

DEPARTMENT OF WATER RESOURCES

1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791



Permit No. 17782 GM

Three Rivers Levee Improvement Authority
915 Eighth Street, Suite 115
Marysville, California 95901-5273

Enclosed is your approved Reclamation Board Encroachment Permit Conditions.

Under the Standard General Condition Four (4) of the permit, you are required to accomplish the work under direction and supervision of the Department of Water Resources; therefore, you must advise the Department at 3310 El Camino Avenue, Sacramento, California 95821, attention Richard Marshall, telephone (916) 574-1213, at least ten days prior to starting your project. An addressed postcard is enclosed for your convenience.

Please note that the permit grants the work proposed in your application. This permit, in addition to the twelve (12) standard conditions, includes special conditions, which may place limitations on or require modifications to your project. You are advised to read all conditions prior to starting the project. Commencing any work under this permit shall constitute an acceptance of the provisions of the permit and an agreement to perform accordingly. This permit does not relieve you from the responsibility for obtaining authorization from any State, local, or federal agencies for your proposed project.

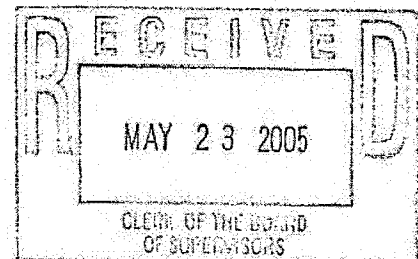
Please refer to your permit number when communicating with this office. For further information, contact Sam Brandon of my staff at (916) 574-0651.

Sincerely,

A handwritten signature in black ink, appearing to read "Mike Mirmazaheri".

Mike Mirmazaheri, Chief
Floodway Protection Section
Division of Flood Management

Enclosure



STATE OF CALIFORNIA
THE RESOURCES AGENCY
THE RECLAMATION BOARD

PERMIT NO. 17782 BD

This Permit is issued to:


Three Rivers Levee Improvement Authority
915 Eighth Street, Suite 115
Marysville, California 95901-5273

To raise levee from Station 130+00 to 140+00 and 158+50 to 169+00, set back pump station at station 140+00, place toe rock on waterside slope from Station 145+00 to 150+00 and 164+00 to 169+00 on right bank levee of Bear River; to fill landside toe ditch from Station 0+00 to 45+00, 95+00 to 106+50 and 115+00 to 120+00, raise levee from Station 0+00 to 137+50, 200+50 to 296+00 and 296+00 to 332+50, to construct a 35-foot deep slurry cut-off wall between Stations 250+50 and 261+50, to place riprap on waterside slope between Stations 250+50 and 270+50 on right (west) bank levee of WPIC; and to construct a two mile long backup levee along right (north) bank of Bear River from about Bear River Station 131+00 to confluence with Feather River. The project is located south of Marysville and east of the Feather River (Section 4,9,16,20,21,6,17,28, 33, T13N, R4E, MDB&M, Reclamation District No. 784, Bear River and WPIC, Yuba County).

NOTE: Special Conditions have been incorporated herein which may place limitations on and/or require modification of your proposed project described above.

(SEAL)

Dated: MAY 19 2005



General Manager

GENERAL CONDITIONS:

ONE: This permit is issued under the provisions of Sections 8700 – 8723 of the Water Code.

TWO: Only work described in the subject application is authorized hereby.

THREE: This permit does not grant a right to use or construct works on land owned by the Sacramento and San Joaquin Drainage District or on any other land.

FOUR: The approved work shall be accomplished under the direction and supervision of the State Department of Water Resources, and the permittee shall conform to all requirements of the Department and The Reclamation Board.

FIVE: Unless the work herein contemplated shall have been commenced within one year after issuance of this permit, the Board reserves the right to change any conditions in this permit as may be consistent with current flood control standards and policies of The Reclamation Board.

SIX: This permit shall remain in effect until revoked. In the event any conditions in this permit are not complied with, it may be revoked on 15 days' notice.

SEVEN: It is understood and agreed to by the permittee that the start of any work under this permit shall constitute an acceptance of the conditions in this permit and an agreement to perform work in accordance therewith.

EIGHT: This permit does not establish any precedent with respect to any other application received by The Reclamation Board.

NINE: The permittee shall, when required by law, secure the written order or consent from all other public agencies having jurisdiction.

TEN: The permittee is responsible for all personal liability and property damage which may arise out of failure on the permittee's part to perform the obligations under this permit. If any claim of liability is made against the State of California, or any departments thereof, the United States of America, a local district or other maintaining agencies and the officers, agents or employees thereof, the permittee shall defend and shall hold each of them harmless from each claim.

ELEVEN: The permittee shall exercise reasonable care to operate and maintain any work authorized herein to preclude injury to or damage to any works necessary to any plan of flood control adopted by the Board or the Legislature, or interfere with the successful execution, functioning or operation of any plan of flood control adopted by the Board or the Legislature.

TWELVE: Should any of the work not conform to the conditions of this permit, the permittee, upon order of The Reclamation Board, shall in the manner prescribed by the Board be responsible for the cost and expense to remove, alter, relocate, or reconstruct all or any part of the work herein approved.

SPECIAL CONDITIONS FOR PERMIT NO. 17782 BD

THIRTEEN: This permit is not valid until the public safety issue regarding the continued increase in human habitation in an area with a known flood risk has been resolved to the satisfaction of the Board.

FOURTEEN: This permit is not valid unless FEMA MT-2 Form 1, Overview & Concurrence Form, of the application for Letters of Map Revision is signed as required by the community official responsible for floodplain management and returned within 30-days of the request for signature.

FIFTEEN: This permit is not valid until the member agencies of the Three Rivers Levee Improvement Authority agree to hold harmless and defend the Board and State through inclusion of an indemnification clause.

SIXTEEN: The permittee shall obtain the endorsement of the Board of Trustees of Reclamation District No. 784 prior to commencement of work.

SEVENTEEN: When work is proposed on land owned in fee by The Reclamation Board, the

permittee shall secure an easement, license, or temporary entry permit from The Reclamation Board prior to commencement of work. Contact Jeffery Fong at (916) 657-2831.

EIGHTEEN: For work proposed on land owned in fee or easement by Reclamation District No. 784, the permittee may be required to secure an easement, license, or permit from the District prior to commencement of work.

NINETEEN: Prior to construction, the permittee shall secure from the owner of the property a permanent easement granting the Sacramento and San Joaquin Drainage District, acting by and through The Reclamation Board of the State of California, the flood control rights stated in the attached form of deed over that portion of the existing or to-be-constructed levee (including the areas parallel to and extending 50 feet from the waterward and landward toes of the levee) which is not presently encumbered by a Reclamation Board easement. Contact Jeffery Fong at (916) 657-2831.

TWENTY: Construction will not be allowed until The Reclamation Board has received, reviewed, and approved in writing final submitted construction drawings for the project. The Reclamation Board shall have up to 90 days after receipt of final plans, drawings, and specifications for the review process. By notification to the permittee, The Reclamation Board may extend this review period when required.

TWENTY-ONE: The permittee shall submit a complete set of construction drawings for all portions of the proposed project for approval by The Reclamation Board prior to start of construction. All work approved by this permit shall be in accordance with the submitted drawings and specifications except as modified by special permit conditions herein. No further work, other than that approved by this permit, shall be done in the area without prior approval of The Reclamation Board.

TWENTY-TWO: If substantial changes in scope and/or design for this project occur after issuance of this permit it will be necessary to present these changes to the Board prior to start of construction.

TWENTY-THREE: The permittee shall submit a complete inventory of all existing encroachments within the proposed new floodway between the existing right bank levee of the Bear River, the left bank of the Feather River and the proposed backup levee. The inventory should have a description of each item for abandonment or retention including, but not limited to, houses, barns, storage sheds, power poles/lines, other utilities, pump stations, wells, irrigation/drainage systems, concrete structures, etc.

TWENTY-FOUR: Upon completion of the project, the permittee shall submit as-built drawings to: Department of Water Resources, Flood Project Inspection Section, 3310 El Camino Avenue, Rm. LL 40, Sacramento, California 95821.

TWENTY-FIVE: The permittee shall maintain the permitted encroachment(s) and the project works within the utilized area in the manner required and as requested by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

TWENTY-SIX: The permittee shall contact the Department of Water Resources by telephone, (916) 574-1213, and submit the enclosed postcard to schedule a preconstruction conference. Failure to do so at least 10 working days prior to start of work may result in delay of the project.

TWENTY-SEVEN: The permittee shall provide supervision and inspection services acceptable to The Reclamation Board. A professional engineer registered in the State of California shall certify that all work was inspected and performed in accordance with submitted drawings, specifications, and permit conditions. For the placement portion of the deep soil mixing cutoff wall portion of the project, a consultant who is experienced in this type of construction shall be included as a member of the supervision and inspection team. The consultant shall coordinate inspection of the project with staff from the U. S. Army Corps of Engineers and the Department of Water Resources' Flood Project Inspection Section.

TWENTY-EIGHT: If FEMA certification of the levee by the Corps is being considered, the project proponent should contact the U. S. Army Corps of Engineers regarding inspection of the project during construction.

TWENTY-NINE: The Reclamation Board and Department of Water Resources shall not be held liable for damages to the permitted encroachment(s) resulting from releases of water from reservoirs, flood fight, operation, maintenance, inspection, or emergency repair.

THIRTY: The permittee may be required, at permittee's cost and expense, to remove, alter, relocate, or reconstruct all or any part of the permitted encroachment(s) if removal, alteration, relocation, or reconstruction is necessary as part of or in conjunction with any present or future flood control plan or project or if damaged by any cause. If the permittee does not comply, The Reclamation Board may remove the encroachment(s) at the permittee's expense.

THIRTY-ONE: The permittee should contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, California 95814, telephone (916) 557-5250, as compliance with Section 10 of the Rivers and Harbors Act and/or Section 404 of the Clean Water Act may be required.

THIRTY-TWO: The permittee shall be responsible for repair of any damages to the project levee and other flood control facilities due to construction, operation, or maintenance of the proposed project.

THIRTY-THREE: The permittee is responsible for all liability associated with construction, operation, and maintenance of the permitted facilities and shall defend and hold harmless the State of California, or any departments thereof, from any liability or claims of liability associated therewith.

THIRTY-FOUR: If the project, or any portion thereof, is to be abandoned in the future, the permittee or successor shall abandon the project under direction of The Reclamation Board and Department of Water Resources, at the permittee's or successor's cost and expense.

THIRTY-FIVE: No construction work of any kind shall be done during the flood season from November 1 to April 15 without prior approval of The Reclamation Board.

THIRTY-SIX: Cleared trees and brush shall be completely burned or removed from the floodway, and downed trees or brush shall not remain in the floodway during the flood season from November 1 to April 15.

THIRTY-SEVEN: No material stockpiles, temporary buildings, or equipment shall remain in the floodway during the flood season from November 1 to April 15.

THIRTY-EIGHT: The permitted encroachment(s) shall not interfere with operation and maintenance of the flood control project. If the permitted encroachment(s) are determined by any agency responsible for operation or maintenance of the flood control project to interfere, the permittee shall be required, at permittee's cost and expense, to modify or remove the permitted encroachment(s) under direction of The Reclamation Board or Department of Water Resources. If the permittee does not comply, The Reclamation Board may modify or remove the encroachment(s) at the permittee's expense.

THIRTY-NINE: During construction of the project, any and all anticipated or unanticipated conditions encountered which may impact levee integrity or flood control shall be brought to the attention of the Flood Project Inspector immediately and prior to continuation. Any encountered abandoned encroachments shall be completely removed or properly abandoned under the direction of the Flood Project Inspection Section Inspector.

FORTY: The haul ramps and utilized levee crown roadway shall be maintained in a manner prescribed by the authorized representative of the Department of Water Resources or any other agency responsible for maintenance.

FORTY-ONE: A profile of the levee crown roadway and access ramps that will be utilized for access to and from the borrow area shall be submitted to The Reclamation Board prior to commencement of excavation.

FORTY-TWO: Any damage to the levee crown roadway or access ramps shall be promptly repaired to the condition that existed prior to this project, or better.

FORTY-THREE: No material shall be stockpiled closer than 50 feet from either toe of the project levee.

FORTY-FOUR: Any damage caused to the levee during placement or removal of the stockpiled material shall be repaired.

FORTY-FIVE: All fencing and gates removed during construction of this project shall be replaced in kind and at the original locations. If it is necessary to relocate any fence or gate, the permittee is required to obtain written approval from The Reclamation Board prior to installation at a new location.

FORTY-SIX: All temporary fencing and gates shall be removed upon completion of project.

FORTY-SEVEN: All pipe or conduit being reinstalled in the levee section and within 50 feet of the levee toes shall meet Title 23 standards.

FORTY-EIGHT: All drains and abandoned conduits shall be removed from the site prior to levee construction.

FORTY-NINE: All holes, depressions, and ditches in the foundation area shall be stripped of surface vegetation to a depth of 6-inches. Organic soil and roots greater than 1-1/2 inches shall be removed to a depth of 3 feet. Backfill material shall be placed in 4- to 6-inch layers and compacted to a minimum of 90 percent relative compaction per ASTM Method D1557-91.

FIFTY: Prior to construction or enlargement of the embankment, all areas to receive fill shall have surface vegetation removed to a depth of 6 inches. Organic soil and roots greater than 1-1/2 inches in diameter shall also be removed to a depth of 3 feet.

FIFTY-ONE: An inspection trench shall be excavated to a minimum depth of 6 feet beneath levees being constructed or reconstructed to a height of 6 feet or greater.

FIFTY-TWO: The inspection (or cutoff) trench shall have a minimum bottom width of 12 feet and side slopes of 1 horizontal to 4 vertical, or flatter.

FIFTY-THREE: The centerline of the inspection trench shall be located approximately under the waterward edge of the levee crown.

FIFTY-FOUR: All fill material shall be imported impervious material with 20 percent or more passing the No. 200 sieve, a plasticity index of 8 or more, and a liquid limit of less than 50 and free of lumps or stones exceeding 3 inches in greatest dimension, vegetative matter, or other unsatisfactory material. Fill material shall be compacted in 4- to 6-inch layers to a minimum of 90 percent relative compaction as measured by ASTM Method D1557-91.

FIFTY-FIVE: Ditches, power poles, standpipes, distribution boxes, and any other aboveground structures located within 50 feet of the waterward or landward levee toes of the backup levee shall be relocated a minimum distance of 50 feet beyond the levee toes.

FIFTY-SIX: Pipelines that are parallel to and within 50 feet of the landward levee toe of the backup levee shall be relocated a minimum distance of 50 feet beyond the levee toe and buried no deeper than 5 feet.

FIFTY-SEVEN: The slopes of the proposed levee shall be no steeper than 3 horizontal to 1 vertical on the water side and 2 horizontal to 1 vertical on the land side.

FIFTY-EIGHT: The minimum crown width of the backup levee shall be 20 feet.

FIFTY-NINE: The backup levee shall be overbuilt at least 0.3 feet vertically or as required by a detailed settlement analysis.

SIXTY: Positive drainage away from the levee toes shall be provided in all fill areas.

SIXTY-ONE: The backup levee and improved levees shall have a minimum of 3 feet of freeboard above the 1957 design flood profile or a crown elevation no lower than designed using an approved risk-based analysis or the flow profile proposed for this project, whichever is greater.

SIXTY-TWO: Density tests by a certified soils laboratory will be required to verify compaction of levee fill and trench backfill.

SIXTY-THREE: Fill on the levee slopes shall be keyed into the existing levee section with each lift.

SIXTY-FOUR: Revetment shall be uniformly placed and properly transitioned into the bank, levee

slope, or adjacent revetment and in a manner which avoids segregation.

SIXTY-FIVE: Revetment shall be quarry stone and shall meet the following grading:

Quarry Stone

Stone Size	Percent Passing
15 inches;	100
8 inches;	80-95
6 inches;	45-80
4 inches;	15-45
2 inches;	0-15

SIXTY-SIX: The revetment shall not contain any reinforcing steel, floatable, or objectionable material. Asphalt or other petroleum-based products may not be used as fill or erosion protection on the levee section or within the floodway.

SIXTY-SEVEN: In the event existing revetment on the channel bank or levee slope is disturbed or displaced, it shall be restored to its original condition upon completion of the proposed installation.

SIXTY-EIGHT: Equipment used in the construction of the slurry cutoff wall shall not exceed live-load surcharge to a level that causes or contributes to the instability of the levee during construction operations.

SIXTY-NINE: The stability of the levee shall be maintained at all times.

SEVENTY: The permittee shall take necessary precautions to minimize the risk of hydraulic fracturing of the levee. Drilling fluid pressures and flow rates shall be carefully monitored and controlled to minimize the potential for hydrofracturing.

SEVENTY-ONE: The permittee shall be responsible for all damages due to settlement, consolidation, or heave from any construction-induced activities.

SEVENTY-TWO: Excess bentonite or other drilling fluids shall be properly disposed of outside of the floodway. The bentonite or other drilling fluids shall not be used as backfill.

SEVENTY-THREE: The levee crown roadway and access ramps shall be surfaced with a minimum of 4 inches of compacted, Class 2, aggregate base (Caltrans Specification 26-1.02A).

SEVENTY-FOUR: Aggregate base material shall be compacted to a relative compaction of not less than 95 percent per ASTM Method D1557-91, with a moisture content sufficient to obtain the required compaction.

SEVENTY-FIVE: The permittee shall replant or reseed the levee slopes to restore sod, grass, or other non-woody ground covers if damaged during project work.

SEVENTY-SIX: Trees removed from the floodway shall have their root systems removed and disposed of outside the floodway. All voids created by tree removal shall be backfilled and compacted to at least the density of the adjacent, firm, undisturbed material.

SEVENTY-SEVEN: If agricultural use of the new/existing floodway is being considered the permittee shall design and construct appropriate ramps and access roads for this use.

SEVENTY-EIGHT: All debris generated by this project shall be disposed of outside the existing and proposed floodways and off all levee sections.

SEVENTY-NINE: The levee sections, access ramps and any encountered active utility crossings shall be restored to at least Title 23 standards.

EIGHTY: Restoration of degraded levee sections shall not begin until slurry wall has cured for at least 7 days and reached a minimum compressive strength of 300 psi.

EIGHTY-ONE: In the event that levee or bank erosion injurious to the adopted plan of flood control occurs at or adjacent to the permitted encroachment(s), the permittee shall repair the eroded area and propose measures, to be approved by The Reclamation Board, to prevent further erosion.

EIGHTY-TWO: If the permitted encroachments result in an adverse hydraulic impact, the permittee shall provide appropriate mitigation measures, to be accepted by The Reclamation Board prior to implementation of mitigation measures.

EIGHTY-THREE: This permit does not authorize any work on the right (north) bank levee of the Bear River between the Feather River and the junction of the new backup levee.

EIGHTY-FOUR: The permittee shall comply with all conditions set forth in the letter from the Department of the Army dated November 1, 2004, which is attached to this permit as Exhibit A and is incorporated by reference.

Rec Bd Permit
Attachment A
ARNOLD SCHWARZENEGGER, GOVERNOR *CSM*

DEPARTMENT OF WATER RESOURCES
1416 NINTH STREET, P.O. BOX 942836
SACRAMENTO, CA 94236-0001
(916) 653-5791

RECEIVED

MAY 23 2005



FAX

ADMINISTRATION

TO: Mr. Kent McClain
: County of Yuba

DATE: 5-23-05

Fax Number: (530) 749-7312

Telephone: (530) 749-7575

Number of Pages: 4

From: Sam Brandon

Dept. of Water Resources

Telephone: (916) 574-0651

Fax Number: (916) 574-0681

Comments



REPLY TO
ATTENTION OF

DEPARTMENT OF THE ARMY
U.S. ARMY ENGINEER DISTRICT, SACRAMENTO
CORPS OF ENGINEERS
1325 J STREET
SACRAMENTO, CALIFORNIA 95814-2922

November 12, 2004

Attachment "A"

Navigation and Flood Control Unit (17782)

Mr. Peter D. Rabbon, General Manager
The Reclamation Board
State of California
3310 El Camino Ave. Rm. LL40
Sacramento, California 95821

Dear Mr. Rabbon:

We have reviewed an application for a permit by Three Rivers Levee Improvement (Reclamation Board Number 17782). These plans include slurry cutoff walls, seepage berms, levee raising, rock slope protection, ditch filling, setback levee, and relocation of a pump station. The proposed work is along the right bank of the Bear River levee (R.D. 784, Unit 3) and the right bank of the Western Pacific Interceptor Canal levee (R.D. 784, Unit 4). The project is located south of Marysville and east of Highway 70, in Section 4, Township 13 North, Range 4 East, (R.M. 4.44 to 4.78), M.D.B.&M. Survey, Yuba County, California.

Please refer to the enclosed comments by our Soil Design Section. A recommendation on approval or denial cannot be made until plans and specifications at 90% design or greater is submitted.

A file (200400484) has been opened because a Section 10 and/or Section 404 permit may be required. Please advise the applicant to contact the U.S. Army Corps of Engineers, Sacramento District, Regulatory Branch, 1325 J Street, Sacramento, CA 95814, telephone (916) 557-5250.

If you have any questions concerning our comments on this permit application, please contact Mr. Mohsen Tavana at (916) 557-5282 or Mr. Robert Murakami at (916) 557-6738.

Sincerely,

Michael D. Mahoney, P.E.
Chief, Construction-Operations Division

Enclosure

CF:
DWR, Richard Marshall

20 October 2004

MB

MEMORANDUM FOR: Navigation and Flood Control Unit (Attn: B. Murakami)

SUBJECT: Geotechnical Review of Reclamation Board Permit Application No. 17782

1. Soil Design Section has reviewed the resubmittal of Reclamation Board Permit Application No. 17782. The work proposed in the resubmitted permit includes shurry cutoff walls, seepage berms, levee raising, rock slope protection, ditch filling, and relocation of a pump station. The work is proposed along the right (north) bank of the Bear River levee (R.D. 784, Unit 3) and the right (west) bank of the Western Pacific Interceptor Canal (WPIC) levee (R.D. 784, Unit 4). The permit application also includes a proposal to setback approximately 12,000 feet of the right bank Bear River levee.

2. The scope of the review included a review of the proposed levee improvements and a determination if the proposed improvements followed generally accepted Corps and State levee guidelines. The review did not include an independent geotechnical assessment of the levees. The scope of this review also did not include an assessment on the ability to certify the levees for the FEMA 100-year flood. Review comments are as follows:

- Permit application only included a draft Basis of Design, a draft feasibility report, and conceptual drawings. Specifications were not included. Plans and specifications at 90% design or greater should be submitted.
- The levee and appurtenances must be restored as a minimum to its pre-project condition after construction.
- Levee raising shall not result in a levee crown width narrower than the existing crown width unless the new crown width is at least 20 feet wide. The levee raising shall also not result in levee side slopes steeper than the existing slopes unless a minimum 1V on 2H landside and 1V on 3H waterside is constructed.
- Soil Design Section recommends a minimum seepage berm width of four times the levee height. This guidance is presented in Sacramento District's Geotechnical Design Practices, SOP-EDG-03, dated 7 July 2004.
- Earthfill used to fill the ditch along the landside toe of the WPIC levee must have a permeability greater than or equal to the in-situ foundation soil.
- The setback levee design should incorporate guidance from Sacramento District's Geotechnical Design Practices, SOP-EDG-03, dated 7 July 2004.
- The waterside impervious zone of the setback levee should be extended to the top of levee.
- The recommended minimum width of the landside maintenance easement for the setback levee is 20 feet in lieu of 10 feet. Experience has shown that 10 feet does not provide adequate room for maintenance, inspection, and flood fighting. A minimum 15-foot wide waterside vegetation free zone should also be provided.
- Soil Design Section recommends a landside slope of 1V on 3H or flatter for the setback levee. Soil Design's experience with the Sacramento River flood control project levee

CESPK-ED-GS (1110)

SUBJECT: Geotechnical Review of Reclamation Board Permit Application No. 17782

system indicates that the long-term sustainability of 1V on 2H slopes is not adequate and therefore a 1V on 3H slope is recommended for new levees.

- Geotechnical analyses for the setback levee, including seepage, slope stability, and settlement, should be provided in the permit application.

2. If there are any questions regarding the review or comments, please contact the undersigned at 916-557-7417.

Henri Mulder

HENRI MULDER, P.E.
Civil Engineer

cc: Soil Design (file)
PM-C (Baker)