ES.1 Project Background

The natural flow of the Kern River has been apportioned among various water users pursuant to a series of court decisions and agreements including, but not limited to, the following: (1) the California Supreme Court decision in *Lux v. Haggin* (1886) 69 Cal. 255; (2) the 1888 Miller-Haggin Agreement (and the 1930, 1955, and 1964 amendments thereto); (3) the 1900 decree of the Kern County Superior Court in *Farmers Canal Company, et al. v. J.R. Simmons, et al*., Case No. 1901; (4) the 1962 Kern River Water Rights and Storage Agreement; and (5) the Lake Isabella Recreation Pool Agreement. These decisions and agreements are generally administered by the Kern River Watermaster.

Pursuant to the 1962 Kern River Water Rights and Storage Agreement, the Kern River Watermaster prepares records of Kern River flows, storage, and releases from Isabella Reservoir. Since at least 1986, the Kern River Watermaster has implemented a Policy Re-Utilization of Isabella Reservoir Flood Releases (Flood Policy). The Flood Policy has been implemented pursuant to the agreement and consent of other water right holders on the Kern River. The Flood Policy provides that during periods in which (1) abnormal flow is being released from Isabella Reservoir by order of the U.S. Army Corps of Engineers (USACE), and (2) such flow is entering into the California Aqueduct through the Kern River Intertie (Intertie):

> [w]ater will be made available to any person, interest or group in Kern County who wish to divert that water, up to the amount of water flowing into the Intertie, provided such interest, person or group acknowledges their desire to divert said water by executing an "Order" which shall include, among other things, a description of the point they wish to divert such flow, the rate of flow they wish to divert and provide a schedule such that the request may be honored by the operating Kern River entity. This policy is without prejudice to the rights of any of the Parties.

In recent years, Kern Water Bank Authority (KWBA), a Joint Powers Authority (JPA), has diverted and utilized Kern River flood flows for the purposes of groundwater recharge in accordance with the Flood Policy and under the direction and control of the Kern River Watermaster. KWBA members include Dudley Ridge Water District, Kern County Water Agency on behalf of its Improvement District 4, Semitropic Water Storage District, Tejon-Castac Water District, Westside Mutual Water Company, and Wheeler Ridge-Maricopa Water Storage District. KWBA members have also purchased Kern River supplies from Kern River water right holders.

Legal proceedings between 1996 and 2007 reviewed and considered questions regarding the extent of appropriative Kern River water rights held by the Kern Delta Water District (Kern Delta), a Kern River water right holder. As a result of those proceedings, California courts concluded that Kern Delta had "forfeited" a significant portion of its pre-1914 appropriative Kern River water rights due to non-use. Following the conclusion of those proceedings in 2007, the California State Water Resources Control Board (State Water Board) began proceedings to revisit the Kern River fully appropriated stream status. The Kern River was formally designated as a river with fully

appropriated status by the State Water Board in 1989 (Order 89-25).[1]. In February 2010, the State Water Board issued an order removing the fully appropriated status for the Kern River, finding that Kern River flood water that enters the California Aqueduct is available for appropriation.[2]

In September 2007, and as a result of the aforementioned court decisions regarding forfeited water on the Kern River and in anticipation of the State Water Board's possible revision of the Kern River's fully appropriated status, the KWBA, on behalf of five of its six member entities (Dudley Ridge Water District, Semitropic Water Storage District, Tejon-Castac Water District, Westside Mutual Water Company, and Wheeler Ridge-Maricopa Water Storage District [the KWBA participating members]), filed a water right application (Application 31676) with the State Water Board to appropriate up to 500,000 acre-feet per year (AFY) of water from the Kern River to the Kern Water Bank (KWB) for irrigation, municipal and industrial (M&I) use, for underground storage, and for fish and wildlife habitat enhancement.

Following the above proceedings, the State of California entered one of the longest and driest periods on record (2011–2016). The period served to highlight the importance of diverting and storing water in years of high water to provide additional certainty and reliability in multi-dry years. As a consequence, this project has taken on greater urgency, as the KWB seeks to achieve greater reliability for existing water demands by diverting water in very high years, when flood waters have historically passed through the system or flooded downstream farmlands.

ES.1.1 Purpose and Scope of the EIR

KWBA, as the lead agency, has prepared this Environmental Impact Report (EIR) to provide the public, responsible agencies, and trustee agencies with information about the potential environmental effects of diverting up to 500,000 AFY of Kern River floodwater in certain high water years when excess flood waters are available for recharge and storage using existing facilities within the KWB as part of the Kern Water Bank Conservation and Storage Project (project). The water diverted will serve to provide greater certainty and reliability in multi-dry years for ongoing irrigation, municipal, and industrial uses that rely on the Kern Water Bank. This EIR analyzes potential environmental effects of the project on air quality, biological resources, geology and seismicity, hydrology and water quality, and utilities and service systems, as well as the project's potential contribution to greenhouse gas emissions. This EIR does not consider the appropriation of the Kern Delta forfeited water (i.e., the water that is the focus of the City of Bakersfield's Kern River Flow and Municipal Water Program Environmental Impact Report).

ES.1.2 EIR Process

CEQA does not require formal hearings at any stage of the environmental review process (State CEQA Guidelines § 15202[a]). However, it does encourage "wide public involvement, formal and informal…in order to receive and evaluate public reactions to environmental issues" (State CEQA Guidelines §

[1] Order 89-25 cited State Water Rights Board Decision 1196 (D-1196), issued on October 29, 1964, as the basis for including the Kern River on the Declaration. D-1196 concluded that the applicants had failed to show "that there is unappropriated water available" in the Kern River watershed.

[2] The EIR does not consider the appropriation of the Kern Delta forfeited water (i.e., the water that is the focus of the City of Bakersfield's Kern River Flow and Municipal Water Program Final Environmental Impact Report). The State Water Board has not yet determined whether the Kern Delta water, or other Kern River water, is unappropriated.

15201) and requires the lead agency to afford the public the opportunity to provide comments. In February 2012, KWBA issued a Notice of Preparation (NOP) of an EIR, informing agencies and the general public that an EIR was being prepared and inviting comments on the scope and content of the document during the 30-day public review period. The NOP also requested participation at a public scoping meeting held on February 28, 2012. Appendix A includes the NOP as delivered to responsible agencies and interested parties, and comment letters received on the NOP.

KWBA has prepared an EIR incorporating public and agency responses to the NOP. Like the NOP, the draft EIR is being circulated for review and comment by appropriate agencies, as well as organizations and individuals who have requested notification. In accordance with Section 15205(d) of the CEQA Guidelines, KWBA has scheduled a 45-day public review period for the draft EIR, ending on February 26, 2018, at 5:00 p.m. Within that 45-day period, KWBA will hold one public meeting to request comments on the draft EIR, at the following time and place:

January 31, 2018
2:00 p.m.

Kern Water Bank Authority
1620 Mill Rock Way, Suite 500
Bakersfield, CA 93311

This EIR is available for review at the KWBA website (http://www.kwb.org/). Copies will also be available for viewing during normal business hours (8:30 a.m. to 5:00 p.m.), Monday through Friday, at the Kern Water Bank Authority office, 1620 Mill Rock Way, Suite 500, Bakersfield, California. Comments on the EIR may be submitted to KWBA in writing at Kern Water Bank Authority, 1620 Mill Rock Way, Suite 500 Bakersfield, CA 93311, to the attention of Jon Parker, or electronically at jparker@kwb.org.

Following the close of the public review period for the draft EIR, KWBA will consider the comments it receives. KWBA will prepare a final EIR, incorporating all comments received during the public comment period. As required by CEQA (§ 21092.5), the final EIR, including written responses to the comments submitted by public agencies, will be available at least 10 days prior to certification. KWBA will consider the EIR and the project, as well as the entire administrative record, in making its decision on the project.

ES.2 Description of the Project

The project is to divert up to 500,000 AFY from the Kern River for recharge and storage within the KWB through existing diversion works and recharge facilities located on the KWB property (Figure ES-1). The stored water would ultimately serve to provide greater certainty and reliability for irrigation, municipal, and industrial uses in multi- year droughts. The 500,000 AFY is considered an upper limit assuming Kern River water is available for a full year at appropriate flow rates. Diversion of 500,000 AF of Kern River floodwater would be a rare occurrence because in normal years, flows are insufficient. KWB diversions under the project would normally be much less. Based on analysis described in detail in Section 3.6, *Hydrology and Water Quality*, flood flows would be available for diversion in only about approximately 18% of years. The water stored within the KWB would ultimately be recovered using existing electric pumps and put to reasonable and beneficial uses—including primarily agricultural uses—by KWBA participating members. To fulfill the project,

KWBA is seeking to secure a permit and then a license for the full amount requested in Application 31676.

Application 31676 proposes to divert up to a maximum of 500,000 AFY to storage or directly at a rate of 10 cubic feet per second (cfs) for a total of 5,000 AFY for municipal use, 750 cfs for a total of 490,000 AFY for irrigation use, and 15 cfs for a total of 5,000 AFY for industrial use. Any water diverted directly would reduce the amount diverted to storage by the same amount. If approved this would allow for the appropriation of up to 500,000 AFY of water from the Kern River for municipal, industrial and irrigation uses and wildlife enhancement, and for groundwater storage and recovery for municipal, industrial, irrigation and water quality uses within the participating members' service areas.

The specific quantity of water available for diversion to the KWB in any given year would depend on annual and seasonal hydrologic and climatologic conditions, and would supplement water already received by KWBA participating members from the State Water Project (SWP) and the Central Valley Project (CVP) via the California Aqueduct, the CVP via the Friant-Kern Canal, and directly from the Kern River through purchases or transfers. The appropriation of water under this application would also supplement and permit water historically diverted from the Kern River to the KWB in above-normal water years when excess water has been made available for diversion to avoid additional flood risks downstream. If the State Water Board grants KWBA a water right permit to appropriate the requested amount, this water would remain in the Kern River channel for instream beneficial purposes until diverted generally west and downstream of the greater Bakersfield area.

ES.2.1 Alternatives

In addition to the project, this EIR evaluates the environmental effects of two alternatives to the project, including the No Project Alternative and a second alternative, the diversion of up to 375,000 acre-feet of flood flows per year.

Alternative 1—No Project Alternative

Under the No Project Alternative, KWBA would not divert unappropriated flood flows in the Kern River for groundwater recharge. Instead, the surplus water that is available in wet water years after existing water rights have been met would flow downstream and either (1) be diverted at the Intertie and conveyed downstream toward southern California via the California Aqueduct or (2) flood farmlands in the Tulare Lake Basin. KWBA would continue to buy water from other sources and recharge and recover that water consistent with the KWB's historical practices.

Alternative 2—Diversion of up to 375,000 Acre-Feet (75% of Request) of Flood Flows a Year

Under Alternative 2, KWBA would divert up to 375,000 acre-feet of unappropriated Kern River flood flows per year for groundwater recharge. This amount represents 75% of the total diversion requested under the project. In wet water years, after existing water rights have been met, any flood flows in excess of that amount would flow into the Intertie and be conveyed downstream toward southern California via the California Aqueduct or potentially flood farms within the Tulare Lake Basin. To supplement the smaller amount of diverted water, KWBA would continue to buy water, although a smaller quantity, from other sources and pump consistent with historic practices.

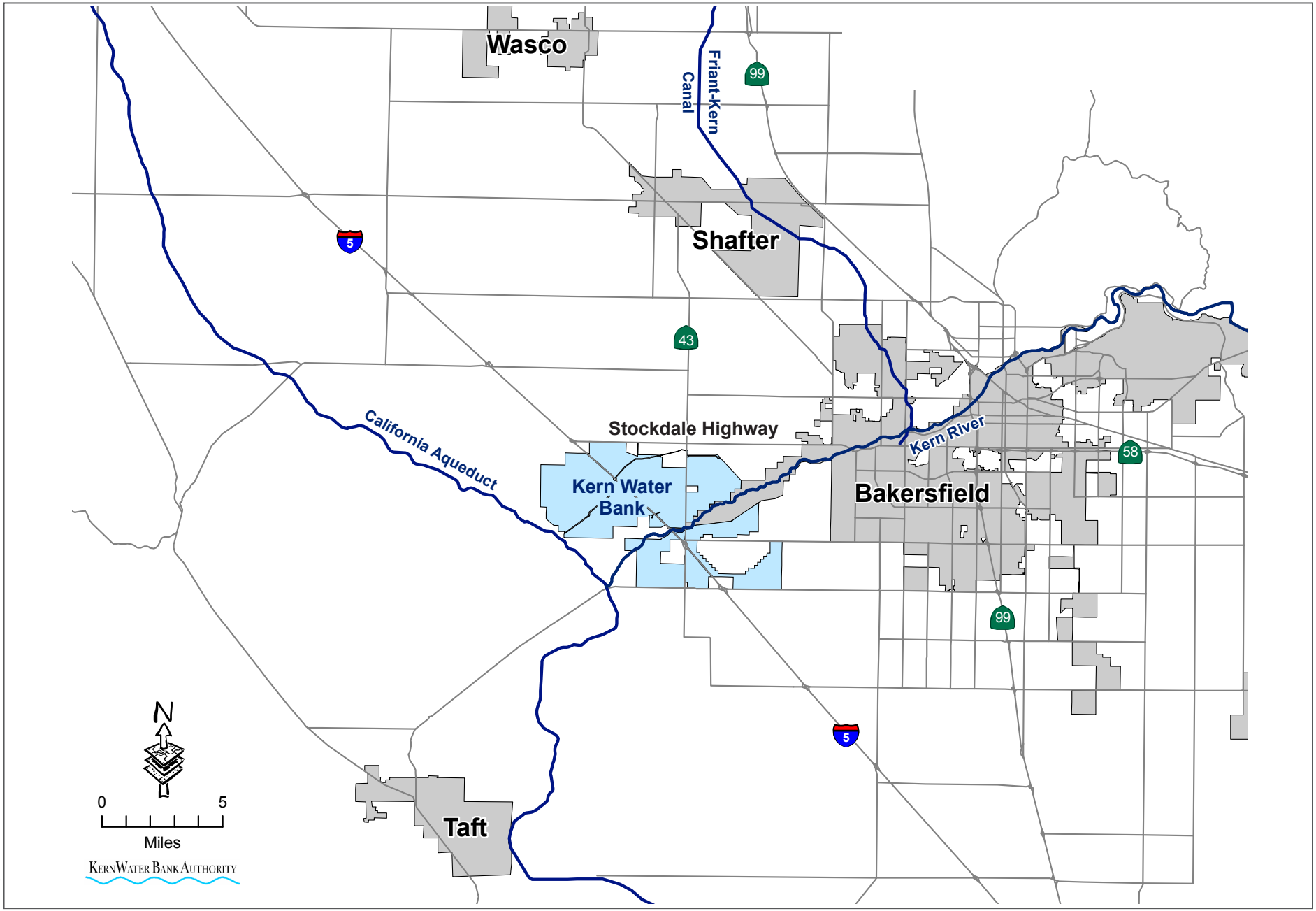

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Figure ES-1
Kern Water Bank Location

ES.2.2 Environmentally Superior Alternative

Section 15126.6 of the State CEQA Guidelines requires that an EIR identify an environmentally superior alternative among the alternatives that are evaluated. The environmentally superior alternative is typically the alternative that would be expected to generate the fewest adverse impacts. If the No Project Alternative is identified as environmentally superior, then CEQA requires that the EIR identify which of the other alternatives is environmentally superior.

Neither the project, the No Project Alternative, nor Alternative 2 has any significant, unmitigable impacts. Thus, the comparison of effects considers the relationship among varying degrees of less-than-significant impacts across the alternatives. The No Project Alternative would result in the greatest amount of water potentially reaching the Intertie and requiring SWP pumping. Compared to the project, Alternative 2 would also result in greater flows reaching the Intertie. Overall, the project would have the fewest environmental impacts compared to both the No Project Alternative and Alternative 2. Therefore, as described in Chapter 4, *Alternatives*, the project would be the environmentally superior alternative.

ES.3 Impacts and Mitigation Measures

This EIR discusses the project's potential environmental effects. Environmental topic areas and resources considered and dismissed from further consideration are distinguished from those considered in detail. Sections 3.2 through 3.7 provide comprehensive discussions of the regulatory and environmental setting for the resources affected by the project, and identify project impacts. Table ES-1, Summary of Impacts, summarizes the project's impacts.

ES.3.1 Impacts Found to be Less than Significant in the Initial Study and Dismissed from Further Consideration

In addition to the environmental impacts on the resources identified in this EIR, KWBA determined, through the preparation of an Initial Study, that implementation of the project would not result in potentially significant impacts to several resources and/or environmental categories. Specifically, through the Initial Study, KWBA determined that the project would have no impact, or less-than-significant impacts, on the following resources, which are therefore not analyzed in detail in this EIR.

- Aesthetics
- Agriculture and Forest Resources
- Cultural Resources
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services

- Recreation
- Transportation and Traffic

Chapter 3.1, *Approach to Analysis*, of this EIR outlines the reasons for which each of these topics was dismissed from further consideration.

ES.3.2 Impacts Analyzed in the Environmental Impact Report

Chapter 3 of this EIR discusses the project's potential environmental effects in detail. Specifically, Sections 3.2 through 3.7 provide a full discussion of the regulatory and environmental setting, methodology, and project impacts. Table ES-1, Summary of Impacts, summarizes the project's impacts. Impacts associated with the following topics or resources are evaluated in detail in this EIR and are discussed further below.

- Air Quality
- Biological Resources
- Greenhouse Gases, Climate Change, and Energy
- Geology and Seismicity
- Hydrology and Water Quality
- Utilities and Service Systems

No Impact

Air Quality

Because there would be no construction of new facilities or substantial changes in KWB operations, the project would not conflict with or obstruct implementation of applicable air quality plans. Further, because there would be no expansion of pumping stations or other facilities, there would be no increase in emissions in any given year from project implementation and no resulting violation of air quality standards established by the San Joaquin Valley Air Pollution Control District (SJVAPCD).

Energy

Because there would be no expansion of pumping stations or other facilities, and there would be no substantial changes to recovery operations in any given year, the project would not require or result in the construction of new electrical facilities.

Geology and Seismicity

Maximum recovery volumes are not expected to change substantially in any given year under the project because no new recovery facilities would be constructed. Thus, the project is not expected to cause land subsidence as a result of groundwater pumping. Further, an extensometer located on the property, which has been monitored by the Department of Water Resources since the KWB began operations, has recorded no inelastic subsidence in the area.

Utilities and Service Systems

The project would not result in impacts on utilities and service systems because there would be no construction associated with the project, and there would be no substantial changes to operations that could affect wastewater management or stormwater drainage in the project area.

Less than Significant

The analysis of project impacts indicates that the project would have less-than-significant impacts on the following air quality, biological resources, geology and soils, and hydrology and water quality considerations.

Air Quality

The project would not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors), expose sensitive receptors to substantial pollutant concentrations, or create objectionable odors affecting a substantial number of people.

Biological Resources

The project is not expected to cause a substantial adverse effect, either directly or through habitat modifications, on a special-status species, on any riparian habitat or other sensitive natural community, or on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means. The project is not expected to interfere substantially with the movement of any native resident or migratory fish or wildlife species or impede the use of native wildlife nursery sites. In fact, following the development and operation of the KWB, some of the upland natural communities (e.g., grassland) have been reestablished and intermittent natural communities have been created. These natural communities existed throughout much of the San Joaquin Valley's history. During wet years, the KWB supports approximately 7,000 acres of aquatic or semiaquatic habitats (recharge ponds) along the Pacific Flyway and provides essential habitat for migrating waterbirds, raptors, and other migratory birds. The aquatic/semiaquatic habitats support a high diversity of species (66 species observed in fall/winter 2011–2012) and an abundance (approximately 35, 000 individuals) of wintering waterfowl (Appendix G). Upland habitat on the KWB has also increased substantially with more than 12,000 acres of grassland and scrub communities that support or have the potential to support special-status plant and wildlife species.

Geology and Seismicity

The project is not expected to result in significant impacts related to liquefaction or ground failure.

Greenhouse Gases, Climate Change, and Energy

There would be no direct or indirect increase in greenhouse gas (GHG) emissions as a result of the project because water diversions are accomplished by gravity (and without electricity), and there would be no construction of new facilities and no substantial operational changes relative to baseline operations in any given year. There would be no difference in operations relative to current KWB operations and, therefore, there would be no conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions. The project would not develop land uses and

patterns that cause substantial wasteful, inefficient, and unnecessary consumption of energy that would result in an increased demand for energy.

Hydrology and Water Quality

The project is not expected to result in a lack of available water supply to serve the project from existing resources, substantially alter the existing drainage pattern of the site or area that would result in substantial erosion or siltation, or substantially increase the rate or amount of surface runoff that would result in flooding onsite or offsite.

Significant (Less than Significant with Mitigation)

The analysis of project impacts indicates that the project would not have significant impacts on any resources.

Significant and Unavoidable

The analysis of project impacts indicates that the project would not have significant and unavoidable impacts on any resources.

ES.3.3 Areas of Known Controversy and Issues to be Resolved

CEQA requires that the lead agency or agencies identify issues of known controversy that have been raised during the scoping process and throughout the development of the project. KWBA has considered these concerns in the development of the project. The following issues were identified during the NOP scoping period.

- Objections to the baseline conditions and project area definition.
- Objections to how and where unappropriated Kern River water is used.
- Objections to which entity or entities are currently using the water.
- Where, to what extent, and at what time of year water will water remain in the Kern River for instream beneficial purposes.
- Mosquito control at KWB recharge ponds.
- Kern River water supply reductions.
- Reduced groundwater recharge.
- Groundwater quality.
- Air quality and greenhouse gas impacts.
- Changes to agricultural land and land uses.
- Socioeconomic impacts.
- Economic impacts related to replacing reduced Kern River water supplies.
- Cultural resource impacts.
- Growth-inducing impacts.
- Mitigation of hydraulic impacts related to the accumulation of in-channel woody vegetation.

Table ES-1. Summary of Impacts of the Kern Water Bank Conservation and Storage Project

Impact	Level of Significance	Proposed Mitigation Measure(s)	Level of Significance after Mitigation
Air Quality			
Impact AQ-1: Conflict with or obstruct implementation of the applicable air quality plan	No impact	None required	Not applicable
Impact AQ-2: Violate any air quality standard or contribute substantially to an existing or projected air quality violation	No impact	None required	Not applicable
Impact AQ-3: Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)	Less than significant	None required	Not applicable
Impact AQ-4: Expose sensitive receptors to substantial pollutant concentrations	Less than significant	None required	Not applicable
Impact AQ-5: Create objectionable odors affecting a substantial number of people	Less than significant	None required	Not applicable
Biological Resources			
Impact BIO-1: Cause a substantial adverse effect, either directly or through habitat modifications, on a special-status species	Less than significant	None required	Not applicable
Impact BIO-2: Cause a substantial adverse effect on any riparian habitat or other sensitive natural community	Less than significant	None required	Not applicable
Impact BIO-3: Cause a substantial adverse effect on state or federally protected wetlands through direct removal, filling, hydrological interruption, or other means	Less than significant	None required.	Not applicable
Impact BIO-4: Interfere substantially with the movement of any native resident or migratory fish or wildlife species or impede the use of native wildlife nursery sites	No impact	None required	Not applicable
Impact BIO-5: Conflict with any local policies or ordinances protecting biological resources	No impact	None required	Not applicable
Impact BIO-6: Conflict with the provisions of an adopted habitat conservation plan, natural community conservation plan, or other approved local, regional, or state habitat conservation plan	No impact	None required	Not applicable
Greenhouse Gases, Climate Change, and Energy			
Impact CC-1: Generate GHG emissions, either directly or indirectly, that may have a significant impact on the environment	No impact	None required	Not applicable
Impact CC-2: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of GHGs	No impact	None required	Not applicable
Impact E-1: Potentially require or result in the construction of new electrical facilities	No impact	None required	Not applicable

Impact	Level of Significance	Proposed Mitigation Measure(s)	Level of Significance after Mitigation
Impact E-2: Potentially develop land uses and patterns that cause substantial wasteful, inefficient, and unnecessary consumption of energy that would result in an increased demand for energy	Less than significant	None required	Not applicable
Geology and Soils			
Impact GEO-1: Expose people or structures to adverse effects associated with an increased risk of liquefaction and related ground failures as a result of elevated groundwater levels	Less than significant	None required	Not applicable
Impact GEO-2: Cause land subsidence as a result of groundwater overdraft	No impact	None required	Not applicable
Hydrology and Water Quality			
Impact HYDRO-1: Lack of available water supply to serve the project from existing resources	Less than significant	None required	Not applicable
Impact HYDRO-2: Substantially deplete groundwater supplies or interfere substantially with groundwater recharge	Less than significant	None required	Not applicable
Impact HYDRO-2a: Raise groundwater levels sufficiently to substantially impact existing infrastructure (e.g., Cross Valley Canal)	Less than significant	None required	Not applicable
Impact HYDRO- 3: Substantially alter the existing drainage pattern of the site or area that would result in substantial erosion or siltation	Less than significant	None required	Not applicable
Impact HYDRO-4: Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff that would result in flooding onsite or offsite	Less than significant	None required	Not applicable
Impact HYDRO-5: Substantially degrade water quality	No impact	None required	Not applicable
Utilities and Service Systems			
Impact UTIL-1: Conflict with wastewater treatment requirements of the applicable Regional Water Quality Control Board	No impact	None required	Not applicable
Impact UTIL-2: Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects	No impact	None required	Not applicable
Impact UTIL-3: Require or result in the construction of new stormwater drainage facilities, or expansion of existing facilities, the construction of which could cause significant environmental effects	No impact	None required	Not applicable
Impact UTIL-4: Result in a determination by the wastewater treatment provider, which serves or may serve the project, that it does not have adequate capacity to serve the project's projected demand in addition to the provider's existing commitments	No impact	None required	Not applicable