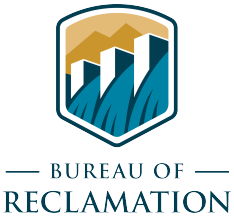
APPENDIX K
Friant-Kern Canal Middle Reach Capacity Correction Project

Changes to the Draft EIS/R



Bureau of Reclamation
Interior Region 10 California-Great Basin
California*, Nevada*, Oregon*
***Partial**

September 2020

INTRODUCTION

The Bureau of Reclamation (Reclamation) and Friant Water Authority (FWA), pursuant to the National Environmental Policy Act (NEPA) and California Environmental Quality Act (CEQA), respectively, provided the public with an opportunity to comment on the Draft Environmental Impact Statement/ Environmental Impact Report (EIS/R) during a 45-day public comment period. To address the public comments, additional clarifying text has been added to the Final EIS/R, as indicated in the individual responses to the comments presented in Appendix L and shown in this appendix. Table K-1 outlines revisions that have been made between the Draft EIS/R and the Final EIS/R that are not minor editorial changes. Table K-1 provides the page number and line number where the changed text was originally located in the Draft EIS/R and the page number and line number where the revised text is located in the Final EIS/R. Changes are shown in this appendix as ~~strikeout~~ for deletions and <u>underline</u> for additions.

Section 15088.5 of the State CEQA Guidelines does not preclude the lead agency from consideration of changes that serve to clarify or enhance a project. None of the revisions to the Draft EIS/R or additions to the Final EIS/R in response to public comments constitute "significant new information" or substantial changes to the Proposed Action or alternatives as defined by CEQA Guidelines Section 15088.5, nor do they constitute significant changes to the results relative to impacts in the Draft EIS/R which would require circulation as a supplemental or revised Draft EIS/R under NEPA. Instead, the revisions provided in the Final EIS/R serve only to clarify or enhance the detail or accuracy of the analysis and recirculation of the EIS/R is not required.

Changes to the Draft EIS/R

Table K-1. Changes to the Draft EIS/R

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	Title	1	Title	1	~~Public Draft~~ Final Environmental Impact Statement
EIS/R	Title	--	Title	--	Estimated Lead Agency Total Costs Associated with Developing and Producing this EIS/EIR $~~1,850~~2,050,000
EIS/R	abstract	3	abstract	3	~~Public Draft~~ Final Environmental Impact
EIS/R	abstract	17-21	abstract	17-21	Reclamation and the Friant Water Authority, pursuant to the National Environmental Policy Act and the California Environmental Quality Act, respectively, have prepared this ~~Draft~~ Final Environmental Impact Statement/Environmental Impact Report (~~Draft~~ Final EIS/R) to analyze the Friant-Kern Canal Middle Reach Capacity Correction Project. The ~~Draft~~ Final EIS/R analyzes the proposed alternatives to restore an approximately 33-mile reach of the FKC from milepost 88 to milepost 121.5.
EIS/R	ix	39	ix	39-42	Appendices Appendix K. Changes to the Draft EIS/R Appendix L. Responses to Comments on the Draft EIS/R Appendix M. Mitigation Monitoring and Reporting Program Appendix N. US Fish and Wildlife Service - Biological Opinion
EIS/R	xi	27-33	xi	27-33	Reclamation, the National Environmental Policy Act (NEPA) Lead Agency, and FWA, the California Environmental Quality Act (CEQA) Lead Agency, have prepared this joint ~~Draft~~ Final Environmental Impact Statement/Environmental Impact Report (~~Draft~~ Final EIS/R) to comply with NEPA and CEQA. This ~~Draft~~ Final EIS/R analyzes the direct, indirect, and cumulative effects of implementing the Project Alternatives. This ~~Draft~~ Final EIS/R serves as an informational document for decision makers, public agencies, nongovernmental organizations, and the public for reviewing the impacts of the Project Alternatives.

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	xii	1-12	xii	1-13	**Purpose and Need** The FKC Middle Reach has lost over 50 percent of its original design capacity due to regional land subsidence and a design deficiency. This has resulted in water delivery impacts on Friant Contractors, reduced ability of the FKC to convey flood waters during wet years, reduced ability to implement provisions of the Water Management Goal as described in Paragraph 16 of the Settlement, and a reduced ability to store and manage the timing and volume of Restoration Flows in Millerton Lake and flood flows at Friant Dam. The purpose and need of Reclamation's Proposed Action is to restore the conveyance capacity of the FKC Middle Reach to such capacity as previously designed and constructed by Reclamation, as provided for in Public Law 111-11, Section 10201 and ~~increase the storage capacity in Millerton Lake through improved operations~~ improve operations of existing facilities at Friant Dam consistent with and as allowed for by the Water Infrastructure Improvements for the Nation Act, which will result in fewer spills and uncontrolled releases of water and thus more efficiently use storage capacity in Millerton Lake.
EIS/R	xii	26	xii	27	Alternatives Evaluated in this ~~Draft~~ Final EIS/R
EIS/R	xiii	11	xiii	12	There are two Project Alternatives considered in the ~~Draft~~ Final EIS/R to address subsidence impacts:
EIS/R	xiii	21-25	xiii	22-27	Reclamation's federal discretionary actions associated with both alternatives include implementation, cost-share funding pursuant to the Friant Division Improvements Legislation Public Law 111-11 Section 10201 and the Water Infrastructure Improvements for the Nation Act (Public Law 114-322 Section 4007), issuance of a repayment contract, as well as approvals of actions being conducted within Reclamation's right-of-way (ROW) and any needed land acquisition.
EIS/R	xiii	26-29	xiii	28-35	**Canal Enlargement and Realignment Alternative (CER Alternative)** The CER Alternative ~~(~~is identified as the proposed Project ~~identified for~~ by FWA pursuant to CEQA ~~purposes[3])~~. Based on the information provided in the Final EIS/R, comparison of impacts between the alternatives, and following public review of the Draft EIS/R, Reclamation has identified the CER Alternative as the Preferred Alternative pursuant to NEPA. The CER Alternative would restore the FKC design capacity using two methods: (1) raising portions of the embankments in the existing FKC and (2) constructing a realigned canal segment east of the existing FKC.
EIS/R	xiii	footnote 3	--	--	~~[3]For CEQA purposes, FWA has identified the CER Alternative as the "Proposed Project." Reclamation has not yet identified a "Preferred Alternative." Per NEPA regulations, the Preferred Alternative will be identified in the Final EIS/R.~~

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	xiii & xiv	34-36 & 1-7	xiv	3-12	• **Canal Realignment** – The new realigned canal segment would be constructed immediately east of the existing FKC and would serve as the exclusive water conveyance and delivery mechanism throughout its length. Most of the existing FKC adjacent to the new realigned canal segment would be taken out of service; however, limited portions would be preserved for use as delivery pools at existing pump station turnouts. For those portions removed from conveyance service, FWA would continue to operate and maintain the canal consistent with their Operations~~, and~~ Maintenance ~~(O&M)~~, and Repair (OM&R) Agreement with Reclamation and Reclamation regulations. The realigned segment would extend about 20 miles from MP 95.7 to MP 116, which encompasses all of Segments 2, 3, and a portion of Segment 4.
EIS/R	xiv	15-21	xiv	20-27	• **Canal Raising and Widening** – About 16 miles of the existing canal would be enlarged by raising the embankments up to 15 feet and widening the canal (approximately 28 feet wide on each embankment or a total of 56 feet wide) in Segments 2, 3, and a portion of Segment 4 from MP 95.7 to MP 116. Short sections (between 0.25 and up to 2.2 miles) of a bypass canal would be constructed as part of this alternative within this reach, totaling approximately four miles. ~~This section would also include up to four miles of 18 a bypass canal segment east of the existing FKC.~~ Most of the corresponding segments of the existing FKC would be taken out of service; however, limited portions would be preserved for use as delivery pools at existing pump station turnouts.
EIS/R	xiv	33	xiv	39	This ~~Draft~~ Final EIS/R assesses the CER Alternative and CE Alternative for their potential
EIS/R	xiv & xv	37-40 & 1	xv	3-7	This ~~Draft~~ Final EIS/R uses the following terminology based on CEQA to denote the significance of each environmental effect (impact): significant and unavoidable, significant, potentially significant, less than significant, and no impact. For all impacts that could be identified as significant or potentially significant, appropriate ECs/MMs are identified to reduce the impacts.
EIS/R	xv	8-10	xv	15-17	The table includes the significance determinations made pursuant to CEQA throughout the ~~Draft~~ Final EIS/R, as well as the residual impacts after any proposed EC/MM is applied.
EIS/R	xv	14-20	xv	21-28	The No Action Alternative would result in potentially significant impacts on the following resources: air quality due to fugitive dust from fallowed land~~,~~ and Swainson's hawk due to removal of foraging habitat from land fallowing, geology and soils from erosion from land fallowing~~,~~ and significant and unavoidable impacts on agricultural lands due to conversions of agricultural lands from land fallowing, and groundwater due to reductions in deliveries that would impede sustainable groundwater management in the Tule and Kern Subbasins. Additional detail for each impact is provided in Chapter 4 for each of the resource sections evaluated in this ~~Draft~~ Final EIS/R.

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	xvi	1	xvi	1	Table ES-1. Summary of Environmental Impacts by Resource Level of Significance after ECs/ MMs (applicable to both ~~Project Alternatives~~ CER and CE Alternatives)
EIS/R	xvii	--	xvii	--	Table ES-1. Summary of Environmental Impacts by Resource Cultural resources **ECs/MMs** [for Impacts CUL-2 and CUL-3] CUL-1 and CUL-2 CUL-1 and CUL-3
EIS/R	xvii	--	xvii	--	Table ES-1. Summary of Environmental Impacts by Resource Geology and Soils **No Action** ~~Significant~~ Potentially significant
EIS/R	1	22-25	1	22-25	Since then, the Middle Reach of the FKC (from mile post [MP] 88 to MP 121.5 [Figure 1-1]) has experienced ~~a~~ additional, substantial reduction in conveyance capacity due to continuing subsidence, which has adversely affected water deliveries to some CVP water contractors served by the FKC.
EIS/R	1	28-32	1	28-33	Reclamation and FWA have prepared this ~~Draft~~ joint Final Environmental Impact Statement/Environmental Impact Report (~~Draft~~ Final EIS/R) pursuant to the National Environmental Policy Act (NEPA) and the California Environmental Quality Act (CEQA), respectively, to assess and address the effects of the proposed FKC Middle Reach Capacity Correction Project (Project). The designated lead agencies for NEPA and CEQA are Reclamation and FWA, respectively.

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EIS/R	4	1-12	4	1-13	**NEPA Purpose and Need** The FKC Middle Reach has lost over 50 percent of its original design capacity due to regional land subsidence and a design deficiency. This has resulted in water delivery impacts on Friant Contractors, reduced ability of the FKC to convey flood waters during wet years, reduced ability to implement provisions of the Water Management Goal as described in Paragraph 16 of the Settlement, and a reduced ability to store and manage the timing and volume of Restoration Flows in Millerton Lake and flood flows at Friant Dam. The purpose and need of Reclamation's Proposed Action is to restore the conveyance capacity of the FKC Middle Reach to such capacity as previously designed and constructed by Reclamation, as provided for in Public Law 111-11, Section 10201 and ~~increase the storage capacity in Millerton Lake through improved operations~~ improve operations of existing facilities at Friant Dam consistent with and as allowed for by the Water Infrastructure Improvements for the Nation Act, which will result in fewer spills and uncontrolled releases of water and thus more efficiently use storage capacity in Millerton Lake.
EIS/R	4	31-34	4	32-35	**Agency Coordination** • U.S. Army Corps of Engineers (USACE) – Compliance with ~~Sections 402 and~~ 404 of the Clean Water Act (CWA) • Central Valley Regional Water Quality Control Board (Regional Water Board) – Compliance with ~~Section~~ Sections 402 and 401 of the CWA
EIS/R	5	18-20	5	21-24	The USACE is the only federal agency that accepted the role as a Cooperating Agency and has designated Reclamation as lead federal agency for NEPA, Section 7 of the ESA, and Section 106 of the NHPA associated with their potential permitting actions pursuant to the CWA.

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EIS/R	7	1-11	7	1-18	**Chapter 2. Description of Alternatives** This chapter describes the Project Alternatives, consisting of the No Action/No Project Alternative and two Project Alternatives, the Canal Enlargement and Realignment Alternative (CER Alternative) and the Canal Enlargement Alternative (CE Alternative) and discusses the other Project Alternatives that were considered but eliminated. The CER Alternative is identified as the proposed Project by FWA pursuant to CEQA. Reclamation has identified the CER Alternative as the Preferred Alternative pursuant to NEPA. Appendix B1 provides more technical information on, and detailed illustrations for, the Project Alternatives. Reclamation's federal discretionary actions associated with both Action Alternatives include implementation, cost-share funding pursuant to the Friant Division Improvements Legislation Public Law 111-11 Section 10201 and the Water Infrastructure Improvements for the Nation Act (Public Law 114-322 Section 4007), issuance of a repayment contract, as well as approvals of actions being conducted within Reclamation's ROW and any needed land acquisition. Reclamation is the federal lead agency for the proposed Project. However, as noted in Section 1, the USACE is a Cooperating Agency pursuant to NEPA as they may have associated federal action(s) pursuant to the CWA, and those potential authorization(s) are considered part of the Project Alternatives.
EIS/R	7	14-16	7	21-23	The existing conditions reflect baseline conditions at the time of the release of the Notice of Preparation (December 2019), including infrastructure; water rights and contracts; applicable regulatory requirements; land uses; and relevant current plans and policies.
EIS/R	8	18-21	8	24-27	2) Projected additional subsidence, as shown in Figure 2-1, would further reduce the capacity of the FKC Middle Reach (see Attachment A of Appendix B1). This would also diminish CVP water supplies to some Friant Contractors; it is estimated that deliveries would be reduced nearly ~~150~~180,000 acre-feet (AF) annually by ~~2040~~2070.
EIS/R	9-10	7-9 & 1-2	10	11-15	**Canal Enlargement and Realignment Alternative (CER Alternative)** The CER Alternative (Proposed Project/Preferred Alternative)[4] would restore the FKC design capacity using two methods: (1) raising portions of the embankments of the existing FKC, and (2) constructing a realigned canal segment east of the existing FKC (see the "Canal Enlargement and Realignment Alternative" section and Attachment A in Appendix B1)

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EIS/R	10	7-16	10	5-14	• **Canal Realignment** – The realigned canal segment would be constructed immediately east of the existing FKC and would serve as the exclusive water conveyance and delivery mechanism through its length. Most of the existing FKC adjacent to the new realigned canal segment would remain in place but would be taken out of active service; limited portions would be preserved for delivery pools at pump station turnouts. The realigned segment would extend about 20 miles from MP 95.7 to MP 116, which encompasses all of Segments 2, 3, and a portion of Segment 4. For those portions removed from conveyance service, FWA would continue to operate and maintain the canal consistent with their Operations~~, and~~ Maintenance ~~(O&M),~~ and Repair (OM&R) Agreement with Reclamation and Reclamation regulations.
EIS/R	10	footnote 4	10	--	~~[1] For CEQA purposes, FWA has identified the CER Alternative as the "Proposed Project." Reclamation has not yet identified a "Preferred Alternative." The Preferred Alternative will be identified pursuant to NEPA regulations in the Final EIS/R.~~
EIS/R	11	--	11	14-18	**Concrete Batch Plant** - A concrete batch plant would be built onsite for construction of canal linings for both alternatives. The batch plant would be located on a 30-acre parcel on Avenue 56 near the FKC in Tulare County (see Figure 1-22 in Appendix B1). The property would also be used for contractor staging, offices, and equipment and material storage.
EIS/R	14	15-16	14	15-16	The batch plant would be located on a 30-acre parcel on Avenue 56 near the FKC in Tulare County (Figure 1-2~~1~~2 in Appendix B1).
EIS/R	16	12-14	16	12-14	Through an evaluation and comparison of initial alternatives as part of the federal Feasibility Study that was conducted by Reclamation and FWA (Reclamation 2020), four additional alternatives were considered and eliminated from further consideration.
EIS/R	16	33-35	16	33-35	FWA does not currently own or operate a large-capacity pump station, and introduction of this major infrastructure would require additional ~~O&M~~ OM&R staff specially trained in pump stations, and would result in significant increased operational complexity.
EIS/R	17	17-18	17	17-18	In addition, there would be increased operational complications and considerably higher ~~O&M~~OM&R costs resulting from the operation of two canals.
EIS/R	17	41-42	17	41-42	There would be increased operational complications and considerably higher ~~O&M~~OM&R costs resulting from the operation of two canals for the 17 to 23-mile length of the bypass canal.
EIS/R	18	--	18	23-27	Public Resources Code Section 21081.6 requires a Lead Agency to adopt a Mitigation Monitoring and Reporting Plan (MMRP) when it approves a project for which measures to mitigate or avoid significant effects on the environment are required. The purpose of the MMRP is to ensure compliance with the mitigation measures during project implementation. Appendix M of this EIS/R includes the Project MMRP.

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EIS/R	19	--	19	24-26	CUL-2 Protocol for handling inadvertent discovery of subsurface cultural or human artifacts. CUL-3 Protocol for handling inadvertent discovery of human remains.
EIS/R	21	16-17	21	16-17	The EA/IS, included as Appendix D, provides explanations for why these resource topics are not discussed further in this ~~Draft~~Final EIS/R.
EIS/R	25	10-12	25	10-12	Native American consultation for the Project is discussed in the Tribal Resources section of this ~~Draft~~ EIS/R.
EIS/R	45	22-23	45	22-23	Table 3-7 summarizes the acreages of important farmland and other lands inventoried in the Project area between 2014 ~~to~~and 2016.
EIS/R	46	1-2	46	1-2	**Table 3-7. Total Acres of Farmland Mapping and Monitoring Program Farmland and 1 Other Categories Mapped in the Project Area between 2014 ~~and~~ to 2016**
EIS/R	53	7-16	53	7-17	A NEPA environmental document must, in accordance with NEPA guidance (40 10 CFR 1508.27), consider the context and intensity of its effects that would be caused by, or result from, a project. These factors were taken into consideration when developing the significance criteria under which each resource was evaluated under NEPA to develop impact conclusions. Thresholds may be quantitative or qualitative; they may be based on agency or professional standards or on legislative or regulatory requirements that are relevant to the impact analysis. Significance criteria used in this ~~Draft~~ Final EIS/R are based on the checklist presented in Appendix G of the State CEQA Guidelines; factual or scientific information and data; and regulatory standards of federal, state, regional, and local agencies. These thresholds also include the context and intensity pursuant to NEPA, to determine the significance of the action and are described, as appropriate, for each resource.
EIS/R	53	28-34	53	29-35	Pursuant to the EA/IS that was prepared by Reclamation and FWA, the resources that would have no impact or less than significant impacts are not ~~included~~ further analyzed in this ~~Draft~~ EIS/R. Further, for the remaining resources that are discussed in this document, any significance threshold that was previously determined to have no impact or less than significant impacts in the EA/IS ~~is~~ are also not ~~included~~ further analyzed in this ~~Draft~~ EIS/R. The EA/IS, included as Appendix D, provides explanations for why resource topics or thresholds within the ~~retained~~ individual resource topics are not discussed further in this ~~Draft~~ EIS/R.
EIS/R	54	21-24	54	21-24	Criteria air pollutant emissions were compared to the SJVAPCD regional significance thresholds published in its GAMAQI and shown in Table 4-1 to determine the significance under CEQA and to the General Conformity Rule (GCR) *de minimis* thresholds pursuant to the Clean Air Act to determine the effects under NEPA.

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	55	--	55 & 56	24-35 & 1-4	***General Conformity Rule (GCR)*** Section 176 (c) of the Clean Air Act (42 United States Code [USC 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 SIP required under Section 110 (a) of the federal Clean Air Act (42 USC 7410[a]) before the action is otherwise approved. In this context, conformity means that such federal actions must be consistent with a SIP's purpose of eliminating or reducing the severity and number of violations of the NAAQS and achieving expeditious attainment of those standards. Each federal agency must determine that any action proposed that is subject to the regulations implementing the conformity requirements will, in fact, conform to the applicable SIP before the action is taken. This Project is subject to the GCR because it involves a federal agency (Reclamation). The general conformity regulations apply to a proposed federal action in a nonattainment or maintenance area if the total of direct[11] and indirect[12] emissions of the relevant criteria pollutants and precursor pollutants caused by the proposed action equal or exceed certain *de minimis* amounts, thus requiring the federal agency to make a determination of general conformity
EIS/R	56	--	56	footnote 11	[11] Direct emissions are those that are caused or initiated by the federal action and occur at the same time and place as the federal action.
EIS/R	56	--	56	footnote 12	[12] Indirect emissions are reasonably foreseeable emissions that are further removed from the federal action in time and/or distance and can be practicably controlled by the federal agency on a continuing basis (40 CFR 93.152).
EIS/R	57	5-7	57	34-36	Table E-~~5~~7 in the appendix shows that total construction-related unmitigated NO_X emissions, would exceed the SJVAPCD's annual significance threshold, as well as the GCR *de minimis* thresholds and therefore would be significant.
EIS/R	57	13-15	58	2-5	As shown in Tables E-~~6~~8a and E-8b in Appendix E, compliance with Regulation VIII and Rule 9510 combined with implementation of ECs/MMs AQ-1 and AQ-2 would reduce impacts to **less than significant** by reducing NOX emissions below the SJVAPCD thresholds of significance.
EIS/R	58	--	58	6-8	In addition, as NO_X emissions are reduced to less than 10 tons per year with the incorporation of mitigation, which is below the GCR *de minimis* threshold for NO_X; Reclamation has determined that the CER Alternative is in conformance with the Clean Air Act.
EIS/R	57 & 58	39-41 & 1-2	58	32-36	As shown in Tables ~~6~~ E-8a and E-8b in Appendix E, with implementation of ECs/MMs AQ-1 and AQ-2, the CER Alternative would not result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is in nonattainment under an applicable federal or state ambient air quality standard.

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EIS/R	59	21-26	60	14-19	As shown in Appendix E, Table E-~~9~~11, with the exception of CO, no other criteria air pollutant exceeded 100 pounds per day. Because the Project's onsite construction emissions would exceed 100 pounds per day of CO, an ambient air quality analysis was conducted to determine if the Project caused a local exceedance of the ambient air quality standard for CO. As shown in Appendix E Table E-~~10~~12, the CER Alternative would not cause an exceedance of the CO ambient air quality standard.
EIS/R	60	6-11	61	1-6	As discussed above, because the Project's onsite construction emissions would exceed 100 pounds per day of CO (see Table E-~~9~~ 11 in Appendix E), an ambient air quality analysis was conducted to determine if the Project caused a local exceedance of the ambient air quality standard for CO. As shown in Appendix E Table E-~~10~~12, the CER Alternative would not cause an exceedance of the CO ambient air quality standard. Impacts related to localized CO emissions from the CER Alternative would therefore be **less than significant**.
EIS/R	60	29-31	61	24-26	Table E-~~7~~9 in the appendix shows that total unmitigated construction-related NO_X would exceed the SJVAPCD's annual significance threshold, as well as the GCR *de minimis* thresholds, and therefore would be significant.
EIS/R	60	31-38	61	26-34	The air quality impacts from construction of the CE Alternative would exceed the SJVAPCD's annual significance thresholds as well as the GCR de minimis thresholds and therefore would be significant (Appendix E Table E-~~7~~9). The potential for the CE Alternative to conflict with or obstruct implementation of an applicable air quality plan would be potentially significant. As shown in Table E-~~8~~ 10a and E-10b in Appendix E, like the CER Alternative, compliance with Regulation VIII and Rule 9510 combined with implementation of EC~~s~~/MM~~s~~ AQ-1 ~~and AQ-2~~, would reduce impacts to **less than significant** by reducing NOX emissions below the SJVAPCD thresholds of significance.
EIS/R	61	--	61	35-38	As with the CER Alternative, NO_X emissions under the CE Alternative are less than 10 tons per year with the incorporation of EC AQ-1, which is below the GCR *de minimis* threshold; therefore, Reclamation has determined that the CE Alternative is in conformance with the Clean Air Act.
EIS/R	61	9-15	62	9-14	In addition, Reclamation and FWA would implement EC~~s~~/MM~~s~~ AQ-1 ~~and AQ-2~~, which would further reduce NOX emissions below the SJVAPCD thresholds of significance. As shown in Table E-~~8~~ 10a and E-10b in Appendix E, with implementation of EC~~s~~/MM~~s~~ AQ-1 ~~and AQ-2~~, the CE Alternative would not result in a cumulatively considerable net increase in any criteria pollutant for which the Project region is in nonattainment under an applicable federal or state ambient air quality standard.
EIS/R	61	18-19	62	18-19	Daily and annual emissions and exposure to sensitive receptors would be similar to those discussed under AQ-3 for the CER Alternative (Tables E-~~10~~ 11 and E-~~11~~ 13 in Appendix E).

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<tr><th>Document Type</th><th>Original Page</th><th>Original Line No.</th><th>Revised Page</th><th>Revised Line No.</th><th>Revised Text</th></tr>
<tr><td>EIS/R</td><td>63</td><td>3-6</td><td>64</td><td>3-6</td><td>Operational impacts from implementation of the CER Alternative would generally be equivalent to existing conditions because ongoing ~~operations and maintenance~~ OM&R of the FKC under this alternative would be comparable to existing conditions. Ongoing ~~operations and maintenance~~ OM&R would continue to be implemented consistent with the 2005 USFWS biological opinion.</td></tr>
<tr><td>EIS/R</td><td>63</td><td>12</td><td>64</td><td>12</td><td>Table 4-2. Estimated Habitat Impacts
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<tr><td>Terrestrial Habitat</td><td>CER Alternative Temporary (acres)</td><td>CER Alternative Permanent (acres)</td><td>CE alternative Temporary (acres)</td><td>CE Alternative Permanent (acres)</td></tr>
<tr><td>Riparian Wetland</td><td>0.9</td><td>0.9<u>7</u></td><td>1.01</td><td>0.7</td></tr>
</table></td></tr>
<tr><td>EIS/R</td><td>67</td><td>3-8</td><td>68</td><td>3-8</td><td>~~The formal Section 7 consultation process is currently ongoing. Reclamation will not initiate any action that would affect a federally listed species or designated critical habitat without first completing the appropriate consultation(s) with USFWS and receiving formal notice that the action would not jeopardize the continued existence of the BLVS. Additionally, implementation of ECs/MMs BIO-1j.1 through BIO-1j.4 would reduce impacts on BVLS to a less-than-significant level.~~ <u>On July 23, 2020, Reclamation received a biological opinion from the USFWS that concluded the Project is not likely to jeopardize the continued existence of BVLS (08ESMF00-2020-F-0350) (see Appendix N). All terms and conditions of the biological opinion have been incorporated as part of the CER Alternative. The terms and conditions of the biological opinion are the same as ECs/MMs BIO-1j.1 through BIO-1j.4 and their implementation would reduce impacts on BVLS to a **less-than-significant** level.</u></td></tr>
<tr><td>EIS/R</td><td>67</td><td>19-22</td><td>68</td><td>19-26</td><td>~~Additionally, as described under Impact BIO-1j, Reclamation included San Joaquin kit fox (SJKF) as part of their consultation efforts with USFWS. This consultation, combined with implementation of ECs/MMs BIO-1l.1 through BIO-1l.4 and EC BIO-1l.5, would reduce impacts on SJKF to a less-than-significant level.~~ <u>Consequently, Reclamation included San Joaquin kit fox (SJKF) as part of their consultation efforts with USFWS. On July 23, 2020, Reclamation received a biological opinion from the USFWS that concluded the Project is not likely to jeopardize the continued existence of SJKF (08ESMF00-2020-F-0350) (see Appendix N). All terms and conditions of the biological opinion have been incorporated as part of the CER Alternative. The terms and conditions of the biological opinion are the same as ECs/MMs BIO-1l.1 through BIO-1l.4 and EC BIO-1l.5 and with their implementation would reduce potential impacts on SJKF to a **less-than-significant** level.</u></td></tr>
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EIS/R	68	4-13	69	6-16	The CER Alternative would result in temporary impacts (i.e., discharge of dredged or fill material) on 0.5 acre (490 linear feet) of intermittent stream channel, 0.01 acre of riparian/fresh emergent wetland, and 0.84 acre of riparian wetlands at Deer Creek; and temporary impacts on 0.5 acre (397 linear feet) of intermittent stream channel and 0.03 acre of riparian wetlands at White River. The temporary impacts would occur as a result of construction equipment access, decommissioning/constructing siphons, and recontouring the streambanks. The CER Alternative would also result in permanent impacts (i.e., discharge of dredged or fill material) on ~~0.9~~ 0.7 acre of riparian wetlands at Deer Creek from the footprint of the canal realignment. The new siphons for the CER Alternative would be buried under the streams at Project completion, and the streambeds would be restored. Placement of the new siphons would therefore not have a permanent impact on the intermittent streams.
EIS/R	73	25-26	74	21-22	With the implementation of EC/MMs CUL-1 and CUL-2 potentially significant impacts on archaeological resources would be reduced to a **less-than-significant** level.
EIS/R	73	33-35	74	29-31	With the implementation of EC/MMs CUL-1 & CUL-3 potentially significant impacts related to the discovery of human remains would be reduced to a **less-than-significant** level.
EIS/R	75	4-5	75	15-17	With the implementation of EC/MMs CUL-1 and CUL-2 potentially significant impacts on archaeological resources would be reduced to a **less-than-significant** level.
EIS/R	75	9-10	76	4-5	With the implementation of EC/MMs CUL-1 & CUL-3 potentially significant impacts related to the discovery of human remains would be reduced to a **less-than-significant** level.
EIS/R	76 & 77	39-40 & 1-3	77 & 78	39-40 & 1-3	The unused remaining canal segment would be maintained under FWA's existing ~~O&M~~ OM&R agreement, with Reclamation, however if not properly managed, disturbed portions of the unused segment of the FKC (i.e., areas that have been excavated for use as borrow material), could transport sediment into agricultural drains or sensitive receiving waters and could result in significant impacts related to soil erosion.
EIS/R	77	12-13	78	12-13	Impacts related to soil erosion during operation of the CER Alternative, including ~~O&M~~ OM&R, would be **less than significant**.
EIS/R	79	2-5	80	2-5	The portions of the existing FKC taken out of active service will be maintained by Friant under the ~~O&M~~ OM&R agreement ~~contract~~, however if not properly managed, disturbed portions of the existing FKC could result in a significant impact related to soil erosion.

<table>
<tr><th>Document Type</th><th>Original Page</th><th>Original Line No.</th><th>Revised Page</th><th>Revised Line No.</th><th>Revised Text</th></tr>
<tr><td>EIS/R</td><td>83 & 84</td><td>28</td><td>84 & 85</td><td>28</td><td>Table 4-7. Estimated CE Alternative Greenhouse Gas Emissions
<table>
<tr><th>Year</th><th>MTCO2e/yr</th></tr>
<tr><td>2021</td><td><s>3,325</s> 2,969</td></tr>
<tr><td>2022</td><td><s>4,767</s> 3,684</td></tr>
<tr><td>2023</td><td><s>3,788</s> 2,777</td></tr>
<tr><td>2024</td><td><s>3,737</s> 2,745</td></tr>
<tr><td>2025</td><td><s>3,680</s> 2,709</td></tr>
<tr><td>2026</td><td><s>3,623</s> 2,673</td></tr>
<tr><td>2027</td><td><s>3,566</s> 2,637</td></tr>
<tr><td>2028</td><td><s>3,510</s> 2,601</td></tr>
<tr><td>2029</td><td><s>3,824</s> 3,293</td></tr>
<tr><td>2030</td><td>1,462 1,398</td></tr>
<tr><td>Total</td><td><s>35,282</s> 27,286</td></tr>
<tr><td>Total Amortized Over 50 years</td><td><s>726</s> 546</td></tr>
<tr><td>SMAQMD Threshold</td><td>1,100</td></tr>
<tr><td>Any Year Exceed Threshold?</td><td>No</td></tr>
</table></td></tr>
<tr><td>EIS/R</td><td>84</td><td>1-3</td><td>85</td><td>1-3</td><td>As shown, construction emissions of the CE Alternative would result in a total of <s>35,282</s> 27,286 $MTCO_2e$ or a yearly total of <s>726</s> 546 $MTCO_2e$ when amortized over 50 years, so it would not result in an exceedance of the project threshold.</td></tr>
<tr><td>EIS/R</td><td>89</td><td>13-15</td><td>90</td><td>13-15</td><td>At the time that this <s>Draft</s> EIS/R was prepared, all GSAs in and around the Project area have adopted GSPs, and nearly all will have submitted their GSPs to DWR.</td></tr>
<tr><td>EIS/R</td><td>103</td><td>25-28</td><td>104</td><td>25-28</td><td>Operations and Maintenance (Long-Term). No discussion of methodology and assumptions is needed for operations and maintenance of either alternative because once construction is completed, trips to conduct <s>O&M</s> OM&R activities would not substantially increase from existing levels.</td></tr>
<tr><td>EIS/R</td><td>119</td><td>9-10</td><td>119</td><td>9-10</td><td>Prior to mitigation, total construction-related NO_X would exceed the SJVAPCD's annual significance threshold for both the CER Alternative and the CE Alternative.</td></tr>
</table>

Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
EIS/R	120	12-14	120	12-14	Although implementation of EC/MMs CUL-1, CUL-2 and CUL-3 would reduce impacts on the FKC, adverse effects would still occur.
EIS/R	127	24-27	127	24-27	However, it is expected that implementation of the Project Alternatives will have a significant unavoidable impact on cultural resources due to impacts on the FKC, ~~land use~~ agricultural resources due to the permanent conversion of important farmland, and transportation impacts due to a potential increase in emergency response times.
EIS/R	129	--	129	--	• ~~Higher exceedances of~~ Greater overall NO_X emissions than the CER Alternative due to longer construction period
EIS/R	130		130	8-21	Reclamation and FWA released the Public Draft Environmental Impact Statement/ Environmental Impact Report (Draft EIS/R) on May 7, 2020, for a 45-day public review and comment period. A public meeting was held on June 8, 2020, to provide Project information and accept comments on the Draft EIS/R. The meeting was open for public comments from approximately 6:30 p.m. to 7:30 p.m. No comments on the Draft EIS/R were received during the public meeting. Reclamation and FWA received five comment letters from federal, state, and local agencies; one comment letter from a non-governmental organization; and eight emails from individuals. Copies of the comment letters and emails as well as the response to comments are included in Appendix L. Additionally, Appendix K illustrates all of the changes that were made between the Draft EIS/R and the Final EIS/R that serve to correct, clarify, and update elements of the document, and in some cases, are the direct result of consideration of public comments received on the Draft EIS/R. None of the changes constitute a significant change to the original text, and none of the changes alter the fundamental assessment of environmental impacts..
EIS/R	130	8-11	131	22-25	**Agencies/Persons Consulted** This section discusses agency consultations and coordination that occurred during the development of the ~~Draft~~ EIS/R and summarizes the agency involvement activities undertaken by Reclamation and FWA to satisfy NEPA and CEQA.
EIS/R	131	14-16	131	25-28	Reclamation submitted the BA to the USFWS on December 23, 2019~~. Consultation with USFWS is ongoing. Reclamation will not initiate the Project until consultation is complete.~~ On July 23, 2020, Reclamation received a biological opinion from the USFWS that concluded the Project is not likely to jeopardize the continued existence of the SJKF and BVLS.

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EIS/R	131	17-23	131	29-36	**Distribution List** This section provides a list of those federal, state, and local agencies, as well as Indian Tribes, organizations, and individuals that ~~will~~ were be notified of this ~~Draft~~ EIS/R (Table 6-2). A notice of availability ~~will~~ was also ~~be~~ widely distributed, indicating the document ~~is~~ was available for viewing on the following websites: https://www.usbr.gov/mp/nepa/nepa_project_details.php?Project_ID=41341 and https://friantwater.org/. Reclamation and FWA will also notify those on the list of the availability of the Final EIS/R as well as issue a notice of availability once it is posted.
Appendix A	A1 – A5	Varies	A1 – A5	Varies	**Acronyms and Abbreviations** AAQA Ambient Air Quality Analysis AIA Air Impact Assessment Application Final EIS/R Final Environmental Impact Statement/Environmental Impact Report ITP Incidental Take Permit MMRP Mitigation Monitoring and Reporting Plan NSR New Source Review ~~O&M~~ OM&R operations ~~and~~, maintenance, and repair OEHHA Office of Environmental Health Hazard Assessment VERA Voluntary Emissions Reduction Agreement

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Appendix A	A16	--	A-16	4-20	**References** **Appendix L: Responses to Comments on the Draft EIS/R** California Department of Fish and Game (CDFG). 2012. Staff Report on Burrowing Owl Mitigation. March 7 Driscoll, Daniel E. 2010. Protocol for Golden Eagle Occupancy, Reproduction, and Prey Population Assessment. Jackman, Ronal E. and Jenkins, Mark J. 2004. Protocol for Evaluating Bald Eagle Habitat and Populations in California. June. San Joaquin Valley Air Pollution Control District (SJVAPCD). 2018. Policy APR – 2030 Project Ambient Air Quality Analysis Applicability Determination under CEQA. June 12. Scobie, D., Faminow, C., 2000. Development of Standardized Guidelines for Petroleum Industry Activities that Affect COSEWIC Prairie and Northern Region Vertebrate Species at Risk. Prepared for Environment Canada by Avocet Environmental Inc. and Ghostpine Environmental Services Ltd., Alberta. Stantec Consulting Services Inc. (Stantec). 2020. Geotechnical Data Report, Friant-Kern Canal Middle Reach Capacity Correction Project, Tulare & Kern Counties, CA. May. U.S. Fish and Wildlife Service (USFWS). 2011. Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox Prior To Or During Ground Disturbance. January.
Appendix B1	B1-6	--	B1-6	--	The CER Alternative is identified as the proposed Project by FWA pursuant to CEQA. Reclamation has identified the CER Alternative as the Preferred Alternative pursuant to NEPA.
Appendix B1	B1-6	Footnote 2	B1-6	Footnote 2	~~[2] For CEQA purposes, Friant has identified the CER Alternative as the "Proposed Project." Reclamation has not yet identified a "Preferred Alternative."~~
Appendix B1	B1-22	--	B1-21	--	After construction, both alternatives would continue to be maintained by FWA Per Contract Number 8-07-20-X0356 (~~O&M~~OM&R Agreement) or future contract agreement.
Appendix B1	B1-22	--	B1-21	--	The FWA, as part of the ~~O&M~~OM&R Agreement, would administer the Federal project lands so that no unauthorized encroachment or use would occur on the lands and ROW.

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Appendix B1	B1-33	--	B1-32 & B1-33	--	• S3-PSA-01: Approximately 160 acres of farmland approximately one mile to east of the FKC south of Deer Creek, adjacent to the western side of Road 224 (MP 102.8). This is a large parcel approximately 5,000 feet by 1,200 feet. Access would be provided by Road 224. • S3-PSA-~~01~~02S3-PSA-01: Approximately ten acres of open space on the west side of the FKC beginning south of the Deer Creek check structure and ending at Terra Bella Avenue (MP 103.0 to 103.7). This is a long, narrow strip of land approximately 90 feet wide by 4,800 feet long. Access would be provided by Terra Bella Avenue. • S3-PSA-~~02~~03: Approximately 1.5 acres of open space on the west side of the FKC between Avenue 64 and Avenue 56 (MP 108.9). Access would be provided by Avenue 64 and Avenue 56. • S3-PSA-~~02~~04: Approximately 30 acres of farmland on the east side of the FKC south of Avenue 56 (MP 109.5). This parcel would also be used for the concrete batch plant as well as construction trailers, equipment and material staging, and parking. Access would be provided by Avenue 56
Appendix B2	B2-1	1-4	B2-1	1-4	This appendix describes the Environmental Commitments and Mitigation Measures included in the Friant-Kern Canal Middle Reach Capacity Correction Project (Project) ~~Draft~~ Final Environmental Impact Statement/Environmental Impact Report (Final~~Draft~~ EIS/R). Acronyms and abbreviations used in this appendix are listed in Appendix A of the Final~~Draft~~ EIS/R.

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Appendix B2	B2-1	16-33	B2-1	16-33	***BIO-1I.5: Construct San Joaquin kit fox artificial dens*** Use of the Project area by San Joaquin kit foxes (SKJF) has not been detected during biological field surveys to date (i.e., burrow cameras at select locations, ecological scent dog survey throughout the Middle Reach, and scent-attractant baited arrays of remotely operated camera stations). However, if ~~San Joaquin kit foxes~~ SJKF are detected during future field surveys or den monitoring activities, artificial escape dens shall be installed to replace destroyed known dens at a 2:1 ratio once construction is complete. The artificial dens shall be constructed in locations as close as possible to apparent kit fox detections, and where logistically feasible, as determined through coordination with the Bureau of Reclamation (Reclamation), the Friant Water Authority (FWA), and the U.S. Fish and Wildlife Service (USFWS). ~~dens could, at Bureau of Reclamation's (Reclamation's) and Friant Water Authority's (FWA's) discretion and in numbers and locations determined based on apparent San Joaquin kit fox detections, be constructed at select locations and as determined to be needed along the 19-mile abandoned canal segment.~~ The artificial dens would provide immediately available alternative habitats but would be considered temporary (i.e., unmonitored, not maintained, and potentially removed upon confirmation of vacancy and after natural potential kit fox dens have become reestablished along the canal). Constructed ~~San Joaquin kit fox~~ SJKF habitat would consist of "escape dens" and "chamber dens" grouped to create habitat complexes. Escape dens would be designed to provide escape cover for ~~San Joaquin kit fox~~ SJKF. Chamber dens would be designed to provide escape cover and diurnal resting cover for ~~San Joaquin kit fox~~ SJKF and provide a chamber for resting or reproduction. The number of complexes to be constructed and spacing of the complex components would be determined through coordination with the ~~U.S. Fish and Wildlife Service~~ (USFWS~~)~~, Reclamation, and ~~Friant~~ FWA.
Appendix B2	B2-2 & -3	21-34 & 1-8	B2-2 & -3	21-34 & 1-21	***AQ-1: Implement measures to reduce construction emissions.*** The Project will comply with the San Joaquin Valley Air Pollution Control District's (SJVAPCD) Regulation VIII and Rule 9510, which serve to reduce emissions associated with fugitive particulate matter less than 10 microns diameter (PM_{10}) and dust and construction exhaust emissions, respectively. In addition, the following environmental commitments will be implemented, as appropriate, to reduce potential air quality impacts from construction of the Project. Nitrogen oxide (NOx) Reductions • Prepare a construction emissions minimization plan that shall include the implementation of measures to reduce construction emissions. Those measures may include but not be limited to the following:

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					○ Use of Tier 4 equipment for the following pieces of construction equipment: ○ Generator Sets: 25 kVA Portable Generator ○ Scraper: CAT 631K ○ Motor Grader: CAT 14M ○ Dozer: CAT D11 ○ Wheel Loader: CAT 950M • Prohibiting the use of portable diesel engines where access to alternative power sources are available. • Instructing construction workers and equipment operators on the maintenance and tuning of construction equipment and require that such workers and operators properly maintain and tune equipment in accordance with manufacturer specifications. • Reducing unnecessary idling from heavy equipment • Prohibiting engine tampering to increase horsepower, except when meeting manufacturer's recommendations • Locating diesel engines, motors, and equipment staging areas as far as possible from residential areas and other sensitive receptors (e.g., schools, daycare centers, hospitals, senior centers, etc.) • Avoiding routing truck traffic near sensitive land uses to the fullest extent feasible • Recycling construction debris to the maximum extent feasible. • Preparing an inventory of all equipment prior to construction and identifying the suitability of add-on emission controls for each piece of equipment before groundbreaking. • Reducing construction-related trips of workers and equipment, including trips taken in trucks.

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Appendix B2	B2-3	9-16	B2-3	22-29	***AQ-2: Enter into a Voluntary Emissions Reduction Agreement.*** ~~If construction related emissions cannot be reduced to less than 10 tons per year for SJVAPCD regional significance thresholds by implementation of EC/MM AQ-1,~~ Reclamation and/or FWA will enter into a Voluntary Emission Reduction Agreement (VERA) with the SJVAPCD to mitigate NOx emissions to below the SJVAPCD NOx significance threshold. Under the VERA, Reclamation and/or FWA ~~would~~ will enter into a contractual agreement with the SJVAPCD to provide mitigation of air emission exceedances through a process that funds and implements emission reduction projects with the SJVAPCD consistent with the SJVAPCD's Rule 9510 fee structure. The VERA will be adopted prior to the first activity generating emissions associated with construction of the Project.
Appendix B2	B2-4	1-3	B2-4	20-22	***BIO-1a.3:*** In the event that special-status plant species are found during the botanical surveys, the locations of the special-status plants and a 50-foot buffer will be marked as avoidance areas both in the field using flagging, staking, fencing, or similar devices and on construction plans.

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Appendix B2	B2-4	4-28	B2-4 & B2-5	23-40 & 1-11	***BIO-1a.4:*** If non-listed, special-status plants are identified during botanical ~~pre-construction~~ surveys and complete avoidance is not practicable, and the Project would directly or indirectly affect more than 25 percent of a local occurrence by either number of plants or square footage of occupied habitat, a qualified biologist will determine if implementation of a conservation plan is recommended. The conservation plan may consist of but would not necessarily be limited to purchase of mitigation credits at a regional conservation bank; plant salvage and relocation; collection and subsequent planting of seed or incorporating seed from native nursery into seed mix used for revegetation efforts; stockpiling, storing, and replacing topsoil containing the local seed bank; or other measures determined practicable based on the species and site conditions. If onsite conservation measures are implemented, the objective is to restore the impacted special-status plant species community to pre-existing conditions by providing for the restoration of a self-sustaining population of special-status plants in the general area where the impact occurred at a minimum of a 1:1 ratio (e.g., number of plants, square footage occupied). For onsite conservation measures, the conservation plan will identify success criteria and provide for annual or other regular monitoring to evaluate whether the conservation effort has met the success criteria. The conservation plan will also include measures for remedial actions (e.g., additional plantings, supplemental irrigation, increased monitoring) in the event that monitoring efforts indicate that success criteria are not being met. For some species and site conditions, the biologist may determine that a conservation plan is not recommended. Some of these circumstances may include but are not limited to the following: (1) there are other nearby populations that will not be disturbed; (2) plant relocation, seeding, or revegetation would not have a reasonable probability of success; (3) implementation of measures could result in detrimental effects on existing special-status plant populations; or (4) incompatibility with required operations and maintenance activities. If the biologist determines that a conservation plan is not warranted, no additional measures are required. If federal- or state-listed plants are identified during botanical surveys and complete avoidance is not practicable, coordination with the California Department of Fish and Wildlife (CDFW) and/or USFWS will be conducted as appropriate to develop the conservation plan. No take of state-listed species will occur without an Incidental Take Permit (ITP) from CDFW.

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Appendix B2	B2-6	28-39	B2-7	12-25	***BIO-1c.2:*** Regardless of when vegetation removal is scheduled, a qualified biologist will conduct a minimum of one pre-construction survey for nesting migratory birds and raptors within the Project area and a ~~250-foot~~ buffer (250 feet for migratory birds, 500 feet for raptors) around the Project area (where accessible) for all construction-related activities that will occur during the nesting season. The pre-construction survey will be conducted no more than 15 days prior to the initiation of construction in a given area and will be phased based on the construction schedule. Due to the ongoing, phased approach to construction, multiple pre-construction surveys per year may be required. If an active nest is found, a construction-free buffer zone (250 feet for migratory birds, 500 feet for raptors) will be established around the active nest site. If establishment of the construction-free buffer zone is not practicable, appropriate conservation measures (as determined by a qualified biologist) will be implemented. These measures may include but are not limited to consultation with CDFW to establish a different construction-free buffer zone around the active nest site, daily biological monitoring of the active nest site, and delaying construction activities in the vicinity of the active nest site until the young have fledged.
Appendix B2	B2-7	17	B2-8	2-3	***BIO-1d.1:*** A minimum of one pre-construction survey for burrowing owls within a minimum of ~~3~~500 feet
Appendix B2	B2-7	29-37	B2-8	14-27	***BIO-1d.2:*** If burrowing owls are detected within the Project area during the non-breeding season and maintaining a 150-foot, no-disturbance buffer is not practicable, a qualified biologist will submit an exclusion and passive relocation plan to CDFW. The exclusion and passive relocation plan will generally follow the guidelines outlined in Appendix E of the *Staff Report on Burrowing Owl Mitigation* (California Department of Fish and Game 2012). The exclusion and passive relocation plan will consist of installing one-way doors in potential burrows, daily monitoring, and collapsing burrows once it is determined that the burrows are un-occupied. Exclusion may only take place during the non-breeding season (September 1 to January 31) and may be an ongoing effort during this time period. The exclusion and passive relocation plan will also detail plans to replace collapsed burrows with artificial burrows at a minimum 1:1 ratio or describe why artificial burrows are not needed (e.g., numerous available natural burrows are available in nearby areas that will not be disturbed). Monitoring of collapsed burrows will be conducted as needed so that burrowing owls do not recolonize the area prior to construction disturbance.

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Appendix B2	B2-8	5-16	B2-8 & B2-9	38-42 & 1-11	***BIO-1e.1:*** For construction activities that occur between February 1 and August 31, a qualified biologist will conduct pre-construction surveys for golden eagle, Swainson's hawk, northern harrier, and white-tailed kite. The pre-construction surveys will include the Project footprint and a minimum of a 0.50~~25~~-mile radius where access is permitted around the construction area in suitable nesting habitat (i.e., large trees). The pre-construction surveys will be conducted no more than 10~~5~~ days before ground disturbance in a given area and will be phased based on construction schedule. If nesting golden eagles, Swainson's hawks, northern harriers, or white-tailed kites are detected, an appropriate no-disturbance buffer (minimum of 500 feet for northern harrier, 0.50 mile for golden eagle, Swainson's hawk, and white-tailed kite) will be established and monitored daily by a qualified biologist. Buffers will be maintained until a qualified biologist has determined that the young have fledged and are no longer reliant on the nest or parental care for survival. A 0.50-mile no-disturbance buffer will also be maintained from any overwintering eagles if they are detected in the Project area or surrounding areas; the buffer will be maintained for the duration that the bird(s) are present. If any bald eagles or golden eagles are detected, Reclamation will coordinate with USFWS as necessary to comply with the Bald and Golden Eagle Protection Act.
Appendix B2	B2-8	17-20	B2-9	12-18	***BIO-1e.2:*** If maintaining the ~~a~~ minimum ~~500-foot~~ no-disturbance buffer around an active golden eagle, Swainson's hawk, northern harrier, or white-tailed kite nest (or any overwintering eagles) is not practicable, CDFW will be consulted to determine if reduced minimum no-disturbance buffers are appropriate based on site-specific circumstances (e.g., visual barriers between nest and construction area, existing level of disturbance) or to identify alternative measures to minimize the potential for Project-related disturbance to the nest site that could result in nest abandonment or other forms of take.
Appendix B2	B2-8	33-36	B2-9	31-34	***BIO-1e.3:*** If consultation with CDFW results in a determination that take of an active Swainson's hawk nest cannot be avoided, then an ~~Incidental Take Permit (~~ITP~~)~~ pursuant to the California Endangered Species Act will be obtained from CDFW prior to initiation of any activities that are likely to result in such take.

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Appendix B2	B2-10	25-35	B2-11	22-34	***BIO-1j.2:*** After vegetation has been cleared from areas of suitable BVLS habitat, non-disturbance exclusion fencing will be installed along the edges of the Project area where vegetation was cleared from areas of suitable habitat; fencing will be buried to a minimum depth of 6 inches. Fencing will be placed between areas of active construction and adjacent to nearby suitable habitat to preclude BVLS from running through the Project area. In areas where installation of fencing is not practicable, the USFWS will be contacted and will provide direction on a case-by-case basis. The exclusionary fencing will be installed under the supervision of the USFWS-approved BVLS biological monitor, and fence placement/configuration will be determined by a USFWS-approved BVLS biologist with input from the USFWS as required. Fencing may consist of a combination of both Environmentally Sensitive Area fencing and Wildlife Exclusion fencing with one-way exit/escape points. The fencing will be constructed using tightly woven netting to preclude entrapment and will be buried to prevent animals from entering the area above and below ground.
Appendix B2	B2-11	20-26	B2-12	18-26	a) Pedestrian inventories of potential and occupied dens will be completed to determine the need for pre-construction monitoring (e.g., a qualified biologist walking the project area and up to a 500-foot buffer [as determined appropriate by a qualified biologist] where access is permitted to search for potential and occupied dens). Pedestrian inventories of potential and occupied dens shall be conducted within 90 calendar days prior to the start of construction (i.e., before any activity that covers or disrupts surface soils [e.g., clearing and grubbing; grading; excavation; soil or equipment stockpiling; equipment or vehicle storage or parking]). To the extent practicable, these surveys will be conducted nearer in time to the start of construction.
Appendix B2	B2-11	27-28	B2-12	27-29	b) Pre-construction monitoring (as described under BIO-1l4) will be performed to confirm and document SJKF presence or absence at potential and occupied dens identified during the inventory.
Appendix B2	B2-12	--	B2-13	4-7	f) f) If any SJKF are detected, CDFW will be contacted to discuss how to avoid take. If it is determined that take may not be avoidable, an ITP pursuant to the California Endangered Species Act will be obtained from CDFW prior to initiation of any activities that are likely to result in such take.
Appendix B2	B2-12	19-23	B2-13	24-28	a) Occupied natal den: if an occupied natal den is visible or encountered within the Project limits or on publicly accessible land sufficiently close to the Project construction area such that it would be disturbed (based on qualified biologist opinion and monitoring), USFWS and CDFW will be contacted immediately and before any Project action occurs to determine permissible actions to permit resumption of work.

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Appendix B2	B2-12 & -13	29-37 & 1-28	B2-13-B2-15	34-36, 1-43 & 1-2	***BIO -1l.4:*** If a natural den or burrow is determined to meet size criteria (i.e., greater than 4-inches in diameter) and cannot be avoided per the no-disturbance buffers recommended in the USFWS "Standardized recommendations for protection of the San Joaquin kit fox prior to or during ground disturbance" (2011) or ~~and~~ must be destroyed, the following guidelines will be followed: a) Prior to den destruction, areas scheduled for construction within the vicinity of potential kit fox dens shall be monitored by a qualified biologist to determine their status. Monitoring will begin with pedestrian surveys to identify locations of potential kit fox dens and observe for suitable surrounding habitat. Because it is logistically impractical to monitor all dens using remote cameras and tracking medium (or to hand excavate to confirm vacancy), baited camera traps may be used to assess presence or absence of SJKF activity. Prior to ground-disturbing activities in Project segments that require excavation (i.e., realigned canal), baited camera traps will be deployed in approximate 0.25-mile increments for four consecutive nights. Baited camera traps may be placed farther than 0.25 mile apart depending on the suitability of surrounding habitat and land uses that are observed during pedestrian surveys and in areas with lower densities of potential kit fox dens. If no kit foxes are detected by the camera traps during this time period, it can be assumed that kit foxes are not currently using the area, and ground-disturbing activities may commence in that area. If a kit fox is detected by a camera trap, then further investigation will be required as described below. b) If a kit fox is detected by a baited camera trap or otherwise observed in an area, further preconstruction monitoring will be conducted to determine which den(s) are being used. Baited camera traps will be deployed in the area and tracking medium will be placed at the entrances of suspected dens to monitor the area for four consecutive nights. ~~the den will be evaluated by a qualified biologist. If subjectively deemed suitable, the den would be monitored for at least 3 consecutive days to determine its status. Activity at the den will be monitored by placing tracking medium at the entrance and by remote cameras.~~ If no SJKF activity is observed during this period, the den will be deemed unoccupied and destroyed immediately under the supervision of a USFWS-approved biologist to preclude subsequent use. If SJKF activity is observed at the den during this period, the den will be monitored for at least 5 consecutive days from the time of observation to allow any resident animal to move to another den during its normal activities. Use of the den can be discouraged during this period by partially plugging the entrance(s) with soil in such a manner that any resident animal can escape easily. Destruction of the den may begin when, in the judgment of a USFWS-approved biologist, the animal has vacated ~~moved to a different den~~. The biologist will be trained and familiar with SJKF biology. If the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may be excavated when, in the judgment of a USFWS-approved biologist, it

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					is temporarily vacant, for example during the animal's normal foraging activities. All den destruction shall be conducted under the supervision of a USFWS-approved biologist. b) ~~If it is determined to be unnecessary or logistically impractical to monitor all dens using remote cameras and tracking medium (or to hand excavate to confirm vacancy), alternative methods of assessing presence or absence of SJKF activity can be used provided that the alternative methods are approved by the USFWS. Alternative methods of assessing SJKF activity could include but are not limited to spotlighting, ecological scent-detection dogs, and digital video inspection cameras (videoscope).~~ c) All dens requiring excavation will be excavated under the supervision of a USFWS-approved biologist. In no event will an excavation that meets the definition of a confined space (i.e., a space large enough and so configured that a person can bodily enter but has limited or restricted means for entry or exit) be initiated. In this circumstance, discouragement (as described ~~in 4a~~ above) would be used. d) The den will be fully excavated and then filled with dirt and compacted so that SJKF cannot reenter or use the den during the construction period. If at any point during excavation, an SJKF is discovered inside the den, the excavation activity will cease immediately, and monitoring of the den will be resumed. Destruction of the den may be resumed when in the judgment of a USFWS-approved biologist, the animal has escaped from the partially destroyed den.
Appendix B2	B2-14	3-11	B2-15	18-30	***BIO-2c:*** A Post-Construction Revegetation and Monitoring Plan will be developed and implemented to provide for the restoration of temporarily impacted riparian habitats to pre-existing conditions. The plan will include provisions for the planting of native woody vegetation and native seed mix or otherwise provide for the reestablishment of self-sustaining native riparian vegetation similar to the existing native riparian vegetation community. Planting of native riparian vegetation will include but is not limited to replacement of any trees removed by the project at a 3:1 ratio (replaced to removed) with appropriate native tree species. For the purposes of this requirement, a tree is defined as a native woody plant (i.e., tree or mature shrub) with at least one stem measuring 2 inches or greater diameter at breast height. The plan will also identify success criteria and provide for annual or other regular monitoring to evaluate whether the revegetation effort has met the success criteria. The plan will include measures for remedial actions (e.g., additional plantings, supplemental irrigation, increased monitoring) in the event that monitoring efforts indicate that success criteria are not being met.

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Appendix B2	B2-15	2-33	B2-16 & -17	19-38 & 1-7	***CUL-1: Implement Reclamation's amended Programmatic Agreement for treatment of the FKC.*** Reclamation's amended Programmatic Agreement with the State Historic Preservation Officer and other consulting parties will be implemented for treatment of the FKC that complies with Section 106 and CEQA Guidelines Section 15064.5 (b) to identify and address any currently unknown and potentially inadvertently discovered archaeological resources and/or human remains (i.e., Reclamation's Plan of Action for Discovery and Identification of Human Remains, Funerary Objects, Sacred Objects and Objects of Cultural Patrimony under the Native American Graves Protection and Repatriation Act; and California Public Resource Code 5097.9-5097.991 and Health and Safety Code 7050). In addition, a Cultural Resources Awareness Training Program will be prepared before the initiation of any ground-disturbing activity. The training program will be prepared by individuals who meet the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in archaeology. The training program will present information about the identification and appropriate treatment of cultural resources (e.g., prehistoric or historic artifacts) and human remains that could be inadvertently uncovered during construction and about the discovery. All personnel participating in construction will participate in the training program. FWA, in coordination with Reclamation, will be responsible for completion and implementation of the training program and implementation of the stipulations in the Programmatic Agreement for identification and treatment of currently unknown archaeological resources and/or human remains. Additionally, a Historic Properties Treatment Plan (HPTP) will be prepared as outlined in the Programmatic Agreement and will follow guidance in stipulations in Reclamation's amended Programmatic Agreement with the State Historic Preservation Officer and other consulting parties for treatment of the FKC that comply with Section 106 and CEQA Guidelines Section 15064.5 (b), and will be completed by individuals who meet the Secretary of the Interior's Standards and Guidelines for Professional Qualifications. FWA, in coordination with Reclamation, will be responsible for implementation and completion of the HPTP. ~~Additionally, a Historic Properties Treatment Plan will be prepared as outlined in the PA that will include but will not be limited to preparing a Historic American Engineering Record (HAER) and developing an interpretive historic webpage for public education about the FKC. The HAER will be prepared for the segment of the FKC that would be affected by construction. The HAER will follow guidance presented in the Secretary of the Interior's Standards for Architectural and Engineering Documentation, will follow guidance in stipulations in Reclamation's amended Programmatic Agreement with the State Historic Preservation Officer and other consulting parties for treatment of the FKC that comply with Section 106 and CEQA Guidelines Section 15064.5 (b), and will be completed by individuals who meet the Secretary of the Interior's Standards and Guidelines for Professional Qualifications in architectural history. FWA, in coordination with Reclamation, will be responsible for implementation and completion of the HAER.~~

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Appendix B2	B2-15	--	B2-17	8-25	***CUL-2: Protocol for handling inadvertent discovery of subsurface cultural or human artifacts.*** If subsurface deposits believed to be cultural or human in origin are discovered during construction, then all work must halt within a 50-foot radius of the discovery. A qualified professional archaeologist, meeting the Secretary of the Interior's Professional Qualification Standards for prehistoric and/or historical archaeology, shall be retained to evaluate the significance of the find, and shall have the authority to modify the no-work radius using professional judgment as needed. The following notifications shall apply, depending on the nature of the find: 1. If the professional archaeologist determines that the find does not represent a cultural resource, then work may resume immediately, and no agency notifications are required. 2. If the professional archaeologist determines that the find does represent a cultural resource from any time period or cultural affiliation, then he or she shall immediately notify Reclamation and the applicable landowner. The agency shall consult on a finding of eligibility and implement appropriate treatment measures if the find is determined to be eligible for inclusion in the National Register of Historic Places. Work cannot resume within the no-work radius until the lead agencies, through consultation as appropriate, determine that the site either: a) is not eligible for the National Register of Historic Places; or b) that the treatment measures have been completed to their satisfaction.

Appendix B2	B2-15	--	B2-17 & -18	26-41 & 1-28	***CUL-3: Protocol for handling inadvertent discovery of human remains.*** Different laws govern the disposition of human remains inadvertently discovered on private, state, tribal, and federal lands. Therefore, it is imperative that Reclamation contractors and other cultural resources management contractors understand the ownership status of lands on which archaeological work is to be conducted to ensure that the appropriate laws are followed. The following summarizes of the applicable laws that govern the inadvertent (i.e., unplanned) discovery of human remains and the procedures to be followed should human remains be discovered during the course of archaeological work permitted by Reclamation or other underlying landowner. Federal and Tribal Lands: Under the Native American Graves Protection and Repatriation Act (25 United States Code 3001) and implementing regulations 43 Code of Federal Regulations (CFR) Part 10, Reclamation is responsible for the protection of Native American human remains, funerary objects, sacred objects, and objects of cultural patrimony that are discovered on Reclamation lands. All human remains and potential human remains must be treated with respect and dignity at all times. In the event that suspected human remains are discovered during proposed project activity on Reclamation land, all activities in the immediate area will cease, and appropriate precautions will be taken to protect the remains and any associated cultural items from further disturbance. Reclamation will follow the procedures outlined in 43 CFR Section 10.4, Inadvertent Discoveries. The Reclamation Interior Region 10 Regional Environmental Officer will be immediately notified by telephone and will take responsibly for the discovery by contacting the appropriate law enforcement and Reclamation officials. Within three (3) working days of confirmation of the discovery (see 43 CFR Part 10.4(d)(1)(iii)), the Reclamation Interior Region 10 Cultural Resource Officer will notify by telephone or in person, with written confirmation, the Indian tribes likely to be affiliated with the discovered human remains (e.g., lineal descendant, culturally affiliated Indian tribe, Indian tribe with other cultural relationship, and Indian tribe that aboriginally occupied area). Treatment and handling of the remains will be determined through consultation between Reclamation and consulting tribes. Other Public and Private Lands in California: There are numerous California state laws and codes that direct the preservation of prehistoric and historic cultural resources, establish the procedures for protecting inadvertently discovered Native American human remains, and impose penalties and punishments for persons acting in violation of the legal code. Specifically, Section 7050.5 of the California Health and Safety Code deals with the discovery of human remains in any location other than a dedicated cemetery, and directs that in such cases the coroner of the county in which the remains are discovered be contacted and further excavation or disturbance in the location of discovery be discontinued until the coroner has examined the remains and made recommendations concerning their treatment and disposition. If the coroner determines that the remains are not subject to his or her authority and if the coroner recognizes the human remains to be those of a Native American, or has reason to

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					believe that they are those of a Native American, the coroner is required to contact the California Native American Heritage Commission (NAHC), by telephone, within 24 hours. Stipulations encouraging private landowners to work with the NAHC and the most likely descendant identified by the NAHC to establish and carry out appropriate treatment of the remains are established in Section 5097.98 of the California Public Resources Code.
Appendix C	C-1	1-8	C1	1-8	This appendix describes the regulatory setting for the resources and topics evaluated in the Friant-Kern Canal Middle Reach Capacity Correction Project (Project) ~~Draft~~ Final Environmental Impact Statement/Environmental Impact Report (~~Draft~~ Final EIS/R). The regulatory setting provides a description of key policies and regulations that are applicable, either directly (e.g., requires a permitting action by a regulatory agency) or indirectly (e.g., requires that the project is conducted in compliance with the law), that are applicable to the Project. Acronyms and abbreviations used in this appendix are listed in Appendix A of the ~~Draft~~ Final EIS/R.
Appendix C	C-9	10	C-9	10-11	~~The Project is currently under~~ Reclamation has completed consultation on the Project with the USFWS pursuant to ~~under~~ Section 7 of the FESA.

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Appendix C	C-9	12–20	C-9	13-37	The objective of the Clean Water Act (CWA) of 1977, as amended, is to maintain and restore the chemical, physical, and biological integrity of the nation's waters. In 1987, the U.S. Army Corps of Engineers (USACE) published a manual standardizing the manner in which wetlands are to be delineated nationwide. A regional supplement to the manual for the Arid West Region, which includes the project area, was published by the USACE in 2008. To determine whether areas that appear to be wetlands are subject to USACE jurisdiction (i.e., are federally jurisdictional wetlands), a wetland delineation must be conducted, and the resulting map of the wetland boundaries must be verified in writing by USACE. Wetlands generally include riparian areas, swamps, marshes, bogs, and similar areas. In addition to verifying wetlands for federal jurisdiction, the USACE is responsible for the issuance of CWA Section 404 permits for projects that include the temporary or permanent discharge of dredged or fill material into federally jurisdictional wetlands or other waters of the United States (e.g., streams). Projects are permitted under either individual or general (e.g., nationwide) permits. Project that require permitting under an individual permit must also comply with the CWA Section 404(b)(1) Guidelines by demonstrating that that there is no less environmentally damaging practicable alternative that achieves the Applicant's project purpose. In addition, no discharge can be permitted if it would cause or contribute to significant degradation of waters. Some activities in federally jurisdictional wetlands and other waters of the United States are exempt from the CWA Section 404 permitting requirements under the CWA Section 404(f) exemptions, such as those for normal farming activities or the construction and maintenance of irrigation ditches. ~~Discharge of dredged or fill material into waters of the United States, including jurisdictional wetlands, is regulated under Section 404 of the CWA by the U.S. Army Corps of Engineers (USACE) via a permitting process.~~ Applicants for Section 404 permits are also required to obtain water quality certification through the state (State Water Resources Control Board [State Water Board] or the Regional Water Quality Control Board [Regional Water Board] in California) under Section 401 of the CWA. Reclamation and FWA will comply with the CWA by obtaining any necessary permits under the CWA. Reclamation is currently coordinating with the USACE pursuant to CWA Section 404.
Appendix C	C-28	--	C-29	25-27	Deer Creek is listed as impaired on the 2014/2016 303(d) list for pH, toxicity, and chlorpyrifos, which are from an unknown source, however the Project would have no effect on its listing status.
Appendix C	C-28	--	C-29	32-33	Reclamation and FWA are coordinating with the State Water Board regarding the Project pursuant to Section 401 of the CWA.
Appendix C	C-28	--	C-29	36-37	Reclamation, FWA and their construction contractor(s) will coordinate with the State Water Board regarding the Project pursuant to Section 402 of the CWA.
Appendix C	C-28	--	C-30	6-7	As noted previously, Reclamation is coordinating with the USACE pursuant to Section 404 of the CWA.

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<tr><td>Appendix E</td><td>E-1</td><td>2-6</td><td>E-1</td><td>2-6</td><td>This appendix provides background information and the results of emissions modeling for air quality and greenhouse gases for the Friant-Kern Canal Middle Reach Capacity Correction Project (Project) ~~Draft~~ Final Environmental Impact Statement/Environmental Impact Report (~~Draft~~ Final EIS/R). Acronyms and abbreviations used in this appendix are listed in Appendix A of the ~~Draft~~ Final EIS/R.</td></tr>
<tr><td>Appendix E</td><td>E-11</td><td>--</td><td>E-11</td><td>12</td><td>Table E-5. Haul Trip Assumptions</td></tr>
<tr><td>Appendix E</td><td>E-12</td><td>--</td><td>E-12</td><td>1</td><td>Table E-6. Estimated Excavation Quantities and Truck Trips</td></tr>
<tr><td>Appendix E</td><td>E-12</td><td>4-5</td><td>E-12</td><td>4-6</td><td>The results of the modeling of unmitigated emissions by alternative are shown in Tables E-~~5~~7 and E-9. The mitigated emissions for each alternative are shown in Tables E-8a, E-8b, E-10a, and E-10b. ~~The mitigated emissions results are shown in Tables E-6 and E-8.~~</td></tr>
<tr><td>Appendix E</td><td>E-12</td><td>6</td><td>E-12</td><td>7</td><td>Table E-~~5~~7. Estimated Unmitigated Emissions – CER Alternative
<table>
<tr><th rowspan="2">Year</th><th colspan="6">Unmitigated Emissions (tons per year)</th></tr>
<tr><th>ROG</th><th>NO_X</th><th>CO</th><th>SO_2</th><th>PM_{10}</th><th>$PM_{2.5}$</th></tr>
<tr><td>2021</td><td>~~1.36~~3.47</td><td>~~13.36~~37.78</td><td>~~36.50~~28.22</td><td>0.08</td><td>~~7.19~~8.31</td><td>~~2.68~~3.76</td></tr>
<tr><td>2022</td><td>~~1.68~~4.26</td><td>~~17.10~~46.52</td><td>~~44.73~~34.98</td><td>0.10</td><td>~~7.63~~8.99</td><td>~~2.88~~4.18</td></tr>
<tr><td>2023</td><td>~~0.23~~0.30</td><td>~~3.33~~4.22</td><td>~~2.97~~2.18</td><td>0.01</td><td>~~1.79~~1.82</td><td>~~1.50~~1.53</td></tr>
<tr><td>2024</td><td>~~0.10~~0.13</td><td>~~1.54~~1.91</td><td>~~1.31~~0.98</td><td>0.01</td><td>~~0.77~~0.78</td><td>~~0.63~~0.64</td></tr>
<tr><td>SJVAPCD and GCR de minimis Significance Threshold</td><td>10</td><td>10</td><td>100</td><td>27</td><td>15</td><td>15</td></tr>
<tr><td>Exceed Thresholds – significant impact?</td><td>No</td><td>Yes</td><td>No</td><td>No</td><td>No</td><td>No</td></tr>
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<tr><th>Document Type</th><th>Original Page</th><th>Original Line No.</th><th>Revised Page</th><th>Revised Line No.</th><th>Revised Text</th></tr>
<tr><td>Appendix E</td><td>--</td><td>--</td><td>E-12 & E-13</td><td>9</td><td>
<u>Table E-8a. Mitigated Emissions using Tier 4 Equipment – CER Alternative</u>
<table>
<tr><th rowspan="2"><u>Year</u></th><th colspan="6"><u>Mitigated[1] Emissions (tons per year)</u></th></tr>
<tr><th><u>ROG</u></th><th><u>NO_X</u></th><th><u>CO</u></th><th><u>SO_2</u></th><th><u>PM_{10}</u></th><th><u>$PM_{2.5}$</u></th></tr>
<tr><td><u>2021</u></td><td><u>1.36</u></td><td><u>13.36</u></td><td><u>36.50</u></td><td><u>0.08</u></td><td><u>7.19</u></td><td><u>2.68</u></td></tr>
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<tr><td><u>2023</u></td><td><u>0.23</u></td><td><u>3.33</u></td><td><u>2.97</u></td><td><u>0.01</u></td><td><u>1.79</u></td><td><u>1.50</u></td></tr>
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<tr><td><u>SJVAPCD and GCR de minimis Significance Threshold</u></td><td><u>10</u></td><td><u>10</u></td><td><u>100</u></td><td><u>27</u></td><td><u>15</u></td><td><u>15</u></td></tr>
<tr><td><u>Exceed Thresholds – significant impact?</u></td><td><u>No</u></td><td><u>Yes</u></td><td><u>No</u></td><td><u>No</u></td><td><u>No</u></td><td><u>No</u></td></tr>
</table>
<u>[1]Tier 4 Final equipment was incorporated for the following equipment: Generator Sets: 25 kVA Portable Generator, Scraper: CAT 631K, Motor Grader: CAT 14M, Dozer: CAT D11, Wheel Loader: CAT 950M</u>
</td></tr>
<tr><td>Appendix E</td><td>E-12</td><td>8</td><td>E-13</td><td>3</td><td>
Table E-<s>6</s>8b. Mitigated Emissions – CER Alternative
<table>
<tr><th rowspan="2">Year</th><th colspan="7">Emissions (tons per year)</th></tr>
<tr><th>NO_X</th><th>Rule 9510 Reduction <s>and VERA Reductions</s></th><th><u>VERA Reductions</u></th><th>Remaining NO_X</th><th><u>SJVAPCD and GCR de minimus</u> Threshold</th><th>Exceed Threshold?</th><th>Significant Impact?</th></tr>
<tr><td>2021</td><td>13.36</td><td><u>-2.6720</u></td><td><s>-3.46</s> <u>-0.698</u></td><td>9.99</td><td>10</td><td>No</td><td>No</td></tr>
<tr><td>2022</td><td>17.10</td><td><u>-3.4200</u></td><td><s>-7.11</s> <u>-3.69</u></td><td>9.99</td><td>10</td><td>No</td><td>No</td></tr>
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<tr><td>2024</td><td>1.54</td><td><u>-0.3080</u></td><td><s>-0.31</s> <u>0.00</u></td><td>1.232</td><td>10</td><td>No</td><td>No</td></tr>
</table>
</td></tr>
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Appendix E	E-13	1	E-13	5	**Table E-~~7~~9. Unmitigated Estimated Emissions – CE Alternative**

Year	Unmitigated Emissions (tons per year)					
	ROG	NO_x	CO	SO_2	PM_{10}	$PM_{2.5}$
2021	1.06 ~~0.79~~	12.64 ~~9.63~~	8.40 ~~14.68~~	0.03 ~~0.04~~	3.51 ~~3.22~~	1.45 ~~1.18~~
2022	1.22 ~~1.07~~	15.57 ~~14.37~~	10.39 ~~21.77~~	0.04 ~~0.05~~	5.49 ~~5.16~~	1.76 ~~1.45~~
2023	0.82 ~~0.82~~	11.45 ~~11.53~~	7.52 ~~18.29~~	0.03 ~~0.04~~	4.57 ~~4.32~~	1.06 ~~0.83~~
2024	0.78 ~~0.81~~	11.01 ~~11.47~~	7.39 ~~18.20~~	0.03 ~~0.04~~	4.54 ~~4.32~~	1.04 ~~0.83~~
2025	0.72 ~~0.80~~	10.14 ~~11.38~~	7.05 ~~18.11~~	0.03 ~~0.04~~	4.50 ~~4.32~~	1.00 ~~0.83~~
2026	0.71 ~~0.79~~	10.11 ~~11.31~~	7.01 ~~18.03~~	0.03 ~~0.04~~	4.50 ~~4.32~~	1.00 ~~0.83~~
2027	0.71 ~~0.78~~	10.09 ~~11.26~~	6.97 ~~17.97~~	0.03 ~~0.04~~	4.50 ~~4.32~~	1.00 ~~0.83~~
2028	0.71 ~~0.78~~	10.06 ~~11.21~~	6.94 ~~17.92~~	0.03 ~~0.04~~	4.50 ~~4.32~~	1.00 ~~0.83~~
2029	0.80 ~~0.66~~	12.22 ~~10.99~~	8.95 ~~16.83~~	0.04 ~~0.04~~	3.47 ~~3.28~~	1.29 ~~1.10~~
2030	0.29 ~~0.19~~	4.85 ~~3.86~~	3.53 ~~5.30~~	0.01 ~~0.02~~	0.99 ~~0.93~~	0.66 ~~0.60~~
SJVAPCD and GCR *de minimis* Significance Thresholds	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Thresholds – significant impact?	**No**	**Yes**	**No**	**No**	**No**	**No**

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Appendix E	--	--	E-14	2	**Table E-10a. Mitigated Emissions using Tier 4 Equipment – CE Alternative**

Year	Mitigated[1] Emissions (tons per year)					
	ROG	NO_X	CO	SO_2	PM_{10}	$PM_{2.5}$
2021	0.51	6.08	11.02	0.03	3.22	1.17
2022	0.55	7.76	14.56	0.04	5.15	1.44
2023	0.32	5.63	11.04	0.03	4.32	0.83
2024	0.32	5.61	10.98	0.03	4.32	0.83
2025	0.31	5.56	10.93	0.03	4.31	0.83
2026	0.30	5.54	10.89	0.03	4.31	0.82
2027	0.30	5.51	10.85	0.03	4.31	0.82
2028	0.30	5.48	10.82	0.03	4.31	0.82
2029	0.36	7.35	12.32	0.04	3.28	1.10
2030	0.15	3.27	4.57	0.01	0.93	0.60
SJVAPCD and GCR *de minimis* Significance Threshold	**10**	**10**	**100**	**27**	**15**	**15**
Exceed Thresholds – significant impact?	**No**	**No**	**No**	**No**	**No**	**No**

[1]Tier 4 equipment was incorporated for the following equipment: Generator Sets: 25 kVA Portable Generator, Scraper: CAT 631K, Motor Grader: CAT 14M, Dozer: CAT D11, Wheel Loader: CAT 950M

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Appendix E	E-13	3	E-15	1	**Table E-~~8~~10b. Mitigated Estimated Emissions – CE Alternative**

Year	Emissions (tons per year)						
	NO_X	Rule 9510 Reductions	~~Rule 9510~~ and VERA Reductions	Remaining NO_X	SJVAPCD and GCR *de minimis* Threshold	Exceed Threshold?	Significant Impact?
2021	~~9.63~~ 6.08	-1.2160	~~-1.93~~ 0.00	~~7.70~~ 4.863	10	No	No
2022	~~14.37~~ 7.76	-1.5520	~~-4.38~~ 0.00	~~9.99~~ 6.204	10	No	No
2023	~~11.53~~ 5.63	-1.1260	~~-1.54~~ 0.00	~~9.99~~ 4.505	10	No	No
2024	~~11.47~~ 5.61	-1.1220	~~-1.48~~ 0.00	~~9.99~~ 4.490	10	No	No
2025	~~11.38~~ 5.56	-1.1120	~~-1.39~~ 0.00	~~9.99~~ 4.450	10	No	No
2026	~~11.31~~ 5.54	-1.1080	~~-1.32~~ 0.00	~~9.99~~ 4.427	10	No	No
2027	~~11.26~~ 5.51	-1.1020	~~-1.27~~ 0.00	~~9.99~~ 4.404	10	No	No
2028	~~11.21~~ 5.48	-1.0960	~~-1.22~~ 0.00	~~9.99~~ 4.384	10	No	No
2029	~~10.99~~ 7.35	-1.4700	~~-1.00~~ 0.00	~~9.99~~ 5.876	10	No	No
2030	~~3.86~~ 3.27	-0.6540	~~-0.772~~ 0.00	~~3.09~~ 2.619	10	No	No

<table>
<tr><th>Document Type</th><th>Original Page</th><th>Original Line No.</th><th>Revised Page</th><th>Revised Line No.</th><th>Revised Text</th></tr>
<tr><td>Appendix E</td><td>E-14</td><td>1</td><td>E-15</td><td>3</td><td>Table E-~~9~~11. Daily Emissions Estimate for Ambient Air Quality Standard Screening
<table>
<tr><th rowspan="2">Alternative</th><th colspan="4">Maximum Daily Emissions (pounds/day)</th></tr>
<tr><th>NO_X</th><th>CO</th><th>PM_{10}</th><th>$PM_{2.5}$</th></tr>
<tr><td><u>Unmitigated</u></td><td></td><td></td><td></td><td></td></tr>
<tr><td><u>CER</u></td><td><u>275.49</u></td><td><u>189.84</u></td><td><u>68.86</u></td><td><u>58.37</u></td></tr>
<tr><td><u>CE</u></td><td><u>226.06</u></td><td><u>157.51</u></td><td><u>52.49</u></td><td><u>43.81</u></td></tr>
<tr><td><u>Mitigated</u></td><td></td><td></td><td></td><td></td></tr>
<tr><td>CER</td><td>54.76</td><td>281.96</td><td>59.55</td><td>49.53</td></tr>
<tr><td>CE</td><td>34.62</td><td>233.38</td><td>44.26</td><td>36.14</td></tr>
<tr><td>SJVAPCD Screening Threshold</td><td>100</td><td>100</td><td>100</td><td>100</td></tr>
<tr><td>CER Exceeds Screening Threshold?</td><td>No</td><td>Yes</td><td>No</td><td>No</td></tr>
<tr><td>CE Exceeds Screening Threshold?</td><td>No</td><td>Yes</td><td>No</td><td>No</td></tr>
</table></td></tr>
<tr><td>Appendix E</td><td>E-14</td><td>3</td><td>E-16</td><td>1</td><td>Table E-~~10~~12. CER Alternative - CO Ambient Air Quality Standard Analysis</td></tr>
<tr><td>Appendix E</td><td>E-14</td><td>6</td><td>E-16</td><td>3</td><td>Table E-~~11~~13. CE Alternative - CO Ambient Air Quality Standard Analysis</td></tr>
<tr><td>Appendix E</td><td>E-15</td><td>2</td><td>E-16</td><td>6</td><td>Greenhouse gas emissions for each alternative are shown in Table E-~~12~~14 and E-~~13~~15.</td></tr>
<tr><td>Appendix E</td><td>E-15</td><td>3</td><td>E-16</td><td>7</td><td>Table E-~~12~~14. Greenhouse Gas Emissions – CER Alternative</td></tr>
</table>

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<tr><th>Document Type</th><th>Original Page</th><th>Original Line No.</th><th>Revised Page</th><th>Revised Line No.</th><th>Revised Text</th></tr>
<tr><td>Appendix E</td><td>E-15</td><td>5</td><td>E-17</td><td>1</td><td>Table E-13<u>5</u>. Greenhouse Gas Emissions – CE Alternative
<table>
<tr><th rowspan="2">Year</th><th colspan="4">Metric Tons per year</th></tr>
<tr><th>CO2</th><th>CH4</th><th>N2O</th><th>CO_2e</th></tr>
<tr><td>2021</td><td><s>3,324.75</s> <u>2,707.77</u></td><td><s>0.25</s> <u>0.24</u></td><td><s>0.30</s> <u>0.21</u></td><td><s>3,412.66</s> <u>2,769.64</u></td></tr>
<tr><td>2022</td><td><s>4,767.39</s> <u>3,598.75</u></td><td><s>0.38</s> <u>0.35</u></td><td><s>0.47</s> <u>0.28</u></td><td><s>4,901.77</s> <u>3,683.84</u></td></tr>
<tr><td>2023</td><td><s>3,788.25</s> <u>2,710.32</u></td><td><s>0.31</s> <u>0.29</u></td><td><s>0.39</s> <u>0.22</u></td><td><s>3,900.28</s> <u>2,776.86</u></td></tr>
<tr><td>2024</td><td><s>3,736.67</s> <u>2,679.49</u></td><td><s>0.31</s> <u>0.29</u></td><td><s>0.38</s> <u>0.22</u></td><td><s>3,846.65</s> <u>2,744.85</u></td></tr>
<tr><td>2025</td><td><s>3,679.88</s> <u>2,644.88</u></td><td><s>0.31</s> <u>0.29</u></td><td><s>0.37</s> <u>0.21</u></td><td><s>3,787.60</s> <u>2,708.91</u></td></tr>
<tr><td>2026</td><td><s>3,623.01</s> <u>2,610.62</u></td><td><s>0.31</s> <u>0.28</u></td><td><s>0.37</s> <u>0.21</u></td><td><s>3,728.49</s> <u>2,673.35</u></td></tr>
<tr><td>2027</td><td><s>3,566.09</s> <u>2,575.20</u></td><td><s>0.30</s> <u>0.28</u></td><td><s>0.36</s> <u>0.20</u></td><td><s>3,669.32</s> <u>2,636.59</u></td></tr>
<tr><td>2028</td><td><s>3,510.14</s> <u>2,540.59</u></td><td><s>0.30</s> <u>0.28</u></td><td><s>0.35</s> <u>0.20</u></td><td><s>3,611.15</s> <u>2,600.65</u></td></tr>
<tr><td>2029</td><td><s>3,824.03</s> <u>3,219.49</u></td><td><s>0.26</s> <u>0.24</u></td><td><s>0.35</s> <u>0.25</u></td><td><s>3,923.13</s> <u>3,293.05</u></td></tr>
<tr><td>2030</td><td><s>1,462.26</s> <u>1,366.27</u></td><td><s></s> <u>0.07</u></td><td><s>0.13</s> <u>0.11</u></td><td><s>1,497.81</s> <u>1,397.77</u></td></tr>
<tr><td>Total</td><td><s>35,282.49</s> <u>26,653.38</u></td><td><s>2.79</s> <u>2.69</u></td><td><s>3.46</s> <u>2.11</u></td><td><s>36,278.86</s> <u>27,285.52</u></td></tr>
<tr><td>50 -year Amortization</td><td></td><td></td><td></td><td><s>725.58</s> <u>545.71</u></td></tr>
</table></td></tr>
<tr><td>Appendix F</td><td>51</td><td>--</td><td>51</td><td>--</td><td>Table 6 – Estimated Aquatic Resources Impacts: Revised acreage of Riparian Wetland under CER Alternative/CER Permanent: <s>0.9</s> <u>0.7</u> acre</td></tr>
<tr><td>Appendix F</td><td>52</td><td>--</td><td>52</td><td>--</td><td>Compensatory Mitigation
The riparian wetlands that would be permanently impacted by the Project are considered sensitive biological resources that function to provide valuable resources for wildlife, and also provide for water quality benefits. The CE Alternative is estimated to result in a permanent loss of 0.7 acre of riparian wetland and the CER Alternative is estimated to result in the permanent loss of <s>0.9</s> <u>0.7</u> acre of riparian wetland. This loss of wetland habitat is considerable and the following compensatory mitigation measure (CMM) is recommended.</td></tr>
<tr><td>Appendix H</td><td>H-1</td><td>2-5</td><td>H-1</td><td>2-5</td><td>This appendix describes background information related to noise and vibration for the Friant-Kern Canal Middle Reach Capacity Correction Project (Project) <s>Draft</s> <u>Final</u> Environmental Impact Statement/Environmental Impact Report (<s>Draft</s> <u>Final</u> EIS/R). Acronyms and abbreviations used in this appendix are listed in Appendix A of the <s>Draft</s> <u>Final</u> EIS/R.</td></tr>
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Document Type	Original Page	Original Line No.	Revised Page	Revised Line No.	Revised Text
Appendix H	H-1	7-9	H-1	7-8	Table H-1 provides terminology that is used to discuss noise in Section 3, Noise subsection, in the ~~Draft Environmental Impact Statement/Environmental Impact Report~~ (Final~~Draft~~ EIS/R). Table H-2 shows typical noise levels for common noise sources.