

This chapter presents a summary of a meeting held February 2, 2012, at the Sacramento District of the US Army Corps of Engineers (USACE) office. The meeting was attended by Paul Detjens (CCCFCWCD), Carl Roner (CCCFCWCD), Ryan Larson (USACE), Scott Stonestreet (USACE), and Doug Moore (West Yost Associates). The purpose of the meeting was to review the range of possible modifications of the Walnut Creek Channel or Drop Structure 2 and to document the process of obtaining approval from the USACE for a proposed modification. A summary of the meeting is provided below in the following sections.

- Review of safety barriers, safety devices, and structure modifications
- Requirements for modifying the channel or drop structure
- Process for modifying the channel or drop structure
- Hydraulic analysis requirements
- Timing for implementing various improvements

6.1 REVIEW OF SAFETY BARRIERS, SAFETY, AND STRUCTURE MODIFICATIONS

USACE staff stressed the high energy nature of supercritical flow channels and expressed concern that any change to the channel or drop structure would need to be carefully studied. USACE staff were unaware of any prior uses of safety racks and nets in supercritical flow floodwater channels. Racks and nets could cause an increase of the water surface elevation or a hydraulic jump upstream of the rack or net. If a hydraulic jump occurred, it would cause the supercritical flow to jump to subcritical flow resulting in a large increase in the water depth and causing the flow to overtop the channel banks, which would result in flooding. Accumulation of debris on a rack or net could lead to even higher water levels and more flooding. However, the rack or net supports could be designed to fail if too much debris accumulated on the rack or net and caused an unacceptable increase in the upstream water level.

A hinged floating rack might be possible (see Section 4.5.3). The floats could be located in wells outside of the channel to minimize the obstruction of the channel. A hinged floating rack would be more feasible if the rack could normally be positioned above the water, and only lowered if a person was detected in the channel (e.g. with a thermal imaging camera). If testing showed that a rack would cause only a small rise in the upstream water level, then it may be possible to raise the channel walls upstream of the rack or net. If the testing showed that a hydraulic jump would occur, then raising of the channel walls would not be a feasible solution.

Safety cables crossing the channel in the supercritical flow would be very difficult for a person moving with channel flow (about 19 miles per hour in the Walnut Creek Channel upstream of Drop Structure 2) to grab and hold onto. Also, the cable would accumulate debris. Safety cables could be designed to fail if too much debris accumulated on the cable. Even if the safety cables were placed diagonally across the channel, it would still be difficult to grab for a person in the channel and hold onto them. Safety cables along the sides of the channel could be used. Safety cables are not typically used across supercritical channels. Concerns were voiced that cables may cause injury or death if a floating person hit them at high velocity. Safety cables in the subcritical flow in the Drop Structure 2 stilling well would probably be acceptable.

USACE staff were unaware of any uses of thermal imaging cameras for detecting people in the channels.

Ladders could be installed at intervals along the channel, but it would be very difficult for a person in the channel to grab and hold onto a ladder if moving about 19 miles per hour with the fast flowing water in the channel.

In the Los Angeles area which has a number of supercritical channels similar to the District, rescue personnel receive swift water rescue training. Rope anchors are installed along the channels for use by rescue personnel. Calculation of the time for a person to float from one location to a potential rescue location is valuable information for rescue personnel.

Baffles chutes are used in dam spillways for energy dissipation, and could potentially be used in the Walnut Creek Channel. However, it is uncertain if baffle chutes are safer than the existing drop structure because a person flowing down the chute could impact or be trapped on the baffles. Installation of baffle chutes would also require that the existing channel be widened so that the flow depth would not be greater than the height of the baffles.

6.2 REQUIREMENTS FOR MODIFYING THE CHANNEL OR DROP STRUCTURE

The requirements for modifying the Walnut Creek Channel or Drop Structure 2 are provided in the Code of Federal Regulations, specifically 33 CFR 208.10 - Local flood protection works; maintenance and operation of structures and facilities. The specific requirements are provided in paragraph (a) (5), which states:

- No improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the District Engineer of the Department of the Army or his authorized representative that such improvement, excavation, construction, or alteration will not adversely affect the functioning of the protective facilities. Such improvements or alterations as may be found to be desirable and permissible under the above determination shall be constructed in accordance with standard engineering practice. Advice regarding the effect of proposed improvements or alterations on the functioning of the project and information concerning methods of construction acceptable under standard engineering practice shall be obtained from the District Engineer or, if otherwise obtained, shall be submitted for his approval. Drawings or prints showing such improvements or alterations as finally constructed shall be furnished the District Engineer after completion of the work.

6.3 PROCESS FOR MODIFYING THE CHANNEL OR DROP STRUCTURE

Because the Walnut Creek Channel and Drop Structure 2 were constructed by the USACE, modification of the channel or drop structure will require approval by the USACE. Guidance for requesting and receiving approval of modifications is provided in the October 2006 and November 2008 Section 408 Guidance Memoranda prepared by the USACE (see Appendix 6A for copies of these memoranda [USACE 2008] and [USACE 2006]). Depending on the modification, approval by the USACE could be provided from one of two levels, including:

- Sacramento District – Districts can approve relatively minor, low impact alterations/modifications related to the operation and maintenance responsibilities of the non-Federal sponsor, such as pump houses, stairs, pipes, trails, sidewalks, fences, drive ways, and power poles, provided these modifications do not adversely affect the functioning of the project and flood fighting activities.
- Chief of Engineers (Head Quarters USACE, HQUSACE) – The Chief of Engineers must approve significant modifications like degradation, raising, realignment, and other modifications that can't be approved by the District. The Chief of Engineers review is to ensure the project is not injurious to the public interest and will not impair the usefulness of the completed project (Walnut Creek Project).

For modifications that would be approved by the Sacramento District, the Sacramento District will review the proposed project geotechnically, hydraulically, and operationally to ensure that the proposed project did not adversely affect the functioning of the Walnut Creek Project.

Several of the modifications of the Walnut Creek Channel or Drop Structure 2 under evaluation by the CCCFCWCD could result in the potential to cause a hydraulic jump in the supercritical flow channel or could result in replacement of Drop Structure 2 with another type of drop structure. These types of modifications would most likely require approval from the Chief of Engineers. In order to receive approval from Chief of Engineers, the following items are required (as listed in references [USACE 2008] and [USACE 2006]):

- Written request for approval of the project modification including
 - Detailed description of the modification
 - Purpose and need of the modification
 - An appropriate map or drawing
- Technical analysis and adequacy of design
 - Geotechnical evaluation
 - Risk and uncertainty analysis
 - Structural evaluation
 - Hydraulic and hydrology evaluation (this evaluation will have to provide strong proof that the modified structure will function correctly)
 - Operational and maintenance requirements
- Real estate analysis
- Analysis of residual risk including a risk analysis
- Administrative record for key decisions for related actions
- Evaluation of Executive Order 11988 considerations, including justification to construct in the floodplain and a no practical alternative determination
- Environmental protection compliance such as National Environmental Policy Act (NEPA), California Environmental Quality Act (CEQA), Endangered Species Act, Fish and Wildlife Coordination Act, Clean Air Act, National Historic Preservation Act, Noise Control Act, and others

All documents submitted to the USACE will receive an Agency Technical Review (ATR) by the Sacramento District. If the modification requires approval by the Chief of Engineers, a Type II Independent Peer Review (Safety Assurance Review) must be completed prior to submission to HQUSACE. The documents will be submitted to the HQUSACE Regional Integration Team. The final decision document products include supporting engineering analysis at the level of detail for preconstruction engineering and design. The submittal package will also include the District's memorandum requesting approval, the Major Subordinate Command endorsement, and the following:

- A description of all other flood and/or storm risk management actions in the watershed.
- A copy of related credit requests and a description of the sponsor's intent to seek credit or reimbursement, if applicable.
- A risk analysis (this analysis incorporates risk and uncertainty in a flood damage evaluation).
- The District's analysis of policy and legal compliance aspects of the proposed modification.
- The District Engineer's determination that the proposed modification will meet the USACE engineering and safety standards, and will not have significant effects on the functioning of the protective facilities.
- Prior HQUSACE guidance on modification of the project and other damage reduction projects in the watershed.
- A public interest determination.
- Discussion of indirect effects.
- The other documents listed above (on page 6-3).

The project applicant would prepare and submit all of the items listed above. The USACE would review the items.

6.4 HYDRAULIC ANALYSIS REQUIREMENTS

Any modification to the channel or drop structure would require a hydraulic analysis suitable for the Section 408 application to the USACE. Four levels of analysis are feasible, including:

- HEC-RAS (1 dimensional)
- 2-dimensional computational modeling
- 3-dimensional computational modeling
- Physical scale modeling

According to the USACE, physical scale modeling would be the preferred method for evaluating potential alternative configurations to the Walnut Creek Channel and Drop Structure 2. However, preliminary evaluations of alternatives could hypothetically be performed with 1-, 2- or 3-dimensional computational modeling for screening purposes. Given the complexity of the existing channel/drop structure configuration, any significant modifications to the channel or drop structure would require a physical model to confirm the hydraulic performance of the modifications prior to receiving approval from the USACE.

6.5 TIMING FOR IMPLEMENTING VARIOUS IMPROVEMENTS

The following items could be implemented with USACE approval by the Sacramento District. Approval at the Sacramento District would require about three months.

- Fencing and fence repairs
- Vehicle guard rails
- Warning signs
- Escape ladders
- Thermal imaging systems
- Safety rings
- Safety cables along the sides of the channel in either the subcritical or supercritical channel sections
- Safety cables crossing the channel in the subcritical flow channel just downstream of Drop Structure 2
- Anchors for use by rescue personnel

The following items would probably require approval by the Chief of Engineers at HQUSACE.

- Safety racks, safety nets, and safety cables in the supercritical flow channel, which could cause a hydraulic jump, which in turn would require raising of the channel banks. Structural modifications like sloped baffle chutes, grouted sloping boulder drop structures, vertical hard basin drop structures, and replacement of the concrete channel with a restored stream channel.

The USACE reviews the applicant prepared documentation throughout the permitting process and the durations for those reviews are generally fixed. The project sponsor is in control of the schedule as they prepare the documents and address comments provided by the USACE. A reasonable time estimate to complete the documentation necessary for approval of a significant modification is 1.5 years.

6.6 REFERENCES

[USACE 2008] Memorandum on Clarification on the Policy and Procedural Guidance for the Approval of Modification and Alteration of Corps of Engineers Projects, dated November 17, 2008.

[USACE 2006] Memorandum for Major Subordinate Commands, Memorandum on Clarification on the Policy and Procedural Guidance for the Approval of Modification and Alteration of Corps of Engineers Projects, dated October 23, 2006.

APPENDIX 6A

USACE Guidance Documents



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
441 G STREET NW
WASHINGTON, D.C. 20314-1000

CECW-PB

OCT 23 2006

MEMORANDUM FOR MAJOR SUBORDINATE COMMANDS

SUBJECT: Policy and Procedural Guidance for the Approval of Modification and Alteration of Corps of Engineer Projects

1. REFERENCES:

- a. ER 1165-2-119, dated 20 September 1982, Modifications to Completed Projects
- b. 33 CFR 208.10, Local flood protection works; maintenance and operation of structures and facilities
- c. 33 USC 408, Taking possession of, use of, or injury to harbor and river improvements
- d. 33 CFR 320.4, General policies for evaluating permit applications
- e. Section 404 of the Clean Water Act
- f. Section 10 of the River and Harbors Act of 1899

2. PURPOSE. Recent events have demonstrated the need to provide clarification and additional guidance on the policy and procedures for dealing with proposals to modify or alter completed Corps of Engineers projects that are either locally or federally maintained. Often requests for modifications to Corps projects come up in the context of Section 404 permitting actions or for modifications to existing Corps projects for the purposes of O&M. This memorandum addresses the use of the appropriate authority and the proper level of approval for such proposals.

3. BACKGROUND.

a. ER 1165-2-119 provides policy and guidance on the modification of completed Corps of Engineers projects, and describes the specific circumstances under which modifications can be approved and accomplished. In general, proposed significant modification of a completed project, involving new Federal construction or real estate acquisition, and any proposed modification that would make the project serve new purposes, or increase the scope of services to authorized purposes beyond that intended at the time of construction, or to extend services to new beneficiaries (areas), requires authorization by Congress. There may be instances where reporting officers find that proposed significant changes to a completed project may be desirable, in which case investigations may be undertaken to document the need for and the feasibility of such project modifications. To the extent practicable, such changes should be accomplished under existing authorities. However, the circumstances under which such modifications can be approved and made are limited, as discussed in the ER, and are briefly summarized below.

b. For projects constructed, operated and maintained by the Corps, the Corps may, as part of its operations and maintenance efforts, make reasonable changes and additions needed to

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properly operate the project or minimize maintenance. In addition, multiple purpose projects operated and maintained by the Corps may be modified within existing authorities for dam safety assurance, changes in water control plans, addition of water supply, changes to meet water quality needs, and recreation and fish and wildlife enhancement, as discussed in the ER. The Chief of Engineers also has limited discretion to modify navigation projects. For Corps-constructed projects operated and maintained by local interests, any proposed Federal work at these projects usually requires congressional authorization, with the exception of work required to correct a design deficiency.

c. Guidance on the responsibilities for the operation and maintenance of local protection projects is found in 33 CFR 208.10. This regulation describes local sponsors' responsibilities for operating and maintaining the structural soundness and functionality of the project in order to assure that the project meets its authorized purposes. Specifically, 33 CFR 208.10 a (5) requires that "no improvement shall be passed over, under, or through the walls, levees, improved channels or floodways, nor shall any excavation or construction be permitted within the limits of the project right-of-way, nor shall any change be made in any feature of the works without prior determination by the District Engineer" that such changes will not adversely affect the functioning of the protective facilities. The types of changes that can be considered and approved by a District Engineer under 33 CFR 208.10 are relatively minor, low impact modifications, such as pipes or pipelines proposed to pass over or through a Federal work, or a road or similar type of infrastructure improvement proposed to pass over a Federal levee. Such minor proposed modifications are considered part of a District Engineer's responsibilities related to normal O&M of such facilities. Any proposed modification of a Federal work, such as a levee or channel, which would involve significant changes to the authorized project's scope, project purpose, or functioning, cannot be approved by the District Engineer, but instead must be forwarded through the Division Commander for the approval of the Chief of Engineers, as explained hereinafter. That is, any proposed change to a Federal work exceeding the level of ordinary District O&M responsibilities for a project must be sent through the Division Commander to the Chief of Engineers for approval, as discussed in the following paragraphs.

d. Any proposed modification to an existing Corps projects (either federally or locally maintained) that go beyond those modifications required for normal O&M require approval under 33 USC 408. 33 USC 408 states that there shall be no temporary or permanent alteration, occupation or use of any public works including but not limited to levees, sea walls, bulkheads, jetties and dikes for any purpose without the permission of the Secretary of the Army. Under the terms of 33 USC 408, any proposed modification requires a determination by the Secretary that such proposed alteration or permanent occupation or use of a Federal project is not injurious to the public interest and will not impair the usefulness of such work. The authority to make this determination and to approve modifications to Federal works under 33 USC 408 has been delegated to the Chief of Engineers.

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4. POLICY.

Any significant alteration or modification to either a locally or federally maintained Corps of Engineers project must be approved by the Chief of Engineers under 33 USC 408 unless covered by ER 1165-2-119. Modifications to a Corps projects beyond those necessary to properly operate the project or to minimize maintenance costs as well as any significant alteration or modification requested by any non-Federal interest for their own benefit also requires the Chief's approval under 33 USC 408.

5. PROCEDURES.

a. The following information will be provided with any request for the approval of significant modifications or alterations to a locally or federally maintained Corps project requiring the Chief of Engineers approval under 33 USC 408.

1. A written request by the non-Federal interests for approval of the project modification/alteration.
2. A physical and functional description of the existing project
3. A detailed description of the proposed modification
4. The purpose/need for the modification
5. A description of any related, ongoing Corps studies/efforts in the watershed
6. A Public Interest Determination
7. Appropriate NEPA documentation
8. Any Administrative Record
9. A discussion of indirect effects
10. A discussion of E.O. 11988 Considerations
11. Technical Analysis
 - Technical adequacy of the design
 - Changes in water surface profiles and flow distribution
 - Assessment of anticipated local and system-wide resultant impacts, i.e., impacts on system integrity
 - Upstream and downstream impacts of the proposed alterations, including potential impacts to existing floodplain management and water control management plans of Federal projects within the basin
 - A discussion of residual risk

b. If there is an associated Section 404/10 permit action, the required public interest and technical evaluations under 33 USC 408 can be done concurrently with that action. Upon completion of the public interest determination and of the technical analyses regarding the impact of the proposed modification on the usefulness of the project, the District Engineer will make a recommendation (with supporting documentation) through the Division Commander to

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the Chief of Engineers (Attn: Appropriate RIT) for his consideration and approval under 33 USC 408. The District Engineer will make the final Section 404/10 permit decisions following the Chief of Engineers decision under 33 USC 408. A minimum of 30 days must be allowed for HQUSACE review.

c. For locally operated and maintained Corps projects, the operations and maintenance for any approved project modifications or alterations will be the responsibility of the non-Federal sponsor and the Project Cooperation Agreement or other appropriate document must be updated to address non-Federal sponsor responsibilities for the approved modifications.

6. If the desired modifications cannot be suitably pursued or approved under any of the preceding approaches, additional congressional authorization may be required. Section 216 of the Flood Control Act of 1970 is the appropriate authority to use to consider such modifications.

7. Consideration will be given to further delegation of the approval authority to a lower level as we gain more experience with the types of changes that are proposed for approval under 33 USC 408.

FOR THE COMMANDER:


for DON T. RILEY
Major General, USA
Director of Civil Works

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SUBJECT: Policy and Procedural Guidance for the Approval of Modification and Alteration of Corps of Engineer Projects

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DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS
WASHINGTON, D.C. 20314-1000

REPLY TO
ATTENTION OF:

NOV 17 2008

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MEMORANDUM FOR SEE DISTRIBUTION

SUBJECT: Clarification Guidance on the Policy and Procedural Guidance for the Approval of Modifications and Alterations of Corps of Engineers Projects

1. References:

- a. CECW-PB Memorandum dated 23 October 2006, Policy and Procedural Guidance for the Approval of Modifications and Alterations of Corps of Engineers Projects.
- b. ER 1105-2-101, Planning - Risk Analysis for Flood Damage Reduction Studies, dated 3 January 2006.
- c. CECW-HS Memorandum dated January 23, 2008, Subject: Guidance for the Prioritization of Fiscal Year (FY 2008) Levee Safety Program Inspection Funds.
- d. EM 1110-2-1619, Risk Based Analysis for Flood Damage Reduction Studies, dated 1 August 1996.
- e. ER 1110-2-1150, Engineering and Design for Civil Works Projects, dated 31 August 1999.
- f. ER 1165-2-502, Delegation of Review and Approval Authority for Post-Authorization Decision Documents, dated 31 March 2007.
- g. ER 1105-2-100, Appendix H, Policy Compliance Review and Approval of Decision Documents, November 2007.
- h. ER 1110-1-12, Quality Management, dated 30 September 2006.

2. Purpose: The purpose of this memorandum is to provide additional clarification and to supplement reference 1a, which remains in effect. This memorandum addresses approval levels for various types of alterations/modifications under 33 U.S.C. 408; the application of risk analysis to the required engineering studies, review requirements, report processing requirements, and appropriate funding mechanisms and focuses primarily on flood risk management projects.

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3. Policy:

a. Application of 33 CFR 208.10 and 33 U.S.C. 408.

(1) 33 U.S.C. 408 authorizes the Secretary of the Army to permit alterations/modifications to existing Corps projects in certain circumstances. The Secretary of the Army has delegated this approval authority to the Chief of Engineers. In addition, the authority to approve relatively minor, low impact alterations/modifications related to the operation and maintenance (O&M) responsibilities of the non-Federal sponsors has been further delegated to the District Engineer for approval in accordance with 33 CFR 208.10. The types of alterations/modifications that can be approved by a District Engineer include placement of structures such as pump houses, stairs, pipes, bike trails, sidewalks, fences, driveways, power poles, and instrumentation provided these alterations/modifications do not adversely affect the functioning of the project and flood fighting activities. If proposed changes are limited to restoring the authorized level of protection or improving the structural integrity of the protection system and do not change the authorized structural geometry or hydraulic capacity, they may be approved in accordance with 33 CFR 208.10. The authorized level of protection is intended to be the top of the levee associated with the design water surface plus appropriate freeboard including consideration for subsidence. Alterations/modifications approved by the District Engineer in accordance with 33 CFR 208.10 are considered within the O&M responsibilities of the non-Federal sponsor and will be implemented by the non-Federal sponsor at no cost to the federal government and are not eligible for credit.

(2) The types of alterations/modifications under 33 U.S.C. 408 that require approval by the Chief of Engineers include degradations, raisings, and realignments and other alteration/modifications not discussed in paragraph 3a(1) above, to the flood protection system. In instances where it is not clear if the proposed alteration/modification is within the authority delegated to the District Engineer for approval in accordance with 33 CFR 208.10 or when the proposed alteration/modification requires approval by the Chief of Engineers, there must be an engineering analysis conducted with consideration of the full range of loading conditions to determine the impact of the alteration/modification on systems performance (flood elevations and structural integrity). Such alterations/modifications include non-Federal levee tie-ins, ramps, riverside landscaping, retaining walls, fill against a levee (such as railroad trestles and overbuild), bridges, relief wells, seepage berms, and stability berms. If the engineering analysis indicates that system performance is adversely impacted by the alteration/modification, then the proposed alteration/modification must be submitted for approval by the Chief of Engineers. The “system performance” includes the portions of the watershed above and

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below the proposed site of alterations/modifications to the extent that adverse impacts can be identified. "Adverse impacts" include any significant increase in risk to public safety.

(3) Regulatory approval under Section 404 of the Clean Water Act and Section 10 of the Rivers and Harbors Act of 1899 for a structure within the waters of the United States does not, by itself, constitute approval for a project alteration/modification.

b. Risk Analysis.

(1) Non-Federal proposals to degrade, raise, or realign existing Corps projects under 33 U.S.C. 408 should be evaluated as new construction of Federal projects and the potential impact of these changes, including system impacts, must be evaluated in accordance with Corps regulations and policy. A risk analysis will be applied to all evaluations of alterations/ modifications to Corps flood damage reduction projects to be approved under 33 U.S.C. 408 in accordance with ER 1105-2-101 and shall apply to the following:

(a) Projects, whether with or without Federal funding, where an ongoing or proposed study considers alternative solutions,

(b) Where the proposed alterations/modifications under 33 USC 408 may impact levees within the purview of forthcoming EC 1110-2- 6067 (formerly known as draft ETL 1110-2-570), Certification of Levee Systems for the National Flood Insurance Program (NFIP) dated 30 September 2008.

(c) Alterations/modifications for which the non-Federal sponsor requests or intends to request credit either under Section 104 of WRDA 1986 or Section 2003 of WRDA 2007.

(2) Risk analysis is not required when evaluating the performance of an existing system where consideration of alternative solutions, USACE certification, or credit are not involved. Even though ER 1105-2-101, Section 6, Variables in a Risk Analysis, includes geotechnical and structural analysis, the risk and uncertainty analysis for evaluation of potential system impacts is limited to the hydrologic and hydraulic parameters. Impacts will be determined by comparing performance parameters as presented in ER 1110-2-101 for the existing or base condition to the condition resulting from the project alteration/modification. The base performance conditions are defined by authorized project features. USACE has provided technical guidance in EM 1110-2-1619, but has yet to fully develop the guidance needed to analyze risk and uncertainty for the geotechnical and structural performance of a system. Until such guidance is developed, deterministic procedures are appropriate for demonstrating geotechnical and structural integrity under the full range of loading conditions. For loading conditions

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where flood waters exceed the level of protection, the analysis shall include a breach analysis to assess impacts within the system. Under no circumstances will the analysis assume failure of any component of the levee or flood wall system for the flood up to the top of protection as a means to relieving systems impacts.

(3) The district and the non-Federal sponsor should work together to provide an appropriate assessment that incorporates state of the art analyses of other areas of uncertainty. Specific areas of concern include seismic stability, impacts of the overtopping loading conditions and potential impacts to interior drainage. Specific to seismic stability, the studies need to demonstrate that under normal operating conditions failure will not result in unexpected release of flows that would impact project performance.

c. Review Requirements.

(1) All documents submitted by the non-Federal sponsor for consideration under 33 U.S.C. 408 will require an Agency Technical Review (ATR). The ATR may be accomplished by the home district in which the proposed alteration/modification is under consideration. Vertical team coordination is required to assure technical requirements are met throughout the process. This coordination can be accomplished through In-Progress-Reviews (IPR) and during interim draft documentation review.

(2) In addition, documents submitted by the non-Federal sponsor for consideration under 33 U.S.C. 408 that require approval by the Chief of Engineers must undergo a Type II Independent External Peer Review (this is the Safety Assurance Review (SAR) set out under Section 2035 of WRDA 2007) prior to submission of the request for approval to HQUSACE. When the Corps is concurrently performing investigations that will entail a safety assurance review, the SAR for the overarching study will suffice but must be completed prior to initiation of construction. In cases where no Corps investigations are ongoing, an SAR on the proposed alteration/modification must be performed. The SAR must be performed by the non-Federal sponsor prior to a request for approval of the proposed alteration/modification. Guidance on the conduct of Independent External Peer Reviews, including Type II SAR's, is under development and will be forthcoming.

(3) Nothing in this guidance alters Division or District quality management responsibilities in accordance with ER 1110-1-12 and any associated regional guidance.

d. Report Review and Approval.

(1) Requests for approval by the Chief of Engineers of proposed alterations/modifications of an existing Corps project and the supporting documentation

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will be forwarded to the appropriate HQUSACE Regional Integration Team (RIT). The final decision document products shall include supporting Engineering analyses to the level of detail for preconstruction engineering and design in accordance with ER 1110-2-1150. ER 1110-2-1150 is being updated and is forthcoming. The submittal package will also include the District's memorandum requesting approval and the MSC endorsement of the request as well as the items listed in paragraph 5 of reference 1.a. and the following items:

- (a) A description of all other flood and/or storm risk management actions in the watershed, including current operations and proposed changes actively underway or planned for the future;
- (b) A copy of any related credit requests and a description of the sponsor's intent to seek credit and/or reimbursement, if applicable;
- (c) A risk analysis of the proposed alterations/modifications in accordance with ER 1105-2-101;
- (d) The District's analysis of the policy and legal compliance aspects of the proposed alterations/modifications;
- (e) The District Engineer's determination that the proposed alterations/modifications will meet USACE engineering and safety standards, and will not have significant adverse affects on the functioning of the protective facilities; and
- (f) A copy of any prior HQUSACE guidance regarding alterations/modifications of the project and other damage reduction projects in the watershed.

(2) The RIT will forward the submittal package to CECW-PC for a policy compliance review in accordance with the paragraph 5 of reference 1 a. and the attached Section 408 Submittal Checklist. The policy compliance review results will be provided to the Chief of Engineers or designee prior to approval. The RIT will coordinate the results, as needed, to correct or improve the package as necessary to address significant concerns.

e. Funding.

At this time, funds have not been specifically appropriated by line item for review of proposals under 33 U.S.C. 408. Potentially available sources of funds for review activities include Inspection of Completed Works (ICW) funds and, if there is an ongoing funded project activity directly related to the 408 proposal, project funds. In certain circumstances for alterations/modifications necessary for Federal transportation projects,

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USACE may accept and expend funds provided by an State DOT agency pursuant to section 139(j) of Public Law 109-59 (codified at 33 U.S.C. 139(j)) provided the Secretary of Transportation finds such review activities directly and meaningfully contribute to an underlying transportation project. In such cases, USACE only may accept funds in amounts necessary to permit USACE to meet the time limits for environmental review established for the project and only may accept funds for activities beyond the normal and ordinary capabilities permitted by USACE's general appropriations. HQUSACE will continue to investigate other avenues of funding for Corps activities under 33 U.S.C. 408.

4. Vertical Teaming: Since it is impossible to anticipate each and every scenario, vertical teaming is a must when there is doubt as to the appropriate course of action related to the application of this guidance. Please coordinate through the appropriate HQUSACE's RIT as needed to ensure that analyses and submittals are in accordance with policy. A guide has been enclosed to help identify the minimum required actions. Other actions should be addressed as appropriate.

FOR THE COMMANDER:



STEVEN L. STOCKTON, P.E.
Director of Civil Works

Encl

DISTRIBUTION:
(See pages 7 and 8)

Final
11/12/08

Section 408 Submittal Package Guide

This guide is intended to ensure a complete submittal, aid the review process and serve as a guide for sponsors/applicants requesting approval of significant modifications or alterations to a locally or federally maintained Corps project requiring Chief of Engineers approval under 33 USC 408. Incomplete submittals will delay processing of applicant requests. This information will be submitted to the MSC for quality assurance review prior to making any recommendations to HQUSACE.

Applicant (Normally the Non-Federal Sponsor) Prepared Documents

1. Written request for approval of the project modification

- A detailed description of the proposed modification
- The purpose/need for the modification
- An appropriate map or drawing

2. Technical Analysis and Adequacy of Design. All necessary technical analysis should be provided. The list below is only a guide for typical items that would routinely be expected and is not intended to list every item that could be needed to make this determination.

- Geotechnical Evaluation.
 - Stability
 - Under seepage
 - Erosion Control
 - Vegetation
 - Material usage/borrow/waste/transport/hauling
- Structural
 - Bridges and related abutments
 - Pier penetrations of levee embankments
 - Diaphragm walls
 - Other structural components integral to the project
 - Gates or other operable features
- Hydraulic and Hydrology
 - Changes in inflow
 - Changes in water surface profiles and flow distribution
 - Assessment of local and system wide resultant impacts
 - Upstream and downstream impacts of the proposed alterations, including Sediment transport analysis as needed
 - Impacts to existing floodplain management

- Operation and Maintenance Requirements
 - Applicant facilities
 - Pre flood preparation
 - Post flood clean up
 - Sediment removal
 - Water control management plan
 - Impacts to other Federal projects within the basin
 - Corps facilities

3. Real Estate Analysis

- Reference ER 405-1-12, Chapter 12, Sections I and II.
 - Include:
 - Description of all Lands, Easements and Rights of Way required for the modification, including proposed estates
 - Description of all Lands, Easements and Rights of Way owned as a part of the authorized project
 - Maps clearly depicting both required real estate and existing real estate limits
 - Navigational servitude, facility relocations, relocation housing assistance and any other relevant factors

4. Discussion of Residual Risk. Discuss the changes to the existing level of risk to life, property as a result of the modification. Will the project incur damages more frequently as a result of flooding that will require Federal assistance under PL 84-99? Risk analysis will be used as the method for communicating residual risk.

5. Administrative record for key decisions for related actions for applicants proposed modification such as environmental reports, judges' decisions, permits, etc.

6. Discussion of Executive Order 11988 Considerations

- Justification to construct in the floodplain
 - No practicable alternative determination, if Federal agency, Agency determination.
- Public Notice Notifications

7. Environmental Protection Compliance. All 408 actions must be in full compliance with all applicable Public laws, executive orders, rules and regulations, treaties, and other policy statements of the Federal government and all plans and constitutions, laws, directives, resolutions, gubernatorial directives, and other policy statements of States with jurisdiction in the planning area. Examples are State water and air quality regulations; State historic preservation plans; State lists of rare, threatened, or endangered species; and State comprehensive fish and wildlife management plans. The District must maintain full documentation of compliance as part of the administrative record. The submittal package provided to HQUSACE will document considerations with significant bearing on decisions regarding the 408 request. Typically the minimum submission will include the following:

- National Environmental Policy Act. The appropriate NEPA process will be determined by the district in consultation with agencies that regulate resources that may be affected by the proposed action. All resources listed in Section 122 of the Rivers and Harbors Act 1970 must be considered. The evaluation will include a description and analysis of project alternatives, the

significance of the effects of each alternative on significant resources. Direct, indirect, and cumulative effects of all reasonably foreseeable actions including the actions of others and natural succession must be considered and documented. A risk analysis must be completed to determine the significance of risks to human life & safety, and property. Mitigation plans must be well described. If Federal funds are or may be involved the mitigation plan must be incrementally justified. NEPA documents will be consistent with 33 CFR 230.

- Endangered Species Act. Coordination/consultation with the US Fish and Wildlife Service and/or NOAA Marine Fisheries Service must be complete. Each agency with jurisdiction over a species that may be affected by the proposed action must provide a letter/memo indicating completion of ESA coordination. This documentation may range from a memo saying no ESA protected species or habitats are in the project impact area through a Biological Opinion.
- Fish and Wildlife Coordination Act. Either a Final FWCA Report or a letter from the USFWS stating that a FWCA Report is not required must be included.
- Marine Protection, Research and Sanctuaries Act For projects involving ocean disposal, or dredged material disposal within the territorial seas, the discharge will be evaluated under Section 103 of the MPRSA. The disposal must meet the criteria established by the EPA (40 C.F.R. 227 and 228). The submittal will document that that materials to be discharged are consistent with the current criteria and the disposal site is suitable.
- Wild and Scenic Rivers Act. The submittal will document efforts to identify designated rivers or river reaches (including potential rivers) in the vicinity of the project, and describe follow-up coordination with the agency having management responsibility for the particular river. If a designated river reach is affected, a letter indicating completed coordination is required from the managing agency.
- Coastal Zone Management Act. If the proposed action is in a coastal zone documentation of a "determination of consistency" with the state coastal zone management program the appropriate State agency (16 U.S.C 1456) must be included.
- Clean Air Act. This is a two-part compliance process. First, the submittal must include a determination that the proposed action is consistent with the Implementation Plan of the affected jurisdiction(s), and concurrence of the appropriate regulatory agency, or a conditional permit. Second, the submittal must include a letter from the USEPA that they have reviewed and commented on the environmental impact evaluations including the NEPA documents.
- HTRW. HTRW includes but is not limited to the Comprehensive Environmental Response, Compensation and Liability Act, the Resource Conservation and Recovery Act, and the Toxic Substances Control Act. The submittal package must include documentation that the USEPA and appropriate State and Tribal agencies with jurisdiction or expertise have been given reasonable opportunity to comment on the proposed action and that their input has been fully considered. The Corps will not incur additional liability related to HTRW.
- National Historic Preservation Act. This includes all other applicable historic and cultural protection statutes. The submittal package will include documentation that the Advisory Council on Historic Preservation, and appropriate State and Tribal agencies with jurisdiction or expertise has been given a reasonable opportunity to comment on the proposed action and that their input

has been fully considered. It is not expected that actual mitigation will be completed but appropriate letters indicating completed Consultation determination of significance must be provided.

- Noise Control Act. Documentation of the significance of noise likely to be generated during construction of the proposed project and the noise that may result due to implementation must be provided. If significant noise may result, a noise mitigation plan must be provided.

District Prepared Documents and Analysis of Applicants Request to be submitted to MSC

1. Transmittal letter to MSC Commander with district's determination of technical soundness and environmental acceptability.

a. A physical and functional description of the existing project

1. Name of authorized project
2. authorizing document
3. Law/Section/Date of project authorization
4. Law Sections/Dates of any post-authorization modifications
5. Non-Federal sponsor
6. Congressional Interests (Senator(s), Representative(s) and District(s))

b. Project Documents:

1. Type of Decision Document:
2. Agency Technical Review (ATR) approval Date
3. Independent External Peer Review (IEPR) approval date

c. Policy, Legal and Technical Analysis:

1. Is the original project authority adequate to complete the project as proposed?
2. Has the District Counsel reviewed and approved the decision document for legal sufficiency?
3. Have all aspects of ATR been completed with no unresolved issues remaining?
4. Have the District Commander documented policy/legal/technical compliance of the decision document?

d. Written request for approval of the project modification (applicant prepared)

1. A detailed description of the proposed modification
2. The purpose/need/rationale for the modification

e. A description of any related, ongoing Corps studies and studies by others within the watershed

f. A description and listing of other Corps projects, ongoing and completed, in the watershed

g. A description of any projected/anticipated credit (section 215/104, etc.) for project modification work and date credit agreement(s) signed

h. Sponsor letter of understanding of their responsibility to perform all required OMRR&R for project modifications. For approved alterations/modifications, the non-Federal sponsor shall revise/update the

O&M Manual to reflect the non-Federal O&M responsibilities and the O&M Manual shall be approved by the District Engineer.

i. Real Estate Analysis Review (District/Division)

j. Agency Technical Review (ATR), ER 1110-1-12 para. 3-8. (District coordinates review)

Provide a description of the technical review team, consolidate and analyze their comments, resolution of comments and district commentary on adequacy of technical support and submit to MSC. This is the section 408 technical analysis. *Prior coordination with MSC is required to determine ATR requirements for each submittal. New Quality Management ER under review will require all Agency Technical Review (ATR), formerly ITR, .*

2. If there is an associated Section 404/10 permit action, the required public interest and technical evaluations under 33 USC 408 can be done concurrently with that action. Upon completion of the public interest determination and of the technical analyses regarding the impact of the proposed modification on the usefulness of the project, the District Engineer will make a recommendation (with supporting documentation) through the Division Commander to the Chief of Engineers (Attn: Appropriate RIT) for his consideration and approval under 33 USC 408. The District Engineer will make the final Section 404/10 permit decisions following the Chief of Engineers decision under 33 USC 408.

- Where the 408 action requires an EIS and the Corps is the Lead Agency the District will draft the ROD, but it will not be signed until the Corps has completed its 408 analysis *and the Chief of Engineer's has issued 408 approval*. The Corps' ROD and the 408 request will be processed as concurrently as possible to reduce the delay between the 408 decision and ROD. Since the 408 approval requires the highest level of approval, the ROD will be signed in HQUSACE. After the 408 request is approved and the ROD is signed, the district may issue any needed Section 404/10 permits.
- Where the 408 action requires an EA and FONSI, the Corps is the lead Federal agency the District will prepare the EA and the District Engineer will draft the FONSI analyzing the 408 request and any other Corps action, and submit it to the Chief of Engineers for review and approval. After the 408 authorization is signed by the Chief of Engineers the District Engineer may sign the FONSI and issue any needed Section 404/10 permits

3. Coordination of Section 404/10 and NEPA compliance with 408 requests When Other Agencies are Involved

- HQUSACE has determined that the EIS for projects led by another Federal agency and including a component requiring Corps 408 authorization will require two RODs. The Lead Agency under NEPA will prepare a ROD for the overall project. The Corps would be a Cooperating Agency and thus be allowed to adopt the Lead Agency's EIS. The second ROD, will be specific to the Corps' actions, including the 408 approval and/or Section 404/10 permits. The District will draft the ROD, but it will not be signed until the Corps has completed its 408 analysis *and the Chief of Engineer's has issued 408 approval*. The Corps' ROD and the 408 request will be processed as concurrently as possible to reduce the delay between the 408 decision and ROD. Since the 408 approval requires the highest level of approval, the ROD will be signed in HQUSACE. After the 408 request is approved and the ROD is signed, the district may issue any needed Section 404/10 permits.

MSC prepared documentation and analysis of District submission

Policy and Legal Compliance Review

1. Has the MSC certified the legal/policy/technical and quality management of the decision document?
 2. MSC Legal certification approval date
 3. MSC certification of policy compliance date
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