment of alternatives.

According to the 1997 DPR, three alternative solutions were evaluated to determine the Tentatively Selected Plan (TSP). Additional alternatives will be formulated by looking at various combinations of structural and non structural solutions. Although specific alternatives will be described in the Project

Management Plan, this does not preclude the team from evaluating other alternatives, or other measures that may currently be a more viable option. Alternatives 2 and 3 will be refined based on current economic and hydraulic information.

In the 1997 DPR, the following three preliminary alternatives were evaluated and are currently being revisited to determine if there is still Federal interest in the project:

Alternatives Developed Further

The No Action and three structural alternatives were developed in sufficient detail for selection of one as a tentatively recommended plan. The three structural alternatives considered are believed to be adequate to cover the likely array of options favorable to the non-Federal sponsor. They were formulated to help divert flood flows up to 1-100 annual chance of exceedence event in the Reese River adjacent to Battle Mountain. These alternatives focus on raising and extending the existing flood control levee, providing a railroad closure, constructing a levee extension upstream from I-80, and adding culverts through I-80.

Alternative 1 - No-Action Alternative – Under this alternative, no action would be taken by the Federal Government to alleviate flood problems and conditions in the study area. The existing flood threat would continue if unchecked. There would continue to be a 1 in 12 chance in any year that peak flows in the Reese River would be great enough to begin to flow over banks to the northwest upstream from I-80 to the developed area near Lemaire Road. There would remain a 1 in 36 chance in any year that the existing levee between I-80 and Highway 40 could fail with resulting flooding of most of downtown Battle Mountain and a 1 in 12 chance in any one year the development upstream of I-80 would have flood flows. Depending on the flood event, flood damages could reach about \$50 million for a single event. Estimated average annual equivalent flood damages of \$662,000 would continue indefinitely.

Alternative 2 - Medium Increased Protection Plan

This alternative was formulated to address damages by strengthening and raising the existing levee by constructing a levee extension upstream from I-80 to reduce the chance of flooding. Over a 50-year period, it would reduce the chance of major levee failure and flooding from about 85 percent to 40 percent. With the plan, there would be a 69 percent chance that Battle Mountain would not experience major flooding from a 1 percent (1/100-year) event and a 59 percent chance that it would not flood during a 0.5 percent (1/200-year) event. These damages are reasonable expectations of future events.

Alternative 3 -National Economic Development (NED) Plan

The DPR report stated that over a 50-year period, this alternative would reduce the chance of major levee failure and flooding from about 85 percent to about 30 percent. With this plan, there would be about 78 percent chance that Battle Mountain would not flood during a 1 percent (1/100-year) event and a 72 percent chance it would not flood from a 0.5 percent (1/200-year) event.

Major features for this plan include:

- Construct a 6,800-foot extension to the levee upstream from I-80 with a maximum height of 9 feet.
- Raise the existing Federal levee (2,800 feet) between I-80 and Highway 40 up to 1 foot and add a slurry cutoff wall at the waterside toe.
- Raise 200 feet of Highway 40 and about 1 foot where the highway crosses the levee alignment.
- Raise 600 feet of existing levee between Highway 40 and the Southern Pacific Railroad (SPRR) about 4 feet.

- Construct a flood gate structure at the SPRR.
- Raise about 300 feet of the existing levee downstream from the SPRR a maximum of 5 feet at the SPRR.
- At the time of a major flood event, the plan also includes placing sandbags across I-80 under current flood threat conditions.

Alternative 4 – High Level Protection Plan

This alternative was formulated to (1) provide a high level of protection and (2) meet current guidelines by the Corps and Federal Emergency Management Agency to credit levees with a minimum of 100-year level of protection. To meet these guidelines, the plan design required a minimum freeboard above the water surface for the 1 percent (1/100-year) event of 3 feet or a 90 percent reliability that the levees would not fail at this event. It is similar to the NED plan and also involved constructing four 5 by 12-foot concrete box culverts through I -80 and at the time of a major flood event, and also included placing sand bags across I-80 under current flood threat conditions.

Using the risk-based procedures, this plan would increase the level of flood protection in Battle Mountain from a 1 in 12 chance of flooding to a 1 in 175 chance in any 1 year. Over a 50-year period, it would reduce the chance of major levee failure and flooding from about 85 percent to about 18 percent. With the plan, there would be about a 90 percent chance that Battle Mountain would not flood during a 1 percent (1/100-year) event and a 73 percent chance that it would not flood from a 0.5 (1/200-year) event.

- c. Factors Affecting the Scope and Level of Review.** The purpose of the 1997 DPR is to describe the development and features of a plan to provide additional flood protection for the Battle Mountain area and to:
- Further define the flood risk at Battle Mountain from the Reese River.
 - Identify potential flood control measures and develop the most favorable one in detail.
 - Select the plan which would maximize NED benefits along the Reese River in Battle Mountain and that is environmentally sound.
 - Define the requirements to implement the plan.

A supplemental DPR will be developed to update the 1997 DPR.

Type I IEPR is mandatory if any of the following are true:

EC 1165-2-214 Criteria	Battle Mountain, Nevada Feasibility Study
Is there significant threat to human life?	Yes. IEPR I is required for Section 205 - design initiates the decision phase. Appendix D, para. 2.C.4 incorporates SAR into IEPR I. IEPR II will be addressed in Preconstruction Engineering and Design (PED). The Chief of Engineers will certify a risk to life safety.
Is the total project cost more than \$45 million?	The estimated project cost is \$4.12M according to the 6 Feb 13 budget submittal flysheet. Feasibility cost estimates are being updated.
Has the Governor of Nevada requested a Type I IEPR?	To date, there have been no requests from the Governor.
Has the head of a Federal or state agency charged	To date, there have been no requests from a head

with reviewing the project study requested a Type I IEPR?	of a Federal or state agency.
Will there be significant public controversy as to size, nature, or effects of the project?	It is anticipated there will be no significant public controversy surrounding the study.
Will there be significant public controversy as to the economic or environmental cost or benefit of the project?	It is anticipated there will be no significant public controversy surrounding the study.
Will the study be based on information from novel methods, present complex challenges or interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices?	The study will not be based on information from novel methods, present complex challenges for interpretation, contain precedent-setting methods or models, or present conclusions that are likely to change prevailing practices.
Will the project include an EIS?	An EA will be prepared for this project.

- The project study does not include an EIS and is a project study pursued under the CAP Program.
- The Battle Mountain Section 205 CAP study is required by EC 1165-2-214 to undergo IEPR Type 1. It does meet at least two of the mandatory triggers of EC 1165-2-214 regarding public controversy due to the new levees up to 9 ft. high and raising existing levees. This could potentially impact real estate acquisition and construction activities.

As a result, DQC, ATR, and IEPR will focus on:

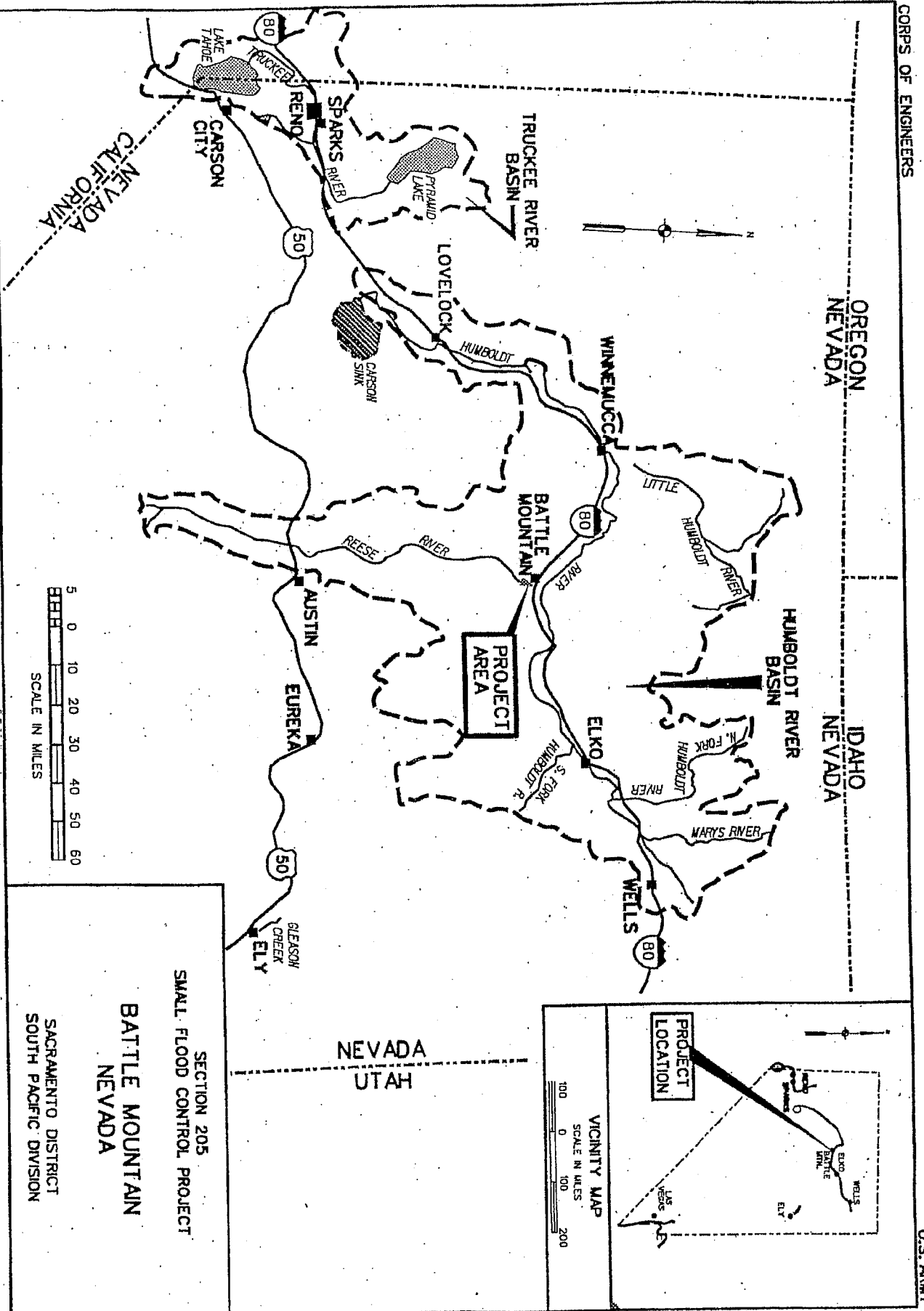
- 1) Completeness and compliance of H&H analysis;
- 2) Review of the planning process and criteria applied;
- 3) Review of the methods of preliminary analysis and design
- 4) Compliance with sponsor, program, and National Environmental Protection Act (NEPA) requirements;
- 5) Completeness of preliminary design and support documents;

In accordance with Section 2035 of the Water Resources Development Act (WRDA) 2007,

A Type II IEPR SAR shall be conducted on design and construction activities for any project where potential hazards pose a significant threat to human life. Safety assurance factors must be considered in all reviews for those studies. Prior to PED of the project identified for construction, a Project Management Plan (PMP) will be developed that will include safety assurance review. Safety assurance review will also be accomplished during construction. The Chief of Engineering has assessed that there is no significant threat to life safety.

d. In-Kind Contributions. Products and analyses provided by non-Federal sponsors as in-kind services are subject to DQC, ATR, and IEPR. No in-kind contributions are expected to be provided by the sponsor.

FIGURE 1



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4. DISTRICT QUALITY CONTROL

All decision 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 PMP. Sacramento 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.

a. Documentation of DQC. Reviewers shall review the draft report to confirm that work was done in accordance with established professional principles, practices, codes, and criteria and for compliance with laws and policy. Comments on the report shall be submitted and provided as part of the report in subsequent compliance packages.

Reviewers shall pay attention to one's discipline, but may also comment on other aspects as appropriate. Reviewers that do not have any significant comments pertaining to their assigned discipline shall provide a comment stating this.

Review comments shall contain these principal elements:

- 1) A clear statement of concern;
- 2) The basis for concern, such as law, policy, or guidance;
- 3) Significance for the concern; and
- 4) Specific actions needed to resolve the comment.

A copy of the DQC comments and resolution will be submitted to the ATR Team when necessary.

b. Products to Undergo DQC. The following documents will undergo DQC - Draft and Final PADD, technical appendices, plans and specification, operations and maintenance manuals, and all contractor products.

c. Required DQC Expertise. Identified required expertise needed to conduct DQC consistent with the District/MSD Quality Management plans. A list of DQC Reviewers is included in Attachment 1.

DQC Team Members/Disciplines	Expertise Required
Planning	The Planning reviewer should be a senior water resources planner with experience flood risk management.
Economics	The reviewer should be familiar with the processes used in evaluation of flood risk management projects and have recent experience in preparing economic analysis plans for flood risk management feasibility studies. HEC-FDA will be used for analysis, as will IMPLAN. Analyses will address all four project accounts during the Alternative Review Conference or Milestone 2 phase.
Environmental Resources	Environmental Resources reviewer should be a senior environmental manager with experience in NEPA impact analysis.
Hydraulic Engineer	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of two-dimensional

	modeling products, FEMA FIS update process and design of hydraulic structures.
Hydrology	The hydrologic reviewer should be a senior hydrologist or engineer with experience in 1) deriving flow frequency curves from stream gage data and 2) rainfall runoff modeling.
Geotechnical Engineering	The geotechnical engineering reviewer will be an expert in the general geotechnical engineering but with specific experience and/or knowledge in seepage modeling and analysis, slope stability as related to the USACE levees and/or dams in addition to competence in soil mechanics and geotechnical construction.
Civil Engineer	Experience in design of levees and flood control.

5. AGENCY TECHNICAL REVIEW

ATR is mandatory for all decision documents (including supporting data, analyses, environmental compliance documents, etc.) The objective for 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 South Pacific Division 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. Once actual costs are determined, the Review Plan will be revised.

a. Products to Undergo ATR. The ATR will review and comment on the Post Authorization Decision Document (DPR), appendices, planning models, the Engineering Technical Appendix, plans and specifications, operations and maintenance manuals, and the MCACES. The ATR will also review any significant changes made to subject documents through the higher level and public review process. Technical appendices and other supporting documentation will be provided for additional reference.

b. Required ATR Team Expertise. The table below provides details of the anticipated needs for the Battle Mountain Section 205 ATR Team. Stricter requirements for membership on the ATR teams for engineering positions now require a minimum 20 years experience in the field or 5 years with a PE registration.

ATR Team Members/Disciplines	Expertise Required
ATR Lead	The ATR lead should be a senior professional with extensive experience in preparing Civil Works decision documents and conducting ATR. The lead should also have the necessary skills and experience to lead a virtual team through the ATR process. The ATR lead may also serve as a reviewer for a specific discipline (such as planning, economics, environmental resources, etc).

Planning	The Planning reviewer should be a senior water resources planner with experience flood risk management. and should be familiar with IWR Plan Ver. 3.3
Economics	The reviewer should be familiar with the processes used in evaluation of flood risk management projects and have recent experience in preparing economic analysis plans for flood risk management feasibility studies. HEC-FDA will be used for analysis, as will IMPLAN. Analysis will address all four project accounts during the Alternative Review Conference or Milestone 2 phase.
Environmental Resources	Environmental Resources reviewer should be a senior environmental manager with experience in NEPA impact analysis.
Hydrology	The hydrologic reviewer should be a senior hydrologist or engineer with experience in 1) deriving flow frequency curves from stream gage data and 2) rainfall runoff modeling, HEC RAS 4.0
Hydraulic Engineering	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of two-dimensional modeling products, FEMA FIS update process and design of hydraulic structures. Should have experience in Tuflow (a two-dimensional unsteady flow) a two-dimensional (2D) and one-dimensional (1D) hydrodynamic/flood simulation software.
Cost Engineering	The cost engineering reviewer will be MCX certified and preferred to have experience in costs of FRM structures. Cost engineer should be pre-certified within the region or by the Walla Walla Cost Engineering (MCX).
Civil Engineer	Experience in design of levees and flood control.
Geotechnical Engineer	The geotechnical engineering reviewer will be an expert in the general geotechnical engineering but with specific experience and/or knowledge in seepage modeling and analysis, slope stability as related to the USACE levees and/or dams in addition to competence in soil mechanics and geotechnical construction.

c. Documentation of ATR. DrChecks review software will be used to document all ATR comments, responses and associated resolutions accomplished throughout the review process. Comments should be limited to those that are required to ensure adequacy of the product. 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 then assess whether further specific concerns may exist.

The ATR documentation in DrChecks will include the text of each ATR concern, the PDT (Project Delivery Team) response, 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. 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 ER 1105-2-100, Appendix H, as appropriate. Unresolved concerns can be closed in DrChecks with a notation that the concern has been elevated to the vertical team for resolution.

At the conclusion of each ATR effort, the ATR team will prepare a Review Report summarizing the review. 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 Technical Review should be completed, based on work reviewed to date, for the AFB, draft report, and final report. A sample Statement of Technical Review is included in Attachment 2.

6. INDEPENDENT EXTERNAL PEER REVIEW

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 and conducted by reviewers outside the 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 assessments 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 SAR 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 SAR, are managed outside the 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 project does meet two of the mandatory triggers for TYPE 1 IEPR outlined in EC 1165-2-214. There is potentially significant public controversy by building new levees up to 9 ft. high and raising existing levees. Over a mile of new levee is being proposed which will impact real estate acquisition, construction, and potentially other activities.

The decision on whether the above criteria are met is the responsibility of the MSC Commander. Additional factors the MSC Commander might consider include in deciding if an exclusion is appropriate include, but are not limited to: Hydrograph/period of flooding, warning time, depth of flooding, velocity of flooding, nature of area protected, and population protected.

b. Products to Undergo Type I IEPR. Unless directed otherwise, the following documents will undergo Type I IEPR – Draft and Final Post Authorization Decision Document, technical appendices, plans and specification, operations and maintenance manuals, and all contractor products.

c. Required Type I IEPR Panel Expertise. See table on page 12.

d. Documentation of Type I IEPR.

The IEPR panel will be selected and managed by an Outside Eligible Organization (OEO) per EC 1165-2-214, Appendix D. Panel comments will be compiled by the OEO and should address the adequacy and acceptability of the economic, engineering and environmental methods, models and analyses used. IEPR comments should generally include the same four key parts as described in Section 4.a. above. The OEO will prepare a final Review Report that will accompany the publication of the final decision document and shall:

- 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; 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.

The final Review Report will be submitted by the OEO no later than 60 days following the close of the public comment period for the draft decision document. USACE shall consider all recommendations contained in the Review Report and prepare a written response for all recommendations adopted or not adopted. The final decision document will summarize the Review Report and USACE response. The Review Report and USACE response will be made available to the public, including through electronic means on the internet.

Type II IEPR. Type II IEPR, or SAR, are managed and conducted by reviewers from outside 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 Type II IEPR. During the subsequent Design and Implementation Phase, if a project is recommended for construction, designs undergoing Type II IEPR will be reviewed for consistency with the assumptions of the decision and environmental documents. This decision is based on the information presented above in Section 6.a., including the presence of life safety issues and complexity of the project (including potential robustness measures). No requests to conduct IEPR have been received from a head of a Federal or state agency charged with reviewing the project.

b. Products to Undergo Type II IEPR. NEPA/CEQA documentation, technical appendices, Review Plan, O&M (Operations and Maintenance) Manual, and design and construction activities will be referenced to ensure that the designs reviewed under Type II IEPR are consistent with the decision and environmental assumptions in the decision documents.

c. Required Type II IEPR Panel Expertise. The Type II IEPR Team will be selected and managed by an organization external to the Corps, per EC 1165-2-214. The RMC will coordinate the Type II IEPR and work with the PDT to write a scope of work for the review that includes developing a charge to reviewers that outlines the scope and requirements of the review, identifying potential reviewers, contracting them, managing the review, and documenting the review. Due to the nature and complexity of the study it is expected that multiple team members will be needed for certain disciplines. The team will consist of approximately 8 reviewers.

Type I IEPR and Type II IEPR Panel Members/Disciplines	Expertise Required
Economics	The reviewer should be familiar with the processes used in evaluation of flood risk management projects and have recent experience in preparing economic analysis plans for flood risk management feasibility studies. HEC-FDA will be used for

	analysis, as will IMPLAN. Analysis will address all four project accounts during the Alternative Review Conference or Milestone 2 phase
Planning	The Planning reviewer should be a senior water resources planner with experience flood risk management.
Environmental Resources	Environmental Resources reviewer should be a senior environmental manager with experience in NEPA impact analysis.
Hydrology*	The hydrologic reviewer should be a senior hydrologist or engineer with experience in 1) deriving flow frequency curves from stream gage data and 2) rainfall runoff modeling.
Hydraulic Engineering*	The hydraulic engineering reviewer will be an expert in the field of hydraulics and have a thorough understanding of two-dimensional modeling products, FEMA FIS update process and design of hydraulic structures.
Cost Engineering	The cost engineering reviewer will be MCX certified and preferred to have experience in costs of FRM structures. Cost engineer should be pre-certified within the region or by the Walla Walla Cost Engineering (MCX).
Civil Engineer*	Experience in design of levees and flood control.
Geotechnical Engineer*	The geotechnical engineering reviewer will be an expert in the general geotechnical engineering but with specific experience and/or knowledge in seepage modeling and analysis, slope stability as related to the USACE levees and/or dams in addition to competence in soil mechanics and geotechnical construction.
Construction Operations**	Must have a broad perspective in determining real estate and environmental issues which may hinder or delay construction schedules. Must have knowledge of project site access, borrow sites, staging areas, relocations of utilities, and have knowledge of cost comparisons in construction materials. May require structural experience.

Note: All disciplines (with the exception of Construction Operations) are included in Type I IEPR.

*Indicates only the disciplines considered in the (SAR) Type II IEPR.

**To be included in the development of the Review Plan during PED phase.

d. Documentation of Type II IEPR.

Per EC 1165-2-214, Appendix E, the review team will prepare a Review Report. All review panel comments shall be entered as team comments that represent the group and be non-attributable to individuals. The team lead is to seek consensus, but where there is a lack of consensus, note the non-concurrence and why. A suggested report outline includes:

- Introduction,

- Composition of the review team,
- Summary of the review during design,
- Summary of the review during construction,
- Lessons learned in both the process and/or design and construction,
- Appendices for conflict of disclosure forms for comments to include any appendices for supporting analyses and assessments of the adequacy and acceptability of the methods, models, and analyses used.

All comments in the report will be finalized by the panel prior to their release to USACE for each review plan milestone. The final Review Report will be submitted no later than 60 days following the close of the review period. The District Chief of Engineering, with full coordination with the Chiefs of Construction and Operations, shall consider all comments contained in the report and prepare a written response for all comments and note concurrence and subsequent action or non-concurrence with an explanation. The District Chief of Engineering shall submit the panel's report and the Districts responses shall be submitted to the MSC for final MSC Commander approval and then make the report and responses available to the public on the District's website.

7. POLICY AND LEGAL COMPLIANCE REVIEW

All decision documents will be reviewed throughout the study process for their compliance with law and policy. Guidance for policy and legal compliance reviews is addressed in Appendix H, ER 1105-2-100. These reviews culminate in determinations that the recommendations in the reports and the supporting analyses and coordination comply with law and policy, and warrant approval for 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. COST ENGINEERING MANDATORY CENTER OF EXPERTISE (MCX) REVIEW AND CERTIFICATION

For CAP projects, ATR of the cost estimate will be conducted by pre-certified district cost personnel within the region or by the Walla Walla Cost Engineering Mandatory Center of Expertise (MCX). The cost ATR member will coordinate with Cost Engineering MCX for execution of cost ATR and cost certification. The Cost Engineering MCX will be responsible for final cost certification and may be delegated at the discretion of the MCX.

9. 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 use of a certified/approved planning model does not constitute technical review of the planning product. 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. SPK will coordinate with the appropriate PCX for model use.

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 Sciences Technology, Engineering and Mathematics 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.

Planning Model	Brief Description of the Model and How It Will Be Applied in the Study
IWR Plan Version 3.3	IWR Planning Suite assists with plan formulation by combining user-defined solutions to planning problems and calculating the effects of each combination, or "plan". The program can assist with plan comparison by conducting cost effectiveness and incremental cost analyses, identifying the plans which are best financial investments and displaying the effects of each of a range of decision variables.
Hydrologic Engineering Center Flood Damage Analysis Version 1.2.4 (Economic Computation)	Provides the capability for integrated hydrologic engineering and economic analysis for formulating and evaluating flood risk management plans using risk-based analysis methods. The program will be used to evaluate and compare the future without and project plans to aid in the selection of a recommended plan to manage flood risk.

a. Engineering Models. The following engineering models are anticipated to be used in the development of the decision document:

Model Name and Version	Brief Description of the Model and How It Will Be Applied in the Study
TUFLOW	Flooding problems in Battle Mountain were mainly due to flow obstruction by I-80, HW 40, railway and other local roadways in conjunction with insufficient conveyance capacity of culverts installed in those embankments. A two-dimensional model which has the hydraulic modeling capability in one-dimensional culvert simulations for all possible flow regimes (inlet or outlet controls) is required for this project. TUFLOW (Two-dimensional unsteady flow) program is a two-dimensional (2D) and one-dimensional (1D) hydrodynamic/flood simulation software. The program will be used for unsteady flow analysis to evaluate the future without and with-project conditions and to generate flood plain mappings as input data for Econ FDA analysis.
MCACES II	Micro-Computer Aided Cost Estimating System (MCACES) Second Generation (MII) – The approved software/tool to produce cost estimates.

10. REVIEW SCHEDULES AND COSTS

ATR Schedule

Task	
Complete DPR Update	FY 14
Complete Redesign	FY 15

Start Construction	FY 16
Complete Construction	FY 17

Estimated Costs for Battle Mountain DPR Update

	FY13	FY14
Cost Engineering	\$0.00	\$47,870.00
Cultural Resources	\$3,728.00	\$17,528.00
Environmental	\$7,366.00	\$0.00
Planning	\$17,035.00	\$90,507.00*
Hydrology	\$14,010.00	\$18,415.00
Civil Design	\$9,903.00	\$93,118.00
Economics	\$0.00	\$78,147.00
Hydraulics	\$110,389.00	\$101,497.00
Real Estate	\$0.00	\$70,478.00
Geotech	\$16,724.00	\$57,500.00
PM	\$20,450.00	\$57,460.00
Budget Analyst	\$5,800.00	\$10,000.00
P2	\$6,300.00	\$10,000.00
Total	\$211,705.00	\$652,520.00

Projected DPR Update Cost \$864,225.00

*Cost includes
development of DPR,
final review and
processing.

a. ATR Schedule and Cost. TBD. Total project costs will be updated when funding is available for additional PDT input.

b. Type I IEPR Schedule and Cost. TBD. Total project costs will be updated when funding is available for additional PDT input.

c. Type II IEPR Schedule and Cost. The RMC will identify someone independent from the PDT to scope the IEPR and develop an Independent Government Estimate. The Sacramento District will provide funding to the IEPR panel and for RMC support for the IEPR. The next milestone review for Type II IEPR will occur during the PED phase.

d. Model Certification/Approval Schedule and Cost. All models are certified or approved for use without further model review except for TUFLOW. The hydrology and hydraulic models will be certified as part of the ATR by the Hydraulic Engineering Center. Cost/Schedule risk analysis and the MCACES will be certified by the Cost Center of Expertise also as part of the ATR. As additional information becomes available, this Review Plan will be updated.

11. PUBLIC PARTICIPATION

State and Federal resource agencies may be invited to participate in the study covered by this review plan as partner agencies or as technical members of the PDT, as appropriate. 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. This study will include a public involvement program designed to meet NEPA requirements; solicit public and government agency input.

12. REVIEW PLAN APPROVAL AND UPDATES

The home MSC Commander is responsible for approving this review plan and ensuring that use of the Model Programmatic RP 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 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 determining that the use of the Model Programmatic 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. The latest version of the review plan, along with the Commanders' approval memorandum, will be posted on the home district's webpage.

13. REVIEW PLAN POINTS OF CONTACT

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

- SPK contact, Karin Lee, 916-557-7987, Karin.Lee@usace.army.mil
- MSC contact, Karen Berresford, 415-503-6557, Karen.G.Berresford@usace.army.mil
- FRM PCX contact, Dean McLeod, 916-557-5491, Dean.M.McLeod@usace.army.mil

ATTACHMENT 2: SAMPLE STATEMENT OF TECHNICAL REVIEW FOR DECISION DOCUMENTS

COMPLETION OF AGENCY TECHNICAL REVIEW

The Agency Technical Review (ATR) has been completed for the Section 205 CAP Study for Battle Mountain, Nevada. The ATR was conducted as defined in the project's Review Plan to comply with the requirements of EC 1165-2-214. During the ATR, compliance with established policy principles and procedures, utilizing justified and valid assumptions, was verified. This included review of: assumptions, methods, procedures, and material used in analyses, alternatives evaluated, the appropriateness of data used and level obtained, and reasonableness of the results, including whether the product meets the customer's needs consistent with law and existing US Army Corps of Engineers policy. The ATR also 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

Name

ATR Team Leader

Office Symbol/Company

Date

SIGNATURE

Michelle Kuhl

Project Manager

CESPK-PD-WF

Date

SIGNATURE

Name

Review Management Office Representative

Office Symbol

Date

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

Rick Poppleman

Chief, Engineering Division

CESPK-ED

Date

SIGNATURE

Alicia E. Kirchner

Chief, Planning Division

CESPK-PD

Date

¹ Only needed if some portion of the ATR was contracted

ATTACHMENT 3: REVIEW PLAN REVISIONS

Revision Date	Description of Change	Page / Paragraph Number

ATTACHMENT 4: ACRONYMS AND ABBREVIATIONS

<u>Term</u>	<u>Definition</u>
AFB	Alternative Formulation Briefing
ATR	Agency Technical Review
DPR	Detailed Project Report
DQC	District Quality Control/Quality Assurance
MCX	Mandatory Center of Expertise
EA	Environmental Assessment
EC	Engineer Circular
EIS	Environmental Impact Statement
ER	Engineering Regulation
FEMA	Federal Emergency Management Agency
FRM-PCX	Flood Risk Management Planning Center of Expertise
Home District/MS	The District or MSC responsible for the preparation of the decision document
HQUSACE	Headquarters, U.S. Army Corps of Engineers
IEPR	Independent External Peer Review
MSC	Major Subordinate Command
NED	National Economic Development
NEPA	National Environmental Policy Act
O&M	Operation and maintenance
OMRR&R	Operation, Maintenance, Repair, Replacement and Rehabilitation
PDT	Project Delivery Team
PMP	Project Management Plan
RMC	Risk Management Center
SAR	Safety Assurance Review
USACE	U.S. Army Corps of Engineers
WRDA	Water Resources Development Act

ATTACHMENT 5: CESPDP SUPPLEMENTAL REVIEW PLAN CHECKLIST

Review Plan: Battle Mountain, Section 205 CAP Study

Date of review:

Reviewed by:

References: CESPDP R 1110-1-8, Appendix C, Planning; EC 1165-2-214, Civil Works Review Policy

Note: Any "No" answer requires explanation in the comment field.

	Item	Yes	No	Comment
1	Is there a Technical Review Strategy Session identified early in the study process? (See Appendix C paragraph 8.2)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	(TRSS not included as part of the draft review plan.)
2	Are potential Continuing Authority Program (CAP) "spinoffs" identified, along with the appropriate QCP identified for them?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	No spinoffs are identified.
3	Are the review costs identified?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	TBD. Total project costs will be updated when funding is available for additional PDT input.
	For District Quality Control (DQC)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	ATR?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	
	Independent External Peer Review (IEPR)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A to Section 205 study.
4	Does the RP identify seamless DQC technical review (8.4), including supervisory oversight of the technical products? (See Appendix C paragraph 8.5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
5	Does the RP identify the recommended review comment content and structure? (See Appendix C paragraph 8.5.4)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
6	Does the RP encourage face-to-face resolution of issues between the PDT and reviewers? (See Appendix C paragraph 8.5.5)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
7	If issues remain, does the RP must identify an appropriate dispute resolution process? (See Appendix C paragraph 8.6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
8	Does the RP require documentation of all significant decisions, and leave a clear audit trail? (See Appendix C paragraph 8.5.6)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
9	Does the RP identify all requirements for technical certifications? (See Appendix C paragraph 8.5.7)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
10	Does the RP identify the requirement that without-project hydrology will be certified by the Feasibility Scoping Meeting? (See Appendix C paragraph 8.5.8)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	All models are certified or approved for use without further model review except for TUFLOW.
11	Does the RP fully address products developed by contractors? (See Appendix C paragraph 8.10)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	RP notes that all products developed by contractor are subject to DQC; plan specifies all products (full report) is subject to ATR.

	Item	Yes	No	Comment
12	Is the need for a VE study identified, and incorporated into the review process, after the feasibility scoping meeting? (See Appendix C paragraph 8.11)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	VE study for this size CAP project required at 35% plans/specs. Will be part of implementation review plan.
13	Does the RP include a Feasibility Alternative Review Milestone, where CESPД buy-in to the recommended plan is obtained? (See Appendix C paragraph 12.1)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Milestone previously accomplished. PADD will be prepared to confirm feas. assumption. Should reformulation be necessary, an Alternative Review Milestone will be held.
14	Does the RP identify the final public meeting milestone? (See Appendix C, Enclosure 1, SPD Milestones)	<input type="checkbox"/>	<input checked="" type="checkbox"/>	Milestone previously accomplished. If a new environmental document for NEPA compliance is necessary, a public meeting will be held.
15	Does the RP identify the report approval process, and if there is a delegated approval authority?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
16	Does the RP reference CESPД milestones, along with PGN milestones?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	
17	Have regional Indefinite Delivery/Indefinite Quantity (IDIQ) contracts been surveyed for potential AE support in the Review Plan process.	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Type I IEPR– contract w/OEO Type II IEPR – contract w/AE contractor or arrange with another govt. agency to manage IEPRs.
18	Did you confirm that the PED agreement is consistent with the engineering scopes of work for the Design Documentation Reports (DDR's) and Engineering Documentation Reports (EDR's) if applicable?	<input checked="" type="checkbox"/>	<input type="checkbox"/>	N/A
19	Has the PED agreement been revisited/scheduled for discussion with Engineering Division (and others) after the AFB	<input type="checkbox"/>	<input checked="" type="checkbox"/>	N/A

29 Aug Responses to Comments for Battle Mn Review Plan

1. **Comment:** Please add BCOES as a review level in the text where appropriate.
Response: BCOES had been added in Section 1. b. references.
2. **Comment:** In Sec 2, discuss the role of the RMC, e.g., as the RMO for the SAR.
Response: In Sec 2, the following has been added: "For the SAR Type II IEPR, review of the Plans and Specifications will be conducted by the RMC which is the RMO for Engineering documents. The RMO for Planning decision documents is SPD."
3. **Comment:** Please consider improving the legibility and quality of Figure 1.
Response: Figure 1. has been enlarged and reprinted.
4. **Comment:** In Section 5, please note that there are now stricter requirements for membership on the ATR teams for engineering positions (i.e., at a minimum, 20 years experience in the field or 5 years with a PE registration.)
Response: In Section 5.b., the following has been added: "Stricter requirements for membership on the ATR teams for engineering positions now require a minimum of 20 years experience in the field or 5 years with a PE registration."
5. **Comment:** Please include in the table of Sec 5.b, any model expertise required for each member (e.g., TUFLOW for the Hydraulics SME).
Response: model expertise has been added for Planning – IWR Plan Ver. 3.3, Hydraulic Engineering – Should have experience in Tuflow (a two-dimensional unsteady flow) a two-dimensional (2D) and one-dimensional (1D) hydrodynamic/flood simulation software.
6. **Comment:** Please reconsider the expertise for the SAR panel. The costs can be significantly reduced by refining this to the engineering and construction SMEs.
Response: Table on page 12-13 indicates IEPR I and IEPR II members to be considered, and that Con Ops is to be included in the development of the RP during PED phase.
7. **Comment:** Please provide rough cost estimates for the project (e.g., the review costs, as these can be significant if not scoped to match the limitations of a CAP project).
Response: A rough estimate of project costs have been provided on page 16.

Levee Safety:

8. **Comment:** Page 5, last paragraph of Section c. - It is agreed that this project will need to undergo a Type II IEPR (SAR), however the statement that "EC 1165-2-214 requires that all projects addressing flooding or storm damage reduction undergo a Type II IEPR..." is not current (this was from EC 209). Please change to reflect EC 214, which says: "A Type II IEPR SAR shall be conducted on design and construction activities for any project where potential hazards pose a significant threat to human life."

Response: On Page 5 the following has been added: A Type II IEPR SAR shall be conducted on design and construction activities for any project where potential hazards pose a significant threat to human life."

9. **Comment:** Page 12, paragraph c. and IEPR Member table - The membership for a Type II IEPR (SAR) will not likely need to be as inclusive as the Type I. A SAR is typically performed by engineering disciplines. Please revise the SAR membership based on the questions posed in Section 5.f and 5.h of EC 214, Appendix E.

Response: (Same answer as #6).

10. **Comment:** Attachment 5. Checklist, Question 12 - Please include a paragraph in the main body of the Review Plan to describe VE studies.

Response: The following has been added in Section 3. a. to describe VE Studies:

" A Value Engineering (VE) Study will not be required during the feasibility phase for the decision document; however, it will be required in the Planning Engineering Design (PED) phase at 35% design complete.