RECLAMATION
Managing Water in the West

Categorical Exclusion Checklist

Contra Costa Canal Repair at Milepost 23.03

CEC-12-068

Prepared by:

Nicholas Kilb
Natural Resources Specialist
South-Central California Area Office

Date: 03/20/2013

Concurred by:

Lisa Carlson
Biological Science Technician
South-Central California Area Office

Date: 03/20/2013

Concurred by:

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Supervisory Natural Resources Specialist
South-Central California Area Office

Date: 3/20/13

Approved by:

for

Michael Jackson
Area Manager
South-Central California Area Office

Date: 3/25/13

Background

The Contra Costa Water District (District) operates and maintains the Contra Costa Canal (Canal), a Federal facility, on behalf of the United States Bureau of Reclamation (Reclamation). An approximately 150-foot long section of the Canal at Mile Post (MP) 23.03 between Port Chicago and Concord, California (figures 1, 2, 3) was damaged during the winter of 2010-2011. The Canal's concrete lining has broken and buckled (figures 6 through 11), causing a reduction in the Canal's capacity and increasing the risk of Canal failure.

Purpose and Need for Action

The Canal was damaged and needs to be repaired. The Proposed Action would restore the Canal to its original design capacity of 225 cubic feet per second, prevent system losses, meet water conservation goals, and stabilize the Canal to prevent further structural damage.

Proposed Action

The Proposed Action consists of the repair and replacement of 20 panels of concrete lining the Canal at MP 23.03.

Canal lining replacement and repairs would involve the following activities, as shown in figure 4 and figure 5:

1. Installation of a 200-foot long temporary pipe to continue the flow of Canal water.
2. Installation of a sheet-pile to protect the adjacent Multi-Purpose Pipeline in case of rupture of the temporary pipeline.
3. Diverting Canal flows into the bypass pipeline by placement of temporary dams constructed from large sand-filled sacks upstream and downstream of the repair area;
4. Draining and cleaning the Canal;
5. Removal of the heavy clay soils on the non-operating side of Canal (southern embankment) that have caused the Canal liner failure;
6. Type 1 riprap slope repair on the non-operating side of Canal (southern embankment), as proposed in a 1998 FEMA study, to stabilize against additional slumping;
7. Removal of 20 damaged panels of Canal lining;
8. Grading of bare earth exposed by removing the panels;
9. Placing and compacting several inches of gravel fill in the canal footprint;
10. Installation of new shotcrete Canal lining;
11. Restoring canal flows by removing of the temporary diversion dams and pipeline.

Work would take approximately two (2) months, and would be scheduled to occur between January and March 2014 if approved. The construction staging area would be on the operating (north) side of the Canal and all construction would occur within the Reclamation's right of way for the Canal. Construction equipment and materials would include excavators, bobcats, pumps, small mobile cranes, concrete mixers, dump trucks, pick-up trucks, pumps, pipe, shotcrete, and wire mesh reinforcing.

For the Canal liner and slope repairs the total amount of excavated material would be approximately 356 cubic yards (300 cubic yards in the 150 foot long by 18 foot wide by 3 foot deep construction area on the non-operating side of the Canal, and 56 cubic yards in the 150 foot long by 10 foot wide by 1 foot deep construction area on the operating road side). The slope repairs could be made using equipment working from within the Canal. Most of the Canal right of way along both sides is covered with up to 15 feet of fill. Excavation would occur entirely in disturbed fill.

Environmental Commitments

Reclamation and the District would implement the following environmental protection measures. Environmental consequences for resource areas assume the measures specified would be fully implemented.

Resource	Protection Measure
Biological	Before any ground-disturbing construction activities for the proposed action begin on the site, a qualified biologist shall conduct focused surveys for burrowing owls in areas of suitable habitat on and within 250 feet of the project construction footprint. Surveys shall be repeated if a two-day or longer lapse in project construction activities occurs. Surveys shall be conducted as detailed in the DFG staff report and Burrowing Owl Consortium Guidelines to avoid direct take. If no occupied burrows are found in the survey area, a letter report documenting survey methods and findings will be submitted to Reclamation at least 5 days before construction.
Biological	If occupied burrowing owl burrows are found prior to initiating construction, impacts will be minimized by establishing a buffer around the burrow of 160 feet during the non-breeding season (September 1 through January 31). During the breeding season (February 1 through august 31), impacts will be minimized by establishing a buffer around the burrow of 250 feet for all project-related construction activities until a qualified biologist confirms that the nest is no longer active. Active nests will be monitored by a qualified biologist to determine when the young have fledged and are feeding on their own. Reclamation will be consulted for clearance before construction activities resume with a non-disturbance buffer.
Biological	If a burrowing owl is observed at the construction site at any time during construction, then exclusion fencing will be used to establish a safe buffer area until the animal can be passively relocated out of the construction area or other appropriate buffer distance is established consistent with Reclamation's guidance. Construction sites in areas that are excavated will remain active and disturbed to ensure that it is highly unlikely that the burrowing owl will return to the construction area.
The following measures were taken from the SCCAO Operations and Maintenance Biological Opinion (BO 1-1-04-F-0368; U.S. Fish & Wildlife Service 2005):	
Biological	To avoid effects to the California tiger salamander and California red-legged frog, construction on the site will cease one half hour before sunset, and will not begin prior to one half hour before sunrise.
Biological	Burrows that may be used by the California tiger salamander or California red-legged frog shall be avoided. If burrows cannot be avoided, no ground disturbing work shall commence until Reclamation's environmental staff has been contacted for further guidance.
Biological	Two weeks before the onset of activities, a Reclamation approved biologist shall conduct a preconstruction survey for the California tiger salamander. Documentation of the survey shall be transmitted to Reclamation's environmental staff and no work shall commence until that information has been reviewed and notification of permission to proceed has been provided by a Reclamation biologist.
Biological	Two weeks before the onset of activities, a Reclamation approved biologist shall conduct a preconstruction survey for the California red-legged frog. Documentation of the survey shall be transmitted to Reclamation's environmental staff and no work shall commence until that information has been reviewed and notification of permission to proceed has been provided by a Reclamation biologist.

Resource	Protection Measure
Biological	Before any construction activities begin on the project, a Reclamation approved biologist shall conduct a training session for all construction personnel about the California red-legged frog, California tiger salamander, and burrowing owl, their habitat requirements, and the necessary measures to avoid or protect them on-site.
Biological	During project activities, all trash that may attract predators shall be properly contained, removed from the work site and disposed of regularly. Following construction, all trash and construction debris shall be removed from the work areas.
Biological	All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 20 meters from any riparian habitat or water body. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
Biological	Only U.S. Fish & Wildlife Service approved biologists shall participate in activities associated with the capture, handling, and monitoring of California red-legged frogs.
Biological, Land	Best management practices to control erosion during and after the project shall be implemented.
Biological, Land	The number of access routes, number and size of staging areas, and the total area of the activity shall be limited to the minimum necessary to achieve the project goal. Routes and boundaries shall be clearly demarcated.
Biological, Land, Safety	To prevent inadvertent entrapment of wildlife during construction, all excavated, steep-walled holes or trenches more than one foot deep will be covered at the close of each working day by plywood or similar materials, or provided with one or more escape ramps constructed of earth fill or wooden planks with a slope of 2:1. Before such holes or trenches are filled, they will be thoroughly inspected for trapped animals. If at any time wildlife if found trapped or injured, Reclamation must be contacted immediately.
Biological	All construction pipes, culverts, or similar structures with a diameter of 4-inches or greater that are stored at the construction site for one or more overnight periods should be thoroughly inspected for animals before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a special-status species is discovered inside a pipe, that section of pipe should not be moved until Reclamation has consulted with the Service.
Biological	If any listed species are observed in the action area, the action will be rescheduled to avoid all impacts to species. Scheduled operations and maintenance activities will be rescheduled or postponed to avoid impacts to listed species.

Exclusion Category

516 DM 14.5 paragraph C (3): *Minor construction activities associated with authorized projects which correct unsatisfactory environmental conditions or which merely augment or supplement, or are enclosed within existing facilities.*

Evaluation of Criteria for Categorical Exclusion:

1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3). No ☒ Uncertain ☐ Yes ☐

2. This action would have highly controversial environmental effects or involve unresolved conflicts concerning alternative uses of available resources (NEPA Section 102(2)(E) and 43 CFR 46.215(c)). No ☒ Uncertain ☐ Yes ☐

3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)). No ☒ Uncertain ☐ Yes ☐

4. This action would have significant impacts on such natural resources and unique geographical characteristics as historic or cultural resources; parks, recreation, and refuge lands; wilderness areas; wild or scenic rivers; national natural landmarks; sole or principal drinking water aquifers; prime farmlands; wetlands (EO 11990); flood plains (EO 11988); national monuments; migratory birds; and other ecologically significant or critical areas (43 CFR 46.215 (b)).	No	☒	Uncertain	☐	Yes	☐
5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)).	No	☒	Uncertain	☐	Yes	☐
6. This action would establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects (43 CFR 46.215 (e)).	No	☒	Uncertain	☐	Yes	☐
7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)).	No	☒	Uncertain	☐	Yes	☐
8. This action would have significant impacts on properties listed, or eligible for listing, on the National Register of Historic Places as determined by Reclamation (LND 02-01) (43 CFR 46.215 (g)).	No	☒	Uncertain	☐	Yes	☐
9. This action would have significant impacts on species listed, or proposed to be listed, on the List of Endangered or Threatened Species, or have significant impacts on designated critical habitat for these species (43 CFR 46.215 (h)).	No	☒	Uncertain	☐	Yes	☐
10. This action would violate a Federal, tribal, State, or local law or requirement imposed for protection of the environment (43 CFR 46.215 (i)).	No	☒	Uncertain	☐	Yes	☐
11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993).	No	☒	Uncertain	☐	Yes	☐
12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)).	No	☒	Uncertain	☐	Yes	☐
13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or	No	☒	Uncertain	☐	Yes	☐

significantly adversely affect the physical integrity of such sacred sites (EO 13007, 43 CFR 46.215 (k), and 512 DM 3)).

14. This action would contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act, EO 13112, and 43 CFR 46.215 (l)). No ☒ Uncertain ☐ Yes ☐

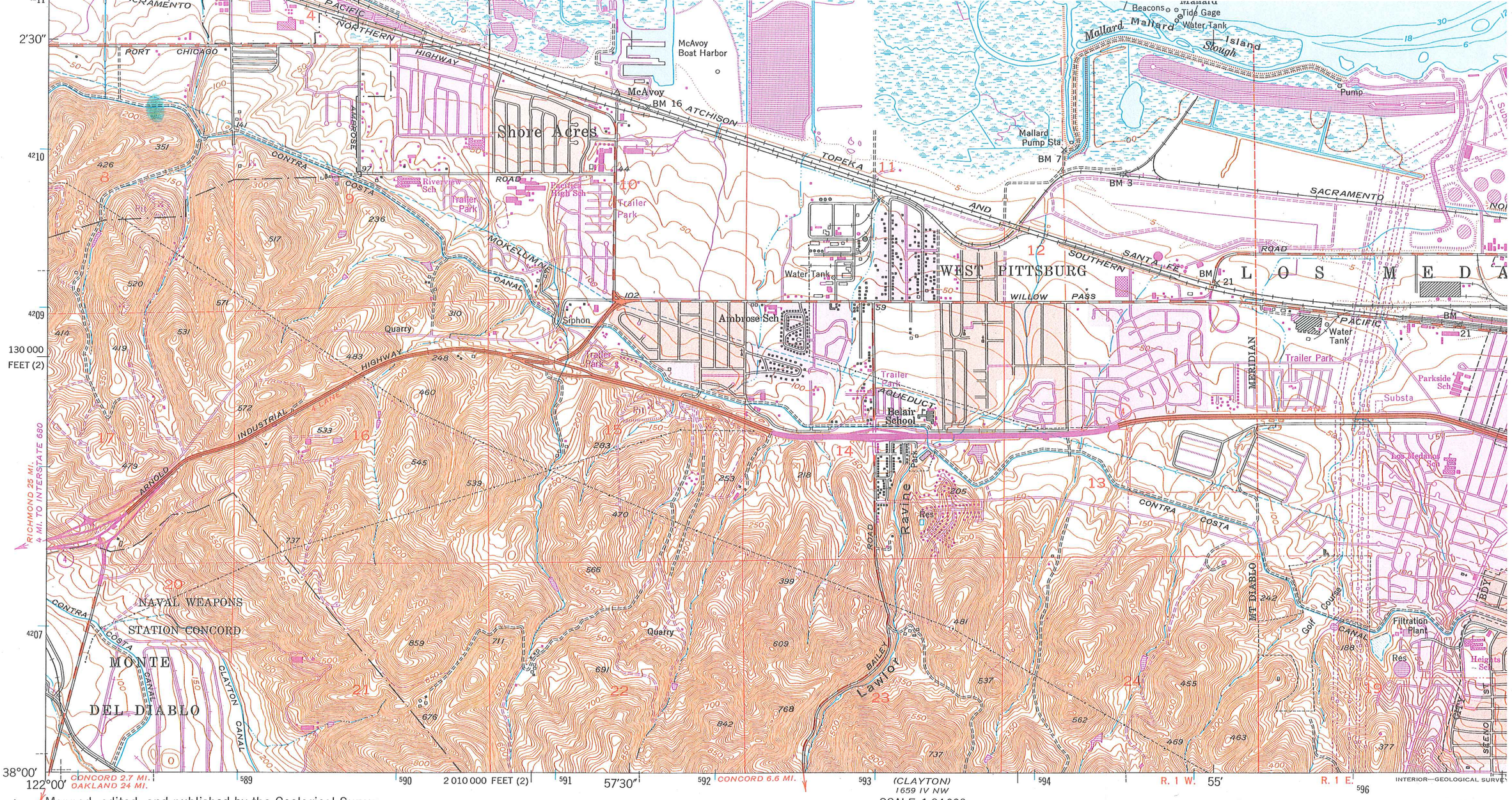
Regional Archeologist concurred with Item 8. Attachment B is a copy of their determination.

ITA Designee concurred with Item 11. Attachment C is a copy of their determination.

References

U.S. Fish and Wildlife Service. 2005. Formal Endangered Species Consultation on the Operations and Maintenance Program Occurring on Bureau of Reclamation Lands within the South-Central California Area Office. Sacramento, CA.

Attachment A Figures



Mapped, edited, and published by the Geological Survey

Control by USGS and NOS/NOAA

Culture and drainage in part by NOS/NOAA from aerial photographs taken 1941
Topography by planetable surveys 1906–07 and by Kelsh plotter methods
from aerial photographs taken 1949. Contour revision and field check 1953

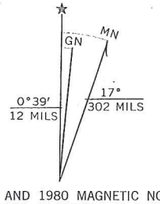
Hydrography compiled from NOS 5534

Polyconic projection
10,000-foot grid based on California coordinate system, zones 2 and 3
1000-meter Universal Transverse Mercator grid ticks,
zone 10, shown in blue. 1927 North American Datum
To place on the predicted North American Datum 1983
move the projection lines 14 meters north and
94 meters east as shown by dashed corner ticks

Dashed land lines indicate approximate locations

Red tint indicates areas in which only landmark buildings are shown

There may be private inholdings within the boundaries
of the National or State reservations shown on this map



UTM GRID AND 1980 MAGNETIC NORTH
DECLINATION AT CENTER OF SHEET

SCALE 1:24 000

1 MILE
1000 0 1000 2000 3000 4000 5000 6000 7000 FEET
1 KILOMETER

CONTOUR INTERVAL 10 FEET
DOTTED LINES REPRESENT HALF-INTERVAL CONTOURS
CONTOURS INCOMPLETE ALONG EMBANKMENTS AND DITCHES
NATIONAL GEODETIC VERTICAL DATUM OF 1929
DEPTH CURVES IN FEET—DATUM IS MEAN LOWER LOW WATER
THE RELATIONSHIP BETWEEN THE TWO DATUMS IS VARIABLE
SHORELINE SHOWN REPRESENTS THE APPROXIMATE LINE OF MEAN HIGH WATER
THE AVERAGE RANGE OF TIDE IS APPROXIMATELY 4 FEET

THIS MAP COMPLIES WITH NATIONAL MAP ACCURACY STANDARDS

FOR SALE BY U. S. GEOLOGICAL SURVEY, DENVER, COLORADO 80225, OR RESTON, VIRGINIA 22092
A FOLDER DESCRIBING TOPOGRAPHIC MAPS AND SYMBOLS IS AVAILABLE ON REQUEST

Fig 1, Topographic Map of Area

QUADRANGLE LOCATION

Revisions shown in purple and woodland compiled from aerial photographs taken 1979 and other source data
This information not field checked. Map edited 1980

Purple tint indicates extension of urban areas

Legend

- ! Project Location
- Contra Costa Canal

CEC-12-068 Contra Costa Canal Repair at Milepost 23.03

Figure 2 General Location

Miles

0 1 2 3 4 5

Background Map Sources:
ESRI, DeLorme, NAVTEQ,
TomTom, and USGS

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Background Image:
USGS, 2008

CEC-12-068 Contra Costa Canal Repair at Milepost 23.03

Figure 3 Project Area

Legend

- Improved Access Road
- Unimproved Access Road
- Project Area

Feet

0 20 40 60 80 100 200

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

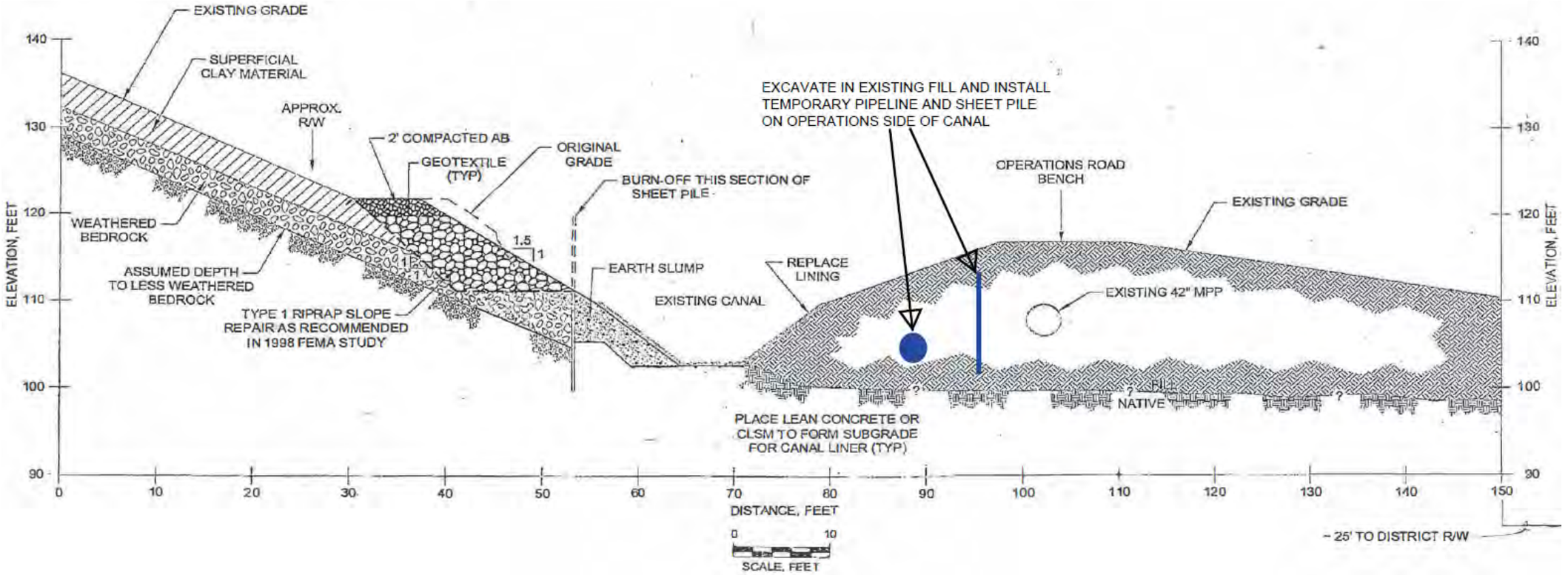

Figure 4 Cross-Section of Proposed Action

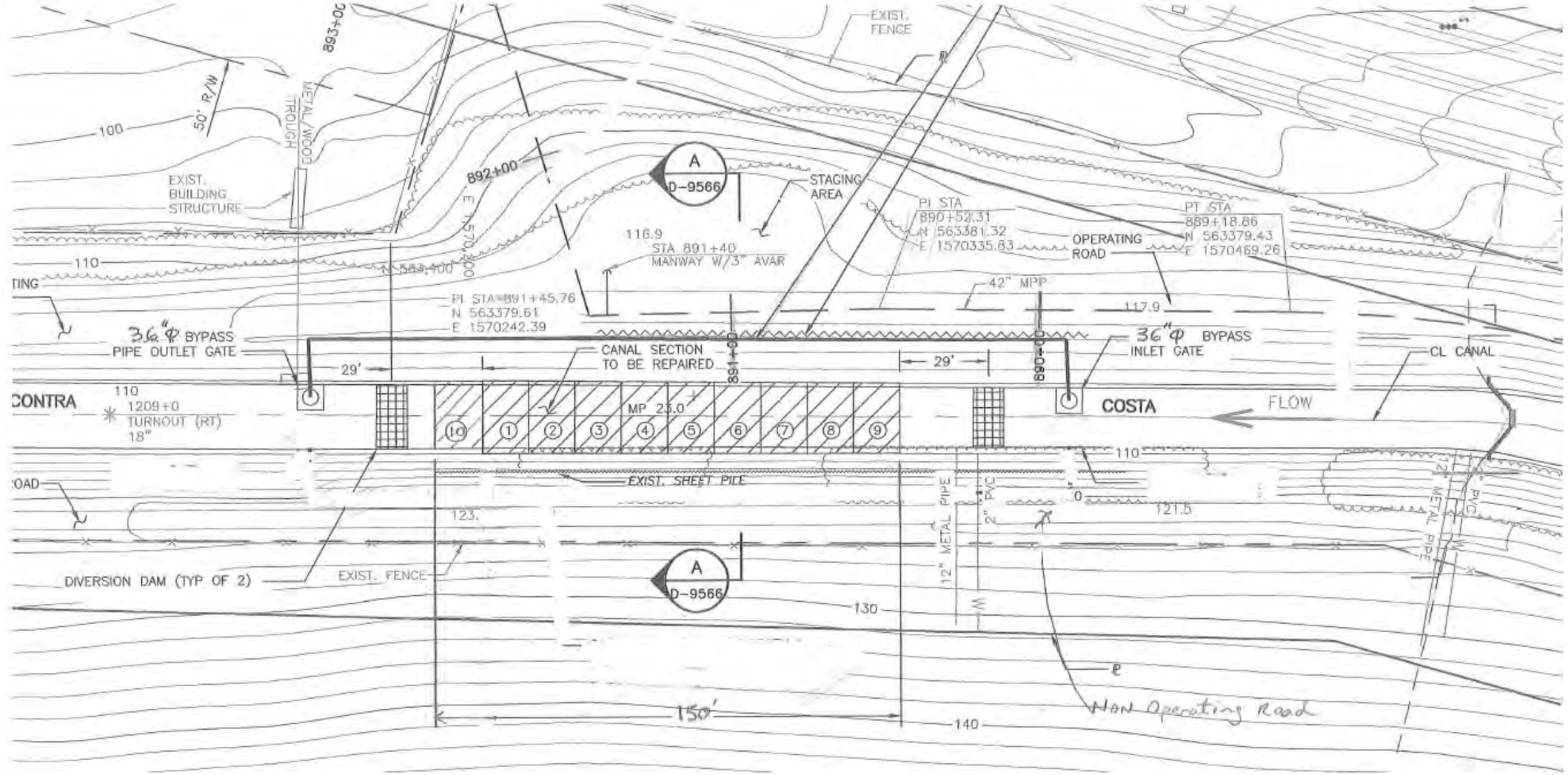

Figure 5 Plan View of Proposed Action

Figure 6 View of slide and Canal lining from operational side (GEI 2011).

Figure 9 View of lining buckling looking downstream (GEI 2011).

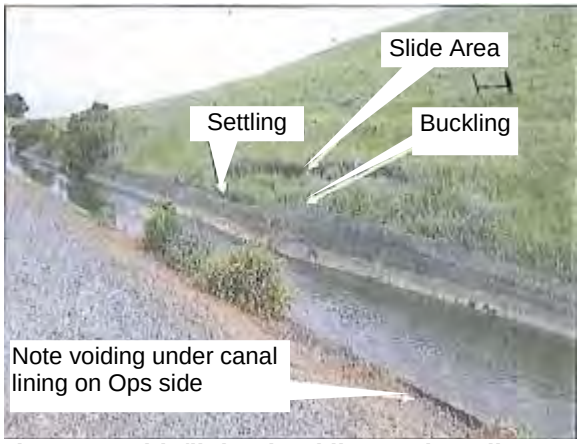

Figure 7 Side/lining buckling and settling looking upstream from ops road (GEI 2011).

Figure 10 Liner has lifted about 2-3 feet. Note lack of vertical support (GEI 2011).

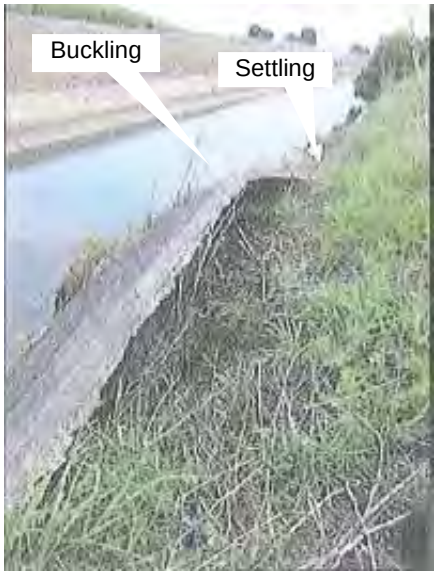

Figure 8 View of Canal lining buckle and settling looking downstream (GEI 2011).

Figure 11 Close-up of Canal lining buckle with 2-3 feet of vertical displacement (GEI 2011

Attachment B Cultural Resources Determination

United States Department of the Interior

BUREAU OF RECLAMATION
Mid-Pacific Regional Office
2800 Cottage Way
Sacramento, California 95825-1898

IN REPLY
REFER TO:
MP-153
ENV-3.00

VIA ELECTRONIC MAIL ONLY

March 11, 2013
MEMORANDUM

To: Nicholas Kilb
Natural Resource Specialist – South Central California Area Office

From: BranDee Bruce /S/
Architectural Historian – Division of Environmental Affairs

Subject: 13-SCAO-005: National Historic Preservation Act (NHPA) Section 106 Compliance for Contra Costa Water District (CCWD) Repair of Contra Costa Canal (CCC) Liner Repair at Milepost (MP) 23.03, Contra Costa County, California

The proposed undertaking by Reclamation to provide approval for CCWD to conduct repairs on the canal lining of the CCC at MP 23.03, a known historic property, was determined to be the type of action that has the potential to cause effects to historic properties pursuant to 36 CFR §800.3 of the Section 106 implementing regulations. As a result of this determination, Reclamation implemented the steps in the Section 106 process as outlined at §800.3 to §800.6.

The proposed project will involve the repair and replacement of ten 10-foot by 15-foot panels of concrete on each embankment of the CCC prism, for a total replacement of twenty panels with an area of 2,700 square feet. The replacement requires placement of two sandbag coffer dams, one on either side of the construction area, a temporary pipeline to be placed within the fill of the CCC embankment, the draining and cleaning of the canal, the removal of the existing panels, grading of the soils behind the existing panels, the compaction of several inches of gravel (AB gravel) fill in the canal footprint, and the placement of new shotcrete for the canal lining.

Reclamation conducted historic property identification efforts and identified the CCC as the only cultural resource within the area of potential effect for this undertaking. The CCC has previously been determined eligible for inclusion in the National Register of Historic Places (National Register) under Criterion A. Reclamation applied the criteria of adverse effect and found no adverse effects to historic properties pursuant to 36 CFR §800.5(b) is appropriate for this undertaking.

Reclamation initiated consultation with the State Historic Preservation Officer (SHPO) on January 22, 2013 by sending a consultation package for this undertaking. On January 25, 2013, SHPO requested additional information on the extent of the work to be completed, including the type of concrete proposed to be used for the replacement panels. Reclamation submitted additional documentation to SHPO via email on January 25 and February 7, 2013. Since the information was submitted, no additional correspondence has been received from SHPO. Pursuant to 36 CFR §800.5(c), the SHPO has 30 days from receipt to review an agency finding. If after 30 days the SHPO has not responded, §800.5(c)(1) states that "…the agency official may proceed after close of the 30 day review period if the SHPO/THPO has agreed with the finding or has not provided a response…and the agency official shall then carry out the undertaking in accordance with paragraph (d)(1) of this section." As SHPO has failed to respond to

supplemental information sent on February 5, 2013, Reclamation is concluding the Section 106 process. Should SHPO respond at later date with concerns, Reclamation may address them, as appropriate. If a concurrence letter for this undertaking is received, it will be forwarded for your records.

This memorandum is intended to convey the completion of the NHPA Section 106 process for this undertaking. Please retain a copy in the administrative record for this action. Should changes be made to this project, additional NHPA Section 106 review, possibly including additional consultation with the SHPO, may be necessary. Thank you for providing the opportunity to comment.

CC: Cultural Resources Branch (MP-153), Anastasia Leigh – Regional Environmental Officer (MP-150), Nicholas Kilb (SCC-416)

Attachment C Indian Trust Assets Determination

Kilb, Nicholas D

From: Rivera, Patricia L
Sent: Wednesday, October 10, 2012 2:16 PM
To: Kilb, Nicholas D
Subject: RE: Request for Determinations, Contra Costa Water District Concrete Lining Repairs MP 23.03

Nick,

I reviewed the proposed action to repair and replacement of the lining of 2700 square feet (eighteen 10 ft by 15 ft panels) of the Canal at MP 23.03. There are two options regarding bypass of Canal flows during construction. An approximately 140-foot long section of the Contra Costa Canal (Canal) at Mile Post 23.03 between Port Chicago and Concord, California was damaged during the winter of 2010-2011. The Canal's concrete lining has broken and buckled, causing a reduction in the Canal's capacity and increasing the risk of Canal failure.

The Proposed Action consists of the Option 1:
If the contractor chooses to install the temporary pipe on the operations side (northern) embankment, sheet piles would be installed by the contractor to protect the adjacent Multi-Purpose Pipeline.

Option 2:
If the contractor chooses to install the temporary pipe on the non-operations side (southern) embankment, a temporary 12 foot wide by 40 foot long construction bridge would be installed to span the Canal to provide access . Existing footings on either side of the Canal would anchor the bridge thus minimizing impacts.

From the bridge, the existing unimproved dirt road (Figure 5) would be improved in order to provide an equipment access road to install the pipe. Road improvement would require an additional 400 to 500 cubic yards of excavation along the Canal embankment. Most excavation would occur in disturbed fill, however some excavation in undisturbed material may be necessary to install the pipeline. The embankment would be restored to original contours and hydro-seeded after construction if this option is pursued.

Canal lining replacement and repairs would follow the following sequence of activities:

1. Installation of a buried temporary pipe to continue the flow of Canal water, according to Option 1 or Option 2 (above);
2. Diverting Canal flows into the bypass pipeline by placement of temporary dams constructed from large sand-filled sacks upstream and downstream of the repair area;
3. Draining and cleaning the Canal;
4. Removal of the heavy clay soils on the non-operating side of Canal (southern embankment) that have caused the Canal liner failure;
5. Removal of 18 damaged panels of Canal lining;
6. Grading of bare earth exposed by removing the panels;
7. Placing and compacting several inches of gravel fill in the canal footprint;
8. Installation of new shotcrete Canal lining;
9. Restoring canal flows by removing of the temporary diversion dams and pipeline.

Work would take approximately two (2) months, and would be scheduled to occur between January and March 2014 if approved. The construction staging area would be on the operating (north) side of the Canal and all construction would occur within the Reclamation's Right of Way for the Canal. Construction equipment and materials would include excavators, bobcats, pumps, small mobile cranes, concrete mixers, dump trucks, pick-up trucks, pumps, pipe, shotcrete, and wire mesh reinforcing.

For the Canal liner and slope repairs the total amount of excavated material would be approximately 330 cubic yards (280 cubic yards in the 140 foot long by 18 foot wide by 3 foot deep construction area on the non-operating side of the Canal, and 52 cubic yards in the 140 feet long by 10 foot wide by 1 foot deep construction area on the operating road side). The slope repairs could be made using equipment working from within the Canal. Most of the Canal Right of Way along both sides is covered with up to 15 feet of fill. Excavation would occur almost entirely in disturbed material, except for the area noted in Option 2.

The proposed action does not have a potential to affect Indian Trust Assets. The nearest ITA is Lytton Rancheria approximately 20 miles sw of the project location.

Patricia Rivera
Native American Affairs Program Manager
Bureau of Reclamation
Mid-Pacific Region
Sacramento, California 95825
(916) 978-5194 (Office)
(916) 978-5290 (Fax)
privera@usbr.gov