

RECLAMATION

Managing Water in the West

Categorical Exclusion Checklist

Friant-Kern Canal Subsidence Correction Project Immediate Repairs

CEC-18-043

Prepared by:

FOR Brian Lopez
Rain L. Emerson

Date: 11/26/2018

Environmental Compliance Branch Chief
South-Central California Area Office
ITA Designee concurred with Item 11. Their determination has been placed within the project file.

Concurred by:

Lisa Buck
Lisa Buck, Wildlife Biologist
South-Central California Area Office

Date: 11/26/2018

Concurred by:

See Attachment A
Scott A. Williams, Archaeologist
Mid-Pacific Regional Office
Regional Archeologist concurred with Item 8. Their determination has been placed within the project file.

Date: See Attachment A

Approved by:

FOR Michael P. Jackson
Michael P. Jackson, P.E.
Area Manager
South-Central California Area Office

Date: 11/26/2018



Background

Subsidence has caused portions of the Friant-Kern Canal to sink significantly in recent years, which has decreased the capacity of the canal to carry and deliver water. The Friant Water Authority, in coordination with the Bureau of Reclamation (Reclamation), have proposed a project to immediately improve the reliability of water supply deliveries along the stretch of canal that has been most affected by subsidence, between approximate milepost (MP) 103 and MP 107. This portion of the canal has a currently-estimated reduction in conveyance capacity from design capacity greater than 50 percent which impacts water deliveries to Friant Division long-term contractors in Tulare and Kern counties.

Nature of the Action

Reclamation proposes to issue land use authorizations for immediate repair activities consisting of bridge treatments, canal lining raises, and canal bank repairs as described below.

Bridge Treatments

The Friant Water Authority would implement bridge coating applications to the Avenue 96, Road 208, Avenue 88, Avenue 80, and Road 192 bridges located between MP 103.6 to 107.34 of the Friant-Kern Canal. The following actions would be implemented at each of the bridges:

- Apply two coats of elastomeric, crack-bridging, waterproofing membrane or two-component cementitious coating to the entire exposed surface of the concrete girders and deck soffit. The finish will be gray, matching the current concrete.
- Seal joints at the interface between the concrete canal lining and the concrete bridge abutments with a pourable elastomeric sealant.
- Paint exposed metal surfaces of the bridge pier bearings with 2 applications of organic zinc-rich primer from the California Department of Transportation Authorized Material List.
- Patch the delaminated and spalled areas at the Avenue 88, Avenue 80, and Road 192 bridge abutments and pier caps with a high-strength, rapid hardening, cementitious structural repair mortar intended for use in vertical applications.
- Repair the damaged utility supports and reinforce the utility supports with additional bracing on the upstream face of the bridges at Avenue 80 and Road 192, and the downstream face of the bridge at Avenue 88.

If the coating work is performed during the canal operation season, the water level in the canal will be lowered to a level low enough so that the Friant Water Authority can safely work from a floating raft or barge that has been anchored in place below the bridge deck. If water levels are low enough a hanging scaffolding system may be able to be installed from the bridge allowing safe worker access to the underside of the bridge. If the coating work is performed during the canal offseason, and the canal can be drained, then a more standard scaffolding system would be constructed resting on the canal invert.

Once safe access to the bridge soffit and girders is established, the installer would first mechanically prepare the surface of the areas to be coated by blast cleaning sand, high-speed pressure water-jetting, or wire brush as required by the coating system manufacturer. After preparation is complete, Friant Water Authority would apply specified coatings by a hand roll on application method.

All staging would occur within the existing Friant-Kern Canal right-of-way. The Friant Water Authority estimates that a coating operation at a single bridge will take up to 2 work days for staging, 2 work days for preparation, and 3 work days for coating. Assuming the bridge coating work was performed one bridge at a time, it is estimated that the entire coating project would require approximately 2 months to complete.

Canal Lining Raise

The proposed canal lining raise work is expected to be performed along both sides of the Friant-Kern Canal for approximately 2.5 miles between MP 103.85 to MP 106.32. The following activities would occur as part of the lining raise:

- Pre-treat the existing earthen canal bank by moisture conditioning and compacting with mechanical vibratory hand compacting units or a small drum roller.
- Excavate a trench with a small track excavator on the top of the bank for placement of the liner. The excavation work is anticipated to extend 3 to 4 feet into the existing O&M road upon the canal banks.
- Install 45 MIL Reinforced Polypropylene Liner (RPL) upon the existing earthen slope above the existing concrete canal liner. The RPL will be anchored into the concrete liner at the bottom of the slope, line the earthen bank to a vertical elevation above the desired operational water level, and be keyed into the trench.
- Install a continuous neoprene gasket for leak control and a continuous stainless steel or aluminum batten strip would be installed along the connection to the top of the concrete liner.
- Backfill the trench to existing grade with excavated material or engineered material. The backfilled material would be compacted with mechanical vibratory hand compacting units or a small drum roller.

All staging would occur within the existing Friant-Kern Canal right-of-way. Friant Water Authority estimates that approximately 400 feet of liner may be installed per work day. At this production rate it is estimated that the lining work would take approximately 1 month to complete. Upon completion of installation the new lined portion of canal would be ready for operation.

Canal Bank Repairs

To address seepage zones along the canal bank, Friant Water Authority will perform mud jacking within the immediate repair work area as it occurs. Mud jacking is the process of pumping a mixture of water, soil, sand, bentonite, and cement (mud or slurry) into the canal banks and filling the voids in the bank to stop seepage. The slurry cures to create a solid, stable fill within the voids. The exact locations of mud jacking, within the work area are unknown at

this point but a total of eight seepage locations are expected over the course of the project. Friant Water Authority anticipates that seepage will surface and increase at some locations within the immediate repair zone during 2018 and beyond that will require emergency action via mud jacking.

Friant Water Authority would stage equipment and vehicles upon the canal bank road. From that location the slurry rod and hose would be driven into the bank just behind the existing canal lining. The slurry would then be pumped into the bank. The canal lining will be observed during pumping to confirm that slurry pressures are not causing uplift and cracking to the concrete. Depending on the total length of canal bank that needs to be mud jacked, the repairs are anticipated to take between 2 and 5 workdays per mud jacking area.

Environmental Commitments

The proposed immediate repair work along the Friant-Kern Canal has existing Section 7 Endangered Species Act (ESA) coverage under the 2005 U.S. Fish and Wildlife Service (Service) biological opinion: *Formal Endangered Species Consultation on the Operations and Maintenance Program Occurring on Bureau of Reclamation Lands within the South-Central California Area Office* (O&M BiOp). The proposed work corresponds to the following Operation and Maintenance Activities identified on page 13 of the O&M BiOp: #24: Bridge Maintenance, #52 Canal Liner Extension, and #15 Mudjacking/Injecting Grout.

The following avoidance and minimization measures shall be implemented by Friant Water Authority or their representatives to avoid potential environmental consequences associated with the Proposed Action:

- a. If a burrowing owl is observed at the construction site at any time during construction, a temporary non-disturbance buffer of approximately 160 feet shall be observed to establish a safe area for the animal until it leaves the area at its own volition.
- b. The following Conservation Measures and Avoidance and Minimization Measures were adapted from the *Formal Endangered Species Consultation on the Operations and Maintenance Program Occurring on Bureau of Reclamation Lands within the South-Central California Area Office* (Service 2005) to avoid and minimize potential effects to San Joaquin kit fox.
 1. Determine the presence of kit fox dens (natural or in pipes and culverts)
 - a. Pre-construction surveys within the project area shall be conducted no more than 30 calendar days prior to the start of construction in accordance with the most current protocols approved by the Service and California Department of Fish and Wildlife
 - b. Surveys for dens shall be conducted by qualified biologists with demonstrated experience in identifying San Joaquin kit fox dens.
 - c. Pipes and culverts shall be searched for kit foxes prior to being moved or sealed to ensure that an animal has not been trapped.
 2. Protect all San Joaquin kit fox dens to the maximum extent practicable as determined by the on-site biologist

3. Identify type of den (natal or non-natal) and its status (occupied or unoccupied) based on the extant Service guidance (Service 1999).
 - a. Known den: any existing natural den or human-made structure for which conclusive evidence or circumstantial evidence can show that the den is used or has been used at any time in the past by the San Joaquin kit fox.
 - b. Potential den: any natural den or burrow within the range of the species that has entrances of appropriate dimensions (4 to 12 inches in diameter) to accommodate San Joaquin kit foxes. A qualified biologist will survey and investigate using photo-detection equipment, track plate, or other methods to determine species utilization. If no information is collected that would indicate use by other species, the den will be treated as a potential kit fox den. Pupping den: any known San Joaquin kit fox den (as defined) used by kit foxes to whelp and/or rear their pups.
 - c. Atypical den: any known San Joaquin kit fox den that has been established in, or in association with, a human-made structure.
4. Identify and execute appropriate action(s) regarding notification, buffers, excavation and fill, or seal-off:
 - a. Occupied natal den: if an occupied natal den is visible or encountered within the project limits, or other accessible land, or on publicly accessible land within 100 feet of the project construction area, the project will be constructed between August 1 and November 30 and the Service shall be contacted immediately, before any project action occurs.
 - b. A buffer or exclusion zone shall be established to protect the physical den and surrounding habitat of unoccupied natal dens and all non-natal dens that can be avoided:
 - i. Occupied and unoccupied natal dens shall be surrounded with a 200 foot buffer and the Service will be contacted. Occupied and unoccupied non-natal dens shall be surrounded with a 100 foot buffer.
 - ii. When occupied natal dens have been found on or near the project site, ground disturbing activities shall be restricted during the period of December 1 to July 31.
 - c. Unless necessary for safety, the project site shall not be lighted between sunset and sunrise.
 - d. Pipes or culverts with a diameter greater than 4 inches shall be capped or taped closed when it is ascertained that no San Joaquin kit fox is present. Any kit fox found in a pipe or culvert shall be allowed to escape unimpeded.
5. If work must occur within the 100-foot buffer for occupied, unoccupied, and potential non-natal dens (burrows), but will not directly impact the dens, the following guidelines shall be followed:
 - a. Prior to ground disturbing activities for the Proposed Action, the den(s) shall be monitored for at least three consecutive nights to determine its

current status. Activity at the den(s) shall be monitored by placing tracking medium at the entrance(s) and with the use of photo-detection equipment. Certain dens may not be monitored if a qualified biologist determines that it would be more beneficial for kit foxes to leave those dens undisturbed (for example, if a den is located outside of the Project work area beyond the outside toe of the canal embankment at least 50 feet from ground disturbing construction activities, and also shows no evidence of recent activity).

- b. Following the monitoring period (assuming no use by kit fox is detected), den entrances shall be temporarily plugged to prevent kit foxes from moving into dens within 100 feet of ground disturbing activities. Once work in the area is complete, the plugs can be removed. Certain dens may not be plugged if a qualified biologist determines that it would be more beneficial for kit foxes to leave those dens undisturbed (for example, if a den is located outside of the Project work area beyond the outside toe of the canal embankment at least 50 feet from ground disturbing construction activities, and also shows no evidence of recent activity). If kit fox activity is observed at a den during the monitoring, the den shall continue to be monitored to allow any resident animal to move to another den during its normal activities. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Temporary plugging of the den to prevent use by kit fox can occur when, in the judgement of the Service-approved biologist, the animal has moved to a different den. If the animal is still present after five or more consecutive days of partial plugging and monitoring, the den may be temporarily plugged to prevent kit fox use when, in the judgement of the Service-approved biologist, it is temporarily vacant, for example during the animal's normal foraging activities.
- c. To the maximum extent practicable, work shall occur first in areas with burrows exhibiting evidence of potential use by San Joaquin kit fox (e.g., scat, prey remains, tracks) to preclude kit foxes from converting these burrows into natal dens.
- d. Prior to beginning work in a new area, and at least weekly in active work areas, all potential dens within 100 feet of work activities that have been temporarily plugged will be inspected to confirm that the temporary plug is still intact by a qualified biologist.
- e. If a San Joaquin kit fox is found at any time, and is in danger of mortality or harm, work activities that may result in mortality or harm will be immediately halted and a qualified biologist contacted to assess the situation. Work will not resume until the animal has left the area on its own.
- f. A worker environmental awareness training program shall be conducted for the project. The program shall include a brief presentation by person(s) knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and/or agency personnel involved in the project. Workers shall be provided with

contact for qualified biologists in the event that a fox is encountered during work on the project.

6. Destruction of dens shall be avoided to the maximum extent practicable; however, if a natural den cannot be avoided and must be destroyed, the following guidelines shall be followed:
 - a. If no kit fox activity is observed at the den following the monitoring period described above in measure 5a, the den shall be destroyed immediately to preclude subsequent use. If kit fox activity is observed at the den during this period, the den shall be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activities. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Destruction of the den may begin when, in the judgement of the Service or Service-approved biologist, the animal has moved to a different den. The biologist shall be trained and familiar with kit fox biology. If the animal is still present after five or more consecutive days of plugging and monitoring, the den may be excavated when, in the judgement of the Service-approved biologist, it is temporarily vacant, for example during the animal's normal foraging activities.
 - b. All dens shall be excavated by hand, by or under the supervision of, a Service-approved biologist.
 - c. The den shall be fully excavated and then filled with dirt and compacted to ensure that kit foxes cannot reenter or use the den during the construction period. If, at any point during excavation a kit fox is discovered inside the den, the excavation activity shall cease immediately and monitoring of the den shall be resumed. Destruction of the den may be resumed, when in the judgement of a Service-approved biologist, the animal has escaped from the partially destroyed den.
 - d. Non-natal dens may be excavated at any time of year, natal dens shall be excavated only between August 15 and November 1.
7. Within 10 working days of the completion of earthmoving, Friant Water Authority, in coordination with Reclamation, shall replace all excavated kit fox dens with artificial dens on a 2:1 basis. The location and design of the artificial dens will be approved by Service prior to installation.

Environmental consequences for resource areas assume the measures specified would be fully implemented.

Exclusion Category

516 DM 14.5 D (10). *Issuance of permits, licenses, easements, and crossing agreements which provide right-of-way over Bureau lands where action does not allow for or lead to a major public or private action.*

516 DM 14.5 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

Below is an evaluation of the extraordinary circumstances as required in 43 CFR 46.215.

Extraordinary Circumstance	No	Uncertain	Yes
1. This action would have a significant effect on the quality of the human environment (40 CFR 1502.3).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. This action would have significant impacts on public health or safety (43 CFR 46.215(a)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. This action would have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks (43 CFR 46.215(d)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. This action would have a direct relationship to other actions with individually insignificant but cumulatively significant environmental effects (43 CFR 46.215 (f)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
11. This action would affect ITAs (512 DM 2, Policy Memorandum dated December 15, 1993).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
12. This action would have a disproportionately high and adverse effect on low income or minority populations (EO 12898) (43 CFR 46.215 (j)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
13. This action would limit access to, and ceremonial use of, Indian sacred sites on Federal lands by Indian religious practitioners or significantly	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Extraordinary Circumstance	No	Uncertain	Yes
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)).	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

NEPA Action: Categorical Exclusion

The Proposed Action is covered by the exclusion category and no extraordinary circumstances exist. The Action is excluded from further documentation in an EA or EIS.

Attachment A: Cultural Resources Determination

CULTURAL RESOURCES COMPLIANCE

Division of Environmental Affairs

Cultural Resources Branch (MP-153)

MP-153 Tracking Number: 17-SCAO-016.004

Project Name: Friant-Kern Canal (FKC) Subsidence/Capacity Correction (Project): Immediate Repair, Kern and Tulare Counties, CA

NEPA Contact: Rain Emerson, Natural Resources Specialist

MP 153 Cultural Resources Reviewer: BranDee Bruce, Architectural Historian

Date: October 23, 2018

Reclamation has been consulting on a number of activities related to the FKC Subsidence/Capacity Correction Project. Friant Water Authority (FWA) has previously proposed geotechnical boring excavations and Cone Penetration Tests (CPTs) within the FKC and, most recently, has proposed a number of immediate repairs on the FKC to alleviate issues resulting from subsidence along the canal that has affected their ability to deliver water. Reclamation determined the approval for the project constituted an undertaking with the potential to cause effects to historic properties, assuming such properties are present, and required compliance under Title 54 USC § 306108, commonly known as Section 106 of the of the National Historic Preservation Act (NHPA), as amended. Consultation with the State Historic Preservation Officer (SHPO) was completed under the Programmatic Agreement Between the Bureau of Reclamation Mid-Pacific Region and the California State Historic Preservation Officer Regarding Modifications to the Friant Kern Canal Fresno, Tulare, and Kern Counties, California (PA), executed February 6, 2017.

FWA has proposed a number of immediate repairs to the FKC to alleviate the subsidence concerns until a more permanent fix can be developed. These activities include bridge modifications to address maintenance concerns associated with high water at five bridge locations, temporary canal lining raises, and canal bank repairs. The proposed activities along the FKC will occur within a 4-mile-long section of the FKC within the established APE for the PA and will be confined to Reclamation's right-of-way between milepost (MP) 103.5 and MP 107.4. The specific APE for the proposed activities amounts to 76 acres in total. All staging will occur on the existing access roads within the PA APE to allow construction flexibility. No construction or modifications will be required for staging or access.

In order to identify historic properties within the APE, Stantec, FWA's cultural resources contractor, prepared a technical memo titled *Effects Analysis for the Friant-Kern Canal Subsidence Correction Immediate Repair Project*, dated October 10, 2018. The only historic property identified within the APE is the FKC. Stantec applied the criteria of adverse effect and Secretary of the Interior Standards for the Treatment of Historic Properties for Rehabilitation and provided recommendations to Reclamation that the proposed immediate repair activities will not alter any of the characteristics that qualify the FKC for inclusion in the National Register of Historic Places. Reclamation agreed with Stantec's recommendation.

Reclamation consulted with the SHPO on our findings via a hand-delivered letter on October 17, 2018. On October 23, 2018, Reclamation received concurrence from the SHPO via email on a finding of no adverse effects to historic properties pursuant to 36 CFR §800.5(b).

This document serves as notification that Section 106 compliance has been completed for this undertaking. Please note that if project activities subsequently change, additional NHPA Section 106 review, including further consultation with the SHPO, may be required.

Attachments:

Letter: Reclamation to SHPO dated October 15, 2018

Letter: SHPO to Reclamation dated October 23, 2018



United States Department of the Interior

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

IN REPLY REFER TO:

OCT 15 2018

MP-153
ENV-3.00

SPECIAL DELIVERY - HAND DELIVERED

Ms. Julianne Polanco
State Historic Preservation Officer
Office of Historic Preservation
1725 23rd Street, Suite 100
Sacramento, CA 95816

Subject: Continuing National Historic Preservation Act (NHPA) Section 106 Consultation for the Friant-Kern Canal (FKC) Subsidence/Capacity Correction (Project) Immediate Repair Activities, Kern and Tulare Counties, California (17-SCAO-016.004; Programmatic Agreement Consultation; SHPO No. BUR_2013_0220_001); Expedited Review Requested

Dear Ms. Polanco:

The Bureau of Reclamation is continuing consultation under the *Programmatic Agreement Between the Bureau of Reclamation Mid-Pacific Region and the California State Historic Preservation Officer Regarding Modifications to the Friant Kern Canal, Fresno, Tulare, and Kern Counties, California* (PA), executed February 6, 2017, pursuant to Title 54 U.S.C. § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800. In accordance with the PA, Reclamation is continuing consultation with you regarding a land use authorization to perform activities related to an immediate subsidence repair on the FKC. Reclamation determined the immediate repair is an undertaking as defined in 36 CFR § 800.16(y) and a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a). In accordance with the PA, we are requesting concurrence with our finding of no adverse effect to historic properties, pursuant to 36 CFR § 800.5(b). Reclamation is requesting an expedited review, pursuant to Stipulation IV.B.1(a) of the PA, which states if an action associated with the proposed project is within the construction berms of the FKC area of potential effects (APE) and does not alter a character defining component of the FKC, your office will be afforded 15 days to review, comment, and concur on the findings.

Pursuant to Stipulation III.A, Reclamation completed the Historic Context and Inventory Methodology consulting with your office on December 4, 2017. Your office responded on January 3, 2018, agreeing to the documentation satisfying the requirements for the Stipulations III.A and III.B of the PA. The remaining commitments of Stipulation III.B, specifically the FKC

inventory, are currently being fulfilled. Reclamation will be consulting with your office on the FKC inventory prior to construction of the Project; however, this smaller project is designed to address immediate subsidence issues along one section of the canal while the larger, more permanent fix is being developed.

The FKC has a history of subsidence, with the most severe subsidence occurring in the area below Deer Creek Check at Milepost (MP) 102.69. Because of the sustained drought and reliance of pumped groundwater in recent years, the subsidence along this section of the FKC has accelerated. As the subsidence has been getting worse, the Friant Water Authority (FWA) struggles to move water to water contractors through the canal at this lower segment without impacts to the bridges crossing the canal and other capacity issues. FWA has proposed a number of immediate repairs to alleviate these concerns until a more permanent fix can be developed. These activities include bridge modifications to address maintenance concerns associated with high water at five bridge locations, temporary canal lining raises, and canal bank repairs. Enclosure 1 provides a detailed description of the proposed work (Stantec 2018: pp. 3-10).

Reclamation has determined the proposed activities along the FKC will occur within a 4-mile-long section of the FKC within the established APE for the PA and will be confined to MP 103.5 and MP 107.4 (Enclosure 1, Figures 1-1 through 1-9). The specific APE for the proposed activities amounts to 76 acres in total. All staging will occur on the existing access roads within the PA APE to allow construction flexibility. No construction or modifications will be required for staging or access.

Efforts to identify historic properties in the APE were conducted in-house and through Stantec Consulting Services (Stantec), a contractor to FWA. Stantec prepared a technical memo titled *Effects Analysis for the Friant-Kern Canal Subsidence Correction Immediate Repair Project*, dated October 10, 2018 (Enclosure 1), and identified the FKC as the only property within the APE. The FKC, which was constructed between 1945 and 1951, is a component of the Central Valley Project (CVP), Friant Division. In 1997, the Federal Highway Administration obtained a consensus determination for the National Register of Historic Places (National Register) eligibility for the FKC, and Reclamation has treated the FKC as eligible for inclusion in the National Register pursuant to 36 CFR § 60.4 under Criterion A, but has not received a consensus determination on its own formal evaluation of the FKC. For the purposes of the current undertaking only, Reclamation proposes to treat FKC as an eligible property under Criteria A for its association with the CVP. As the contributing and non-contributing features of the FKC have yet to be determined, all features within the project APE will be considered contributing to the eligible property, including the five bridges where maintenance activities will occur.

Stantec applied the criteria of adverse effect at 36 CFR § 800.5(a)(1) and the Secretary of the Interior Standards for the Treatment of Historic Properties for Rehabilitation and provided recommendations to Reclamation that the proposed immediate repair activities will not alter any of the characteristics that qualify FKC for inclusion in the National Register. Effects on FKC from the proposed boring will be temporary in nature and will not significantly change or diminish the integrity of the appearance, design, or function of the canal. No other features of the FKC will be modified or impacted as part of this project. A detailed analysis supporting the finding of no adverse effect to historic properties, including specific analysis of the

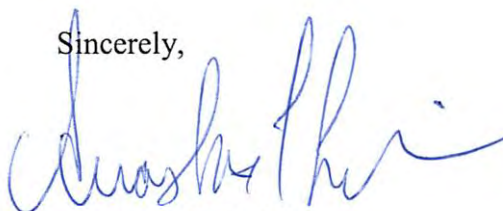
Rehabilitation Standards, can be found in Enclosure 1 (Stantec 2018: pp. 11-13). Based on the analysis in Enclosure 1, Reclamation accepts Stantec's recommendation and concludes that the FKC will not be adversely affected by the proposed undertaking pursuant to 36 CFR § 800.5(b).

As the current activities will be confined to bridges crossing the FKC, the constructed berm of the FKC and adjacent maintenance roads, there is no potential to cause effects to archaeological deposits from the proposed work; therefore, no records search or archaeological surveys were conducted. Additionally, Reclamation did not consult with Indian tribes or other Native American groups concerning properties of religious or cultural significance because the undertaking is confined to the FKC constructed berm. For future activities proposed under the PA, Reclamation will coordinate and consult with Indian Tribes and other Native American groups, organizations, and individuals as appropriate pursuant to 36 CFR § 800.4(a)(3) and Stipulation IV.B.2 of the PA.

Based on the above and enclosed information, Reclamation has reached a finding of no adverse effect on historic properties for the currently proposed geotechnical investigations pursuant to 36 CFR § 800.5(b). We invite your comments on the delineation of the APE and the appropriateness of the historic properties identification efforts. We also request your consensus with our finding of no adverse effect for the current undertaking. In accordance with Stipulation IV.B.1(a) of the PA, Reclamation requests a 15-day review period. If your office needs more time to review the document, as stated in the PA, your office will inform Reclamation, via email, within five days of receipt of the consultation package that your office will be unable to complete their review in an expedited fashion. Your office will then be afforded a full 30-day review from the date of submittal.

In the event of a post-review discovery during project implementation, Reclamation will follow the procedures outlined at 36 CFR § 800.13. If you have any questions or concerns, please contact Ms. Brandee Bruce, Architectural Historian, at 916-978-5039 or bbruce@usbr.gov.

Sincerely,



Anastasia T. Leigh
Regional Environmental Officer

Enclosure



**DEPARTMENT OF PARKS AND RECREATION
OFFICE OF HISTORIC PRESERVATION**

Lisa Ann L. Mangat, *Director*

Julianne Polanco, State Historic Preservation Officer

1725 23rd Street, Suite 100, Sacramento, CA 95816-7100

Telephone: (916) 445-7000

FAX: (916) 445-7053

calshpo.ohp@parks.ca.gov

www.ohp.parks.ca.gov

October 23, 2018

Reply in Reference To: BUR_2013_0220_001

Ms. Anastasia T. Leigh
Regional Environmental Officer
Bureau of Reclamation, Mid-Pacific Region
2800 Cottage Way
Sacramento, CA 95825-1898

RE: Friant-Kern Canal (FKC) Subsidence/Capacity Correction Immediate Repair
Activities, Kern and Tulare Counties, California (Project #17-SCAO-006.004)

Dear Ms. Leigh:

The State Historic Preservation Officer (SHPO) received the Bureau of Reclamation's (Reclamation) letter on October 17, 2018, initiating consultation for the above-referenced project pursuant to Section 106 of the National Historic Preservation Act of 1966 (54 U.S.C. § 300101), as amended, and Stipulation IV.B.1(a) the *Programmatic Agreement Between the Bureau of Reclamation Mid-Pacific Region and the California State Historic Preservation Officer Regarding Modifications to the Friant Kern Canal, Fresno, Tulare, and Kern Counties, California* (PA). The Bureau of Reclamation (Reclamation) is seeking the SHPO's comments regarding the effects the undertaking described below will have on historic properties. Included with the consultation letter was the *Technical Memorandum Effects Analysis for the Friant-Kern Canal Subsidence Correction Immediate Repair Project* (report), prepared by Stantec on October 10, 2018.

Reclamation is consulting regarding a land use authorization to perform activities related to an immediate subsidence repair on the FKC. Repair activities include:

- Bridge coating and minor repairs on five bridges, the Avenue 96, Road 208, Avenue 88, Avenue 80, and Road 192 bridges, including:
 - elastomeric, crack-bridging, waterproofing membrane, or two-component cementitious coating to the entire exposed surface of the concrete girders and deck soffit
 - seal joints at interface between concrete canal lining and the concrete bridge abutments with a pourable elastomeric sealant
 - paint exposed metal surfaces of the bridge pier bearings
 - patch the delaminated and spalled areas on bridge abutments and pier caps

- additional work may include repair of damaged utility supports and reinforcing of the utility supports with additional bracing
- Raising the canal lining with the installation of a reinforced polypropylene liner from just north of the Terra Bella Avenue Bridge at MP 103.5, extending three miles southwest to just past the bridge crossing at Road 192 at MP 106.5
- Canal bank repairs via mud jacking along the length of the APE as needed

Reclamation delineated the Area of Potential Effect (APE) as the width of the FKC from the outer toe of embankment to outer toe of embankment, extending from Mile Post (MP) 103.5 to MP 107.4 (76 acres). All staging will occur on the existing access roads within the APE. Based on the information in the report, the vertical APE appears to be 2.5 feet deep.

Identification efforts included the use of in-house documentation. The FKC was the only historic property identified within the APE, and was previously determined eligible for listing in the National Register of Historic Places (NRHP) in 1997. All features of the canal, including the bridges, are being considered contributing features to the property.

Reclamation has found that the undertaking will result in no adverse effect to historic properties because it complies with the Secretary of the Interior's Standards for the Treatment of Historic Properties, specifically the Rehabilitation Standards. After reviewing the information submitted with your letter, I offer the following comments:

- I agree that the Area of Potential Effect (APE) as represented in the attachments to your letter is appropriate, per 36 CFR § 800.4(a)(1).
- I concur that Reclamation's identification and evaluation efforts are sufficient for this undertaking, per 36 CFR § 800.4(b).
- I concur with your finding and agree that pursuant to 36 CFR § 800.5(b), a Finding of No Adverse Effect is appropriate for the undertaking as described.

Please be advised that under certain circumstances, such as an unanticipated discovery or a change in project description, Reclamation may have future responsibilities for this undertaking under 36 CFR § 800 and the PA. If you have any questions or concerns, please contact Kathleen Forrest, Historian, at (916) 445-7022 or Kathleen.Forrest@parks.ca.gov.

Sincerely,



Julianne Polanco
State Historic Preservation Officer

