UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF RECLAMATION

MID-PACIFIC REGION

DRAFT FINDING OF NO SIGNIFICANT IMPACT

Friant-Kern Canal Capacity Restoration

Recommended by:

_____ Date: _____

Michelle Banonis
Natural Resources Specialist
San Joaquin River Restoration Program
Mid-Pacific Region

Concurred by:

_____ Date: _____

Mario Manzo
Project Manager
San Joaquin River Restoration Program
Mid-Pacific Region

Approved by:

_____ Date: _____

Alicia Forsythe
Program Manager
San Joaquin River Restoration Program
Mid-Pacific Region

Friant-Kern Canal Capacity Restoration

In accordance with section 102(2)(c) of the National Environmental Policy Act (NEPA) of 1969, as amended, the San Joaquin River Restoration Program (SJRRP) Office of the Department of Interior, Bureau of Reclamation (Reclamation) has determined that the implementation of the provisions of the San Joaquin River Restoration Settlement Act (SJRRS Act) pertaining to the restoration of the capacity of the Friant-Kern Canal (FKC) from its current 4,680 cubic feet per second (cfs) capacity to the originally designed and constructed 5,000 cfs capacity is not a major federal action that would significantly affect the quality of the human environment and an environmental impact statement is not required. This Finding of No Significant Impact (FONSI) is supported by Reclamation's Draft and Final Environmental Assessments (EAs), *Friant-Kern Canal Capacity Restoration*, which are hereby incorporated in their entirety by reference.

Background

In 1942, Reclamation, as part of the Central Valley Project (CVP), completed construction of Friant Dam, located on the San Joaquin River 16 miles northeast of downtown Fresno, California. Friant Dam is a concrete gravity structure, 319 feet high, with a crest length of 3,488 feet. It controls the flows of the San Joaquin River and provides for: downstream releases to meet requirements above Mendota Pool; flood control; conservation storage; diversion into the FKC and Madera Canal; and the delivery of water to 1 million acres of agricultural land in Fresno, Kern, Madera, and Tulare Counties. Friant Dam was first used to store water on February 21, 1944. Millerton Lake, the reservoir behind Friant Dam, has a total capacity of 520,500 acre-feet, has a surface area of 4,900 acres, and is approximately 15 miles long. It provides for 45 miles of shoreline that varies from gentle slopes near Friant Dam to steep canyon walls further inland, and it allows for various recreational activities, such as boating, fishing, picnicking, and swimming.

Friant Dam serves the CVP Friant Division long-term contractors (Friant Contractors) through three separate river and canal outlets: the San Joaquin River outlet works, the FKC, and the Madera Canal. The FKC carries water over 151.8 miles in a southerly direction from Millerton Lake to the Kern River, 4 miles west of Bakersfield. The water is used as supplemental and irrigation supplies in Fresno, Tulare, and Kern Counties. Construction of the FKC began in 1945 and was completed in 1951. The majority of the FKC is concrete lined, with 15-percent earth lined. The FKC originally had a maximum capacity of 5,000 cfs that gradually decreased to 2,500 cfs at its terminus in the Kern River. In the 1970s, Reclamation increased the FKC's concrete lining from the headworks, Milepost (MP) 0.00, to the Kings River Siphon, MP 28.50, increasing the maximum capacity in this reach to 5,300 cfs.

Since completion of construction by Reclamation in 1951, the FKC has lost its ability to fully meet its previously designed and constructed capacity, resulting in restrictions on water deliveries to the Friant Contractors. The reduction in capacity is a result of several factors, including original design limitations, ground subsidence, increased canal roughness, and changes in water delivery patterns. Hydraulic modeling, completed as part of the *Friant-Kern Canal Capacity Restoration Feasibility Report* (FKC Feasibility Report), authorized pursuant to Section 10201(a)(1) of the San Joaquin River Restoration Settlement Act (SJRRS Act), in Public Law 111-11, confirmed the reduction in FKC capacity in several reaches.

San Joaquin River Restoration Settlement and Act

In 1988, a coalition of environmental groups, led by the Natural Resources Defense Council (NRDC), filed a lawsuit, entitled *NRDC, et al., v. Kirk Rodgers, et al.*, challenging the renewal of long-term water service contracts between the United States and the Friant Contractors. On September 13, 2006, after more than 18 years of litigation, NRDC, the Friant Water Users Authority (FWA), and the U.S. Departments of the Interior and Commerce, collectively known as the "Settling Parties", agreed on the terms and conditions of the Stipulation of Settlement in *NRDC, et al., v. Kirk Rodgers, et al.*, (Settlement) subsequently approved by the U.S. Eastern District Court of California on October 23, 2006. The SJRRS Act authorizes and directs the Secretary of the Interior (Secretary) to implement the Settlement, which establishes two primary goals:

- **Restoration Goal** – To restore and maintain fish populations in "good condition" in the main stem San Joaquin River below Friant Dam to the confluence of the Merced River, including naturally reproducing and self-sustaining populations of salmon and other fish.

- **Water Management Goal** – To reduce or avoid adverse water supply impacts on all of the Friant Division long-term contractors that may result from the Interim and Restoration Flows provided for in the Settlement.

To achieve the Restoration Goal, the Settlement calls for releases of water from Friant Dam to the confluence of the Merced River (referred to as Interim and Restoration Flows), a combination of channel and structural modifications along the San Joaquin River below Friant Dam, and reintroduction of Chinook salmon. To achieve the Water Management Goal, Paragraph 16 of the Settlement and Part III of the SJRRS Act provide for certain activities to be developed and implemented to reduce or avoid adverse water supply impacts on all Friant Contractors. Specifically, Section 10201 of the SJRRS Act states:

> *(a) The Secretary of the Interior (hereafter referred to as the 'Secretary') is authorized and directed to conduct feasibility studies in coordination with appropriate Federal, State, regional, and local authorities on the following improvements and facilities in the Friant Division, Central Valley Project, California:*
> *(1) Restoration of the capacity of the Friant-Kern and Madera Canal to such capacity as previously designed and constructed by the Bureau of Reclamation.*
> *(2) […]*
> *(b) Upon completion of and consistent with the applicable feasibility studies, the Secretary is authorized to construct the improvements and facilities identified in subsection (a) in accordance with applicable Federal and State laws.*
> *(c) The costs of implementing this section shall be in accordance with Section 10203, and shall be a nonreimbursable Federal expenditure.*

Section 10203 of the SJRRS Act states:

> *(a) The Secretary is authorized and directed to use monies from the fund established under section 10009 to carry out the provisions of section 10201(a)(1), in an amount not to exceed $35,000,000.*

Proposed Action

The Proposed Action would consist of restoring the capacity of the FKC from the current operating capacity of 4,680 cfs to the previously designed and constructed capacity of 5,000 cfs over 59 miles of canal length, from mile post (MP) 29.14 to MP 88.22, which includes modifications to the Little Dry Creek Wasteway at MP 5.44. Proposed modifications to the FKC would include constructing raised sections of new lining attached to and above the existing concrete and earth lining; raising existing banks; modifying check structures and inlet/outlet structures; removing three timber farm bridges, possibly replacing one timber farm bridge with a concrete farm bridge, and possibly modifying up to 37 other bridges crossing the canal, for a total of 40 bridge modifications or removals; and modifying the Little Dry Creek Wasteway Facility at MP 5.44. Construction activities on the FKC would be contained between the outside slope toes of the canal's existing embankments, except for roadway travel and mobilization. Ground disturbance would therefore be limited to existing disturbed areas of the FKC.

Modifications along the FKC would require the excavation of approximately 400,000 cubic yards of soil from existing canal embankments; the excavation of approximately 17,000 cubic yards of rock from existing escarpments within the raised canal sections; approximately 450,000 cubic yards of backfill, of which approximately 100,000 cubic yards would be obtained from off-site permitted facilities; approximately 35,000 cubic yards of concrete lining material; approximately 500,000 linear feet of aqualastic sealant; approximately 85,000 cubic yards of "beach-belting" riprap, 25,000 cubic yards of roadway aggregate base course; 140,000 square yards of asphaltic cement coating; 65 acre-feet of water for dust abatement and soil conditioning; removal of three timber bridges and potential modifications of 37 other bridges crossing the canal for a total of 40 bridges; and fabrication and placement of splashboards at Little Dry Creek Wasteway. Excavated material would be temporarily stored on the embankment operation and maintenance road, parallel to the FKC, until it would be reused as backfill or taken and disposed of off-site. Materials taken off-site would be transported to permitted locations for safe storage, use, and/or disposal.

FINDINGS

Reclamation's finding that implementation of the Proposed Action will result in no significant impact to the human environment is supported by the following findings:

Water Resources

The Proposed Action provides the Friant Division with greater access to water supplies during wet conditions by improving the ability of the FKC to convey surface water from Friant Dam that would have otherwise been released into the San Joaquin River as a result of: (1) storage evacuations in preparation for high snowmelt conditions, (2) rainfall-dominated inflows that exceed the reservoir's physical capacity or regulated flood management capacity, (3) lack of conveyance capacity in the canals, and/or (4) storage for SJRRP Interim or Restoration Flows. On average, the Proposed Action improves the access of Friant districts to surface water supplies by 5–8 TAF/year. Because the majority of these supplies occur during periods when agricultural demands are low, they would predominantly be applied to groundwater banking and recharge facilities. Restoring the capacity of the FKC in order to allow continued and reliable water supply will not result in an adverse impact to water supply in the Friant Division.

The Proposed Action would not involve additional groundwater pumping, rather it would help to mitigate the impacts of existing groundwater pumping on water levels by increasing the ability to recharge available surface water supplies. This could help to offset the ongoing and long-term decline in groundwater levels expected to result from the implementation of the Settlement flows, as well as associated ground subsidence. Therefore, the Proposed Action would not have an adverse impact to groundwater resources.

Construction of the Proposed Action would occur during periods when the FKC is at low-flow and will utilize best management practices to avoid or minimize impacts to water quality in the canal from construction activities. Further, the surface water supply has a lower salinity level than groundwater in the project area, thus, the long-term infiltration of the surface water supply would serve to maintain and enhance groundwater quality underlying the Friant Division. Therefore, the Proposed Action would not have an adverse impact to water quality.

Biological Resources

The Proposed Action includes a Conservation Strategy for implementation. The Conservation Strategy identifies specific measures to avoid or minimize impacts to special-status species as a result of construction activities. Further, construction will be limited to existing disturbed right-of-way and would not require extending the land-side toe of the levees. Vegetation removal would occur on existing maintained levees. Construction would occur when flows in the canal are normally reduced or when there is sufficient freeboard to avoid in-water work in order to avoid potential impacts to aquatic species. Because the Proposed Action will involve the implementation of the Conservation Strategy, because no in-water work will occur, and because work will only occur within existing disturbed areas, there will be no adverse impact to biological resources.

Cultural Resources

The Proposed Action would alter the FKC and associated features such as bridges. Information is being assessed to determine the eligibility status of the canal and important features and impacts will be identified and evaluated consistent with applicable regulations and available information. If adverse impacts that cannot be mitigated are discovered through the process of the determination of eligibility in association with the Proposed Action, another NEPA environmental document would be prepared that would address this information and would be distributed for public comment and review. A Final EA and FONSI will be signed and distributed when it is confirmed that there are no adverse impacts to cultural resources associated with the Proposed Action and as defined by NEPA and Council on Environmental Quality (CEQ) regulations.

Air Quality

The Proposed Action will result in short-term and temporary air quality impacts associated with construction of the FKC. Emissions levels associated with the operation of construction equipment are calculated to be less than then thresholds for Federal conformity determinations and less than the San Joaquin Valley Air Pollution Control District (SJVAPCD) thresholds for local significance. Construction associated with the FKC would be required to comply with the SJVAPCD's control measures for emissions of PM_{10}, which would involve implementing fugitive dust suppression to bring the project into compliance. There are no operational changes

associated with the completed project, therefore, no air quality changes are anticipated for the long-term. Because the project will not exceed local or federal thresholds for emissions and because the project will implement best management practices for dust emissions, the Proposed Action will not result in adverse impacts to air quality.

Global Climate Change

The Proposed Action would involve short-term impacts consisting of emissions during construction, which have been estimated at 851 metric tons of CO_2, which is small in comparison to the CEQ threshold, which is 25,000 metric tons of CO_2 per year. There may be a slight realignment of where energy is produced from the Proposed Action, however, the total anticipated change is less than one percent. This total change is negligible in relation to the overall cumulative global effects of climate change. Therefore, the Proposed Action will not result in adverse impact to global climate change.

Noise

The Proposed Action would involve construction over several years, which would result in short-term and temporary elevated noise near the project area. All work will occur during daylight hours and within existing regulations, which would be exempted from local noise ordinances. If construction activities must occur past exempted hours, nearby sensitive receptors and responsible regulatory agencies would be notified. All equipment will be equipped with noise controls, such as mufflers and will be properly maintained. A disturbance coordinator will be designated and their contact information shall be provided to potentially sensitive receptors and posted in and around the project area. With the implementation of these best management practices for noise, the Proposed Action will not result in adverse impacts to sensitive receptors.

Transportation

Construction activities associated with the Proposed Action would result in additional trips of construction-related vehicles on local roads, farm roads, and state highways. Impacts to the local transportation system are anticipated to be minor because construction would occur over an extended period, during limited hours each day, and on different portions of the roadways over the course of the three-year construction period. One local bridge over the FKC will be replaced and other bridges may be re-paved. No new access roads will be constructed. Further, a Transportation Management Plan will be implemented that shall provide emergency and resident access on roads and bridges where construction activities may need to occur. With the implementation of these actions, the Proposed Action will not result in adverse impacts to transportation.

Power and Energy Resources

The Proposed Action would result in a slight shift to the Friant Power Project powerhouses located along the Friant-Kern and Madera Canals. The Friant-Kern Powerhouse would generate less power because more water would be delivered to the FKC. As a result, the Madera Canal power generation would increase. Implementation of the Proposed Action would result in a shift of energy production from the Friant-Kern Powerhouse to the Madera Powerhouse with less than a one percent overall increase in energy production. Because power produced at Friant Dam, regardless of the powerhouse where it is generated, is sold to the same energy company, and the

total power production is anticipated to change by less than one percent, the Proposed Action would have no adverse impacts to power and energy resources.

Socioeconomic Resources

The Proposed Action will not adversely impact socioeconomic resources. Implementing the Proposed Action would provide a temporary increase in construction-related jobs and related expenditures, resulting in a slight benefit on socioeconomic resources. In the long-term implementing the Proposed Action would help to provide continued irrigation to agricultural land in the region, which would maintain or increase the economic viability with the Central Valley.

Environmental Justice

The Proposed Action would not disproportionately impact economically disadvantaged or minority populations. Noise and air quality protective measures associated with the project description would assist in reducing or avoiding construction-related impacts to residents near the Proposed Action. Implementing the Proposed Action would help to maintain or increase the economic viability of irrigated agriculture in the region, helping to support minority and economically disadvantaged populations that rely on agricultural and related jobs for employment.

Land Use

Construction associated with the Proposed Action will only occur within existing right-of-way and no new land will be acquired. Implementing the Proposed Action would not support development of additional lands to irrigated agriculture because it would return the FKC to its original capacity, not increase its capacity. Accordingly, the project would deliver water to existing users at the capacity previously designed and constructed, therefore, there would be no adverse impacts to land use.

Agricultural Resources

The Proposed Action will not result in adverse impacts to agricultural resources. The Proposed Action will occur within existing rights-of-way and agricultural land around the canal would not be acquired or taken out of production. Some bridges may be modified as a result of the project, which may result in bridge closures or detours. With the implementation of measures to provide a Transportation Management Plan, the Proposed Action will not result in adverse impacts to agricultural mobility. The Proposed Action would continue to deliver water to existing users, which would provide stability for existing agricultural resources.

Utilities

The Proposed Action will not result in adverse impacts to utilities. No utilities are expected to be permanently removed or disturbed. Some short-term and temporary utility disruption may occur in association with utility relocation. These relocations will be coordinated with the appropriate utility company and will not result in long-term impacts.

Earth Sciences

Implementing the Proposed Action would not result in adverse impacts to earth resources. The restoration of FKC capacity would not disturb soils outside the canal and the canal banks. Needed borrow materials would come from existing stockpiles of material or from commercially

available and permitted sources. Most spoil materials would be stored temporarily on the canal banks or at local established staging areas and would be reused at nearby locations in the canal; excess spoil materials would be disposed of through commercially available and permitted sources.

Indian Trust Assets

The Proposed Action will not result in adverse impacts to Indian Trust Assets (ITA). Construction activities on the FKC would be contained between the canal's existing outside embankment edges, except for required roadway travel and mobilization, and ground disturbance would be limited to existing disturbed areas. There are no tribes possessing legal property interests held in trust by the United States in the lands involved with the Proposed Action area.

Population and Housing

The Proposed Action will not result in adverse impacts to population and housing. In the short term, implementing the Proposed Action would provide a temporary increase in construction-related jobs and related services. However, because of the high unemployment rates in the affected counties, it can reasonably be assumed that construction jobs would be filled by existing residents. Therefore, project construction would not increase population or the demand for housing. In the long term, implementing the Proposed Action would restore the capacity of the FKC to that previously designed and constructed by Reclamation. Although this would help to maintain the economic viability of irrigated agriculture in the region, it would not create new permanent jobs. Therefore, no increases in population and, consequently, no new housing related to operation of the Proposed Action are anticipated.

Visual Resources

In the short term, because of the distance from the proposed improvements, construction would have no adverse visual resources effect on residents in Cutler or Exeter. There are few residences in the area, and only a small number of individuals would have views of the FKC during construction. Project construction effects on the existing visual character are considered minor because of the short-term nature of the construction activities and the relatively small area that would be affected for any given viewer. In addition, construction sites along the canal would be returned to preconstruction conditions after the canal is returned to design capacity. In the long term, implementing the Proposed Action would restore the capacity of the FKC and would not substantially alter its original design or visual context. Existing concrete lining and bank height would be raised on both sides of the canal, and canal cleaning and changes in channel geometry would occur. Some bridges and overchutes that cross the canal would also be modified. These modifications, however, would not change the visual character of the canal or the surrounding viewsheds. The views associated with the canal and its operation would remain as it is currently, and there would not be any adverse effects on visual resources.

Recreation

Implementing the Proposed Action would not generate demand for recreation facilities, nor would it require the construction or expansion of recreation amenities. Parks and recreation facilities in the area of the canal would not receive additional or fewer recreational visits as a result of implementing the Proposed Action. In addition, implementing the Proposed Action would not restrict access to any recreation facilities located near the canal; therefore, no adverse

effects on recreation facilities, parks, or existing or future recreational opportunities are anticipated under the Proposed Action.

Public Health and Safety

The Proposed Action will not result in adverse impacts to public health and safety. Construction of the Proposed Action would result in additional trips of construction-related vehicles on local roads, farm roads, and state highways during construction, thereby increasing congestions. However, construction would occur over an extended period and on different portions of the affected roadways over the course of the construction period. Further, a Transportation Management Plan will be implemented to avoid and minimize transportation-related impacts on public health and emergency services during construction. The project will not directly generate the routine transfer or disposal of hazardous materials. Best management practices will be implemented during construction to avoid and minimize impacts associated with potential spillage of materials such as fuels and oils from construction equipment.

Cumulative Impacts

As in the past, hydrological conditions and other factors would result in fluctuating water supplies. Conjunctive use of surface water and groundwater is regionally extensive on the east side of the San Joaquin River and Tulare Lake hydrologic regions. Several artificial recharge programs are currently operating in the Tulare Lake Hydrologic Region. Additional direct and in-lieu recharge groundwater banks have been proposed in the San Joaquin Valley by the Friant Contractors and non-Friant Division contractors. The Proposed Action, when considered with other proposed projects, would improve management of water resources in the Friant Division and the region. There would be a cumulative beneficial effect on groundwater levels and quality because of the long-term increase in groundwater recharging capability when surface water is available.

Terrestrial biological resources would continue to be affected by other types of activities that are ongoing or proposed but unrelated to the Proposed Action. Impacts on terrestrial biological resources from implementation of the Proposed Action would occur only during temporary and short-term construction activities. The Proposed Action, when added to other existing and proposed actions, would not contribute to the cumulative impact on terrestrial biological resources because construction activities would be short-term and because effects on these resources would be avoided or minimized with implementation of the environmental commitments. No cumulative impacts on fish, including Kern brook lamprey, would result from implementation of the Proposed Action in conjunction with other reasonably foreseeable future projects. The Proposed Action is the only construction-related project that would affect species in the FKC.

For air quality, SJVAPCD defines cumulative impacts as two or more individual effects that, when considered together, are considerable or that compound or increase other environmental impacts. SJVAPCD's cumulative impacts determination guidance states that if there would be no significant impact from implementing an action, then there would be no cumulative impact. All the Proposed Action's emissions would be individually below the SJVAPCD and Federal thresholds. Because the combined emissions would be below the thresholds, the cumulative impact from implementing the Proposed Action would not be adverse.

GHG impacts are considered to be cumulative impacts. Although no project construction would occur under the No Action Alternative, the cumulative effects of projects in California and the world would increase over the foreseeable future such that impacts on global climate change would continue to increase. The Proposed Action, when added to other existing and proposed actions, would not contribute to cumulative impacts on global climate change because of the *de minimis* magnitude of annual GHG emissions and the short-term nature of construction-related GHG impacts. Implementing the Proposed Action would not change operations and, therefore, would not change long-term impacts on global climate change. Furthermore, according to SJVAPCD's definition of cumulative impacts, the Proposed Action would not contribute to global climate change.

Implementation of recently approved and reasonably anticipated projects in the vicinity of the Proposed Action would most likely result in noise effects at some level. Although noise effects from on-site construction activities and construction traffic associated with cumulative projects could occur in the same timeframe as the Proposed Action, construction activities would likely not occur within the same proximity of sensitive receptors as the Proposed Action. In addition, the Proposed Action would generate noise for only a limited period (3 years) and construction would move from site to site, so only temporary effects would occur. Therefore, implementing the Proposed Action would not contribute to the cumulative noise effect related to on-site construction activities, off-site construction traffic, and noise from other actions. Because no adverse effects from operations or ground-borne vibration and ground-borne noise would occur, implementing the Proposed Action would not contribute to the cumulative effects related to operations or ground-borne vibration or noise.

It is difficult to estimate the cumulative effects of existing and future actions on socioeconomics in the Study Area because the factors affecting socioeconomics are complex. The availability of water supply is undeniably a key factor affecting the area's economy, especially agricultural production and related services. Implementing the Proposed Action would result in a return of the FKC to design capacity, which would help sustain and improve the economy of irrigated agriculture. When added to other similar existing and proposed actions, implementing the Proposed Action would contribute to beneficial cumulative impacts on socioeconomics or help offset any adverse cumulative effects from other actions.

The Proposed Action, when considered with other existing and proposed actions, would have a slight beneficial contribution to cumulative impacts associated with environmental justice. Implementing the Proposed Action would help to support and maintain jobs that minority and economically disadvantaged populations rely on, especially in the agricultural industry.

In recent years, land use changes in Fresno, Tulare, and Kern Counties have involved urbanization of agricultural lands. Restoring the capacity of the FKC could ultimately have the beneficial effect of rehabilitating an incremental water supply that had been reduced over time and thereby providing a beneficial effect on the continued viability of agricultural uses on lands in the areas served by these two canals. Accordingly, a slight beneficial cumulative impact on land use and agricultural resources is anticipated.