RECLAMATION

Managing Water in the West

Final Environmental Assessment

Fresno County Water Works District No. 18 and Lower Tule River Irrigation District Request for Approvals Pursuant to the Friant Ranch Specific Plan

EA-11-097

U.S. Department of the Interior
Bureau of Reclamation
Mid Pacific Region
South-Central California Area Office
Fresno, California

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Mission Statements

The mission of the Department of the Interior is to protect and provide access to our Nation's natural and cultural heritage and honor our trust responsibilities to Indian Tribes and our commitments to island communities.

The mission of the Bureau of Reclamation is to manage, develop, and protect water and related resources in an environmentally and economically sound manner in the interest of the American public.

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Section 1 Introduction

Fresno County Waterworks District No. 18 (FCWW 18) is a Friant Division Central Valley Project (CVP) contractor with the Bureau of Reclamation (Reclamation) which serves the municipal and industrial (M&I) needs of the town of Friant, Millerton Lake State Recreation Area, and Reclamation employees at Friant Dam.

FCWW 18 has requested approval from Reclamation for (1) inclusion of approximately 520+/- acres of the Friant Ranch Specific Plan area located immediately adjacent to FCWW 18's existing service area, (2) modification and use of Reclamation's existing 24-inch pipeline located near Friant Dam, and (3) execution of an operation and maintenance (O&M) agreement between FCWW 18 and Reclamation. In addition, Lower Tule River Irrigation District (LTRID), another CVP contractor, has requested that Reclamation approve a permanent transfer of up to 2,000 acre-feet (AF) per year (AFY) of its CVP Friant Division Class 1 water supply to FCWW 18 for M&I purposes.

Reclamation provided the public with an opportunity to comment on the Draft Finding of No Significant Impact (FONSI) and Draft Environmental Assessment (EA) between May 10, 2013 and June 10, 2013. No comments were received. Changes from the draft EA that are not minor editorial changes are indicated by vertical lines in the left margin of this document.

1.1 Background

Fresno County analyzed potential impacts and mitigation associated with the development of residential and commercial uses within the Plan Area in the Friant Community Plan Update and Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) circulated for public review in 2009 and certified by Fresno County on February 1, 2011. Since certification, this environmental impact report has been challenged in court. At the trial level, Fresno County Superior Court Judge Peña wholly upheld the analysis relating to the water transfer, but mandated that the County take certain additional actions related to parks and traffic. (See Judgments in Fresno County Superior Court Cases *City of Fresno v. County of Fresno*, Case No. 11CECG00706, *San Joaquin River Parkway and Conservation Trust Inc., v. County of Fresno*, Case No. 11CECG00709, and *Sierra Club, Revive the San Joaquin, and League of Women Voters of Fresno v. County of Fresno*, Case No. 11CECG00726.) On or about February 19, 2013, Friant Ranch, L.P., City of Fresno, and Sierra Club et al. appealed the judgment in Case Nos. 11CECG00709, 11CECG00706, and 11CECG00726, respectively. These appeals stay the effect of the trial court's judgments and writs of mandate. As such, the Fresno County approvals associated with the Specific Plan remain in place and continue to have full force and effect.

The Friant Community Plan Update generally maintains the land use designations for the 1983 Friant Community Plan area (currently receiving water supplies from FCWW 18), but expands the Community Plan area to include planned growth within the Friant Ranch Specific Plan area. The Friant Ranch Specific Plan Area is in Fresno County, California, north of the cities of Fresno

and Clovis. This area is bounded by residential single-family homes to the north, Friant Road to the west, and a vacant open space to the south and east beyond the Friant-Kern Canal (FKC), which runs along the eastern edge of the Specific Plan Area (Appendix A). As planned and approved by Fresno County, the Friant Ranch Specific Plan and related mitigation provides for approximately 2,500 residential units and 250,000 square feet of commercial space, 482 acres of on-site open space conservation areas, and over 1,000 acres of off-site mitigation lands conserving agricultural and biological resources. The Friant Ranch Specific Plan identifies FCWW 18 as the water purveyor to serve the proposed development.

In March 2011, FCWW 18 petitioned the Fresno County Local Agency Formation Commission (LAFCo) to amend FCWW 18's sphere of influence to include approximately 520+/- acres of the proposed Friant Ranch Specific Plan area. On October 4, 2011, LAFCo approved the annexation and modified FCWW 18's sphere of influence to include the 520+/- acres as shown in Appendix B. The City of Fresno subsequently challenged this approval (City of Fresno v. Fresno County LAFCo Case No. 11CECG03812). A hearing on the merits of the case was held resulting in a decision to let the LAFCo approval stand.

1.2 Need for the Proposed Action

FCWW 18 needs to meet the demands of the proposed development within the Friant Ranch Specific Plan. The purpose of the Proposed Action is to provide an additional M&I supply to FCWW 18 for delivery to the FCWW 18 existing service area and the development planned by Fresno County within the Friant Ranch Specific Plan Area.

1.3 Scope

This EA has been prepared to examine the potential impacts on environmental resources as a result of the following: (1) the inclusion of approximately 520+/- acres of the Friant Ranch Specific Plan area into FCWW 18's service area, (2) the permanent transfer of up to 2,000 AFY from LTRID to FCWW 18 consistent with the term of LTRID's 9(d) Repayment Contract, (3) modification of existing infrastructure located near Friant Dam, and (4) execution of a perpetual agreement with FCWW 18 to O&M Reclamation-owned facilities. The Proposed Action area is shown in Figure 1-1.

This EA does not analyze the impacts of the build-out of the Friant Ranch Development because Reclamation does not have land use authority or jurisdiction over the development. The County, which has land use authority over the Friant Ranch Development, has approved the construction of the development. Impacts relating to the development were analyzed separately by the County under a certified Final Environmental Impact Report (SCH #2007101016) as described above.

In addition, the Friant Ranch Development required a United States Army Corps of Engineers (Corps) Clean Water Act Section 404 permit for the dredge and fill of Waters of the United States. As such, the Corps is the Federal lead agency for the development. On April 7, 2010, the United States Fish and Wildlife Service (Service) issued the Corps a non-jeopardy Biological Opinion for the Friant Ranch Specific Plan area (Appendix C). Although the Corps' approval

concerns the entire development footprint of the Specific Plan Area, it does not involve Reclamation's Proposed Action; therefore, Reclamation has drafted this EA to comply with its obligations pursuant to the National Environmental Policy Act, Endangered Species Act, National Historic Preservation Act, and other requirements as applicable.

1.4 Resources of Potential Concern

This EA analyzes the affected environment of the Proposed Action and No Action Alternative in order to determine the potential direct and indirect impacts and cumulative effects to the following resources:

- Water Resources
- Land Use
- Biological Resources
- Cultural Resources
- Indian Sacred Sites
- Indian Trusts Assets (ITA)
- Socioeconomic Resources
- Environmental Justice
- Air Quality
- Global Climate

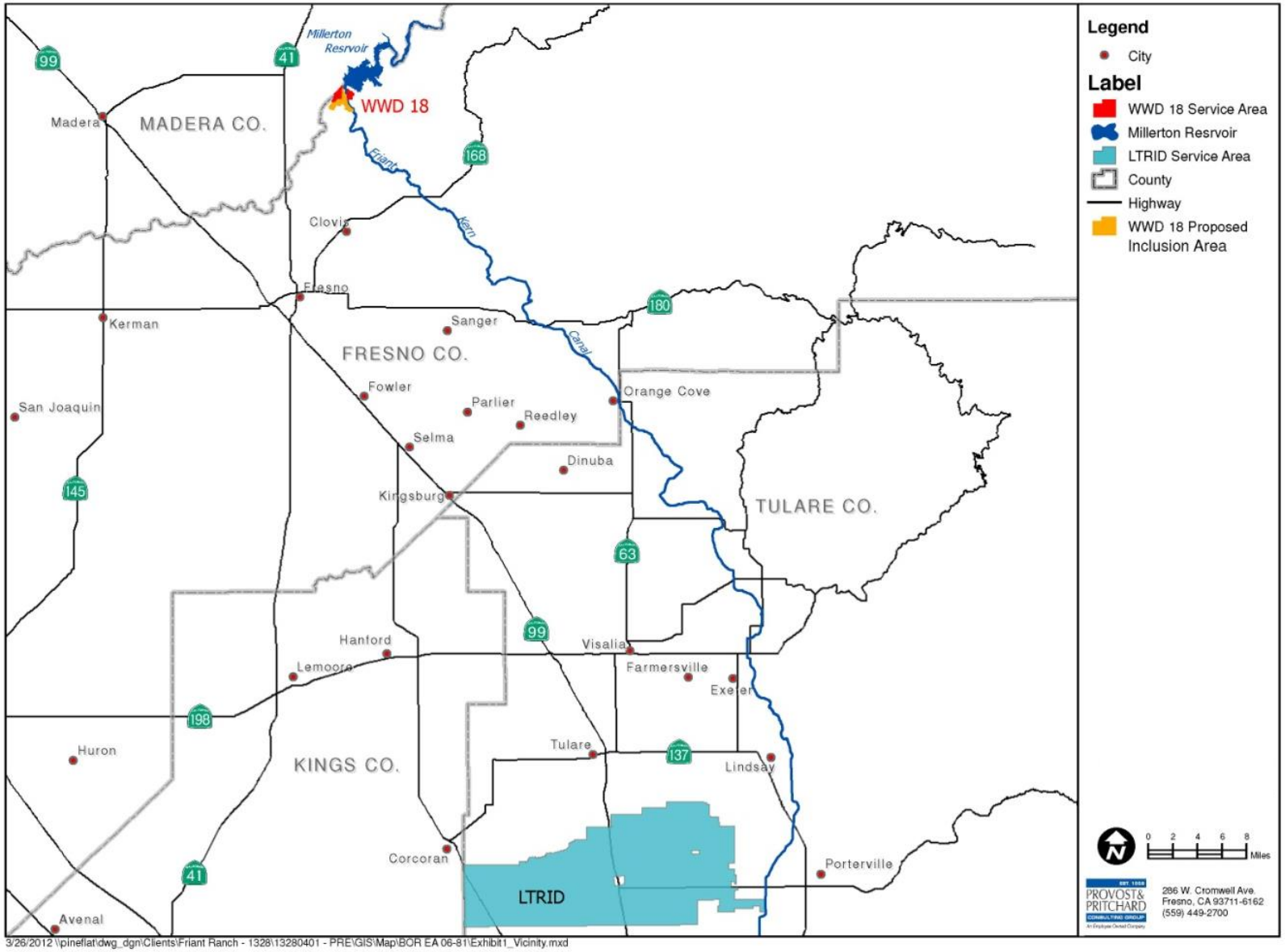

Figure 1-1 Proposed Action Area

Section 2 Alternatives Including the Proposed Action

This EA considers two possible actions: the No Action Alternative and the Proposed Action. The No Action Alternative reflects future conditions without the Proposed Action and serves as a basis of comparison for determining potential effects to the human environment.

2.1 No Action Alternative

Under the No Action alternative, Reclamation would not approve the following: (1) the inclusion of 523.8 acres of the Friant Ranch Specific Plan area into FCWW 18's service area, (2) the permanent transfer of up to 2,000 AFY of LTRID's Friant Division CVP water to FCWW 18, (3) modification of existing infrastructure located near Friant Dam, and (4) execution of a perpetual agreement with FCWW 18 to O&M Reclamation-owned facilities.

LTRID would continue to use its available water supplies within its service area and/or transfer or exchange its water as it has in the past. FCWW 18 would renew its search for alternative water supplies to meet its current and planned needs. Reclamation's facilities would continue to be used as they have in the past.

2.2 Proposed Action

Reclamation proposes to approve the following: (1) the inclusion of 523.8 acres of the Friant Ranch Specific Plan area into FCWW 18's service area, (2) the permanent transfer of up to 2,000 AFY of LTRID's Friant Division CVP water to FCWW 18 consistent with the term of LTRID's 9(d) Repayment Contract, (3) modification of existing infrastructure located near Friant Dam, and (4) execution of a perpetual agreement with FCWW 18 to O&M Reclamation-owned facilities. Further details are included below.

Inclusion

As described previously, LAFCo approved the annexation of 520+/- aces of the Friant Ranch Specific Plan into FCWW 18's service area. Reclamation proposes to approve the inclusion of 523.8 acres of the Friant Ranch parcels listed in Table 2-1 and shown in Appendix B into FCWW 18's CVP service area for the receipt of CVP supplies from FCWW 18.

Table 2-1 Friant Ranch Parcels Proposed for Inclusion into FCWW 18

Assessor's Parcel Number	Acreage	Section	Township	Range	County Zoning*	County Land Use Designation*
300-021-51	68.00	8	11S	21E	Residential and Open Space	Medium density residential, medium high density residential, and open space
300-021-52	3.49	8	11S	21E	Agriculture	Public Facilities (school)
300-021-53	20.11	8	11S	21E	Residential and Open Space	Medium high density residential and open space
300-160-52S	2.24	18	11S	21E	Residential and	Medium high density

Assessor's Parcel Number	Acreage	Section	Township	Range	County Zoning*	County Land Use Designation*
					Village Center	residential and community commercial
300-190-02	7.33	8	11S	21E	Residential and Open Space	Medium high density residential and open space
300-200-05	0.11	8	11S	21E	Residential	Medium high density residential
300-200-06	0.02	7	11S	21E	Open Space	Open space
300-200-19	8.13	8	11S	21E	Residential and Open Space	Medium high density residential and open space
300-040-02S	93.91[1]	18	11S	21E	Residential, Village Center, and Open Space	Medium high density residential, open space, and community commercial
300-040-23	58.50[2]	18	11S	21E	Residential, Village Center, and Open Space	Medium high density residential, open space, and community commercial
300-040-24	48.10[3]	18	11S	21E	Residential	Medium density residential and medium high density residential
300-050-01	188.38[4]	17	11S	21E	Residential and Open Space	Medium density residential, medium high density residential, and open space
300-160-08	24.87[5]	18	11S	21E	Residential	Medium density residential and medium high density residential
300-160-47T	0.61[6]	18	11S	21E	Residential	Medium high density residential

[1]93.91 acres are part of a larger 120 acre parcel
[2]58.50 acres are part of a larger 58.61 acre parcel
[3]48.10 acres are part of a larger 234.21 acre parcel
[4]188.38 acres are part of a larger 457.97 acre parcel
[5]24.87 acres are part of a larger 47.00 acre parcel
[6]0.61 acres are part of a larger 111.85 acre parcel
*These County zoning and land use designations are based upon the 2011 approvals, which are subject to the pending litigation described in Section 1.1 above.

Permanent Transfer of LTRID's Friant Division CVP Water

Reclamation proposes to approve the permanent transfer of up to 2,000 AF of LTRID's Friant Division Class 1 contract water supply annually to FCWW 18. Rather than being delivered to LTRID via the FKC, the transferred water would be delivered from Millerton Lake through existing diversion points at Friant Dam via two Reclamation-owned pipelines (a 24-inch and a 6-inch pipeline). The transferred water would then continue into pipelines owned by FCWW 18 at the FCWW 18 treatment plant as shown in Figure 2-1. No other CVP facilities would be utilized for the delivery of the transferred water.

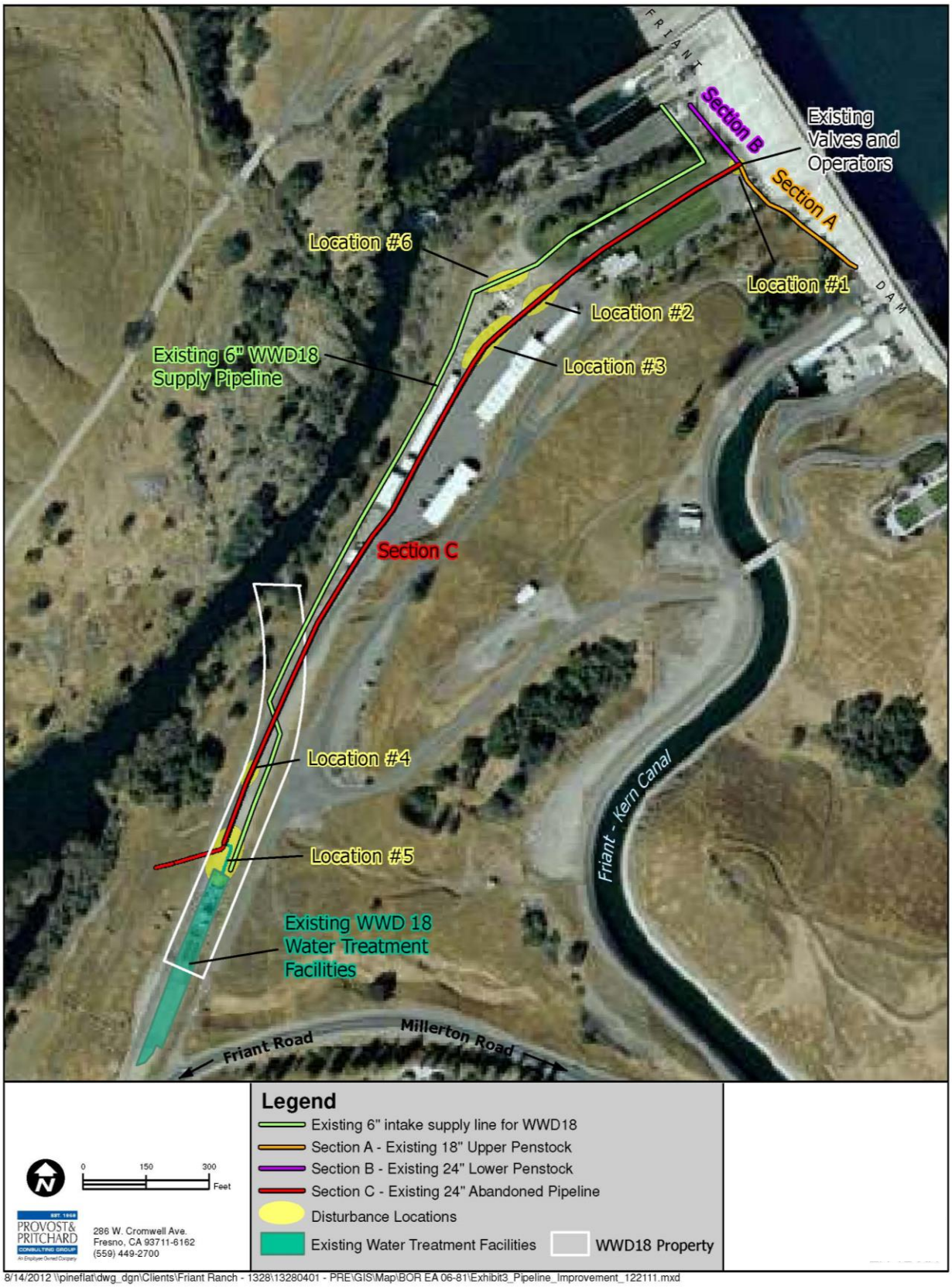

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Figure 2-1 Proposed Pipeline Improvements

Modification of Existing Infrastructure

Reclamation would issue FCWW 18 a permit for modifications/alterations of the Reclamation-owned 24-inch pipeline located near Friant Dam. Construction designs for the modifications are included in Appendix D. As part of the Proposed Action, FCWW 18 would slipline the abandoned 24-inch pipeline with approximately 1,980 linear feet of 18-inch high-pressure plastic pipe between the existing mixing vault (see Location #1 on Figure 2-1) and the existing FCWW 18 treatment plant (see Location #5 on Figure 2-1). The sliplining of the existing pipeline would create six localized disturbance areas, as shown in Figure 2-1 and described below:

- **Location #1 –** The mixing vault would include a receiving pit, approximately 10 by15 feet in size and approximately 8 feet deep. Total disturbance would be approximately 150 square feet. Pipe improvements would include the removal of a small section of the 24-inch pipe so the new 18-inch pipe could be connected with an expansion fitting. The top layer of the existing gravel surfacing would be removed and replaced upon construction completion.
- **Location #2 –** The Venturi Meter and Totalizer Vault would be replaced with a segment of 24-inch casing pipe for the housing of the 18-inch sliplined pipe. Improvements include removal of piping, valves, a meter, metal grating, and the two-foot high metal railing surrounding the area. The disturbance area would be approximately 1,200 square feet with a maximum width of 20-feet, a maximum length of 70-feet, and a maximum depth of 8 feet. The existing asphalt pavement and packed dirt ground surface would be removed and replaced upon construction completion.
- **Location #3 –** This is the location of the first of two angle points in the pipeline. To accommodate this first angle, two jack and bore pits would be constructed to push the new 18-inch pipe into the existing 24-inch pipe during the sliplining process. Each pit would be approximately 10 feet by 55 feet in area and an estimated 10 feet deep. Total disturbed area at this location would be approximately 1,300 square feet. The existing asphalt pavement ground cover would be removed and replaced upon construction completion.
- **Location #4 –** This is the location of the receiving pit, which would receive the new pushed pipeline from the jack and bore process at both Location #3 and Location #5. The 12 by 12 foot pit would have a disturbance area of up to 200 square feet. As this location occurs on the west side of the Reclamation Entrance Road, an all-weather gravel surface would be provided adjacent to the receiving pit to provide a 2-lane access road during construction (see Sheet 4 in Appendix D). The existing asphalt pavement and packed dirt ground cover would be removed and replaced upon construction completion.
- **Location #5** – This is the second of two angle points in the pipeline and includes an approximate 10 foot by 55 foot jack and bore pit. Additional improvements at this location include the installation of approximately 155 feet of new 18-inch pipe that would connect the existing 24-inch pipe to FCWW 18's existing 6-inch surface water treatment facilities. The connection between the 18-inch and 6-inch pipelines would occur in a new vault that would contain meters and valves to control the incoming flow from both pipelines. Similar to Location #4, as this location is immediately west of the Reclamation Entrance Road, an all-weather gravel surface would be provided adjacent to the jack and bore pit to provide a 2-lane access road during construction (see Sheet 4 in Appendix D).

The existing asphalt pavement and packed dirt ground cover would be removed and replaced upon construction completion.

- **Location #6** – This location is anticipated to be used by the Contractor as a staging area to store equipment overnight at the job site and to potentially stockpile the disturbed material from other locations during the construction process. It is anticipated that up to 1,000 square feet may be used for the stockpile which would result in superficial ground disturbance by the dumping/scooping/transporting of project soil.

All of the locations for construction activities occur in the highly and regularly disturbed areas of the maintenance yard for Friant Dam and its appurtenant facilities or the maintenance areas for FCWW 18. With the exception of Locations #4, and #5 which are on FCWW 18 owned lands, all locations are on Reclamation-owned land. All locations are in areas believed to be constructed of imported fill during the construction of Friant Dam.

Execution of a Long-Term Operation and Maintenance Agreement

Reclamation proposes to execute an O&M agreement with FCWW 18 which could cover the O&M of all or some of the Reclamation-owned 6-inch, 18-inch, and 24-inch pipelines shown in Figure 2-1. Operation of the pipelines would cover CVP deliveries for FCWW 18 as well as other Reclamation requested deliveries. Potential future maintenance activities could include, but are not limited to, leak repairs, pipeline relining, pipe section replacement, and/or valve repair, removal or replacement. The 18-inch pipeline is above ground along the dam face and would not require ground disturbing activities for repair. The 6-inch and 24-inch pipelines are buried and would require excavation for access. Buried pipeline repairs would occur within the existing prism of disturbance for these pipelines and would generally be up to 10-feet wide and 6-feet deep. The length of any future disturbance would be dependent upon the needed repair.

Section 3 Affected Environment and Environmental Consequences

This section identifies the potentially affected environment and the environmental consequences involved with the Proposed Action and the No Action Alternative, in addition to environmental trends and conditions that currently exist.

3.1 Water Resources

3.1.1 Affected Environment

Friant Division Allocations

Friant Division allocations averaged 92 percent over a 10 year period for Class 1 water and 9 percent for Class 2 water, and ranged from 50 percent to 100 percent, and 0 percent to 20 percent respectively (Table 3-1).

Table 3-1 Friant Division Allocations 2002 to 2011

Contract Year	Class 1 Allocation (%)	Class 2 Allocation (%)
2012	50	0
2011	100	20
2010	100	15
2009	100	15
2008	100	5
2007	65	0
2006	100	10
2005	100	10
2004	100	8
2003	100	5
Average	**92**	**9**

Class 1 water is considered as the first 800,000 AF supply of CVP water stored in Millerton Lake, which would be available for delivery from the FKC and/or Madera Canals, or directly off of the Dam, as a relatively dependable water supply during each Contract Year[1]. Class 2 water is considered as the next 1,400,000 AF supply of non-storable CVP water which becomes available in addition to the Class 1 supply, and because of its uncertainty as to the availability and time occurrence, would not be dependable in character and would be furnished only if and when available as determined by Reclamation per Contract Year. In addition to the allocated Class 1 and Class 2 supplies, Reclamation makes Section 215 water available during "flood releases" from Millerton Lake. Class 1 and 2 waters are not inclusive of waters released by Reclamation from Friant Dam for environmental and/or other obligations including waters made available under the San Joaquin River Settlement Act.

San Joaquin River Restoration Program

In 2006, the San Joaquin River Restoration Program (SJRRP) was established to implement the Stipulation of Settlement in *NRDC, et al. v. Kirk Rodgers et al*. The Settlement's two primary

[1] A Contract Year is from March 1 of a given year through February 28/29 of the following year.

goals include: (1) restoration and maintenance of fish population in the San Joaquin River below Friant Dam to the confluence of the Merced River; and (2) management of water resources in order to reduce or avoid adverse water supply impacts to Friant Division long-term contractors (SJRRP 2012). The SJRRP is a long-term effort to restore flows to the San Joaquin River from Friant Dam to the confluence of Merced River in order to meet the two goals established in the Settlement (SJRRP 2012).

Friant-Kern Canal

The FKC serves over 800,000 acres of farmland and communities in four counties. San Joaquin river water for the Friant Division is stored at Millerton Lake. From there, water is released from the reservoir to the 152-mile long FKC flowing south to its terminus at the Kern River (Reclamation 2012).

Fresno County Water Works District 18

FCWW 18's current service area encompasses 443 acres, 244 acres of which are located west of the FKC, within the Friant Community Plan boundary, known as the "Western Service Area". The remaining 199 acres are all located within the Mira Bella development located east of the FKC along Friant Road within FCWW 18's "Eastern Service Area". Both service areas function independently of each other. Although the Mira Bella development is pending Reclamation approval for inclusion into FCWW 18's CVP service area, the Mira Bella service area is not intended to receive CVP supplies and would need additional environmental review and Reclamation approval before CVP water could be delivered to the development. Water supplies for Mira Bella are expected to be met by on-site groundwater wells.

FCWW 18 Water Deliveries FCWW 18 has a 9(d) Repayment Contract (Contract No. 14-06-200-5904D) with Reclamation for up 150 AF annually of CVP Friant Division Class 1 water diverted at Friant Dam for M&I purposes. This supply is used to meet the needs in the unincorporated community of Friant, generally comprising the area planned within Fresno County's 1983 Friant Community Plan. Fresno County and LAFCo have also designated FCWW 18 as the water purveyor for the expanded Friant Community Plan Area approved by Fresno County in 2011 to include lands just south of FCWW 18's existing service area.

FCWW 18 also provides water treatment services for Table Mountain Rancheria, Millerton Lake State Park, California Division of Forestry and Fire Protection (CDF) and the Reclamation office at Friant Dam under two separate agreements. Under agreement with Table Mountain Rancheria, FCWW 18 treats up to 2 AF per month (not to exceed 20 AFY) non-CVP water obtained via transfer from Madera Irrigation District. The treated water is then trucked by Table Mountain for use at the casino located approximately six miles to the east. Under a single agreement, FCWW 18 treats Reclamation's CVP water and delivers the treated water to Millerton Lake State Park, the CDF station in Friant and the Reclamation office at Friant Dam. District records indicate an average of approximately 1.25 AF per month is treated for these three users, with 82 percent going to the State Park, 16 percent to CDF and the remainder to Reclamation's office.

FCWW 18 Future Water Supply Demands FCWW 18's current demands within the Western Service Area are 150 AFY. Future demands at build out of the Friant Community Plan, exclusive of Friant Ranch, are expected to add an additional 185 AFY. The Infrastructure

Master Plan for the Friant Ranch Specific Plan estimated that at full build-out of the preferred alternative the water supply demands for the Friant Ranch development would be 1,093 AFY (Provost & Pritchard 2011). Total estimated future water supply demands, including Friant Ranch, are estimated to be 1,428 AFY. Most of this demand would be associated with residential (low, medium, and medium-high density) land uses.

Groundwater Resources in FCWW#18 The portion of the Proposed Action area that encompasses FCWW 18 and Friant Dam is located partially within the San Joaquin groundwater basin. The Proposed Action area does not overlie a productive aquifer. Existing domestic wells in the immediate vicinity are completed in relatively shallow fractured rock aquifers and are known to produce typically 10 to 25 gallons per minute. No community water system in the immediate vicinity relies on groundwater, though the Mira Bella development within FCWW 18's Eastern Service Area will be doing so if and when homes are built and water service within that portion of the district actually begins.

Lower Tule River Irrigation District

LTRID is a conjunctive use District, meaning that private growers within the District supplement available surface water supplies with groundwater from private wells as District supplies are always less than the total irrigated demand within the District. However, LTRID has endeavored to conserve groundwater resources through the import of as much surface water as possible to offset the use of private groundwater wells for irrigation purposes and to replenish the aquifer through direct recharge via sinking basins, river channels and unlined canals. The District does not own or operate any groundwater extraction facilities. LTRID's water supply portfolio includes:

- Class 1 supplies from the CVP Friant Division up to 61,200 AFY;
- Class 2 supplies from the CVP Friant Division up to 238,000 AFY;
- CVP Cross Valley Division supplies from the San Joaquin-Sacramento River Delta up to 31,200 AFY; and
- Pre-1914 water right water from the Tule River which has an average annual yield of 40,000 AF. This water is developed and stored behind Success Dam and delivered via the Tule River and its distributaries.

In 2012, LTRID completed constructed of an Intertie Canal between their Wood Central Ditch and their Casa Blanca Canal. The new canal allows LTRID to capture and use or store otherwise unusable floodwater from the Tule River creating an additional source of water for use in portions of the District that previously only received CVP water. In September 2007, LTRID prepared an Initial Study and Negative Declaration pursuant to the California Environmental Quality Act for their Tule River Intertie Project which found that the project would not have a significant effect on the environment (LTRID 2007). In 2009, LTRID applied to Reclamation for 50/50 cost-share funding of their project through the American Recovery and Reinvestment Act of 2009 and the Challenge Grant Program. Reclamation prepared an EA for the awarding of the grants to LTRID and signed a FONSI on February 2, 2010 (Reclamation 2010).

Groundwater Resources in LTRID LTRID is located within the Tule Sub-basin of the San Joaquin Valley Groundwater Basin. This sub-basin is generally bounded by the Tulare County

line on the west, by the Sierra Nevada bedrock on the east, the Tulare-Kern County line on the south, and the northern boundary of LTRID on the north (California Department of Water Resources 2003). Continental deposits that make up the aquifer include flood-basin, younger alluvium, older alluvium, undifferentiated continental, and the Tulare Formation. Most are major sources of groundwater and are moderately to highly permeable. Groundwater recharge is done directly by stream recharge of the Tule River, White River, and Deer Creek as well as applied irrigation water (California Department of Water Resources 2003). Annual extraction of groundwater within Tule Sub-basin is estimated to be 19,300 AF for urban and 641,000 AF for agricultural needs. Recharge of the sub-basin from natural and applied water is estimated to be approximately 34,000 AFY and 201,000 AFY, respectively. In 1980, Tule Sub-basin was identified by the California Department of Water Resources as being in critical overdraft (California Department of Water Resources 2003).

LTRID maintains and operates 12 recharge and regulating basins, covering approximately 3,000 acres. When excess surface water is available, LTRID uses the 12 groundwater recharge facilities to recharge the aquifer. At present LTRID does not own or control groundwater extraction facilities. All groundwater pumping is done by landowners who utilize privately owned wells. LTRID has estimated an annual irrigation demand of approximately 346,500 AF. On average, the district supplies approximately 201,400 AFY of surface water leaving approximately 145,100 AFY of demand to be met by groundwater pumping.

3.1.2 Environmental Consequences

No Action

Under the No Action Alternative, Reclamation would not approve the inclusion of 523.8 acres of the Friant Ranch Specific Plan area into FCWW 18's service area, the permanent transfer of up to 2,000 AFY of LTRID's Friant Division CVP water to FCWW 18, modification of existing infrastructure located near Friant Dam, or execute an O&M agreement with FCWW 18. Water resources within FCWW 18 and LTRID would remain unchanged. Both districts would continue to receive and use their existing water supplies as they have in the past.

As there is limited groundwater available within the area planned for the Friant Ranch development and the area would not be eligible to receive CVP supplies, FCWW 18 would not be able to meet its future water supply needs. Consequently, FCWW 18 would need to pursue other long-term arrangements to secure supplemental surface water supplies within or outside the Friant Division to meet future demands.

Groundwater use within FCWW 18's Eastern and Western Service Areas would remain unchanged. The Eastern Service Area would continue to use groundwater where available. As there is limited groundwater available within FCWW 18's Western Service Area, and FCWW 18 does not plan to use groundwater within this area to meet demands, there would be no impacts to groundwater resources due to this alternative.

Proposed Action

The change in FCWW 18's CVP service area boundary to include 523.8 acres of the Friant Ranch Specific Plan area and the proposed improvements of the 24-inch pipeline would allow CVP water to be used to meet current and future M&I demands of the District. At full build-out

water supply demands for the Friant Ranch development would be 1,093 AFY which would be fully met by the permanent transfer of 2,000 AFY of LTRID's Class 1 water supply. Additional water from the transfer would be used by FCWW 18 to meet existing and growing demands within its current service area. The use of additional surface water supplies in FCWW 18, including the recapture and recirculation of water for landscaping uses, would provide slight beneficial impacts to groundwater resources within this area due to slight groundwater recharge.

With the completion of the Intertie Canal, LTRID is able to capture Tule River floodwater for groundwater recharge either by direct or in lieu recharge methods. The additional recharged water is then available to LTRID water users for pumping to meet consumptive crop demands under their rights to groundwater as overlying landowners, offsetting the District's need to provide an equivalent amount of LTRID's annual CVP surface water supplies. Therefore, the loss of 2,000 AF of LTRID's Friant Division Class 1 water supply would be made up through the operation of LTRID's new facilities and programs.

The proposed transfer is from an existing CVP Class 1 allocation from a Friant Division CVP contractor to another Friant Division CVP contractor. There would be no change in the point of diversion for the transferred water as the point of diversion from Millerton Lake would be the same; however, LTRID's 2,000 AF that had previously been conveyed down the FKC to LTRID would now be delivered from Friant Dam to FCWW 18's treatment plant. As the water is already part of the baseline conditions for diversion from Millerton Lake, there would be no increase in diversions as a result of this transfer; therefore, the proposed transfer would not interfere with Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes such as the SJRRP.

The proposed improvements to the 24-inch pipeline and the execution of the O&M agreement with FCWW 18 as described in Section 2.2 would not impact water resources as ground disturbance would be limited to previously disturbed areas within the Friant Dam maintenance yard. In addition, pipeline improvements would increase the functionality of the existing infrastructure and thereby provide a beneficial impact to existing FCWW 18 and Reclamation facilities by increasing delivery capability and system redundancy for FCWW 18.

Cumulative Impacts

Cumulative impacts result from incremental impacts of the Proposed Action or No Action alternative when added to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Significance exists if it is reasonable to anticipate a cumulatively significant impact on the environment. To determine whether cumulatively significant impacts to water resources are anticipated from the Proposed Action or the No Action alternative, the incremental effect of both alternatives were examined together with impacts from past, present, and reasonably foreseeable future actions in the same geographic area. This includes project growth and zoning as detailed in the Fresno County General Plan, the Sierra North Regional Plan, and the Millerton New Town Specific Plan. Major development projects proposed within two miles of the Proposed Action area include: North Fork Village (1,000 units), River Ranch Estates (900 units), Tesoro Viejo (5,000 units), Mira Bella Development (56 units to date with 180 total units planned), Millerton New Town (3,499 units), Marina Estates (80 units), Brentwood at Brighton Crest (420 units), and Wellington Ranch (5,500 units).

Additional construction activities proposed for the area include: the construction of the Big Sandy Rancheria Casino, Millerton Road widening, Winchell Cove water pipeline maintenance project, and the construction of a new powerhouse below Friant Dam.

Cumulative impacts to water resources (hydrology, water quality, and water supply) from the proposed development of Friant Ranch were addressed in the Friant Community Plan Update and Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) which found that the proposed Friant Ranch development would not have cumulatively considerable impacts on these resources.

Under the No Action alternative, FCWW 18 would need to seek additional surface water supplies in order to meet future demands as CVP water and groundwater would not be available to meet the demands of the Friant Ranch development. As these other sources are unknown and speculative, cumulative impacts to water resources as a result of this alternative are difficult to determine. However, any additional supply that would require Reclamation approval would undergo environmental review prior to implementation.

The 2,000 AF proposed for transfer from LTRID to FCWW 18 is part of the baseline conditions for diversion from Millerton Lake and would occur under either alternative. As there would be no increase in diversions as a result of this transfer, the proposed transfer would not cumulatively impact Reclamation's obligations to deliver water to other contractors, wetland habitat areas, or for other environmental purposes such as the SJRRP. In addition, as described above, the transfer of 2,000 AFY of LTRID's Class 1 allocation is approximately 3.3 percent of their total Class 1 supply and would be made up by additional Tule River water being brought into the district via their new Intertie Canal; therefore, there would be no cumulative adverse impacts to LTRID's available water supply.

The addition of up to 2,000 AF of LTRID's Class 1 water supply to FCWW 18's water supply would have a cumulatively beneficial impact to FCWW 18's overall water supply enabling the district to meet existing and future demands.

3.2 Land Use

3.2.1 Affected Environment

Land uses on Reclamation owned lands in the immediate vicinity of the proposed pipeline improvements are associated primarily with Friant Dam and include maintenance yards, equipment and supply storage areas, office buildings, electric power lines and equipment, roads and drainage facilities. Land uses immediately surrounding the pipeline improvements include recreation at Millerton Lake, open space, and public facilities at the FCWW 18 surface water treatment plant. Reclamation does have maintenance agreements for hydro-electric facilities owned and operated by the Friant Power Authority and the Orange Cove Irrigation District, which allow for access to Reclamation property by these entities for their on-going facility operation and maintenance.

The land uses in the vicinity of FCWW 18 include agriculture, rural residential development, and recreational uses. Land use designations for the area proposed for inclusion into FCWW 18 were changed from agricultural (majority of the Friant Ranch specific plan area), medium density residential, and highway commercial to medium density residential, medium high density residential, community commercial, open space, and public facilities. The changes were analyzed in the Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016). The current land use for the majority of the Friant Ranch Specific Plan Area is cattle grazing which is expected to continue while the area is being developed (County of Fresno 2009), and will continue within the onsite preservation areas to be conserved in perpetuity as part of the Friant Ranch Specific Plan.

LTRID encompasses 161 square miles in Tulare County, California. Of the approximately 104,000 acres within LTRID, 85,000 acres are irrigated. The primary crops are alfalfa (23,000 acres), silage (34,000 acres) and cotton (11,000 acres).

3.2.2 Environmental Consequences

No Action

There would be no change in existing land uses or land use designation under this alternative as conditions would remain the same as existing conditions. Growth would likely occur within the existing FCWW 18 boundaries in accordance with the Friant Community Plan Update, dependent on FCWW 18's ability to acquire additional water in the spot market or through other arrangements which would almost certainly involve the CVP and as such would require additional environmental analysis and Reclamation approval.

Proposed Action

Modification of the 24-inch pipeline and execution of an O&M agreement with FCWW 18 would not change land use or land use designations. During construction, temporary access routes would be installed as shown in Figure 2-1 to allow passage of traffic. If needed, similar routes would be created during O&M activities. As construction would be short-term and the area of disturbance would be returned to its current state, there would be no adverse impacts to land use in this area.

The proposed transfer and inclusion of 523.8 acres of the proposed Friant Ranch Specific Plan into FCWW 18 would allow the area to slowly be developed as analyzed in the Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) and approved by the County. The current land use (cattle grazing) would be changed over time; however, this change would be consistent with the Friant Ranch Specific Plan approved by Fresno County. The Proposed Action would not facilitate unplanned growth or land use changes, or conflict with established land uses; therefore, there would be no adverse impacts to land use in this area as a result of the Proposed Action.

The transfer of 2,000 AFY of LTRID's Class 1 allocation is approximately 3.3 percent of their total Class 1 supply and would be made up by additional Tule River water being brought into the district via their new Intertie Canal. As such, the Proposed Action would not reduce the overall availability of water to LTRID landowners and is not expected to cause fallowing or land use changes within LTRID.

Cumulative Impacts

In recent years, land use changes within the San Joaquin Valley have involved the urbanization of agricultural lands. These types of changes are typically driven by economic pressures and local government decisions and are as likely to occur under either alternative.

Under the No Action alternative, FCWW 18 would pursue alternative sources of water for existing development and planned growth within its service area. As such, land uses could change in the same manner as described above for the Proposed Action. If no alternative water sources could be identified, there would be no cumulative impacts to land uses as conditions would be unchanged; however, this would not be consistent with adopted land use plans for the area.

The Proposed Action would allow lands within the Friant Community Plan to be developed over time consistent with the Friant Ranch Specific Plan and Friant Community Plan adopted by Fresno County. The Proposed Action would not facilitate unplanned growth or land use changes, or conflict with established land uses; therefore, there would be no cumulatively adverse impacts to land use as a result of the Proposed Action.

3.3 Biological Resources

3.3.1 Affected Environment

The 523.8 acres of the Friant Ranch Specific Plan area proposed for inclusion into FCWW 18's service area consists of gently rolling to increasingly hilly terrain that ranges in elevation from approximately 300 feet in the southwest corner of the site to 700 feet near the northern portion of the site. The Friant Ranch Specific Plan site consists of non-native grasslands that are currently utilized for cattle grazing. The state and federal Endangered Species Act impacts for this area have already been analyzed under separate actions associated with the land development activities and their associated environmental documentation in obtaining needed Clean Water Act, Section 404 permitting (Service 2010), as described in Section 1.3.

As noted previously, land uses on Reclamation owned lands in the immediate vicinity of the proposed pipeline improvements are associated primarily with Friant Dam and include maintenance yards, equipment and supply storage areas, office buildings, electric power lines and equipment, roads and drainage facilities. All of the locations for pipeline improvement construction activities are in highly and regularly disturbed areas of the maintenance yard for Friant Dam and its appurtenant facilities.

The disturbed areas along Friant Road support weedy non-native grasses and forbs, with vegetation in this area consisting of soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), red-stem filaree (*Erodium cicutarium*), and a small stand of trees-of-heaven (*Ailanthus altissima*), an invasive tree species. Common wildlife species are predicted to occur on the site, including the western fence lizard (*Sceloporus occidentalis*), gopher snake (*Pituophis catenifer*), western rattlesnake (*Crotalus oreganus*), striped skunk (*Mephitis mephitis*), raccoon (*Procyon lotor*), feral cat (*Felis domesticus*), California ground squirrel (*Spermophilus beecheyi*), Botta's pocket gopher (*Thomomys bottae*), and many others.

Table 3-2 was prepared using a list obtained on October 11, 2012 (file number: 121011031609) by accessing the U.S. Fish and Wildlife Database at (http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm). The following 7 ½ minute U.S. Geological Survey quadrangles were queried: Friant, Millerton Lake West, Millerton Lake East, Lanes Bridge, Fresno North, Little Table Mountain, Academy, Clovis and Round Mountain. Table 3-2 identifies the special status species that occur in the general vicinity of the Proposed Action area in the pipeline improvement area. The Endangered Species Act determination for each noted species was based upon conditions associated with the highly disturbed areas of the maintenance yard for Friant Dam and its appurtenant facilities.

Table 3-2 Federal Status Species on Quad Lists (Pipeline Improvements)

Species	***Federal Status[1]***	***Effects[2]***	***Summary basis for ESA determination[3]***
Amphibians			
California tiger salamander (*Ambystoma californiense*)	T, X	NE	Suitable habitat absent within the Proposed Action Area.
California red-legged frog (*Rana draytonii*)	T	NE	Suitable habitat absent within the Proposed Action Area.
Invertebrates			
Conservancy fairy shrimp *(Branchinecta conservation)*	E	NE	Suitable habitat absent within the Proposed Action Area.
vernal pool fairy shrimp (*Branchinecta lynchi*)	T, X	NE	Suitable habitat absent within the Proposed Action Area.
valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	NE	Suitable habitat absent within the Proposed Action Area.
vernal pool tadpole shrimp (*Lepidurus packardi)*	E, X	NE	Suitable habitat absent within the Proposed Action Area.
Mammals			
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	NE	Suitable habitat absent within the Proposed Action Area.
Fresno kangaroo rat *(Dipodomys nitratoides exilis)*	E	NE	Suitable habitat absent within the Proposed Action Area.
Plants			
Succulent owl's-clover *(Castilleja campestris* ssp. *succulenta)*	T, X	NE	Suitable habitat absent within the Proposed Action Area.
California jewelflower *(Caulanthus californicus)*	E	NE	Suitable habitat absent within the Proposed Action Area.
San Joaquin Valley Orcutt grass *(Orcuttia inaequalis)*	T, X	NE	Suitable habitat absent within the Proposed Action Area.
Hairy Orcutt grass *(Orcuttia pilosa)*	E	NE	Suitable habitat absent within the Proposed Action Area.
Hartweg's golden sunburst *(Pseudobahia bahiifolia)*	E	NE	Suitable habitat absent within the Proposed Action Area.
San Joaquin adobe sunburst (*Pseudobahia piersonii*)	T	NE	Suitable habitat absent within the Proposed Action Area.
Greene's tuctoria *(Tuctoria greenei)*	E	NE	Suitable habitat absent within the Proposed Action Area.

Species	***Federal Status[1]***	***Effects[2]***	***Summary basis for ESA determination[3]***
Reptiles			
Blunt-nosed leopard lizard (*Gambelia sila)*	E	NE	Suitable habitat absent within the Proposed Action Area.
Giant garter snake *(Thamnophis gigas)*	T	NE	Suitable habitat absent within the Proposed Action Area.
Fish			
Delta smelt *(Hypomesus transpacificus)*	T	NE	Suitable habitat absent within the Proposed Action Area.
Central Valley steelhead (*Oncorhynchus mykiss*)	T	NE	Suitable habitat absent within the Proposed Action Area.

1 Federal Status= Listing of Federally special status species
E: Listed as Endangered
T: Listed as Threatened
X: Critical Habitat designated for this species
2 Effects = Endangered Species Act Effect determination
NE: No Effect
NLAA: May affect, not likely to adversely affect
LAA: May affect, likely to adversely affect
3 Analysis area is specifically associated with the Reclamation Operation and Maintenance Yard

Most of the land within the LTRID service area is devoted to irrigated agricultural production. Because the irrigated fields are intensively managed, very little to no native vegetation exists, and little volunteer vegetation is allowed to grow. Cultivation usually occurs up to the very margins of fields, roads or ditches. Herbicides are routinely used to control unwanted vegetation which typically includes all non-crop species. Occasionally, cultivated land is allowed to lie fallow, and ruderal plant associations take over. Ruderal habitats are subject to frequent disturbance and are quickly colonized by non-native, and to a lesser extent native, plant species. Species composition varies greatly depending on the location, type and frequency of disturbance, and proximity of natural habitats. In addition to fallow agricultural fields, roadsides within the southern San Joaquin Valley area often support ruderal plant communities. Row crops and orchards provide minimal food and cover for wildlife.

Table 3-3 was prepared using a list obtained on October 11, 2012 (file number: 121011032058) by accessing the U.S. Fish and Wildlife Database at (http://www.fws.gov/sacramento/es_species/Lists/es_species_lists-form.cfm). The following 7 ½ minute U.S. Geological Survey quadrangles were queried which cover the LTRID Service Area: Cairns Corner, Corcoran, Porterville, Taylor Weir, Tipton, Tulare, and Woodville. The ESA determination for each noted species was based on the fact that there is no proposed ground disturbance or change of land use associated with the Proposed Action in the LTRID Service Area.

Table 3-3 Federal Status Species on Quad Lists (LTRID)

Species	***Federal Status[1]***	***Effects[2]***	***Summary basis for ESA determination[3]***
Amphibians			
California tiger salamander (*Ambystoma californiense*)	T, X	NE	Suitable habitat absent within the Proposed Action Area.

Species	***Federal Status[1]***	***Effects[2]***	***Summary basis for ESA determination[3]***
California red-legged frog (*Rana draytonii*)	T	NE	Suitable habitat absent within the Proposed Action Area.
Invertebrates			
valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)	T	NE	Suitable habitat absent within the Proposed Action Area.
vernal pool fairy shrimp (*Branchinecta lynchi*)	T	NE	Suitable habitat absent within the Proposed Action Area.
Mammals			
San Joaquin kit fox (*Vulpes macrotis mutica*)	E	NE	Might use agricultural lands to a limited extent for foraging, but would not den in them (Warrick et al. 2007).
Tipton kangaroo rat *(Dipodomys nitratoides nitratoides)*	E	NE	Suitable habitat absent within the Proposed Action Area.
Plants			
California jewel-flower *(Caulanthus californicus)*	E	NE	No ground disturbance or change of land use proposed.
San Joaquin adobe sunburst (*Pseudobia piersonii*)	T	NE	No ground disturbance or change of land use proposed.
Springville clarkia *(Clarkia springvillensis)*	T	NE	No ground disturbance or change of land use proposed.
Reptiles			
Blunt-nosed leopard lizard (*Gambelia sila)*	E	NE	No ground disturbance or change of land use proposed.
Giant garter snake *(Thamnophis gigas)*	T	NE	Suitable habitat absent within the Proposed Action Area.
Fish			
Delta smelt *(Hypomesus transpacificus)*	T	NE	Suitable habitat absent within the Proposed Action Area.

1 Federal Status= Listing of Federally special status species
E: Listed as Endangered
T: Listed as Threatened
PT: Proposed Threatened
X: Critical Habitat designated for this species
2 Effects = Endangered Species Act Effect determination
NE: No Effect
NLAA: May affect, not likely to adversely affect
LAA: May affect, likely to adversely affect
3 Analysis area is specifically associated with the Reclamation Operation and Maintenance Yard

3.3.2 Environmental Consequences

No Action

There would be no impact to biological resources as conditions would remain the same as existing conditions.

Proposed Action

Biological resources found in the planned and approved development were identified and environmentally analyzed in the Friant Community Plan Update and Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) and mitigation measures were adopted to

reduce environmental impacts associated with the construction and operation of planned development to less than significant levels. Moreover, the Fish and Wildlife Service issued a Biological Opinion concluding no-jeopardy to any listed species from the proposed construction activities on April 7, 2010 (Service 2010). The Biological Opinion imposes mitigation requirements to ensure protection of species through the Corps' 404 permit. There would be no additional adverse affect to biological resources beyond what is already covered and addressed by the Biological Opinion for the Corps 404 permit regarding the Proposed Action's increase to FCWW 18's service area boundary to serve the Friant Ranch Specific Plan area.

The change in conveyance of 2,000 AF of LTRID's Class 1 water would not cause adverse impacts to biological resources as the FKC is lined and the loss of water flowing down to Tulare County does not impact fish or other wildlife dependent upon the FKC. As described previously, the loss of 2,000 AF from the CVP Friant Division within the LTRID boundaries would be made up through the operation of LTRID's new Intertie Canal. No new ground disturbance would occur in the LTRID service area as a result of the Proposed Action.

The area affected by the pipeline improvements and O&M Agreement is within the Reclamation maintenance yard, at the base of the Friant Dam. This area has been highly disturbed and is currently well maintained. The existing ground cover is generally gravel, pavement, and packed earth. It is not suitable habitat for any sensitive species. Reclamation has determined that the Proposed Action would have no effect on federally listed or proposed to be listed threatened or endangered species, designated critical habitat, or proposed critical habitat within this specific area.

Cumulative Impacts

As there would be no additional adverse impacts to biological resources as a result of either alternative that have not already been addressed by the Corps, no cumulative impacts are expected to occur.

3.4 Cultural Resources

Cultural resources is a broad term that includes prehistoric, historic, architectural, and traditional cultural properties. The National Historic Preservation Act (NHPA) of 1966 is the primary Federal legislation that outlines the Federal Government's responsibility to cultural resources. Section 106 of the NHPA requires the Federal Government to take into consideration the effects of an undertaking on cultural resources listed on or eligible for inclusion in the National Register of Historic Places (National Register). Those resources that are on or eligible for inclusion in the National Register are referred to as historic properties.

The Section 106 process is outlined in the Federal regulations at 36 CFR Part 800. These regulations describe the process that the Federal agency (Reclamation) takes to identify cultural resources and the level of effect that the proposed undertaking will have on historic properties. In summary, Reclamation must first determine if the action is the type of action that has the potential to affect historic properties. If the action is the type of action to affect historic properties, Reclamation must identify the area of potential effects (APE), determine if historic properties are present within that APE, determine the effect that the undertaking will have on

historic properties, and consult with the State Historic Preservation Office (SHPO), to seek concurrence on Reclamation's findings. In addition, Reclamation is required through the Section 106 process to consult with Indian Tribes concerning the identification of sites of religious or cultural significance, and consult with individuals or groups who are entitled to be consulting parties or have requested to be consulting parties.

3.4.1 Affected Environment

Cultural resources investigations associated with the Friant Ranch project were initially completed by Sierra Valley Cultural Planning cultural resources consultants in 2008 (Roper 2008). These identification efforts resulted in one archaeological resource (CA-FRE-2653) being recommended eligible for inclusion in the National Register. In order for the Friant Ranch development to move forward, the Corps needs to issue a Clean Water Act 404 permit. As a result, Corps was determined to be the federal agency tasked with the responsibility to complete the Section 106 process pursuant to 36 CFR §800.2(a)(2). The Corps entered into consultation with the SHPO obtaining the SHPO's consensus on the National Register eligibility of CA-FRE-2653. In addition, Corps sought SHPO's concurrence on a finding of Adverse Effect to historic properties pursuant §800.5(d)(2). The Corps entered into a Memorandum of Agreement (MOA) with the SHPO and other parties to resolve adverse effects to CA-FRE-2653. The MOA was executed on May 29, 2012. The CA-FRE-253 resources are not within the Proposed Action area covered in this EA; however, Reclamation's Proposed Action would be within the view-shed of Friant Dam and the FKC, both National Register eligible properties.

3.4.2 Environmental Consequences

No Action

The No Action Alternative would result in no change to existing conditions. As a result, there would be no federal action that would constitute an undertaking pursuant to Section 301(7) of the NHPA and therefore Section 106 would not be initiated. The No Action Alternative would result in no impacts to cultural resources.

Proposed Action

As the Federal lead for Section 106, the Corps has fulfilled Reclamation and the Corps's collective responsibility for compliance with Section 106 through the execution of an MOA with the only exception being the improvements FCWW 18 would make to the existing pipeline(s). The improvements would involve sliplining a smaller diameter, high pressure pipe into the existing 24-inch diameter pipe. The pipeline improvement action has no potential to cause effects to cultural resources eligible for inclusion in the National Register pursuant to §800.3(a)(1). See Appendix F for Reclamation's determination.

Cumulative Impacts

As there would be no impacts to cultural resources as a result of either alternative, no cumulative impacts are expected to occur.

3.5 Socioeconomic Resources

3.5.1 Affected Environment

As shown in Table 3-4, unemployment for Fresno and Tulare counties was three to four percentage points higher than the State average in June, 2013.

Table 3-4 Tulare Basin County 2013 Preliminary Monthly Labor Force Data

Area	Unemployment Rate
Fresno County	11.8%
Tulare County	12.0%
California	8.6%
California Employment Development Department http://www.edd.ca.gov/	

3.5.2 Environmental Consequences

No Action

There would be no impact to LTRID as they would continue to receive their CVP supplies and conditions would remain the same as existing conditions. FCWW 18 would continue to receive its existing CVP water supplies which are inadequate to meet future water needs in the District. FCWW 18 would need to find alternative surface water supplies as LTRID CVP transfer water would not be available and groundwater cannot meet its future needs. Alternative surface water supplies would likely cost much more than the proposed transfer creating potential economic hardships for FCWW 18 and its constituents, as FCWW 18 would need to purchase "spot market" water in dry years at then-market rates to meet current and expected demands in its current service area. Therefore, there could be adverse impacts to socioeconomic resources as a result of the No Action Alternative.

Proposed Action

The Proposed Action would allow lands within the Friant Community Plan to be developed over time consistent with the Friant Ranch Specific Plan and Friant Community Plan adopted by Fresno County. As the development has been planned and approved by Fresno County, the Proposed Action would have beneficial impacts to socioeconomic impacts to the county, FCWW 18, and the development.

The proposed transfer is a small percentage of the overall water supplies available to LTRID. In addition, Tule River water made available for use in LTRID via the Tule River Intertie Project and its positive impacts on groundwater would be available to make up for this portion of their CVP Class 1 allocation. As such, the proposed transfer would not result in any economic uncertainty such that agricultural employment would be affected within LTRID. Therefore, the Proposed Action would have no adverse effect on socioeconomic resources within LTRID.

Cumulative Impacts

There may be adverse cumulative impacts to socioeconomic resources in FCWW 18 and the development under the No Action Alternative as FCWW 18 may need to purchase more costly surface water supplies in order to meet future demands. The Proposed Action would have cumulatively beneficial impacts to socioeconomic resources within FCWW 18, Fresno County, and the development as it would be consistent with the approved and planned growth for the

Friant Ranch Specific Plan area. In addition, the Proposed Action would not change the existing socioeconomic setting of the Proposed Action area.

3.6 Air Quality

Section 176 (C) of the Clean Air Act [CAA] (42 U.S.C. 7506 (C)) requires any entity of the federal government that engages in, supports, or in any way provides financial support for, licenses or permits, or approves any activity to demonstrate that the action conforms to the applicable State Implementation Plan (SIP) required under Section 110 (a) of the Federal CAA (42 U.S.C. 7401 [a]) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with SIP's purpose of eliminating or reducing the severity and number of violations of the National Ambient Air Quality Standards and achieving expeditious attainment of those standards. Each federal agency must determine that any action that is proposed by the agency and that is subject to the regulations implementing the conformity requirements would, in fact conform to the applicable SIP before the action is taken.

On November 30, 1993, the Environmental Protection Agency (EPA) promulgated final general conformity regulations at 40 CFR 93 Subpart B for all federal activities except those covered under transportation conformity. The general conformity regulations apply to a proposed federal action in a non-attainment or maintenance area if the total of direct and indirect emissions of the relevant criteria pollutants and precursor pollutant caused by the Proposed Action equal or exceed certain *de minimis* amounts thus requiring the federal agency to make a determination of general conformity.

3.6.1 Affected Environment

The Proposed Action area lies within the San Joaquin Valley Air Basin (SJVAB) under the jurisdiction of the San Joaquin Valley Air Pollution Control District (SJVAPCD). The pollutants of greatest concern in the San Joaquin Valley are carbon monoxide, ozone, ozone precursors such as volatile organic compounds, inhalable particulate matter between 2.5 and 10 microns in diameter (PM_{10}) and particulate matter less than 2.5 microns in diameter ($PM_{2.5}$). The SJVAB has reached Federal and State attainment status for carbon monoxide, nitrogen dioxide, and sulfur dioxide. Although Federal attainment status has been reached for PM_{10} the State has not and both are in non-attainment for ozone and $PM_{2.5}$ (Table 3-5). There are no established standards for nitrogen oxides; however, they do contribute to nitrogen dioxide standards and ozone precursors (SJVAPCD 2012).

Table 3-5 San Joaquin Valley Attainment Status

Pollutant	California Attainment Status	National Attainment Status
Ozone	**Nonattainment**	**Nonattainment**
Carbon monoxide	Attainment	Attainment
Nitrogen dioxide	Attainment	Attainment
Sulfur dioxide	Attainment	Attainment
PM_{10}	**Nonattainment**	Attainment
$PM_{2.5}$	**Nonattainment**	**Nonattainment**
Source: CARB 2012; SJVAPCD 2012		

3.6.2 Environmental Consequences

No Action
There would be no impacts to air quality as conditions would remain the same as existing conditions under this alternative.

Proposed Action
There would be no air quality impacts due to the proposed transfer as the transferred water would be gravity fed from Friant Dam into FCWW 18's existing facilities. Air quality impacts due to the construction and operational activities related to the Friant Ranch development and its planned uses were analyzed and mitigated in the Friant Community Plan Update and Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) and were found to be significant and unavoidable. As such, a statement of overriding considerations was approved by Fresno County.

As noted above, there are no impacts as a result of the proposed transfer, and the inclusion of new lands into FCWW 18 does not have the potential to result in air quality impacts separate and apart from the build-out of the Friant Ranch Development approved by Fresno County. Thus the only potential for air quality emissions as a result of the Proposed Action would be generated during the proposed pipeline improvements and future O&M activities. Pipeline modifications would occur over a four-month period and would use the following equipment: backhoes, boom trucks, pipe jacking equipment, loaders, dump trucks, hauling trucks, concrete trucks, water trucks and asphalt paving equipment. Future O&M would likely be similar. Air emissions were calculated for the Proposed Action utilizing Sacramento Metropolitan Road Construction Emissions Model, Version 7.1.1 and are included in Table 3-6.

Table 3-6 Calculated Project Emissions

Activity	ROG	NO_x, lb/day	PM_{10}, lb/hr	$PM_{2.5}$, lb/hr	CO, lb/hr
Maximum pounds/day	0.5	3.1	2.2	0.5	2.2
Total tons/year	0.0	0.1	0.1	0.0	0.1
De minimis threshold (tons/year)	10	10	15	15	None
Source: Road Construction Emissions Model, Version 7.1.1					

As shown in Table 3-6, calculated emissions are well below the *de minimus* thresholds for the SJVAPCD; therefore, there would be no adverse air quality impacts associated with this Proposed Action and a conformity analysis pursuant to the CAA is not required.

Cumulative Impacts
There would be no cumulative impacts to air quality as a result of the No Action alternative as conditions would remain the same as existing conditions. The Proposed Action, when added to other existing and proposed actions, would not contribute to cumulative impacts to air quality since construction activities are short-term and well below *de minimis* thresholds.

3.7 Global Climate

Climate change refers to significant change in measures of climate (e.g., temperature, precipitation, or wind) lasting for decades or longer. Many environmental changes can

contribute to climate change [changes in sun's intensity, changes in ocean circulation, deforestation, urbanization, burning fossil fuels, etc.] (EPA 2012a).

Gases that trap heat in the atmosphere are often called greenhouse gases (GHG). Some GHG, such as carbon dioxide (CO_2), occur naturally and are emitted to the atmosphere through natural processes and human activities. Other GHG (e.g., fluorinated gases) are created and emitted solely through human activities. The principal GHG that enter the atmosphere because of human activities are: CO_2, methane (CH_4), nitrous oxide, and fluorinated gasses (EPA 2012a).

During the past century humans have substantially added to the amount of GHG in the atmosphere by burning fossil fuels such as coal, natural gas, oil and gasoline to power our cars, factories, utilities and appliances. The added gases, primarily CO_2 and CH_4, are enhancing the natural greenhouse effect, and likely contributing to an increase in global average temperature and related climate changes. At present, there are uncertainties associated with the science of climate change (EPA 2012b).

Climate change has only recently been widely recognized as an imminent threat to the global climate, economy, and population. As a result, the national, state, and local climate change regulatory setting is complex and evolving.

In 2006, the State of California issued the California Global Warming Solutions Act of 2006, widely known as Assembly Bill 32, which requires California Air Resources Board (CARB) to develop and enforce regulations for the reporting and verification of statewide GHG emissions. CARB is further directed to set a GHG emission limit, based on 1990 levels, to be achieved by 2020.

In addition, the EPA has issued regulatory actions under the CAA as well as other statutory authorities to address climate change issues (EPA 2012c). In 2009, the EPA issued a rule (40 CFR Part 98) for mandatory reporting of GHG by large source emitters and suppliers that emit 25,000 metric tons or more of GHG [as CO_2 equivalents per year] (EPA 2009). The rule is intended to collect accurate and timely emissions data to guide future policy decisions on climate change and has undergone and is still undergoing revisions (EPA 2012c).

3.7.1 Affected Environment

Global mean surface temperatures have increased nearly 1.8°F from 1890 to 2006 (Intergovernmental Panel on Climate Change 2007). Models indicate that average temperature changes are likely to be greater in the northern hemisphere. Northern latitudes (above 24°North) have exhibited temperature increases of nearly 2.1°F since 1900, with nearly a 1.8°F increase since 1970 alone (Intergovernmental Panel on Climate Change 2007). Without additional meteorological monitoring systems, it is difficult to determine the spatial and temporal variability and change of climatic conditions, but increasing concentrations of GHG are likely to accelerate the rate of climate change.

More than 20 million Californians rely on the State Water Project and CVP. Increases in air temperature may lead to changes in precipitation patterns, runoff timing and volume, sea level rise, and changes in the amount of irrigation water needed due to modified evapotranspiration rates. These changes may lead to impacts to California's water resources and project operations.

While there is general consensus in their trend, the magnitudes and onset-timing of impacts are uncertain and are scenario-dependent (Anderson et al. 2008).

3.7.2 Environmental Consequences

No Action

There would be no impacts to global climate change as conditions would remain the same as existing conditions under this alternative.

Proposed Action

Water under the Proposed Action is water that would be delivered via gravity from existing facilities under either alternative, and is therefore part of existing conditions. There would be no additional impacts to global climate change as a result of the proposed transfer.

Impacts to the global climate as a result of construction and operation of the planned and approved Friant Ranch development were identified and environmentally analyzed in the Friant Community Plan Update and Friant Ranch Specific Plan Environmental Impact Report (SCH# 2007101016) and approved by the County. Impacts resulting from development were determined to be significant and unavoidable and as such, Fresno County approved a statement of overriding considerations.

As noted above, there are no impacts as a result of the proposed transfer, and the inclusion of new lands into FCWW 18 does not have the potential to result in impacts separate and apart from the build-out of the Friant Ranch Development approved by Fresno County. Thus the only potential for contributions to global climate change as a result of the Proposed Action would be generated during the proposed pipeline improvements and future O&M activities. Construction emissions of CO_2 during the proposed pipeline modification are estimated to be 21.6 tons (19.6 metric tons). Any future repair to the pipelines would likely be similar. These emissions are negligible compared to the EPA's 25,000 metric tons per year threshold for annually reporting GHG emissions (EPA 2009). Accordingly, the Proposed Action would result in below *de minimis* impacts to global climate change.

Cumulative Impacts

Impacts from GHG are considered to be cumulative impacts; however, delivery of water with or without the Proposed Action is part of the existing baseline conditions of the CVP and is not expected to produce additional GHG that could contribute to global climate change. In addition, estimated annual CO_2 emissions required for the Proposed Action is 21.6 tons (19.6 metric tons) per year, which is well below the 25,000 metric tons per year threshold for reporting GHG emissions. As a result, the Proposed Action is not expected to contribute cumulative adverse impacts to global climate change.

CVP water allocations are made dependent on hydrologic conditions and environmental requirements. Since Reclamation operations and allocations are flexible, any changes in hydrologic conditions due to global climate change would be addressed within Reclamation's operation flexibility and therefore water resource changes due to climate change would be the same with or without the Proposed Action.

3.8 Resources Eliminated from Further Analysis

Reclamation analyzed the affected environment of the Proposed Action and No Action Alternative and has determined that there is no potential for direct, indirect, or cumulative effects to the following resources:

Indian Sacred Sites

No impact to Indian sacred sites would occur under the No Action Alternative as conditions would remain the same as existing conditions. The Proposed Action would not limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites. There would be no impacts to Indian sacred sites as a result of the Proposed Action.

Indian Trust Assets

No impact to ITA would occur under the No Action Alternative as conditions would remain the same as existing conditions. Reclamation determined that the Proposed Action would not impact ITA as there are none in the Proposed Action area. See Appendix F for Reclamation's determination.

Environmental Justice

No impact to minority or disadvantaged populations would occur under the No Action Alternative as conditions would remain the same as existing conditions. The Proposed Action would not cause dislocation, changes in employment, or increase flood, drought, or disease and would not disproportionately impact economically disadvantaged or minority populations.

Section 4 Consultation and Coordination

4.1 Public Review Period

Reclamation provided the public with an opportunity to comment on the Draft FONSI and Draft EA between May 10, 2013 and June 10, 2013. No comments were received.

4.2 Endangered Species Act (16 U.S.C. § 1531 et seq.)

Section 7 of the Endangered Species Act requires Federal agencies, in consultation with the Secretary of the Interior and/or Commerce, to ensure that their actions do not jeopardize the continued existence of endangered or threatened species, or result in the destruction or adverse modification of the critical habitat of these species.

The Service issued a Biological Opinion to the Corps on April 7, 2010, which covered all of the impacts of the development, but not the modification of the pipeline on Reclamation-owned or FCWW 18-owned land, or the transfer of water from LTRID. Reclamation has determined that the Proposed Action would have no effect on federally listed or proposed to be listed threatened or endangered species, designated critical habitat, or proposed critical habitat due to the inclusion, transfer from LTRID, execution of an O&M agreement, or the pipeline improvements. In addition, Reclamation has determined that there would be no additional adverse affect to biological resources beyond what is already covered and addressed by the Biological Opinion for the Corps 404 permit.

The Biological Opinion on Implementation of the CVPIA and Continued Operation and Maintenance of the CVP, issued to Reclamation by the Service in 2000, requires that Reclamation send a notice to the Service whenever Reclamation makes a “no effect” determination for an inclusion or exclusion. Pursuant to that requirement, Reclamation sent the Service a 30-day notice for the inclusion on May 17, 2013. No comments or questions were received.

4.3 National Historic Preservation Act (16 U.S.C. § 470 et seq.)

The NHPA of 1966, as amended (16 U.S.C. 470 et seq.), requires that federal agencies give the Advisory Council on Historic Preservation an opportunity to comment on the effects of an undertaking on historic properties, properties that are eligible for inclusion in the National Register. The 36 CFR Part 800 regulations implement Section 106 of the NHPA.

Section 106 of the NHPA requires federal agencies to consider the effects of federal undertakings on historic properties, properties determined eligible for inclusion in the National Register. Compliance with Section 106 follows a series of steps that are designed to identify

interested parties, determine the APE, conduct cultural resource inventories, determine if historic properties are present within the APE, and assess effects on any identified historic properties.

The Corps has fulfilled Reclamation and the Corps's collective responsibility for compliance with Section 106 through the execution of an MOA with the only exception being the improvements FCWW 18 would make to the existing pipelines. Reclamation has determined that the pipeline improvements has no potential to cause effects to cultural resources eligible for inclusion in the National Register pursuant to §800.3(a)(1).

Section 5 Preparers and Reviewers

Bureau of Reclamation

Rain Healer, M.S., Natural Resources Specialist, SCCAO
Shauna McDonald, Wildlife Biologist, SCCAO
Adam Nickels, Archaeologist, MP-153
Patricia Rivera, ITA, MP-400
Rena Ballew, Repayment Specialist, SCCAO – reviewer
George Bushard, Repayment Specialist, SCCAO – reviewer

Provost & Pritchard Consulting Group

Adam Lee, Project Engineer
Amy Wilson, Assistant Planner
Emily Bowen, Senior Planner
David McGlasson, Principal Engineer – reviewer
Richard M. Moss, Principal Engineer – reviewer

Section 6 Acronyms and Abbreviations

AF	Acre-feet
AFY	Acre-feet per year
APE	Area of Potential Effect
CAA	Clean Air Act
CDF	California Division of Forestry and Fire Protection
CH_4	Methane
CO_2	Carbon dioxide
Corps	United States Army Corps of Engineers
CVP	Central Valley Project
EA	Environmental Assessment
EPA	Environmental Protection Agency
FCWW 18	Fresno County Waterworks No. 18
FKC	Friant-Kern Canal

GHG	Greenhouse gases
ITA	Indian Trust Asset
LAFCo	Fresno County Local Agency Formation Commission
LTRID	Lower Tule River Irrigation District
M&I	Municipal and Irrigation
MOA	Memorandum of Agreement
National Register	National Register of Historic Places
NHPA	National Historic Preservation Act
O&M	Operation and Maintenance
$PM_{2.5}$	Particulate matter less than 2.5 microns in diameter
PM_{10}	Particulate matter between 2.5 and 10 microns in diameter
Reclamation	Bureau of Reclamation
Service	U.S. Fish and Wildlife Service
SHPO	California State Historic Preservation Officer
SIP	State Implementation Plan
SJRRP	San Joaquin River Restoration Program
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District

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