

CULTURAL RESOURCE COMPLIANCE
Mid-Pacific Region
Division of Environmental Affairs
Cultural Resources Branch

MP-153 Tracking Number: 14-SCAO-149

Project Name: Shafter-Wasco Irrigation District (SWID) Kimberlina Groundwater Banking Project

NEPA Document: EA

MP 153 Cultural Resources Reviewer: Amy J. Barnes

Date: June 20, 2016

This proposed undertaking by Reclamation is to award grant funds to the SWID from the San Joaquin River Restoration Program (Title X, Part III, sec. 10202) for partially funding for construction of recharge basins, recovery wells, and new conveyance facilities approximately 3 miles southeast of Wasco, California. This is 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 SWID project will include the following construction activities.

- Construct a new 270-acre recharge basin with a new central canal and head gate on the Calloway Canal.
- Drill two new deep groundwater recovery wells, convert one existing well to a groundwater recovery well, convert two existing wells to monitoring wells.
- Drill a new grower well immediately south of the new recharge basin.
- Install new pipelines to connect the three ground water recovery wells with SWID's Lateral 134.4 pipeline.
- Install a new electric pump and pipeline at the open canal portion of Lateral 134.4 to discharge water into the FKC next to the existing turnout.

The area of potential effects (APE) for this undertaking includes an approximately 272-acre area for constructing the recharge basin, new grower well, and new pump and pipeline connecting Lateral 134.4 to the FKC in Sections 23 and 28 in T. 27 S., R. 25 E., Mount Diablo Meridian, as depicted on the Famosa and Wasco 7.5' U.S. Geological Survey topographic quadrangle maps (see Figure 3). The vertical APE will measure 6 feet below the existing grade, which is the maximum depth of grading for the recharge basin. The APE is bracketed by agricultural roads, water conveyance facilities, orchards, and fields. Access and staging for this project will occur within existing roads and fields.

The historic property identification efforts included a cultural resources inventory covering the APE by ASM Affiliates (ASM) to assist in the identification of historic properties (ASM) (Carey et. al. 2016). ASM identified three cultural resources within the APE: a segment of the Calloway Canal (P-15-007233), an earthen farm reservoir (K-RA-1), and Reclamations' FKC. Additionally, Reclamation identified a segment of SWID's Lateral 134.4 that is also located within the APE.

CULTURAL RESOURCE COMPLIANCE

Mid-Pacific Region

Division of Environmental Affairs

Cultural Resources Branch

The Calloway Canal was previously determined not eligible for listing in the National Register of Historic Places (National Register) in 1996 through a consensus determination with the State Historic Preservation Officer. The FKC is a 152-mile long canal completed in 1951 as a component of Reclamation's CVP to carry water from Friant Dam to the Kern River. The FKC is a component of Reclamation's CVP Friant Division and considered eligible for inclusion in the National Register pursuant to 36 CFR § 60.4 under Criterion A for its contribution to the development of agriculture in California and the San Joaquin Valley.

The earthen farm reservoir is a square earthen structure constructed sometime between 1930 and 1943 that is situated adjacent to the west bank of the Calloway Canal. This structure is an on-farm delivery structure that is no longer used. The earthen farm reservoir was evaluated by ASM for inclusion on the National Register as an individual resource, recommending that it is not eligible for listing.

The segment of SWID Lateral 134.4 within the APE is a 78-inch diameter concrete pipeline with a 3,700-foot long open concrete lined canal portion west of the FKC turnout from which it receives water. The lateral totals approximately 10.9 miles long and was installed in the late 1950s by Reclamation for SWID as part of the SWID distribution system. For the purposes of this undertaking only, Reclamation will treat the SWID water conveyance system as a district eligible for inclusion in the National Register under Criterion A for the theme of development of irrigated agriculture in the Kern River valley, and Lateral 134.4 as a contributing element to that district.

The only identified historic properties within the APE are the FKC and SWID Lateral 134.4, which are component of the CVP and SWID conveyance systems, respectively. Reclamation applied the criteria of adverse effect [36 CFR § 800.5(a)] for the current undertaking and found that the proposed activities would result in no significant alterations to the historic characteristics that make the FKC or Lateral 134.4 eligible for the National Register. The proposed actions on the FKC and Lateral 134.4 will not alter any physical characteristics of the FKC or Lateral 134.4 or their berms. This turn-out installation is consistent with other similar existing facilities that pump water to and from the FKC. Since there will be no significant alterations to the FKC or Lateral 134.4, the CVP and SWID conveyance systems will also be unaffected.

Reclamation entered into consultation with the California State Historic Preservation Officer (SHPO) on May 13, 2016, seeking their concurrence on a finding of "no adverse effects to historic properties pursuant to 36 CFR § 800.5(b)." SHPO concurred with Reclamations' findings and determination on June 17, 2016 (consultation attached).

After reviewing the EA, dated June 2016 entitled *Shafter-Wasco Irrigation District Kimberlina Recharge Basin Proposed Project*, I concur that this action would not have significant impacts on properties listed, or eligible for listing, on the National Register.

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 consultation with the State Historic Preservation Officer, may be necessary. Thank you for providing the opportunity to comment.

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

1725 23rd Street, Suite 100
SACRAMENTO, CA 95816-7100
(916) 445-7000 Fax: (916) 445-7053
calshpo@parks.ca.gov
www.ohp.parks.ca.gov



June 17, 2016

Reply in Reference To: BUR_2016_0516_001

Anastasia T. Leigh, Regional Environmental Officer
United States Department of the Interior
Bureau of Reclamation, Mid-Pacific Regional Office
2800 Cottage Way, Sacramento, CA 95825-1898

Re: National Historic Preservation Act (NHPA) Section 106 Compliance for the Shafter-Wasco Irrigation District (SWID) Kimberlina Groundwater Banking Project, Kern County, California (Project #14-SCAO-149)

Dear Ms. Leigh:

The Office of Historic Preservation (OHP) received your letter on May 13, 2016 initiating consultation for the above-referenced undertaking. The Bureau of Reclamation (Reclamation) is consulting pursuant to Section 106 of the National Historic Preservation Act and its implementing regulations found at 36CFR Part 800 (as amended). The following documentation was included with your letter:

- *Draft: Class III Inventory/Phase I Survey, Shafter-Wasco Irrigation District Recharge Project, Kern County, California (for Provost & Pritchard Consulting Group, Visalia, CA; by P. Carey, J. Gorman, S. Davis and D. Whitley--ASM Affiliates, 2016).*
- *Figure 1: Project Area Map; Figure 2: proposed pump and discharge on the Friant-Kern Canal; Figure 3: Project area location for the SWID Kimberlina Groundwater Banking Project; project description-2 pp.*

Reclamation proposes to award grant funds from the San Joaquin River Restoration Program (Title X, Part III, sec. 10202) to the SWID for this project which will consist of the construction of recharge basins, recovery wells, and new conveyance facilities approximately 3 miles southeast of Wasco, California. General construction activities will include creating a new 270-acre recharge basin with a new central canal and head-gate on the Calloway Canal; drill two new deep groundwater recovery wells, convert an existing well to a recovery well and convert two wells to monitoring wells; drill a new grower well south of the recharge basin; install new connecting pipelines from the wells to SWID's Lateral 134.4 pipeline and install a new electric pump and pipeline at the open portion of lateral 134.4 to discharge water into the Friant-Kern Canal (FKC) at its existing turnout.

Reclamation determined the area of potential effects (APE) includes an approximately 272-acre area for constructing the recharge basin, new grower well, and new pump and pipeline connecting Lateral 134.4 to the FKC. The vertical APE will measure 6 feet below the existing grade (maximum depth of grading for the recharge basin). Staging will be by existing roads and fields.

Identification efforts of historic properties in the APE included a record search and fieldwork survey. ASM, on behalf of Reclamation, identified and documented three cultural resources within the APE: a segment of the Calloway Canal (P-15-007233), an earthen farm reservoir (K-RA-1), and Reclamation's FKC. A historic context was defined for the development of irrigation for agriculture in the local Shafter-Wasco area and segments of the Calloway Canal and FKC, and the earthen farm reservoir (K-RA-1) were recorded. In addition, Reclamation has identified a segment of SWID's Lateral 134.4 that is also located within the APE. No other sites or structures were identified within the APE.

The earthen farm reservoir is a square earthen structure built between 1930 and 1943 and situated adjacent to the west bank of the Calloway Canal. It is a locally built, no longer used, common type, structure. The farm reservoir was evaluated by Reclamation and recommended as not individually eligible for listing in the National Register of Historic Places (NRHP). The Calloway Canal has been determined not eligible for listing in the NRHP in 1996 through a Section 106 consensus determination.

The FKC is a 152-mile long canal completed in 1951 as a component of Reclamation's Central Valley Project (CVP) to carry water from Friant Dam to the Kern River. The FKC is a component of Reclamation's CVP Friant Division district and considered by Reclamation to be eligible for inclusion in the NRHP under Criterion A for its contribution to agricultural development in California and the San Joaquin Valley.

The SWID Lateral 134.4 segment is a 78-inch diameter concrete pipeline with a 3,700-foot long open concrete lined canal portion west of the FKC turnout from which it receives water. The lateral is about 10.9 miles long and was installed in the late 1950s by Reclamation for SWID as part of the SWID distribution system. Recording the entirety of the SWID system is outside the scope of this project. Therefore, for the purposes of this undertaking only, Reclamation will treat the SWID water conveyance system as an eligible district under Criterion A for the theme of development of irrigated agriculture in the Kern River valley, and Lateral 134.4 as a contributing element to that district.

A geotechnical analysis of buried site sensitivity indicates a low potential for subsurface archaeological sites. Also, initial construction of the SWID system and plowing within the APE and adjacent fields has disturbed 6 feet or more of the vertical context, reducing the potential for finding intact buried sites.

Pursuant to §800.3(f), Reclamation sent letters to the Santa Rosa Rancheria, Tejon Indian Tribe, to the Tule River Indian Tribe, and to the Native American organizations of the Wukache Indian Tribe of Eshorn Valley and the Kern Valley Indian Council to request their assistance with site identification. To date no responses have been received. Should Native American concerns be raised in the future Reclamation will work to identify and address them and make notification as required.

Reclamation applied the criteria of adverse effect [36 CFR § 800.5] and found that the proposed undertaking would result in no significant alterations to the historic characteristics that make the FKC or Lateral 134.4 eligible for the NRHP and finds that this turn-out installation is consistent with other similar existing facilities that pump water to and from the FKC.

OHP reviewed the submitted documentation and offers the following comments:

- Pursuant to 36 CFR 800.4(a)(1), there are no objections to the APE as defined and documented.
- Pursuant to 36 CFR 800.4(b), it is considered that Reclamation has made a reasonable and good faith effort to identify historic properties within the area of potential effects.
- Pursuant to 36 CFR 800.4(c)(2), **I do not object** that Reclamation finds that the earthen farm reservoir (K-RA-1), a locally built, common-type structure lacking historic context, is not eligible for listing in the National Register of Historic Places.
- Pursuant to 36 CFR 800.4(c)(2), **I do not object** that, for the purposes of this undertaking only, Reclamation will treat the SWID water conveyance system as an eligible district under Criterion A for the theme of development of irrigated agriculture in the Kern River valley, and Lateral 134.4 as a contributing element to that district.
- Reclamation has determined that the proposed undertaking would result in no adverse effect to historic properties. Pursuant to 36 CFR 800.5(b), **I concur**.

Please be advised that under certain circumstances, such as unanticipated discovery or a change in project description, Reclamation may have additional future responsibilities for this undertaking under 36 CFR Part 800 (as amended). Should you require further information, please contact Jeanette Schulz at Jeanette.Schulz@parks.ca.gov or (916) 445-7031.

Respectfully,



Julianne Polanco
State Historic Preservation Officer



United States Department of the Interior

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

IN REPLY REFER TO:

MP-153
ENV-3.00

MAY 1 2016

HAND DELIVERY

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

Subject: National Historic Preservation Act (NHPA) Section 106 Compliance for the Shafter-Wasco Irrigation District (SWID) Kimberlina Groundwater Banking Project, Kern County, California (Project #14-SCAO-149)

Dear Ms. Polanco:

The Bureau of Reclamation is initiating consultation under Title 54 USC § 306108, commonly known as Section 106 of the NHPA, and its implementing regulations found at 36 CFR Part 800, for construction of recharge basins, recovery wells, and new conveyance facilities approximately 3 miles southeast of Wasco, California (Figure 1). Reclamation proposes to award grant funds to the SWID for this project from the San Joaquin River Restoration Program (Title X, Part III, sec. 10202). Reclamation determined that the granting of Federal funds constitutes an undertaking as defined in 36 CFR § 800.16(y) and is a type of activity that has the potential to cause effects on historic properties under 36 CFR § 800.3(a). We are entering into consultation with you on this undertaking and requesting your concurrence on our finding of no adverse effect to historic properties, pursuant to 36 CFR § 800.5(b).

The SWID project will include the following construction activities. Refer to the enclosed project description and Figures 2 and 3 for additional detail.

- Construct a new 270-acre recharge basin with a new central canal and head gate on the Calloway Canal.
- Drill two new deep groundwater recovery wells, convert one existing well to a groundwater recovery well, convert two existing wells to monitoring wells.
- Drill a new grower well immediately south of the new recharge basin.

- Install new pipelines to connect the three ground water recovery wells with SWID's Lateral 134.4 pipeline.
- Install a new electric pump and pipeline at the open canal portion of Lateral 134.4 to discharge water into the FKC next to the existing turnout.

The area of potential effects (APE) for this undertaking includes an approximately 272-acre area for constructing the recharge basin, new grower well, and new pump and pipeline connecting Lateral 134.4 to the FKC in Sections 23 and 28 in T. 27 S., R. 25 E., Mount Diablo Meridian, as depicted on the Famosa and Wasco 7.5' U.S. Geological Survey topographic quadrangle maps (see Figure 3). The vertical APE will measure 6 feet below the existing grade, which is the maximum depth of grading for the recharge basin. The APE is bracketed by agricultural roads, water conveyance facilities, orchards, and fields. Access and staging for this project will occur within existing roads and fields.

In an effort to identify historic properties, PID contracted ASM Affiliates (ASM) to conduct a cultural resources inventory covering the APE (Carey et. al. 2016). ASM identified three cultural resources within the APE: a segment of the Calloway Canal (P-15-007233), an earthen farm reservoir (K-RA-1), and Reclamations' FKC. Additionally, Reclamation identified a segment of SWID's Lateral 134.4 that is also located within the APE. ASM developed a historic context for the development of irrigation for agriculture in the local Shafter-Wasco area and recorded the segments of the Calloway Canal and FKC, and the earthen reservoir K-RA-1, within the APE (Carey et. al. 2016, enclosed). ASM did not record SWID's Lateral 134.4, and did not discuss the SWID conveyance system.

The earthen farm reservoir is a square earthen structure constructed sometime between 1930 and 1943 that is situated adjacent to the west bank of the Calloway Canal. This structure is an on-farm delivery structure that is no longer used. The earthen farm reservoir was evaluated by ASM for inclusion on the National Register as an individual resource, recommending that it is not eligible for listing. It is a small earthen on-farm delivery structure of common type and design built by an unknown farmer to draw water from the Calloway Canal. See Carey et. al. (2016) for further discussion. Reclamation agrees with this recommendation.

The Calloway Canal was previously determined not eligible for listing in the National Register of Historic Places (National Register) in 1996 through a consensus determination with the State Historic Preservation Officer. The FKC is a 152-mile long canal completed in 1951 as a component of Reclamation's CVP to carry water from Friant Dam to the Kern River. The FKC is a component of Reclamation's CVP Friant Division and considered eligible for inclusion in the National Register pursuant to 36 CFR § 60.4 under Criterion A for its contribution to the development of agriculture in California and the San Joaquin Valley.

The segment of SWID Lateral 134.4 within the APE is a 78-inch diameter concrete pipeline with a 3,700-foot long open concrete lined canal portion west of the FKC turnout from which it receives water. The lateral totals approximately 10.9 miles long and was installed in the late

1950s by Reclamation for SWID as part of the SWID distribution system. Recording the entirety of the SWID system is outside the scope of this project. Therefore, for the purposes of this undertaking only, Reclamation will treat the SWID water conveyance system as a district eligible for inclusion in the National Register under Criterion A for the theme of development of irrigated agriculture in the Kern River valley, and Lateral 134.4 as a contributing element to that district.

An analysis of buried site sensitivity (Carey et. al. 2016:9) indicates that this general setting has a low potential for subsurface archaeological sites. In addition, the construction of the SWID conveyance system and facilities, other water systems, and the plowing of fields within and adjacent to the APE has disturbed 6 feet or more of the vertical context. Given the depositional characteristics of the landform and soils in the APE, and ongoing impacts of agricultural development, there is low potential for encountering intact subsurface cultural resources in the APE.

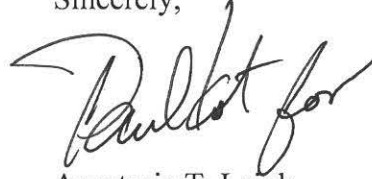
ASM Affiliates contacted the Native American Heritage Commission (NAHC) to request a search of their sacred lands files and request a list of Native American contacts. The sacred lands files search did not identify any properties in or near the APE. Pursuant to the regulations at 36 CFR § 800.3(f)(2), Reclamation identified the Santa Rosa Rancheria, Tejon Indian Tribe, and Tule River Indian Tribe as Indian tribes who might attach religious and cultural significance to historic properties within the APE. Reclamation sent letters to these Indian tribes on March 30, 2016, to invite their participation in the Section 106 process and request their assistance in the identification of sites of religious and cultural significance or historic properties that may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(4). Reclamation also sent letters to the Wukache Indian Tribe of Eshorn Valley and the Kern Valley Indian Council, as identified on the NAHC list as Native American organizations likely to have knowledge or concerns with historic properties in the area, requesting their assistance in identifying historic properties which may be affected by the proposed undertaking pursuant to 36 CFR § 800.4(a)(3). To date, no responses have been received from these Indian tribes and Native American organizations. If Native American concerns are subsequently raised, Reclamation will work to address them and notify your office as appropriate.

The only identified historic properties within the APE are the FKC and SWID Lateral 134.4, which are component of the CVP and SWID conveyance systems, respectively. Reclamation applied the criteria of adverse effect [36 CFR § 800.5(a)] for the current undertaking and found that the proposed activities would result in no significant alterations to the historic characteristics that make the FKC or Lateral 134.4 eligible for the National Register. The proposed actions on the FKC and Lateral 134.4 will not alter any physical characteristics of the FKC or Lateral 134.4 or their berms. This turn-out installation is consistent with other similar existing facilities that pump water to and from the FKC. Since there will be no significant alterations to the FKC or Lateral 134.4, the CVP and SWID conveyance systems will also be unaffected.

Reclamation has determined that the undertaking will result in no adverse effect to historic properties pursuant to 36 CFR Part 800.5(b). We invite your comments on our delineation of the APE and our efforts to identify historic properties. Reclamation requests your concurrence that the earthen farm reservoir is not a historic property. We also requests your concurrence with our

finding of no adverse effect to historic properties. In the event of a post-review discovery, Reclamation will follow the procedures outlined at 36 CFR § 800.13. Please contact Ms. Amy Barnes, Archeologist, at 916-978-5047 or abarnes@usbr.gov, if you have any questions concerning this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Paula for", written over the printed name.

Anastasia T. Leigh
Regional Environmental Officer

Enclosure – 5

Project Description

The SWID proposes to construct a recharge basin, groundwater recovery and monitoring wells, a new pump and pipeline connection to the Reclamation-owned Friant-Kern Canal (FKC), and a new grower well. The new 270-acre recharge basin will be situated south of and adjacent to Kimberlina Road and SWID's existing 78-inch diameter main pipeline (Lateral 134.4), and west of and adjacent to the North Kern Water Storage District's Calloway Canal. The recharge basin will consist of a new head gate and canal that will be constructed east to west from the Calloway Canal and flanked north and south by a series of approximately 22 recharge cells separated by small earthen levees. These small levees will measure approximately 2.5 feet above the existing grade with a top width of 16 feet. The exterior levees surrounding the complex of recharge cells will measure approximately 2.5 feet above the existing grade with a top width of 24 feet. The recharge cells will be excavated between 2 feet and 6 feet below the existing grade. The new central canal will measure a maximum of 6 feet deep with a bottom width of approximately 24 feet and a top width of 48 feet. The system of earthen levees will be constructed using the excavated material from basin construction.

Two new deep groundwater recovery wells will be constructed within the recharge basin. The new recovery wells will be drilled to a depth of approximately 1,000 feet by truck-mounted equipment using an 18-inch-diameter casing. The well head will be surrounded by an 8-foot square concrete pad, on which the pump and motor will be set and enclosed with a security fence. One existing grower well will be converted to extract groundwater. New pipelines measuring between 15 inches and 21 inches in diameter will connect these three wells with SWID's Lateral 134.4 pipeline on the south side of Kimberlina Road. The pipelines will be installed in trenches measuring approximately 2.5 feet wide and 5.5 feet deep. Up to 4 feet of fill will be excavated to expose the top of the Lateral 134.4 pipeline, which will be cored out to install a 24-inch connection to convey the recovered well water into the mainline for delivery to SWID growers and/or to the FKC. Two other existing wells within the recharge basin will be converted to monitoring wells. The well heads will include an above ground segment of pipe with a locking cap surrounded by a concrete foundation. Up to four bollards will be installed to a depth of up to 3 feet around each monitoring well for protection.

SWID's Lateral 134.4 is an existing 10-mile long pipeline connected to the FKC via an existing turnout structure. Approximately 3,700 feet of Lateral 134.4 becomes an open concrete lined canal where it meets the FKC turnout (Figure 2). A new electric pump will be installed along the north bank of this open canal portion of the lateral to draw water into a new 21-inch diameter pipeline measuring approximately 150 feet long that will discharge water into the FKC next to the existing turnout. The pump and motor will be enclosed with a security fence. The new discharge pipeline will have two metering devices and will be installed in a 2.5-foot wide by 8-foot-deep trench through the FKC embankment. The exposed portion of pipe over the FKC will rest on a concrete saddle measuring approximately 12 inches wide, 12 inches long, and 18 inches high (12 inches of which will be buried). The concrete saddle will be located 24 inches away from the edge of the canal liner and the pipe will extend approximately 5 feet over the FKC.

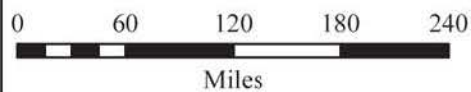
The one existing grower well that will be used for the groundwater recovery component of the project will be replaced for the grower on other lands he farms south of the recharge basin. The new well will be located immediately south of the new recharge basin adjacent to a field road. It

will be drilled to a depth of approximately 600 feet by truck-mounted equipment using a 8-inch or 12-inch-diameter casing. The well head will be surrounded by an 8-foot square concrete pad, on which the pump and motor will be set and enclosed with a security fence.



Figure 1. The project area is located approximately 3 miles southeast of Wasco, California.

Project Tracking No.: 14-SCAO-149



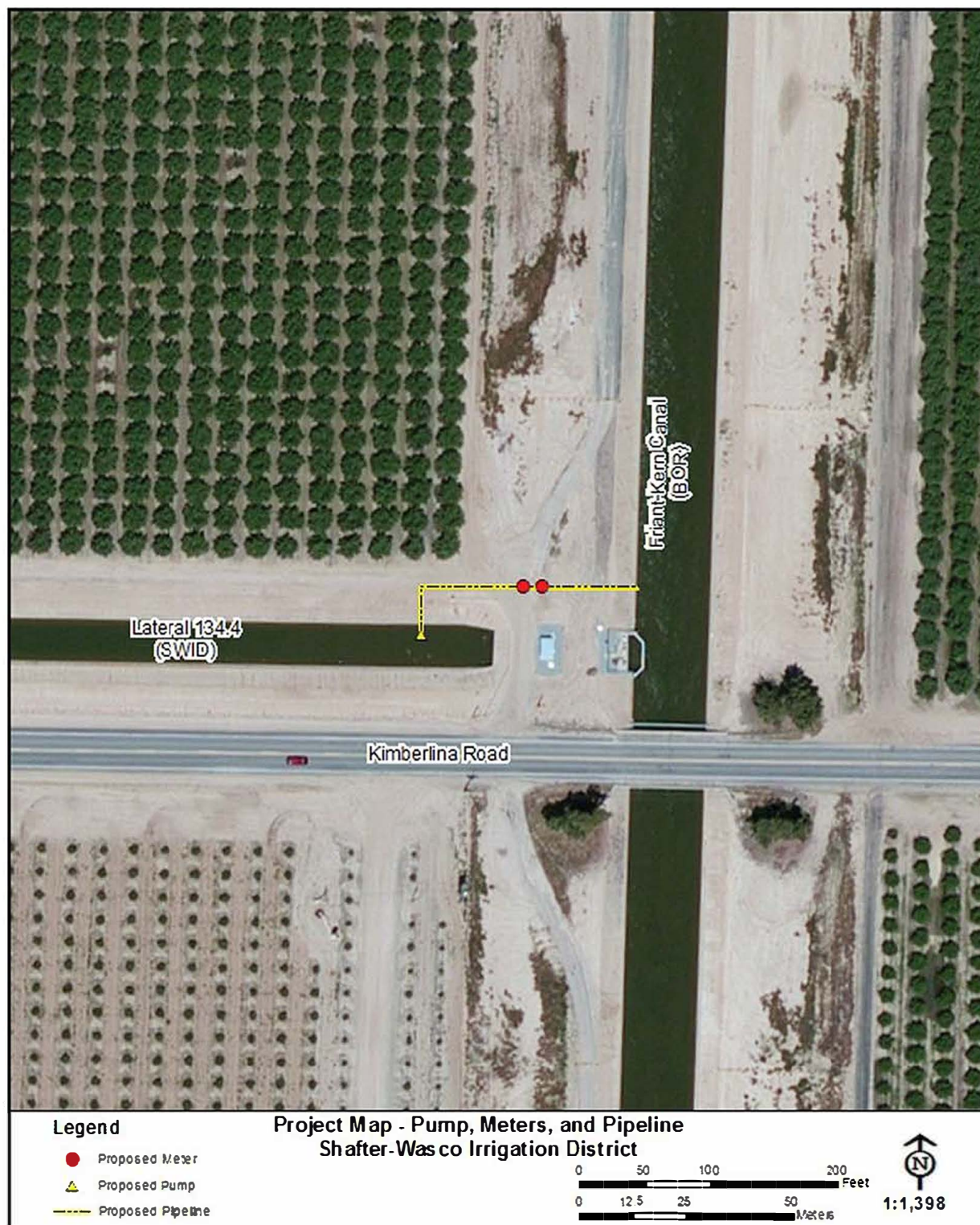


Figure 2. Diagram of the new proposed pump and discharge on the Friant-Kern Canal.

