ADDENDUM TO THE

ENVIRONMENTAL IMPACT REPORT

FOR THE

WILLOW SPRINGS WATER BANK PROJECT

(FORMERLY ANTELOPE VALLEY WATER BANK PROJECT)

STATE CLEARINGHOUSE NO. 2005091117

ROSAMOND COMMUNITY SERVICES DISTRICT

JULY 2018

TABLE OF CONTENTS – 1

1. INTRODUCTION AND BACKGROUND 1
1.1. ACTION TRIGGERING THE ADDENDUM UNDER CEQA 1
1.2. PREVIOUS ENVIRONMENTAL ANALYSIS 1
1.3. CEQA GUIDELINES PROVISIONS REGARDING THE PREPARATION OF AN ADDENDUM 1
1.4. PROJECT HISTORY 3

2. PROJECT DESCRIPTION 5
2.1. OVERVIEW 5
2.2. PROJECT LOCATION AND SETTING 5
2.3. PROJECT OBJECTIVES 12
2.4. PLANNED MODIFICATIONS TO THE WILLOW SPRINGS WATER BANK PROJECT 12
2.5. DISCRETIONARY APPROVALS 18
2.6. CHANGES IN SITE CONDITIONS 20

3. ENVIRONMENTAL CHECKLIST 23
3.1. EXPLANATION OF ENVIRONMENTAL EVALUATION CATEGORIES 23
3.2. ENVIRONMENTAL EVALUATION SECTIONS 24

4. ENVIRONMENTAL EVALUATION 25
4.1. AESTHETICS 25
4.2. AGRICULTURAL RESOURCES 29
4.3. AIR QUALITY 37
4.4. BIOLOGICAL RESOURCES 45
4.5. CULTURAL RESOURCES AND PALEONTOLOGICAL RESOURCES 58
4.6. GEOLOGY AND SOILS 66
4.7. GREENHOUSE GASE EMISSIONS 74
4.8. HAZARDS AND HAZARDOUS MATERIALS 80
4.9. HYDROLOGY AND WATER QUALITY 87
4.10. LAND USE AND PLANNING 96
4.11. MINERAL RESOURCES 102
4.12. NOISE 104
4.13. POPULATION AND HOUSING 112
4.14. PUBLIC SERVICES 114
4.15. RECREATION 117
4.16. TRANSPORTATION/TRAFFIC 119
4.17. UTILITIES AND SERVICE SYSTEMS 126

5. REFERENCES/BIBLIOGRAPHY 131

TABLE OF CONTENTS – 2

APPENDICES

A – MEMORANDUM OF UNDERSTANTING (MOU)

B – AIR QUALITY AND GHG ASSESSMENT

C – BIOLOGICAL TECHNICAL REPORT

D – CULTURAL RESOURCES REVIEW

LIST OF TABLES

Table Page

1. SUMMARY OF MODIFICATIONS TO WATER BANK PROJECT 13
2. ANNUAL CONSTRUCTION EMISSIONS (UNMITIGATED) FROM APPROVED PROJECT (2006)(TONS/YEAR) 39
3. ANNUAL CONSTRUCTION EMISSIONS (UNMITIGATED) FROM MODIFIED PROJECT (TONS/YEAR) 40
4. ANNUAL OPERATIONS EMISSIONS FROM APPROVED AND MODIFIED PROJECT (TONS/YEAR) 41
5. COMPARISON OF GHG EMISSIONS BETWEEN APPROVED PROJECT AND MODIFIED WATER BANK PROJECT 78

LIST OF FIGURES

Figure Page

1. REGIONAL LOCATION 6
2. PROJECT VICINITY 7
3. PLANNED RECOVERY WELLS AND COLLECTION PIPES 8
4. PLANNED EXTERNAL CONNECTIONS AND FACILITIES 9
5. MODIFICATIONS FROM 2006 WATER BANK PROJECT 10
6. SOLAR AND WIND PROJECTS IN THE VICINITY 21

1. INTRODUCTION AND BACKGROUND

On September 12, 2006, the Kern County Board of Supervisors certified the Environmental Impact Report (EIR) on the Antelope Valley Water Bank (AVWB) project (State Clearinghouse No. 2005091117) under the California Environmental Quality Act (CEQA)(hereinafter referred to as "2006 EIR"). The 2006 EIR provided CEQA review and clearance for the following project approvals by Kern County: Specific Plan Amendment (SPA) No. 13, Map No. 232; SPA No. 2, Map No. 233 (Willow Springs Specific Plan); Alteration of the Boundaries of Agricultural Preserve No. 24-Inclusion (Williamson Act contract lands).

1.1. ACTION TRIGGERING THE ADDENDUM UNDER CEQA

Several modifications to the approved AVWB project are currently planned. These changes generally include a reduction in the overall area of recharge basins, an increase in total number of recovery wells, and changes to the overall facilities layout plan including elimination of the eastern portion of the wellfield and expansion of the wellfield to the west, and modifications and additions to supply and distribution pipelines. In addition, the name of the project has been changed to "Willow Springs Water Bank" and is hereinafter referred to as the "WSWB project" or the "modified project." The overall scale and characteristics of the modified WSWB project are generally consistent with the facilities planned under the project approved in 2006 with some variations.

This Addendum to the 2006 EIR evaluates planned modifications to the WSWB project. In accordance with State CEQA Guidelines Section 15164, an Addendum to an EIR may be prepared by the lead agency or responsible agency. The Rosamond Community Services District (CSD) will be the agency responsible for authorizing construction of the improvements planned for the WSWB project. As the responsible agency for this project, the Rosamond CSD is therefore the appropriate agency to prepare this EIR Addendum under CEQA. The Rosamond CSD has determined that, in accordance with Section 15164 of the State CEQA Guidelines, the planned changes to the WSWB project from the project addressed in the 2006 EIR warrant the preparation of an Addendum to update the analysis provided in the 2006 EIR. (Additional discussion regarding the Addendum as the proper form of subsequent documentation for the project changes under CEQA is provided subsequently in this section.)

1.2. PREVIOUS ENVIRONMENTAL DOCUMENTS

The environmental process for the former Antelope Valley Water Bank project (now WSWB project) involved the preparation of the following documents that are relevant to the consideration of the modified Willow Springs Water Bank Project.

- Draft EIR for the Antelope Valley Water Bank Project, Volumes I-II, April 2006.
- Memorandum of Understanding and Agreement for Performance of Zoning Ordinance and Mitigation Measures as Environmental Restrictions (MOU) for the Antelope Valley Water Bank, April 17, 2007.

1.3. CEQA GUIDELINES PROVISIONS ON PREPARATION OF AN ADDENDUM

Altered conditions, changes, or additions to the description of a project that occur after certification of an EIR may require additional analysis under CEQA. The legal principles that guide decisions regarding whether

additional environmental documentation is required are provided in the State CEQA Guidelines, which establish three alternative forms of documentation to address these changes, as follows: (1) a Subsequent Environmental Impact Report (SEIR), (2) a Supplement to an EIR, and (3) an Addendum to an EIR.

Section 15162 of the State CEQA Guidelines describes the conditions under which a Subsequent EIR would be prepared. In summary, when an EIR has been certified for a project, no Subsequent EIR shall be prepared for that project unless the lead agency determines, based on substantial evidence in light of the whole record, one or more of the following:

> (1) Substantial changes are proposed in the project which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified effects;
>
> (2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
>
> (3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete, shows any of the following:
>
> > (A) The project will have one or more significant effects not discussed in the previous EIR;
> >
> > (B) Significant effects previously examined will be substantially more severe than shown in
> >
> > the previous EIR;
> >
> > (C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measures or alternatives; or
> >
> > (D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

Section 15163 of the State CEQA Guidelines states that a lead agency may choose to prepare a Supplement to an EIR (or "Supplemental EIR") rather than a Subsequent EIR if:

> (1) any of the conditions described above for Section 15162 would require the preparation of a Subsequent EIR; and
>
> (2) only minor additions or changes would be necessary to make the previous EIR adequately apply to the project in the changed situation.

An Addendum is appropriate under Section 15164 of the State CEQA Guidelines where a previously certified EIR has been prepared and some changes or revisions to the project are proposed, or the circumstances surrounding the project have changed, but none of the changes or revisions would result in significant new or substantially more severe environmental impacts, consistent with CEQA Section 21166 and State CEQA Guidelines Sections 15162, 15163, and 15164. As mentioned, the Rosamond CSD has determined that the an EIR Addendum is the appropriate form of CEQA documentation because the planned project modifications and changes in project

circumstances would not result in significant new or substantially more severe impacts than were identified in the 2006 EIR.

This Addendum is intended to evaluate and confirm CEQA compliance for the modified WSWB project, which includes changes relative to what is described and evaluated in the 2006 EIR. This Addendum is organized with reference to an environmental checklist, and is intended to evaluate all environmental topic areas for any changes in circumstances or the project description, as compared to the 2006 EIR, and determine whether the 2006 EIR continues to be relevant and adequate to address the potential impacts, if any, of such changes. This checklist is not the traditional CEQA Environmental Checklist, per Appendix G of the CEQA Guidelines. As explained below, the purpose of this checklist is to evaluate the checklist categories in terms of any "changed condition" (i.e., project changes, changed circumstances, or new information of substantial importance) that may result in a different environmental impact significance conclusion from the 2006 EIR. The column titles of the checklist have been modified from the CEQA Appendix G Checklist to facilitate responses to questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162, 15163, 15164 and 15168.

1.4. PROJECT HISTORY

On September 12, 2006, the Kern County Board of Supervisors certified the EIR for the Antelope Valley Water Bank and approved the Amendments to the Willow Springs Specific Plan in order to allow the construction and operation of the water bank facilities. Located in the Antelope Valley west of Lancaster, the approved 12,160-acre Recharge and Recovery Facilities covered in the 2006 EIR included approximately 1,612 acres (gross) of recharge basins, 57 recovery wells, and an 8.75-mile long water supply pipeline from the California Aqueduct, among other supporting infrastructure.

The 2006 EIR evaluated the environmental impacts associated with the implementation of the planned Recharge and Recovery Facilities. (The 2006 EIR is contained in a CD attached to this Addendum and is also accessible at https://cwc.ca.gov/WISPDocs/WSWB_EvnDoc_1of1.pdf)

Upon completion, the approved water banking facility would be capable of annual recharge and recovery of up to 100,000 acre-feet (AF) and would allow up to 500,000 AF of total storage capacity within the underlying aquifer. The first 160-acre recharge basin was completed in 2007.

In April 2007, the Kern County Board of Supervisors and the project proponent executed a Memorandum of Understanding (MOU) which required that the proponent or its successors in ownership of the water bank would be bound by all the applicable requirements of the zoning ordinance and the Mitigation Monitoring and Reporting Program (MMRP) for the project, the latter based on mitigation measures identified in the 2006 EIR. (The MOU is contained in Appendix A of this document.)

In late 2008, the development and operation responsibilities of the AVWB were transferred to the Semitropic-Rosamond Water Bank Authority (SRWBA), along with lands pertinent to the AVWB. The SRWBA a Joint Powers Authority (JPA), whose members include the Semitropic Water Storage District, Rosamond Community Services District, and Valley Mutual Water Company.

In 2010, the U.S. Bureau of Reclamation prepared an Environmental Assessment (EA) under the National Environmental Policy Act (NEPA) to provide environmental review and clearance for Federal funding for the "Antelope Valley Water Bank Initial Recharge and Recovery Facilities Improvement Project" under the American Recovery and Reinvestment Act (ARRA). Specifically, the action provided partial funding for the creation of a second 160-acre recharge basin, and construction of 6 recovery wells and associated pipelines for conveyance and recovery of water (USBR 2010). The recovery wells were drilled but no well pumps or equipment has been

installed to date. The completion of these facilities in 2011 increased the total basin area to 320 acres, where it stands today.

In 2011, the name of the water bank facility was officially changed from "Antelope Valley Water Bank" to "Willow Springs Water Bank." In that same year, approximately 20,000 acre-feet of imported water were recharged to the 320-acre basins. Extraction of banked water has not occurred, given that the 6 recovery wells drilled to date have not been equipped for pumping.

In 2014, hydrologic engineering studies prepared for WSWB determined that the storage capacity of the underlying aquifer was substantially greater than described in the 2006 EIR, and also that it would be more advantageous, from a hydrological standpoint, to shift the entire recovery wellfield westward of the originally planned location. Accordingly, the Recharge and Recovery Facilities Plan was modified to accommodate the updated engineering recommendations. The planned project modifications are described in the following chapter.

In July 2017, the SRWBA changed its name to the Southern California Water Bank Authority (SCWBA).

2. PROJECT DESCRIPTION

2.1. OVERVIEW

The Antelope Valley Water Bank (AVWB) project (subsequently renamed Willow Springs Water Bank) was approved by the Kern County Board of Supervisors on September 12, 2006. In general, the water bank facility would store imported surface water in the underlying aquifer, which would be recovered by wells when needed. The imported water would be conveyed by pipeline from the East Branch of the California Aqueduct, a State Water Project (SWP) facility located approximately 7 miles to the south. The delivered water would be recharged to the aquifer for storage. When needed, the stored water would be recovered for conveyance back to the California Aqueduct or for delivery to local and regional water agencies.

The approved water bank includes approximately 1,630 gross acres of recharge basin area, and up to 57 recovery wells and associated collection piping, within an overall area of approximately 12,160 acres. The water bank was approved for a maximum storage capacity of 500,000 acre feet, with an annual capacity of 100,000 acre feet for recharge and recovery. The approved water bank project includes an 8.75 mile long supply pipeline from the California Aqueduct, along with a booster pump station. The approved water bank also includes a 4-mile long connecting pipeline to the Antelope Valley East Kern Water Agency (AVEK) West Feeder pipeline to the east.

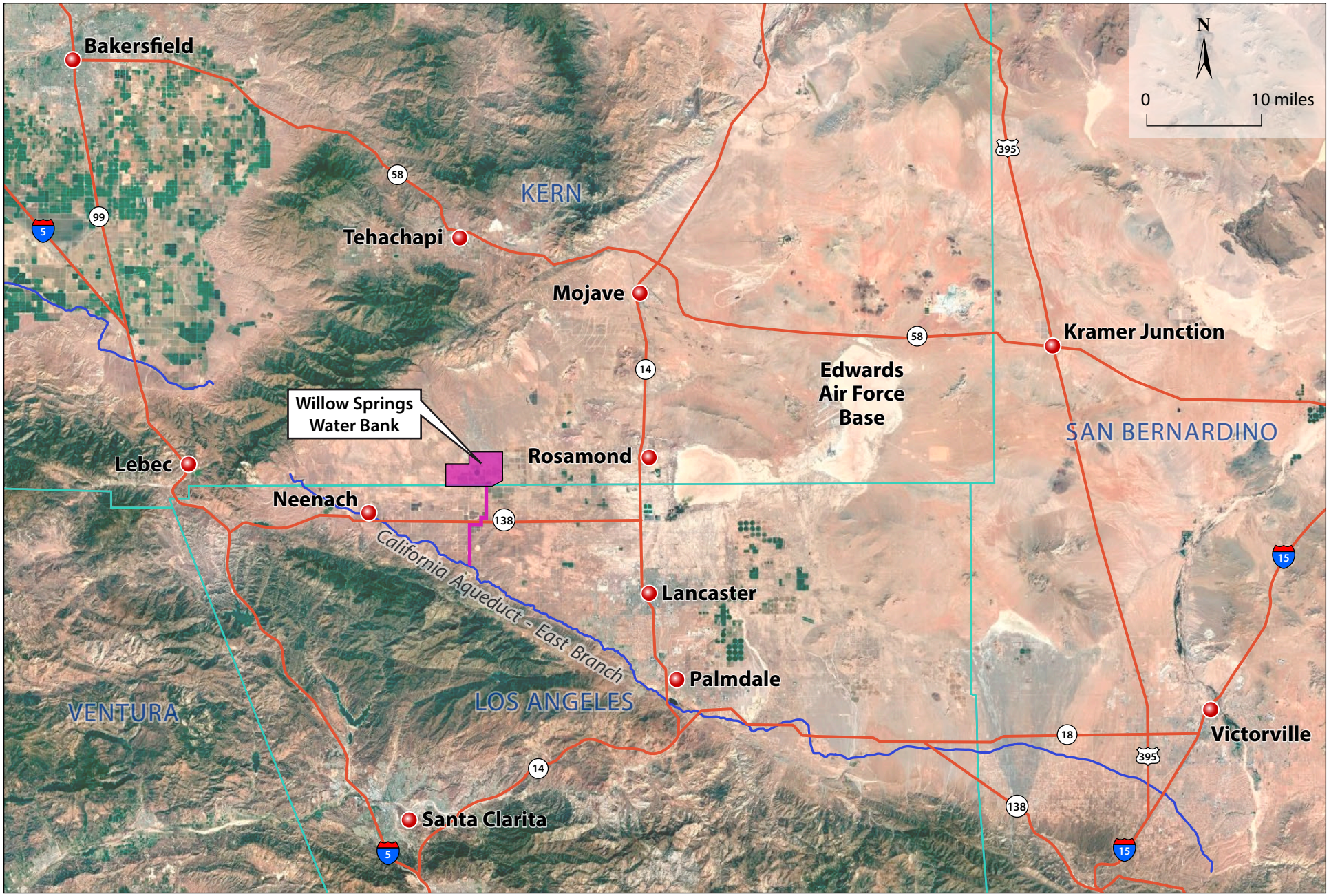
The planned modifications to the WSWB project are briefly described below. (The currently planned facilities for the water bank are shown in Figures 3 and 4, and the differences between the previously approved water bank facilities and the currently planned facilities are illustrated in Figure 5.) The total recharge basin area will be reduced to 1,106 gross acres, and the number of recovery wells will be increased to a total of 77 wells, within an overall area of approximately 8,650 acres. The planned maximum storage capacity will be increased to 1,000,000 acre feet, with a maximum annual recharge capacity of 250,000 acre feet, and a maximum annual recovered volume of 225,000 acre feet. The supply pipeline from the California Aqueduct will follow a modified route from the approved plan, and will have a total length from 9.2 miles. The connecting pipeline to the AVEK West Feeder has been partially completed, and a new 2.5-mile long connecting pipeline to the AVEK's South-North Interconnect Pipeline (SNIP) to the southeast has been added. Another new planned facility consists of a 2-mile long supply pipeline from the Los Angeles Aqueduct #2 to the west.

Due to the more productive hydrogeological conditions that prevail in the area to the west of the approved water bank project site, the planned wellfield area has been shifted westward to encompass the adjacent 3,200 acres. The eastern portion of the approved wellfield, comprising approximately 6,710 acres, has been removed from the water bank. This results in an overall reduction of 3,510 acres in the size of the water bank area.

A detailed description of all elements of the modified water bank project is provided subsequently in this chapter.

2.2. PROJECT LOCATION AND SETTING

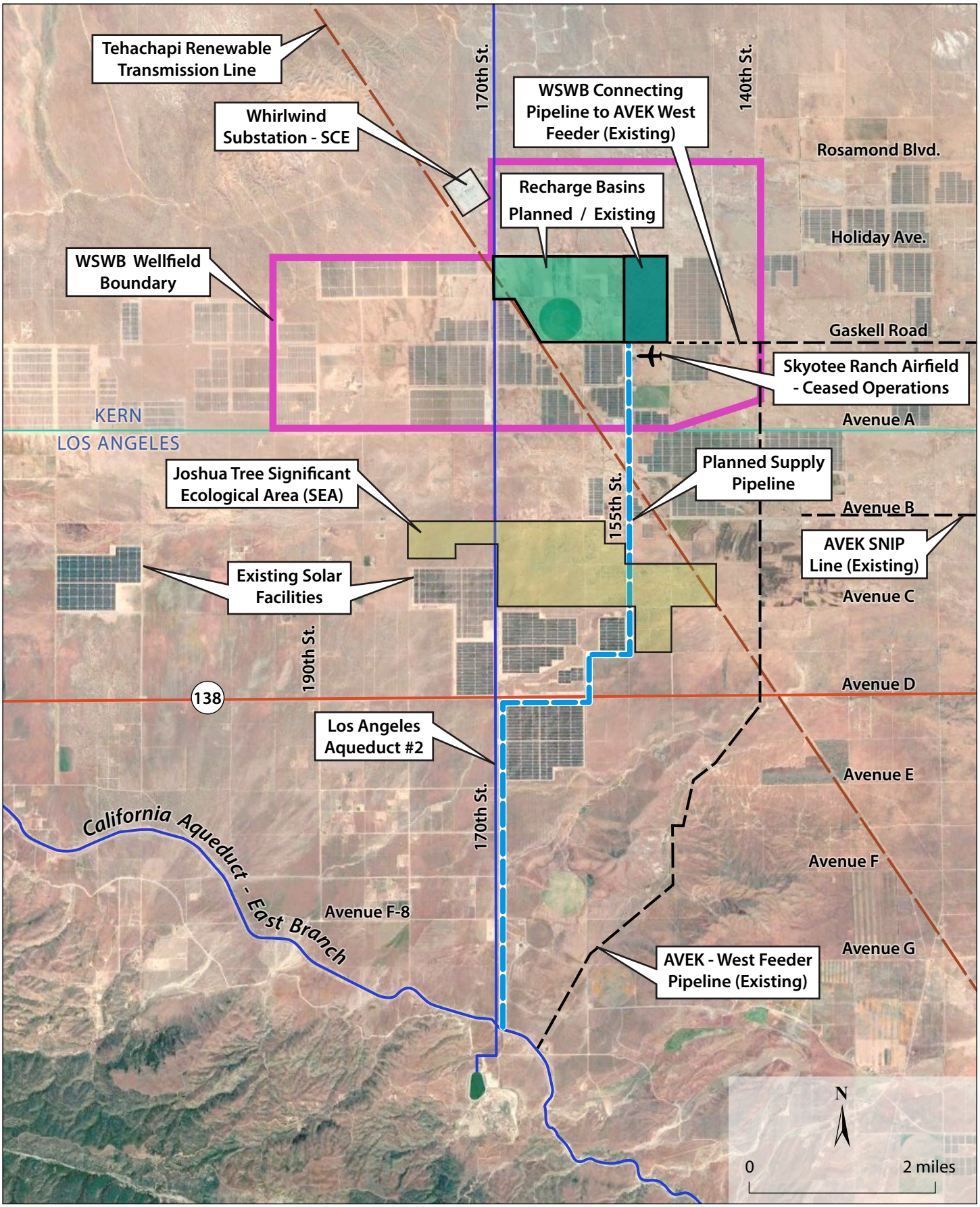
The WSWB project site is located in the western Antelope Valley, a semi-arid region with gently sloping terrain bounded by the Tehachapi Mountains to the north and the San Gabriel Mountains to the south (see Figures 1 and 2). The natural vegetation in the project area consists of annual grasslands, scrubland, and Joshua tree woodland. There are no permanent water features, and several ephemeral streams are present in the surrounding area.



Source: Google Earth, 2018

Regional Location

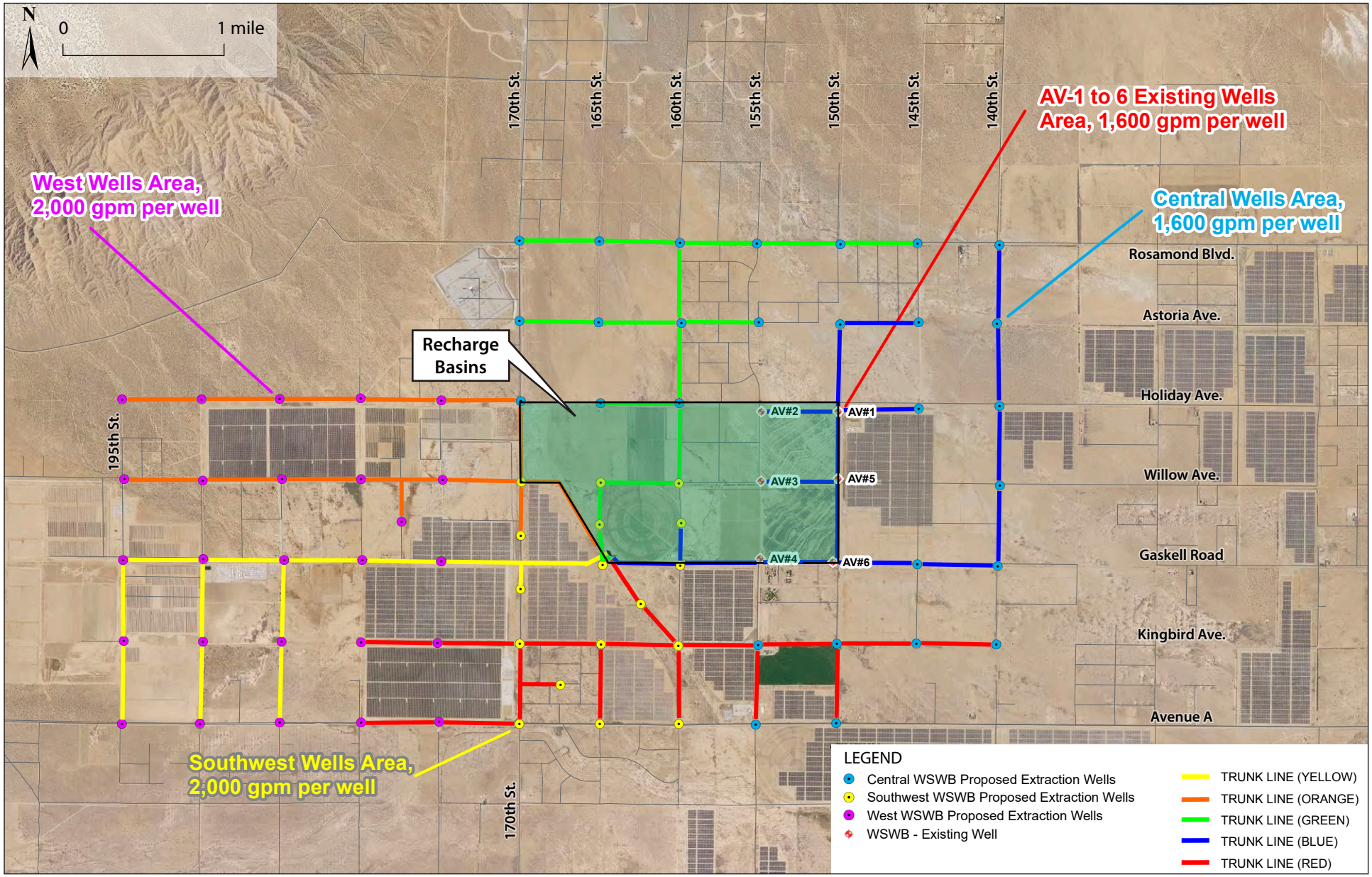
Figure 1



Sources: WSWB; Google Earth, 2018

Project Vicinity

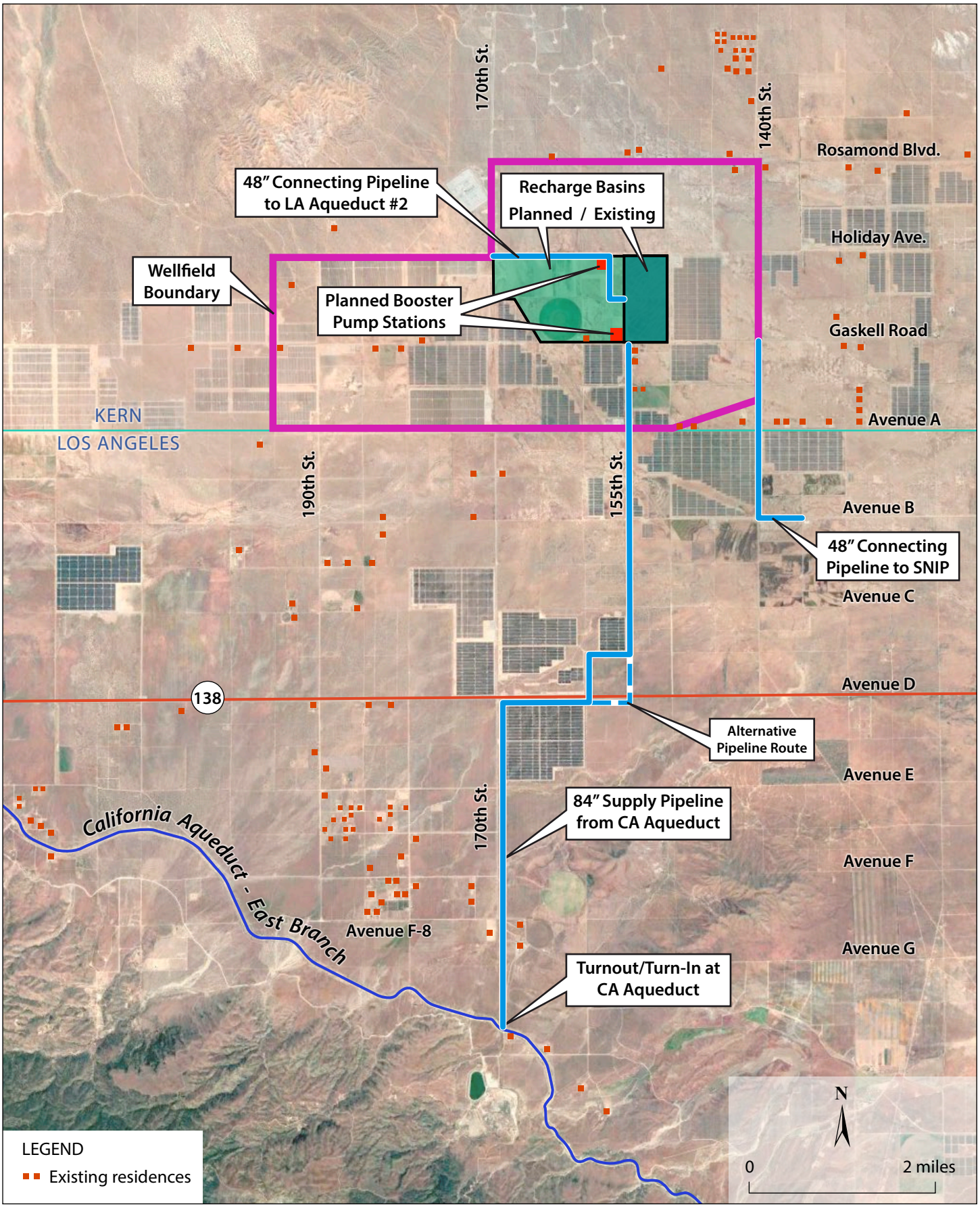
Figure 2



Source: WSWB, 2018

Planned Recovery Wells and Collection Pipes

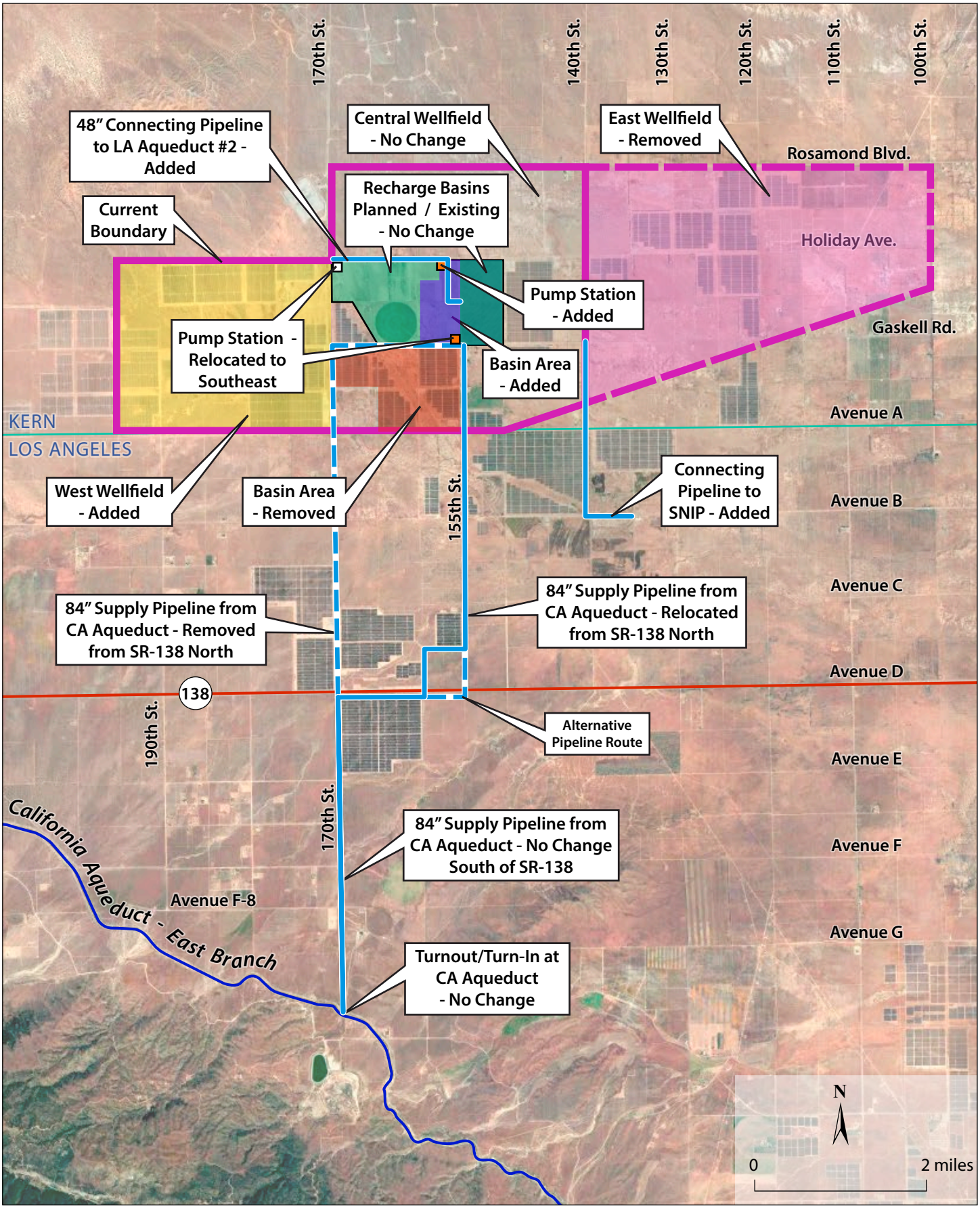
Figure 3



Sources: WSWB; Google Earth, 2018

Planned External Connections and Facilities

Figure 4



Source: WSWB; Google Earth, 2018

Modifications from 2006 Water Bank Plan

Figure 5

Willow Springs Water Bank Site

The WSWB project site is located at the junction of Avenue A and 170th Street in an unincorporated area of Kern County (see Figure 1). The main urban communities in the area include: the unincorporated community of Rosamond located approximately 10 miles east; the community of Mojave located about 18 miles northeast; the City of Lancaster located approximately 15 miles southeast; and the City of Palmdale located about 20 miles southeast of the project site. The main state highways in the area include State Route (SR) 138 (Avenue D) which runs east-west to the south of the WSWB project site, and SR-14 which runs north-south through the above communities to the east of the project site.

The WSWB project site encompasses of the planned recharge basin area and the wellfield areas, within a total land area of 8,650-acres (13.5 square miles) generally bounded on the north by Rosamond Boulevard, on the south by Avenue A, on the east by 140th Street, and on the west by 195th Street (see Figures 2 and 3). The project area is predominantly rural in character and sparsely populated with scattered residences. Within the WSWB project site there is one rural residence in the area planned for recharge basins, and 12 rural residences in the surrounding wellfield areas (see Figure 4). The former Skyotee Ranch Airport is located just south of the eastern recharge basins; however, this airfield is has ceased flight operations.

Much of the project area has been in agricultural cultivation, which in recent years has largely given way to renewable energy projects such as utility-scale solar and wind generation facilities (see Figure 6). This is particularly the case at the WSWB project site, which was largely in agricultural cultivation in 2006 when the EIR was certified, and is currently occupied by solar arrays on approximately 4,100 acres, or about 47 percent of the total water bank area. Agricultural cultivation now occurs on about 600 acres, or about seven percent of the WSWB project site. In addition, the Tehachapi Renewable Transmission Project, which passes diagonally through the water bank site just east of 170th Street, was constructed by SCE after the water bank project was approved in 2006, as was the accompanying SCE Whirlwind Substation located at the southwest corner of Rosamond Boulevard and 170th Street.

Off-site Facilities Settings

The WSWB project facilities include three off-site pipelines, including the supply lines from the California Aqueduct and the Los Angeles Aqueduct #2, and the connecting pipeline to the AVEK SNIP line, as described below (see Figure 4).

The main supply pipeline from the California Aqueduct will run south along or near 170th Street to Avenue D, where it turns east and then north along 155th Street to the water bank site. This supply pipelines runs through various types of terrain, including annual grasslands, an ephemeral drainage, Joshua tree woodland, and will also run alongside the AV Solar One facility. There are eight existing rural dwellings within one-quarter mile of the pipeline route, with the nearest dwellings located 300-350 feet away (see Figure 4).

The Los Angeles Aqueduct #2 runs along the west side of 170th Street through the WSWB project site. A 2-mile long connecting pipeline is planned to run beneath 170th Street commencing at Holiday Avenue, and will enter the WSWB on the east side of 170th Street. The terrain in the vicinity of the pipeline consists of annual grasslands and cultivated fields, with no rural dwellings in the vicinity.

The third off-site pipeline consists of a 2.5-mile long connecting pipeline extending south along 140th Street from the WSWB project site to AVEK's South-North Intertie Pipeline (SNIP). The terrain in the vicinity of this pipeline consists of annual grasslands, an ephemeral stream, solar arrays, and AVEK recharge basins. There are three rural residences in the vicinity of this pipeline alignment, all of which are located on the north side of Avenue A.

The nearest dwelling is located 800 feet west of the pipeline route, and the other two residences are located about 1,600 and 1,800 feet east of the pipeline route.

2.3. PROJECT OBJECTIVES

The objectives of the Antelope Valley Water Bank (AVWB) in 2006 are still applicable to the modified Willow Springs Water Bank (WSWB) project. The project objectives, as set forth in the 2006 EIR, are as follows:

The primary purpose of the project is to provide additional water storage to supply the needs of Antelope Valley and, potentially, other regions of southern California, through facilities that are of sufficient size and scope to be both cost effective and environmentally sound. The following objectives are intended to accomplish this purpose:

1. To import SWP water when it is available (typically wet years) for recharge and storage underground, and then recover it when needed.
2. To leave some of the recharged water in the aquifer to aid in recovery or to slow the decline of the water table.
3. To continue farming project lands using organic farming practices when the land is not being used for recharge purposes.
4. To construct a project that is designed to enhance water supply reliability and flexibility in a cost-effective and environmentally sound manner, help reduce the rate of aquifer overdraft, allow continuation of agricultural uses on project lands, and encourage conjunctive use, where appropriate.

2.4. PLANNED MODIFICATIONS TO THE WILLOW SPRINGS WATER BANK PROJECT

As described above, the planned modifications to the WSWB project include an overall reduction in the area of recharge basins, an increase in total number of recovery wells, and changes to the overall facilities layout plan including elimination of the eastern portion of the wellfield and expansion of the wellfield to the west, and modifications and additions to supply and distribution pipelines. The planned modifications to the major project elements are described in detail below, and summarized in Table 1.

WSWB – Project Area

Approved Project

The approved WSWB project covers an overall area of approximately 12,160 acres (~19 square miles) and is bounded by Rosamond Boulevard on the north, 100th Street on the east, Avenue A on the south, and 170th Avenue on the west. This area encompasses the recharge basin area and wellfield area planned in 2006.

Planned Project Modifications

Hydrogeologic engineering investigations conducted in 2014 determined that the geologic substrata to the west of 170th Street exhibit characteristics that are conducive to greater volumes of aquifer storage and recovery than the substrata located east of 140th Street. As such, the planned wellfield has been shifted westward to 195th Street to encompass an additional area of approximately 3,200 acres (see Figure 5 – Modifications from 2006 Water Bank Plan).

TABLE 1
SUMMARY OF MODIFICATIONS TO WATER BANK PROJECT

Project Element	Approved Water Bank Project (2006)	Modified Water Bank Project (2018)	Project Changes
Water Bank Land Area	12,160 acres (~19 sq. mi.)	8,650 acres (~13.5 sq. mi.)	Reduction of 3,510 acres (~5.5 sq. mi.)
Water Bank Storage Capacity (max)	500,000 AF	1,000,000 AF	Increase of 500,000 AF
Annual Recharge Capacity (max)	100,000 AF	250,000 AF	Increase of 150,000 AF
Annual Recovery Capacity (max)	100,000 AF	225,000 AF	Increase of 125,000 AF
Annual Period of Recharge	4-5 months (winter-spring)	12 months as needed in response to demand	Increase of 7-8 months of annual recharge
Recharge Basin Area	1,612 gross acres	1,106 gross acres	806 acres removed. 300 acres added. Net reduction of 506 acres.
Instantaneous Recharge Capacity	350 cfs	350 cfs	No change.
Recovery Wells	57 wells (propane) Max 466 hp	77 wells (electric) Max 300 hp	Increase of 20 wells Reduction of 166 hp in max pump power rating
Instantaneous Recovery Capacity	250 cfs	250 cfs	No change.
Collection Pipelines from Recovery Wells	18 miles	38 miles	Increase of 20 miles of collection pipeline
Supply Pipeline from CA Aqueduct	8.75 miles	9.2 miles	Increase of 0.45 miles of supply pipeline
Booster Pump Station at Recharge Basins	8,137 hp (propane)	17,600 hp (electric)	Increase of 9,463 hp in pump power rating
Regulating Reservoir at Pump Station	Storage capacity – 48 AF Land area – 12 acres	Storage capacity – 48 AF Land area – 12 acres	No change.
Supply Pipeline from LA Aqueduct #2	Not included	2.0 miles	Newly added 2.0 miles of supply pipeline
Booster Pump Station on LAA #2 Pipeline	Not included	3,300 hp (electric)	Newly added 3,300 hp booster pump station
Regulating Reservoir at Pump Station on LAA #2 Pipeline	No included	Storage capacity – 40 AF Land area – 10 acres	Newly added regulating reservoir with 40 AF capacity on 10 acres
Pipeline to AVEK West Feeder	4.0 miles (1.5 miles completed)	2.5-mile unconstructed segment removed from project.	Reduction of 2.5 miles of pipeline
Booster Pump Station at AVEK West Feeder	2,700 hp (propane)	Not included	Removal of 2,700 hp booster pump station
Connecting Pipeline to AVEK South-North Intertie Pipeline (SNIP)	Not included	2.5-mile pipeline	Newly added 2.5-mile connecting pipeline

Accordingly, the eastern portion of the approved wellfield, covering an area of approximately 6,710 acres located between 140th and 100th Streets, has been removed from the plan. Therefore, the total WSWB project area is planned to be reduced from a total 12,160 acres (~19 square miles) to 8,650 acres (~13.5 square miles), a net reduction of approximately 3,510 acres (~5.5 square miles), representing a 30 percent reduction in land area.

Recharge and Recovery Capacities

Approved Project

The approved WSWB project would have a maximum water storage capacity of 500,000 acre-feet (AF), with a maximum annual recharge volume of 100,000 AF, and a maximum annual recovery volume of 100,000 AF. Recharge operations were planned to occur over a 4 to 5 month period in the winter and spring, with the recovery period to occur over the remaining 7 to 8 months of the year.

Planned Modifications

The hydrological engineering investigations determined that the groundwater subbasin has sufficient capacity to allow for total water bank storage of 1 million AF of water. The maximum annual recharge volume would be increased to 250,000 AF, and the maximum annual recovery volume would be 225,000 AF. The planned WSWB operations have been modified to allow for recharge and recovery operations during 12 months of any given year, depending on variations in demand for storage and recovery.

Recharge Basins

Approved Project

The recharge basin area in the approved WSWB project encompasses an area of 1,612 gross acres (see Figure 5 – Modifications from 2006 Water Bank Plan). The approved recharge basin area is generally bounded by Holiday Avenue on the north, 150th Street on the east, Avenue A on the south, and 170th Street on the west. The first recharge basin, covering 160 gross acres is located northeast of 150th Street and Gaskell Road, was completed in 2007. The second recharge basin, covering 160 acres directly north of the first recharge basin, was completed in 2011. Instantaneous recharge capacity is 350 cubic feet per second (cfs).

Planned Modifications

Hydrogeologic engineering studies conducted in 2014 determined that a reduced recharge basin area would be capable of meeting the current objectives of the project. Accordingly, the WSWB project has been modified to remove 806 acres of planned recharge basin area located south of Gaskell Road. In order to provide greater contiguity in the remaining recharge basin area, several parcels totaling approximately 300 gross acres have been added to the planned recharge basin area. The total recharge basin area is planned cover 1,106 gross acres, of which 320 gross acres have been completed, leaving 786 gross acres to be constructed. Instantaneous recharge capacity would remain unchanged at 350 cfs.

Recovery Wells and Pipelines

Approved Project

The approved WSWB project would include a total of 57 recovery wells, including 52 new wells and 5 existing agricultural wells to be converted for water bank operations. In the 2006 EIR, all wells were assumed to be propane-fueled and would each have a power rating of up to 466 horsepower. A total of 18 miles of collection pipeline would carry the recovered water to a centrally-located booster pump station for conveyance to the California Aqueduct. Since 2006, six new recovery wells have been installed around the existing 320 acres of recharge basins. These wells have not been equipped with pumps or other equipment and are not operational.

Planned Modifications

The modified WSWB project would include a total of 77 recovery wells, including 6 existing agricultural wells to be converted for water bank operations. As mentioned, 6 of the 71 new wells have been constructed. The modified wellfield would include 38 miles of collection pipeline.

CA Aqueduct Supply Pipeline and Ancillary Facilities

Approved Project

The approved WSWB project includes an 8.75-mile long supply pipeline to convey State Water Project (SWP) from the East Branch of the California Aqueduct north to the water bank site. The 84-inch diameter pipeline would run along the east side of 170th Street north to the water bank. The pipeline would function as a two-way facility, allowing for withdrawals from the Aqueduct for recharge at the water bank, and subsequent conveyance of recovered water back to the Aqueduct. Due to the topographical down-gradient to the north, the incoming water would flow to the water bank by gravity. The recovered water would be pumped up-gradient back to the Aqueduct by a booster pump station located at 170th Street and Holiday Avenue. The 2006 EIR assumed the pump station would be propane-fueled and would have a power rating of up to 8,173 horsepower. In order to manage inflows, the booster pump station would include an adjacent regulating reservoir with a storage capacity of 48 AF and would occupy approximately 12 gross acres. In order to provide for diversion SWP water from California Aqueduct and subsequent conveyance of recovered water back to the Aqueduct, a "Turnout, Turn-in" structure would be constructed on about one acre on the south side of the Aqueduct at the 170th Street alignment.

Planned Modifications

The modified WSWB project includes the 84-inch supply pipeline from the California Aqueduct, but the pipeline route was been modified as follows (see Figure 4). Commencing from the Aqueduct the pipeline would follow the east side of 170th Street for approximately 3.7 miles to Avenue D (SR-138) where it would turn east and follow the Avenue D alignment for 1.0 miles, where it would head north for 0.5 miles, and then east for 0.5 miles to 155th Street. (An alternative alignment would extend along Avenue D east for 1.5 miles to 155th Street.) Then it would turn north and follow the 155th Street alignment for 4.0 miles to Gaskell Road. The total length of the modified supply pipeline route is approximately 9.2 miles. The location of the booster pump station would be changed to the northwest corner of Gaskell Road and 155th Street. The booster pump station would be powered by electricity and would have a power rating of 17,600 horsepower. The adjacent regulating reservoir would occupy approximately 12 acres and have a storage capacity of 48 AF, as in the approved project.

LA Aqueduct #2 Supply Pipeline and Ancillary Facilities

Approved Project

As mentioned previously, the Los Angeles Aqueduct #2 runs through the water bank site along the west side of 170th Avenue. This aqueduct is owned and operated by the Los Angeles Department of Water and Power (LADWP). Although a connection to this aqueduct was considered in the original water bank plan, it was not included in the approved WSWB project in 2006.

Planned Modifications

The modified WSWB project includes a newly planned connecting pipeline to the Los Angeles Aqueduct #2 as a source of supply water. A "turnout, turn-in" from the Aqueduct is planned to be located on the west side of 170th Street at Holiday Avenue. From this location, an approximately 2-mile long supply pipeline would run along the Holiday Avenue alignment to a booster pump station planned at Holiday Avenue and 155th Street. The supply pipeline would be 48 inches in diameter, and supply water would flow by gravity down-gradient eastward

from 170th Street to 155th Street, and would subsequently be pumped back to the aqueduct from the booster pump station. The pump station would be located at the southwest corner of Holiday Avenue and 155th Street and would be powered by electricity and have a power rating of 3,300 horsepower. The pump station would include an adjacent regulating reservoir with a storage capacity of 40 AF and would occupy approximately 10 gross acres.

Connecting Pipeline to AVEK West Feeder

Approved Project

The approved water bank project was to have been constructed in two separate phases, with the 84-inch supply pipeline from the California Aqueduct to be constructed in the second phase. The supply water for recharge operations in the first phase was to have been provided by the AVEK West Feeder which is an existing supply pipeline that connects to the California Aqueduct approximately 0.5 miles to the southeast of 170th Street, and extends northeasterly to the AVEK system (see Figure 2). The approved water bank project includes a 4-mile long connecting pipeline extending westward from the AVEK West Feeder at 140th Avenue and Gaskell Road, and follows Gaskell Road west for one mile to 150th Street, where it would turn north and run along 150th Street for one mile, and finally turning west and continuing to a booster pump station at 170th Street and Holiday Avenue. The approved project also included a booster pump station at the connection with the AVEK West Feeder at 140th Street and Gaskell Road. This booster pump would have a power rating of 2,700 horsepower, and was assumed in the 2006 FEIR to be fueled by propane.

Planned Modifications

The modified WSWB project is planned to include the connection to the 84-inch supply pipeline from the California Aqueduct at the outset, and thus would not rely on the AVEK West Feeder for interim supplies. As such, a connection to the AVEK West Feeder is not included in the modified project; additionally, the originally planned booster pump station at 140th Street and Gaskell is not included in the modified project for the same reason. It is noted that a 1.5-mile segment of the originally planned 54-inch connecting pipeline to the AVEK system, extending along Gaskell Road from 140th Street, was constructed in 2010 with funding through the American Recovery and Reinvestment Act (ARRA). The construction of the additional 2.5 miles of pipeline between 155th/Gaskell and 170th/Holiday is not required with the planned relocation of the main booster pump station to 155th/Gaskell, and therefore the remainder of this originally planned pipeline is not included in the modified project.

Connecting Pipeline to AVEK SNIP

Approved Project

The approved WSWB project does not include the currently planned pipeline connection to the AVEK South-North Intertie Pipeline (SNIP) and associated storage and chlorination facility located east of Avenue B and 135th Street to the southeast of the WSWB. This newly planned connecting pipeline is described below.

Planned Modifications

The modified WSWB project includes a newly planned 2.5-mile long connecting pipeline to the AVEK SNIP and related facilities located at Avenue B and 135h Street. The purpose of this pipeline is to convey recovered water from WSWB to the facilities for chlorination, storage in two existing water tanks, and distribution to domestic water customers. This 36- to 48-inch pipeline would commence at Gaskell Road and 140th Street, and run south along 140th Street to Avenue B where it would turn east and continue to the treatment facility at 135th Street.

Agricultural Operations

Approved Project

When the 2006 EIR was prepared, most of the planned recharge basin area of 1,612 acres was under agricultural cultivation. In order to maintain agricultural productivity of this land, the approved water bank project included plans to conduct organic farming within the recharge basins during the 7 to 8 months of the year when no recharge operations would occur.

Planned Modifications

As discussed above, the planned recharge basin area has been modified and now encompasses a total of approximately 1,106 gross acres. Approximately 320 gross acres are now occupied by recharge basins constructed since 2006. Approximately 266 additional acres have been taken out of agricultural production since 2006, leaving approximately 520 acres that are currently under cultivation within the planned recharge basin area. Since the modified WSWB project includes potential recharge operations at any time during the year, organic farming is no longer planned. Instead, the modified project is planned to maintain agricultural activity on these lands through cattle and sheep grazing to manage vegetation in the recharge basins.

Recreational Access

Approved Project

After completion of the 320 acres of recharge basins since 2006, it has been observed that recreationalists occasionally visit the recharge basins when basins are flooded for the purpose of bird watching and hiking. This recreational informal recreational activity was not contemplated prior to 2006 and is not recognized in the approved project or addressed in the 2006 EIR.

Planned Modifications

The modified WSWB project includes no formal plans for recreation and includes no facilities or improvements to support recreational use of the recharge basin area. However, the modified plan recognizes that informal recreational use will occur and includes no plans to prohibit or preclude such use. It is expected that bird watching and hiking will occur around the perimeter of the existing 320 acres of recharge basins, providing a total perimeter hiking distance of approximately 3.0 miles. The modified WSWB project includes no plans for trail improvements, parking areas, restrooms, picnic tables, or any other facilities to support recreation. However, the basin perimeters berms are adequate for informal hiking and there is a sufficient amount of unused level area at the southwest corner of the completed recharge basins to accommodate informal parking of recreational user vehicles. The general level of recreational activity at the basins is very low and is expected to remain so given the general remoteness of the WSWB from the nearest population centers. As such, occasional recreational activity is not anticipated to adversely affect WSWB operations.

Construction Phasing

Approved Project

The approved project evaluated in the 2006 EIR was planned to be constructed in two separate phases. The first phase was to be completed in six months. After completion of the first phase there was to be a pause of one year prior to starting construction on the second phase. The second phase was to be completed in one year. The total time elapsed between the start of the first phase and completion of the second phase was planned to be 2.5 years.

Planned Modifications

The modified WSWB project is planned to be constructed continuously over a 4-year period. For purposes of this analysis, it is assumed that construction would commence in early 2019 and be completed in late 2022. The following is a list of project elements planned to be constructed in each year.

Year 1
- Supply pipeline from California Aqueduct (LA County segments), including turnout, turn-in at Aqueduct
- Supply pipeline from LA Aqueduct (including booster pump station and regulating reservoir)
- Recovery Wells (7) in Southwest Wellfield (including collection pipeline)

Year 2
- Supply pipeline from California Aqueduct (Kern County segments), including booster pump station and regulating reservoir at Gaskell/155th Street
- Recharge basins (first 393 gross acres), including distribution pipeline and turnouts
- Recovery wells (10) in Southwest Wellfield (including collection pipeline)

Year 3
- Recharge basins (remaining 393 gross acres), including distribution pipeline and turnouts
- Recovery wells (28) in Central Wellfield (including collection pipeline)

Year 4
- Recovery wells (26) in West Wellfield (including collection pipeline)
- Connection Pipeline to SNIP

2.5. DISCRETIONARY APPROVALS

Kern County

Approved Project

On September 12, 2006, the Kern County Board of Supervisors approved amendments to the Willow Springs Specific Plan necessary for the construction and operation of the Antelope Valley Water Bank (current Willow Springs Water Bank). The project was approved on the condition that future owners and operators of the water bank would be bound by all requirements of Kern County's "A (Exclusive Agriculture) Zoning Ordinance, the certified Final EIR and the Mitigation Monitoring and Reporting Program (MMRP). On April 17, 2007, the Kern County Board of Supervisors approved the executed Memorandum of Understanding (MOU) between the County and the owner-operator of the water bank. The implementation of the MOU satisfies the conditions of approval. (The MOU is contained in Appendix A of this document.)

Planned Modifications

The planned modifications to the WSWB, described above, are not subject to additional discretionary approvals from Kern County. The WSWB project site lies entirely with the planning area of the Willow Springs Specific Plan (WSSP) of the County General Plan. Under the WSSP, approximately 340 acres of the planned recharge basin area have a base land use designation of "8.1 (Intensive Agriculture [Min. 20 Acre Parcel Size])", and approximately 766 acres are designated "8.5 (Resource Management [Min. 20 Acre Parcel Size])" (Kern County 1992, WSSP as amended, Exhibit A). Both of these land use designations include "recharge basins" as a permitted use (Kern County General Plan, pp. 53-55). Since "recharge basins" are a permitted use over the

entire 1,106 acres planned for recharge basins, no amendment to the Willow Springs Specific Plan is required for the modified project.

Under the Kern County Zoning Ordinance, all lands within the planned recharge basin area are zoned "A FPS" meaning that these lands lie within the "Exclusive Agriculture (A) District" and have an overlay zone of "Flood Protection Secondary Combining District." The "A" zoning district specifically allows "water storage or groundwater recharge facilities" without the issuance of a conditional use permit (Kern County Zoning Ordinance Section 19.12.020(F)). The "FPS" combining zone does not require a conditional use permit if the base zoning district (i.e., "A") does not require a conditional use permit for the planned use (i.e., recharge basins)(Kern County Zoning Ordinance Section 19.70.30). Therefore, no conditional use permit is required for the construction of recharge basins under the modified project plan. It is noted that the "A" base zoning district is deemed to be consistent with the WSSP base land use designations applicable to the recharge basin area (i.e., "8.1 (Intensive Agriculture)" and "8.5 (Resource Management)" (Kern County 1992, WSSP, General Plan Land Use & Zoning Consistency Matrix, after p. B-56).

The Kern County Zoning Ordinance, Section 19.08.360 (Large Water Systems – Aboveground Facilities) states: "…above ground structures related to large water systems, excluding well heads, well housing, booster pumps, small pressure tanks, and similar small aboveground structures, as determined by the Planning Director, shall require the processing of a conditional use permit … in the R-1, R-2, R-3, E (1/4), E (1/2), and E (1) Districts." There are no lands within the 8,650-acre WSWB site that are subject to the referenced zoning districts. There are no "R" zones within the project site, and the only "E" zones within the project site consist of the "E-2½" and "E-5" zones which are not subject to this ordinance section. As such, no large aboveground facilities or small aboveground facilities within the WSWB project site are subject to the issuance of a conditional use permit. Therefore, no conditional use permit from Kern County is required for any infrastructure planned to be constructed under the modified WSWB plan.

In summary, no amendments to the Willow Springs Specific Plan or the Kern County Zoning Ordinance are required for the modified WSWB project, and no conditional use permits are required from Kern County for any land uses or activities planned under the modified project. Therefore, no discretionary approvals of any kind are required from Kern County for the modified WSWB project.

Los Angeles County

Zoning

Two project elements extend south into Los Angeles County. These include: the 84-inch supply pipeline extending from the California Aqueduct northward to the water bank site; and the connecting pipeline from the Water Bank site to SNIP at Avenue B and 135th Street. According to the Los Angeles County Zoning Map, all of the properties along the pipeline alignments are zoned as A-2 (Heavy Agriculture). The Los Angeles County Code lists uses that are permitted in the A-2 Zoning District, including the following uses, subject to approval of a conditional use permit (Los Angeles County Code §22.16.030):

> "Water reservoirs, dams, treatment plants, gauging stations, pumping stations, tanks, wells, and any use normal and appurtenant to the storage and distribution of water."

The installation of a new pipeline within Los Angeles County is considered a use "appurtenant to the storage and distribution of water." Therefore, a Conditional Use Permit will be required for construction of the above pipelines within Los Angeles County.

Joshua Tree Significant Ecological Area (SEA)

An approximately ½ mile segment of the 84-inch supply pipeline, between Avenue C and Avenue B-8, will pass through lands that have been designated by Los Angeles County as "Joshua Tree SEA." As such, this portion of the pipeline is subject to the County's SEA Ordinance and the accompanying SEA Implementation Guide (LA County 2018a and 2018b). Under the SEA Ordinance, any project that would result in disturbance of over 500 square feet of land within an SEA is subject to an SEA Conditional Use Permit (SEA CUP), which is separate and distinct from the project CUP described above (Los Angeles County Code §22.102.070). The connecting pipeline to the AVEK SNIP pipeline would not pass through the Joshua Tree SEA.

Rosamond Community Services District

Project authorization will be undertaken by Rosamond CSD which will also adopt this EIR Addendum in its role as Responsible Agency under CEQA. The Rosamond CSD is a member agency of the Southern California Water Bank Authority (SCWBA) which is responsible for the development and operation of the Willow Springs Water Bank.

2.6. CHANGES IN SITE CONDITIONS

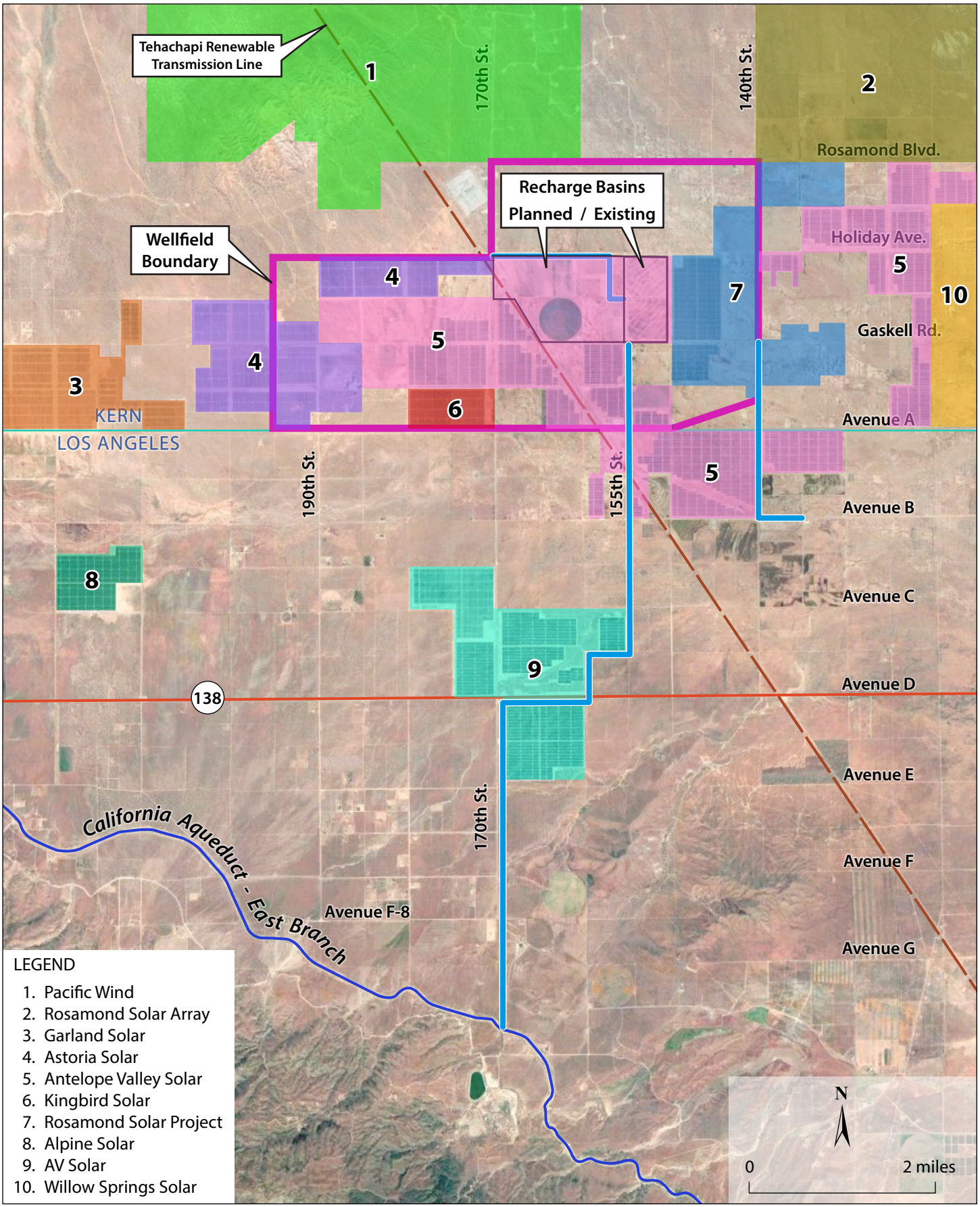
Since the time that the project EIR was certified in 2006, there have been a number of changes to the project site and its biological setting. Foremost among them are the four utility-scale solar generating facilities that have been approved and constructed on land that overlaps the water bank area. Approximately 5,700 acres of solar facilities have been approved within the 8,650-acre modified water bank site, of which approximately 4,100 acres have been constructed. Also, five other solar projects and one wind generation project have been constructed on lands in the project vicinity. In addition, a segment of the Tehachapi Renewable Transmission Project has been constructed through a portion of the water bank site, with the transmission right-of-way traversing approximately 2.2 miles within the site. The completed or partially projects that overlap or are adjacent to the project site are described below and shown in Figure 6.

Other physical changes to the project setting have occurred since 2006 which are relevant to the environmental categories discussed in Chapter 4. These resource-specific changes to the project setting are described in the opening discussion for each environmental category.

The following four solar projects overlap the modified water bank site:

Antelope Valley Solar. Also known as "Solar Star," this 650-MW solar generating facility (SGF) is located on approximately 4,642 acres in Kern and Los Angeles Counties. The SGF covers a number of discontiguous parcels extending from Rosamond Boulevard in the North to Avenue B in the south, and from 105th Street in the east to 170th Street in the west (Kern County 2011). An approximately 3,300-acre portion of this SGF overlaps the modified water bank site. The Antelope Valley Solar Project was largely completed in 2014.

Rosamond Solar Project. This 390-MW solar project is located on an irregularly shaped site totaling approximately 1,846 acres, and extends from Rosamond Boulevard in the north to Kingbird Avenue in the south, and from 130th Street in the east to 150th Street in the west (Kern County 2010b). An approximately 1,100-acre portion of this SGF overlaps the eastern portion of modified water bank site. The Rosamond Solar Project was largely completed in 2016.



Source: Kern County; Google Earth, 2018

Solar and Wind Projects in Vicinity

Figure 6

Astoria Solar. This 175-MW solar project is located on two discontiguous sites totaling approximately 2,060 acres, and extends from Holiday Avenue in the north to Avenue A in the south, and from 170th Street in the east to 205th Street in the west (Kern County 2014b). An approximately 1,100-acre portion of this SGF overlaps the western and northwestern portions of modified water bank site. The Astoria Solar Project was largely completed in 2016.

Kingbird Solar. This 40-MW solar project is located on an approximately 324-acre site at the northwest corner of 170th Street and Avenue A (Kern County 2013). The entire Kingbird Solar Project lies within the boundaries of the modified water bank site. The Kingbird Solar Project was completed in 2015.

The following projects are adjacent to or within two miles of the modified water bank site:

AV Solar One. This 230-megawatt (MW) solar project is located in Los Angeles County on approximately 2,100 acres along both sides of 170th Street between Avenue B-8 and Avenue E (LA County 2010). The AV Solar One project is located about 1.5 miles south of the modified water bank site, and is adjacent to segments of the 84-inch supply pipeline. The AV Solar One project was completed in 2014.

Rosamond Solar Array. This 150-MW solar project is located on an approximately 2,057-acre site at the northeast corner of 140th Street and Rosamond Boulevard (Kern County 2014a). The Rosamond Solar Array lies adjacent to and entirely outside modified water bank site at this northeast corner. This SGF had not commenced construction as of July 2018.

Garland Solar. This 200-MW solar project is located on an irregularly-shaped site of approximately 1,175 acres, and extends from Patterson Road (Willow) on the north to Avenue A on the south, and from 205th Street on the east to 240th Street on the west (Kern County 2015). The Garland Solar Project is located one mile west of the western boundary of the modified water bank site. The Garland Solar Project was completed in 2017.

Willow Springs Solar. This 150-MW solar project is on an approximately 1,400-acre site located between Rosamond Boulevard on the north and Avenue A on the south, and between 100th Street on the east and 120th Street on the west (Kern County 2016a). This SGF is located two miles east of the eastern boundary of the modified water bank site. The Willow Springs Solar project had not commenced construction as of July 2018.

Alpine Solar. This 92-MW solar project is located in Los Angeles County on an approximately 835-acre site between Avenue B on the north and Avenue C on the south, and between 220th Street and 230th Street (LA County 2011). This SGF is located two miles southwest of the southwestern corner of the modified water bank site. The Alpine Solar Project was largely completed in 2012.

Pacific Wind Energy Project. This 250-MW wind generation project occupies an approximately 8,300-acre site generally located north of Rosamond Boulevard and east of 160th Street (Kern County 2010a). The Pacific Wind project site is adjacent to a portion of the northern boundary of the modified water bank site. As of July 2018, the southeastern portion of the Pacific Wind project had been completed.

Tehachapi Renewables Transmission Project (TRTP). This 173-mile transmission project was constructed by Southern California Edison to convey wind and solar generated power from southern Kern County to urbanized Los Angeles County and on to the Chino Hills in San Bernardino County (CPUC 2009). An approximately 2.2-mile segment of TRTP passes through the modified water bank site within a 200-foot wide easement. The portion of the TRTP passing through the water bank site was completed in 2012.

3. ENVIRONMENTAL CHECKLIST

3.1. EXPLANATION OF CHECKLIST EVALUATION CATEGORIES

For each environmental category analyzed in this chapter, a checklist is provided at the beginning of the discussions to serve as a framework for evaluating any "changed condition" (i.e., changed circumstances, project changes, or new information of substantial importance) that may result in environmental impact significance conclusions different from those found in the 2006 EIR. The row titles of the checklist include the full range of environmental topics, as presented in CEQA Appendix G of the State CEQA Guidelines. The column headings of the checklist have been modified from the CEQA Appendix G checklist to help answer the questions to be addressed pursuant to CEQA Section 21166 and State CEQA Guidelines Section 15162. A "no" answer does not necessarily mean that there are no potential impacts relative to the environmental category, but indicates that there is no change in the condition or status of the impact because it was analyzed and addressed with mitigation measures in the 2006 EIR. For instance, the environmental categories might be answered with a "no" in the checklist because the impacts associated with the modified project were adequately addressed in the EIR, and the environmental impact significance conclusions of the EIR remain applicable. The purpose of each column of the checklist is described below.

Where in the 2006 EIR was the Impact Analyzed?

This column provides a cross-reference to the pages of the EIR where information and analysis may be found relative to the environmental issue listed under each topic. Unless otherwise specified, all references point to the 2006 EIR.

Would Modified Project Involve New or Substantially More Severe Significant Impacts?

The significance of the changes proposed to the approved WSWB, as it is described in the certified 2006 EIR, is indicated in the adjacent columns, described below.

Changes to the Project

Pursuant to Section 15162(a)(1) of the CEQA Guidelines, this column indicates whether the project, as modified, would result in new significant environmental effects or a substantial increase in the severity of previously identified effects.

Changes in Circumstances

Pursuant to Section 15162(a)(2) of the CEQA Guidelines, this column indicates whether there have been changes in circumstances under which the project is undertaken (i.e., changes to the project site or the vicinity) that have occurred subsequent to the certification of the 2006 EIR, which would result in the modified project having new significant environmental impacts that were not considered in the 2006 EIR or would result in substantial increases in the severity of previously identified significant impacts in the 2006 EIR.

New Information of Substantial Importance

Pursuant to Section 15162(a)(3)(A-D) of the CEQA Guidelines, this column indicates whether new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous environmental documents were certified as complete is available, requiring an update to the analysis of the previous environmental documents to verify that the environmental conclusions and mitigation measures remain valid. If the new information shows that: (A) the

project will have one or more significant effects not discussed in the 2006 EIR; or (B) that significant effects previously examined will be substantially more severe than shown in the 2006 EIR; or (C) that mitigation measures or alternatives previously found not to be feasible in the 2006 EIR would in fact be feasible and would substantially reduce one or more significant effects or the project, but the project proponents decline to adopt the Mitigation Measure or alternative; or (D) that mitigation measures or alternatives which are considerably different from those analyzed in the 2006 EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the Mitigation Measure or alternative, the question would be answered "yes" requiring the preparation of a subsequent EIR or supplement to the EIR. However, if the additional analysis completed as part of this Environmental Checklist Review finds that the conclusions of the 2006 EIR remain the same and no new significant impacts are identified, or identified significant environmental impacts are not found to be substantially more severe, the question would be answered "no" and no additional EIR documentation (supplement to the EIR or subsequent EIR) would be required.

Notably, where the only basis for preparing a subsequent EIR or a supplement to a certified EIR is a new significant impact or a substantial increase in the severity of a previously identified impact, the need for the new EIR can be avoided if the project applicant agrees to one or more mitigation measures that can reduce the significant effect(s) at issue to less than significant levels. (See *River Valley Preservation Project v. Metropolitan Transit Development Board* (1995) 37 Cal.App.4th 154, 168.)

Do Prior Environmental Documents Mitigations Address/Resolve Impacts?

This column indicates whether the 2006 EIR and adopted Mitigation Monitoring and Reporting Program (MMRP) provide mitigation measures to address effects in the related impact category. If "NA" is indicated, this Environmental Checklist Review concludes that there was no impact, or the impact was less-than-significant and, therefore, no mitigation measures are needed. (Note: The MMRP for the 2006 EIR is incorporated into the MOU contained in Appendix A of this document.)

3.2. ENVIRONMENTAL EVALUATION SECTIONS

Environmental Evaluation

A discussion of the elements of the checklist is provided under each environmental category to clarify the answers. The discussion summarizes the analysis of the 2006 EIR with respect to approved water bank project, and reevaluates the checklist questions relative to the modified project, and indicates whether the impact conclusions of the 2006 EIR remain valid and applicable to the modified project.

Mitigation Measures

The mitigation measures from the 2006 EIR are listed for each environmental category. In some instances, mitigation language is updated as appropriate to reflect the current conditions or to bring them in line with current standards of practice.

Conclusions

A conclusion regarding the validity and applicability of the impact analyses from the 2006 EIR to the modified project is contained in each section.

4. ENVIRONMENTAL EVALUATION

4.1. AESTHETICS

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
1. Aesthetics. Would the project:					
a) Have a substantial adverse effect on a scenic vista?	Appendix A – NOP 2. Environmental Checklist, p. 2-4.	No	No	No	NA (Impact was and remains less than significant.)
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	Appendix A – NOP 2. Environmental Checklist, p. 2-4.	No	No	No	NA (Impact was and remains less than significant.)
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	Appendix A – NOP 2. Environmental Checklist, p. 2-4.	No	No	No	NA (Impact was and remains less than significant.)
d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?	Appendix A – NOP 2. Environmental Checklist, p. 2-4.	No	No	No	NA (Impact was and remains less than significant.)

[Note: In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made an initial determination, through completion of the CEQA Initial Study/Environmental Checklist, that there were no potential significant aesthetic impacts associated with the project, and therefore the subject of Aesthetics was not carried forward for detailed evaluation in the 2006 EIR.]

4.1.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of aesthetic impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. The modified project is described in detail in

Section 2.4 and the differences between the modified project and the previously approved water bank project are fully described in that section and illustrated in the accompanying figures.

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since the preparation of the 2006 EIR, the project setting has undergone substantial visual changes with the installation of several large solar generating facilities within and around the water bank area as well as the construction of extensive wind generating facilities to the north and west. In addition, the SCE's Tehachapi Renewable Transmission Project has been completed, a segment of which passes through the project site. (See Section 2.6 for a description of these projects.) These new built environment features have visually altered the landscape, but due to their relatively low profile and/or low intensity land use, have not changed the setting to an urbanized condition. Much of the rural character is retained, so the area can be best described as semi-rural.

New Information

No new information relevant to aesthetics has become available since the 2006 EIR was prepared.

4.1.2. Environmental Evaluation

a) Have a substantial adverse effect on a scenic vista?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would not be within a scenic vista and would have no impact on a scenic vista. Therefore, this issue was not addressed further in the body of the EIR. This condition remains the same and the modified project would similarly have no impact on a scenic vista.

b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is not located near any historical buildings, trees, or rock outcroppings, and that the project is not near any designated scenic highways or near any highways that are eligible for such designation, and as such the project would result in no impacts such scenic resources. Therefore, this issue was not addressed further in the body of the EIR. These conditions remain the same for the modified project area, and so the modified project would similarly have no impact on scenic resources.

c) Substantially degrade the existing visual character or quality of the site and its surroundings?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is not located near any historical buildings, trees, or rock outcroppings, and that the project would not substantially degrade the existing visual character or quality of the site and its surroundings, primarily because most of the project facilities would be underground or would have a very low visual profile. Therefore, this issue was not addressed further in the body of the EIR.

As mentioned above, the visual character of the setting has been substantially altered by the introduction of several large solar generating facilities and wind generating facilities to the area.

Modified water bank project would also largely involve underground facilities, or would consist of low profile recharge basins, wells, and pump stations located between and around the solar facilities. The modification of the water bank project to relocate a portion of the wellfield west of 170th Avenue would result in very minor visual changes since the wellheads would small in scale and would be largely obscured by solar arrays. As such, the impact of the modified project on the visual character or quality of the site and its surroundings would remain less than significant. Therefore, the conclusion from the NOP/Initial Study in the 2006 EIR that the project would not result in a significant change in the visual character of the area is still valid and applicable to the modified project.

d) Create a new source of substantial light or glare, which would adversely affect day or nighttime views in the area?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would create a new source of substantial light or glare. At most, it was stated that the recharge basins may introduce a new source of glare when they are flooded, but that this would be similar to flooded farm fields and the glare impact would be less than significant.

The modified project would reduce the overall area of planned recharge basins (i.e., from 1,620 acres of basins originally planned to 1,106 acres currently planned, of which 320 acres have been constructed). Also, the basin areas would be largely screened from public view by existing solar arrays on the surrounding lands. The project would not include permanent night lighting, so there would not be light or glare from this source. Thus, the modified project would not introduce a new source of substantial light or glare to the area, and the impact would remain less than significant. Therefore, the conclusion from the NOP/Initial Study in the 2006 EIR that the project would not result in substantial light and glare is still valid and applicable to the modified project.

Cumulative Impacts

The solar and wind projects that have been constructed within and around the project site since 2006 have collectively resulted in substantial visual changes to the area since the 2006 EIR was prepared. The modified project would be very similar in character to the approved project in that most project facilities would be located underground (e.g., wells and pipelines), while others would be visible but unobtrusive (e.g., lift stations, wellhead equipment); and the recharge basins would be low in profile and not visible from public roadways, in addition to being substantially reduced in area relative to recharge basins approved in 2006. Given that the modified project would have very few structural elements located above the existing ground surface elevations, the project contribution to any cumulative aesthetic impact would not be cumulatively considerable. Therefore, the cumulative aesthetic impacts associated with the modified project would be less than significant.

4.1.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing aesthetic impacts, and no new mitigation measures for aesthetic impacts are required for the modified project.

4.1.4. Conclusion

The modified project would not involve new or substantially more severe significant aesthetic impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to aesthetic impacts remain valid and are applicable to the modified project without the need for further analysis.

4.2. AGRICULTURE AND FORESTRY RESOURCES

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
2. Agriculture and Forestry Resources. Would the project:					
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	Impact 4.1-1 (pp. 4.1-9, -10.)	No	No	No	NA (Impact was and remains less than significant.)
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	Impact 4.1-2 (p. 4.1-11.)	No	No	No	NA (Impact was and remains less than significant.)
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?	Not applicable in 2006. (This criterion was not in the CEQA Appendix G Checklist when the 2006 EIR was certified.)	No	No	No	NA No impact.
d) Result in the loss of forest land or conversion of forest land to non-forest use?	Not applicable in 2006. (This criterion was not in the CEQA Appendix G Checklist when the 2006 EIR was certified.)	No	No	No	NA No impact.
e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use, or the conversion of forest land to non-forest use?	Impact 4.1-3 (pp. 4.1-11, -12.).	No	No	No	NA (Impact was and remains less than significant.)
	Impact 4.1-4 (pp. 4.1-12, -13.)	No	No	No	Yes
	Forest land not applicable in 2006. (This criterion was not in the CEQA Appendix G Checklist when the 2006 EIR was certified.)	No	No	No	NA No impact

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
2. Agriculture and Forestry Resources. Would the project:					
f) Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Public Resources Code Section 15206(b)(3)).	Impact 4.4-5. (p. 4.1-13.) (Note: This is a Kern County criterion only; it is not included in the State CEQA Guidelines Appendix G Checklist.)	No	No	No	NA (Impact was and remains less than significant.)

4.2.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of impacts to agricultural resources. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward relative to the approved project boundaries. In particular, the planned wellfield has been shifted westward to 195th Street to encompass an additional area of approximately 3,200 acres (see Figure 5 – Modifications from the 2006 Water Bank Plan). Accordingly, the eastern portion of the approved wellfield, covering an area of approximately 6,710 acres located between 140th and 100th Streets, has been removed from the plan. The modified project is described in detail in Section 2.4 and the differences between the modified project and the previously approved project are fully described in that section and illustrated in the accompanying figures.

Changes in Project Circumstances and Setting

Since certification of the EIR in 2006, the most notable change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. This has resulted in the conversion of farmland in the project area, including the western project expansion area, as described in the impact discussions below. The projects that have been approved and constructed within and near the project site are described in Section 2.6 and are shown in Figure 6.

Since 2006, there have been no changes to the zoning or other aspects of the regulatory context of the project with respect to agricultural resources.

Since the preparation of the EIR in 2006, the CEQA Appendix G Checklist has been modified to add analysis of forestry resources to the Agricultural Resources section. The newly added Checklist questions are addressed in the impact discussions below.

New Information

Since the EIR was prepared in 2006, the lands within the water bank site that are mapped as "Farmland" under the California Department of Conservation's (CDOC) Farmland Mapping and Monitoring Program (FMMP) have been reduced substantially. Similarly, lands with the water bank site that are subject to Williamson Act Land Conservation Contracts have also been substantially reduced. Both of these changed circumstances are discussed in the corresponding impact discussions below.

4.2.2. Environmental Evaluation

a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?

The 2006 EIR addresses farmland conversion in ***Impact 4.1-1***. The EIR found that the approved project was expected to affect approximately 1,763 acres of "Farmland" as then mapped by the California Department of Conservation (CDOC) under the Farmland Mapping and Monitoring Program (FMMP). Of this total area, approximately 1,570 acres were located in the approved recharge basin areas. The remaining 193 acres comprised agricultural lands that would be temporarily affected by pipeline construction or minimally affected by well construction, and would not result in significant conversion of "Farmland." Since the approved project included organic farming within the recharge basins during the 7 to 8 months of the year when they were not flooded for recharge operations, the approved project would not convert "Farmland" to non-agricultural use, and the impact was concluded to be less than significant.

Much of the land that was mapped "Farmland" in 2006 has since been converted from agricultural use to solar generating facilities, or comprises lands that have been approved for solar development where agricultural cultivation has been discontinued. This is reflected in the current FMMP Important Farmland maps which are revised every two years to reflect changes in actual agricultural activity, with the latest FMMP mapping for Kern and Los Angeles Counties published in 2017. According to the 2017 FMMP mapping of Important Farmlands at the WSWB project site, the total area of "Farmland" within the modified project site is approximately 595 acres, with the remainder comprising "Grazing Land" and "Urban and Built-up Land," neither of which is included in the farmland categories that comprise "Farmlands" under CEQA (CDOC 2017a, 2017b). Within the modified recharge basin area, there are approximately 240 acres of lands mapped as "Farmland." A small amount of the remaining 355 acres of "Farmland" within the modified project area would be temporarily affected by pipeline construction or minimally affected by well construction, although most if not all of these facilities would be constructed at the edges of fields where no cultivation occurs. Within the off-site pipeline alignments that extend south into Los Angeles County (i.e., California Aqueduct supply line, and connecting pipeline to SNIP), all of these lands are mapped as "Grazing Lands" or "Urban and Built-up Land," and therefore these facilities would have no effect on "Farmlands."

In the modified WSWB project, the planned recharge basin area has been reduced from approximately 1,630 gross acres to approximately 1,106 gross acres, which includes 320 gross acres of recharge basins that have been constructed since 2006. Of the remaining lands planned for recharge basins in the modified project, approximately 786 acres of recharge basins remain to be constructed, of which approximately 240 acres are mapped as "Farmland" in the current FMMP mapping. Under the modified project operations, recharge

activities can take place any time during the year depending on availability of imported water. This operational flexibility does not permit seasonal cultivation of crops which require predictable and stable seasons when planting, growing, and harvesting can occur without disruption by flooding for recharge operations. As such, the modified project includes a program of cattle and sheep grazing in order to manage and control vegetation growth throughout the 1,106-acre recharge basin area, including the 240-acre area of mapped "Farmland." In this manner, the agricultural use of the land would be maintained, and the 240 acres of "Farmland" would not be converted to non-agricultural uses. Therefore, the impact of the modified project upon "Farmland" would be less than significant.

In summary, the modified project would not result in a new or more severe significant impact to "Farmland" than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact to Farmland in the 2006 EIR is still valid and applicable to the modified project.

b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?

Kern County

The 2006 EIR addresses the potential for zoning and Williamson Act conflicts in ***Impact 4.1-2***. Within the approved water bank project, all of the lands approved for recharge basins were zoned Exclusive Agriculture (A) under the Kern County Zoning Ordinance, and all of the lands planned for recharge basins in the modified project are also zoned Exclusive Agriculture (A). The "A" zoning district specifically allows "water storage or groundwater recharge facilities" without the issuance of a conditional use permit (Kern County Zoning Ordinance Section 19.12.020(F)). As discussed in Section *2.5. Discretionary Approvals*, all of the pipelines, wells, and other water bank infrastructure are permitted without a conditional use permit under the zoning designations that apply to the modified project area. Therefore, the modified project would not conflict with the applicable agricultural zoning of the Kern County Zoning Ordinance, and the conclusion of less-than-significant impact with respect to conflicts with Kern County zoning in the 2006 EIR remains valid and is applicable to the modified project.

In the approved water bank project, the 2006 EIR indicates that 959 acres within the planned recharge basin area were subject to Williamson Act Land Conservation Contracts. The then-planned organic farming within these areas was deemed to be compatible use under the Williamson Act, and therefore no conflict with a Williamson Act contract would occur under the approved project. Under the modified project, approximately 40 acres of the 1,106-acre recharge basin area are under Williamson Act Contract according to the latest CDOC mapping published in 2013 (CDOC 2013). Under the modified project, the planned maintenance of agricultural use by grazing of cattle and sheep within the recharge basin areas is considered a compatible use under the Williamson Act. Therefore, the modified project would not conflict with a Williamson Act contract, and the conclusion of a less-than-significant impact with respect to Williamson Act conflicts in Kern County in the 2006 EIR is still valid and applicable to the modified project.

Los Angeles County

The approved water bank project includes the 84-inch supply pipeline extending from the California Aqueduct northward along 170th Avenue in Los Angeles County to the county line at Avenue A. The 2006 EIR discussed that the applicable LA County zoning districts on adjacent lands are the A-1 (Light Agriculture) and A-2 (Heavy Agriculture) districts. Both zoning districts allow the following uses relevant to the water bank subject to approval of a conditional use permit: "Water reservoirs, dams, treatment plants, gauging stations, pumping stations, tanks, wells, and any use normal and appurtenant to the storage and distribution of water" (County of Los Angeles 2009, §22.24.100). Pipelines are considered "normal and

appurtenant" uses to the water bank project. Therefore, the approved project did not conflict with the Los Angeles County Zoning Ordinance, and the impact was found to be less than significant.

The modified project plan includes the 84-inch supply pipeline from the California Aqueduct, although the pipeline would follow a modified alignment. In addition, the modified project includes a newly planned connecting pipeline to SNIP, and a portion of that pipeline will also be located in LA County. All of the lands traversed by the two pipelines are in the A-1 or A-2 zoning districts where pipelines are a permitted use. Therefore, the modified project would not conflict with the applicable agricultural zoning of the Los Angeles County Zoning Ordinance, and the conclusion of a less-than-significant impact with respect to conflicts with Los Angeles County zoning in the 2006 EIR is still valid and applicable to the modified project.

According to the California Department of Conservation, Los Angeles County does not participate in the Williamson Act Program. As such, there were no Williamson Act contracts in effect in Los Angeles County in the vicinity of the approved project, and thus there are no conflicts with Williamson Act contracts under the approved project. Likewise, there are no conflicts with Williamson Act contracts in Los Angeles County under the approved project, and the conclusion of a less-than-significant impact with respect to Williamson Act conflicts in Los Angeles County in the 2006 EIR is remains valid and is applicable to the modified project.

c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined by Public Resources Code section 4526), or timberland zoned Timberland Production (as defined by Government Code section 51104(g)?

This checklist question from Appendix G of the CEQA Guidelines was added after the certification of the 2006 EIR and therefore this question was not applicable to the 2006 EIR.

Neither the modified project site nor other lands in the site vicinity are currently zoned forest land, timberland, or Timberland Production per the cited statutes. As such, the modified project would not conflict with existing zoning for, or cause rezoning of such lands. Therefore, the modified project would have no impact in terms of potential conflicts with zoning for forest land or timberland.

d) Result in the loss of forest land or conversion of forest land to non-forest use?

This checklist question from Appendix G of the CEQA Guidelines was added after the certification of the 2006 EIR and therefore this question was not applicable to the 2006 EIR.

There is no forest land on the modified project site or in the site vicinity. As such, the modified project would not result in the loss or conversion of forest land. Therefore, the modified project would have no impact in terms of loss of forest land or conversion of forest land to non-forest uses.

[Note: Potential impacts to Joshua tree woodland are discussed in Section *4.3. Biological Resources*.]

e) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use or conversion of forest land to non-forest use?

Indirect Conversion of Farmland

The 2006 EIR addresses potential for indirect conversion of Farmland in ***Impact 4.1-3***. The EIR discussed that construction of the approved projects may disturb agricultural operations, but that due to the temporary nature of construction this impact was considered less than significant.

Within the modified project area, the 240 acres of "Farmland" within the planned recharge area would be utilized for grazing after the completion of the recharge basin in that area. As discussed under item 'a' above, the resulting maintenance of agricultural activity on this "Farmland" would have a less-than-significant impact on "Farmland." The modified project area includes an additional 355 acres of "Farmland" outside the recharge basin area, of which approximately 30 acres is located west of 170th Avenue and was not covered by the 2006 EIR. According to the planned wellfield plan shown in Figure 3, a section of collection pipeline approximately 1,000 feet in length would be constructed along the northern edge of this Farmland. At a planned construction pace of 400 feet per day, this segment of pipeline would be completed in less than three days. This very brief period of construction activity directly adjacent to this Farmland would result in little if any disruption to this agricultural operation. Once installed, the pipeline would not affect agricultural operations. As such, it is not anticipated that the modified project would result in conversion of this Farmland to non-agricultural use. Therefore, the conclusion of a less-than-significant impact In this regard from the 2006 EIR is still valid and applicable to the modified project.

Adverse Effects from Elevated Groundwater

The 2016 EIR addressed the potentially adverse effects from elevated groundwater in ***Impact 4.1-4***. The operation of the water bank would involve adding and removing water from the aquifer beneath the water bank area, which could potentially result in drawdown of the water table below the depths of existing agricultural wells, or could result in high groundwater conditions which may saturate root zones and adversely affect crops. To avoid these potential impacts, the approved water bank project is subject to ***Mitigation Measure 4.1-1***, which established a monitoring committee to monitor groundwater levels and ensure that groundwater levels rise no higher than 20 feet below the ground surface, and to order corrective actions to prevent impacts to crops. Under Mitigation Measure 4.7-3, the monitoring committee is also responsible for ensuring that 10 percent of recharged water is left behind to help alleviate overdraft and prevent impacts to agricultural wells. The 2006 EIR concluded that these mitigation measures would reduce potential impacts to agricultural operations to less-than-significant levels.

Under the modified project plan, the volumes of water that could be recharged and recovered from the water bank on an annual basis would be substantially greater than under the approved plan. Under the approved plan, a maximum of 100,000 acre-feet per year (AFY) could be recharged and recovered annually. Under the modified project plan, a maximum of 250,000 AFY could be recharged, and a maximum of 225,000 AFY could be recovered. Groundwater modeling conducted by HDR Engineering in 2014 concluded these volumes and rates of recharge and recovery would occur without causing excessive rise or decline in groundwater levels or impacts to other supply wells. In addition, the water bank operator is subject to the 2007 MOU with Kern County, which provides for the implementation and enforcement of the mitigation measures described above to prevent overpumping or oversaturation that could result in adverse effects on agricultural operations (the MOU is contained in Appendix A of this document). As such, it is concluded that the mitigation measures from the 2006 EIR will be effective in mitigating the potential impacts from the modified project. Therefore, the conclusion of less-than-significant impact with mitigation in this regard from the 2006 EIR is still valid and applicable to the modified water bank project.

Conversion of Forest Land to Non-Forest Use

In the referenced checklist question from Appendix G of the CEQA Guidelines, the additional language regarding forest land was added after the certification of the 2006 EIR, and therefore the added language was not applicable to the 2006 EIR.

As mentioned in item "d" above, there is no forest land on the modified project site or in the site vicinity. As such, the modified project would not indirectly result in the loss or conversion of forest land. Therefore, the modified project would have no impact in terms of indirect loss of forest land or conversion of forest land to non-forest uses.

f) Result in the cancellation of an open space contract made pursuant to the California Land Conservation Act of 1965 or Farmland Security Zone Contract for any parcel of 100 or more acres (Public Resources Code Section 15206(b)(3)).

The 2006 EIR addresses the potential for cancellation of an open space (i.e., Williamson Act) contracts in ***Impact 4.1-5***. The EIR indicated that 959 acres within the 1,630 acres of planned recharge basin area were subject to Williamson Act Land Conservation Contracts, and no lands were subject to Farmland Security Zone Contracts. The 2006 EIR concluded that neither the recharge operations nor the pipeline installation would cause the cancellation of a Williamson Act Contract, and the impact would be less than significant.

Under the modified project, approximately 40 acres of the 1,106-acre planned recharge basin area are under Williamson Act Contract according to the latest CDOC mapping published in 2013 (CDOC 2013). Since the planned recharge facilities are planned to be operated in a manner that is compatible with the Williamson Act Contract, as discussed in item "b" above, it is not anticipated that the recharge operations or pipeline installation associated with the modified project would cause the cancellation of a Williamson Act contract. Therefore, the conclusion of a less-than-significant impact in this regard from the 2006 EIR is still valid and applicable to the modified project.

Cumulative Impacts

The 2006 EIR concluded that the cumulative impact to agricultural resources resulting from the approved and pending projects at that time would not result in a cumulatively significant impact to agricultural resources. With respect to the approved project, the 2006 EIR concluded that the construction and operation of the water bank would result in a less-than-significant impact to agricultural resources in terms of potential conversion of Farmland to non-agricultural uses, conflicts with zoning or Williamson Act, or other indirect impacts resulting in agricultural conversion to non-agricultural uses. Therefore, it was concluded that the approved water bank project would not contribute considerably to a cumulatively significant impact on agricultural resources.

Compared to the approved project, the modified project involves substantially less Farmland and substantially less land subject to Williamson Act contracts, and would have a lower potential to result in indirect conversion of Farmland to non-agricultural uses. Thus the modified project would similarly not contribute considerably to a cumulatively significant impact on agricultural resources. Therefore, the conclusion of less-than-significant cumulative impact in the 2006 EIR remains valid and is applicable to the modified project.

4.2.3. Mitigation Measures

The following mitigation measure, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum):

- **Mitigation Measure 4.1-1: Monitoring of Groundwater Levels** (for full text see MOU p. 1.) This mitigation is applicable to the modified water bank project without changes.

4.2.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to agricultural resources than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to impacts to agricultural resources remain valid and are applicable to the modified project without the need for further analysis.

4.3. AIR QUALITY

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
3. Air Quality. Would the project:					
a) Conflict with or obstruct implementation of the applicable air quality plan?	Impact 4.2-3 (p. 4.2-40)	No	No	No	NA (Impact was and remains less than significant.)
b) Violate an applicable air quality standard adopted by the U.S. EPA or air district or contribute substantially to an existing or projected air quality violation? [Note: This is CEQA Checklist question as modified by Kern County prior to 2006.]	Impact 4.2-1 Construction (pp. 4.2-30→4.2-33)	No	No	No	Yes
	Impact 4.2-2 Operations (pp. 4.2-33, -34)	No	No	No	NA (Impact was and remains less than significant.)
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors). Specifically, if implementation of the project would exceed any of the following adopted thresholds: ▪ ROG – 25 tons per year and 137 lbs/day mobile sources ▪ NOx – 25 tons per year total and 137 lbs/day mobile sources ▪ Sox – 27 tons per year ▪ PM_{10} – 15 tons per year. [Note: Numeric thresholds above are added by Kern County.] [AVAQMD thresholds also include CO – 100 tons per year.]	Impact 4.2-3 (pp. 4.2-35→4.2-44)	No	No	No	NA (Impact was and remains significant and unavoidable with implementation of feasible mitigation. However, the impact is less severe under the modified project plan.)
d) Expose sensitive receptors to substantial pollutant concentrations: ▪ Cancer risk impacts – Maximum Exposed Individual (MEI) exceeds 10 in one million ▪ Chronic non-cancer risk impacts – Chronic Hazard Index (HC) exceeds 1.0. [Note: Numeric risk factors added by Kern County.]	Impact 4.2-1 (pp.4. 2-30→4.2-33)	No	No	No	Yes (Note: Mitigation has been updated.)
e) Create objectionable odors affecting a substantial number of people?	Appendix A – NOP 2. Environmental Checklist, p. 2-8.	No	No	No	NA (Impact was and remains less than significant.)

4.3.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of air quality impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and any new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notable in the context of air quality is an increased number of recovery wells, increased length of collection pipeline, a substantial reduction in the overall area planned for recharge basins, and the change from propane-powered wells and pump stations to electrically-powered wells and pump stations. The modified project is described in detail in Section 2.4 and the differences between the modified project and the previously approved project are fully described in that section and illustrated in the accompanying figures.

Changes in Project Circumstances and Setting

Since preparation of the EIR in 2006, the most notable change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. As a consequence of the solar development, there has been a corresponding decrease in active agricultural land and existing residences within and adjacent to the project site. The projects that have been approved and constructed within and near the project site are described in Section 2.6 and shown in Figure 6.

New Information

No new information has become available since 2006 that is relevant to the analysis of air quality for the modified project. It is noted that several air quality studies have been produced for the EIRs on the solar and wind projects in the area. However, these analyses focused on construction emissions since operational emissions from these facilities are negligible. Since the solar and wind facilities have been largely constructed, the information on very small amounts of operational emissions from these projects is not useful for the analysis of operational air emission from the modified water bank project, which will also result in negligible emissions.

The following evaluation is based on the air quality technical report prepared by Illingworth & Rodkin which is contained in Appendix B of this Addendum.

4.3.2. Environmental Evaluation

a) Conflict with or obstruct implementation of the applicable air quality plan?

The 2006 EIR discussion of air quality plan consistency is included within the larger air quality discussion under ***Impact 4.2-3*** (see item 'b' below). The 2006 EIR concluded that the approved project would be consistent with the applicable air quality plans because it complies with all Air District rules and regulations, including air quality control measures, and is consistent with the land use plans upon which the growth forecasts in the air quality plans are based. As such, the project would not conflict with or obstruct the air quality plans of the Eastern Kern Air Pollution Control District (EKAPCD) or the Antelope Valley Air Quality Management District (AVAQMD)(which covers the Los Angeles County portion of the project area), and the impact would be less than significant.

The modified project would result in similar levels of air pollutant emissions as the approved project, and no impact thresholds for air quality would be exceeded, as discussed under items 'b' and 'c' below. The modified project is consistent with applicable land use plans, and would comply with all Air District rules and regulations. As such, the modified project would not conflict with or obstruct the air quality plans of the EKAPCD or the AVAQMD. Therefore, the conclusion of the 2006 EIR that the project impact with regard to air quality plan consistency would be less than significant is still valid and applicable to the modified project.

b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?

Fugitive Dust During Construction

The 2006 EIR included calculations of fugitive dust and exhaust emissions from grading and construction activity for the approved project in ***Impact 4.2-1***. The results are shown in Table 2 which includes annual emissions for Phase 1 and 2 of the approved project, along with the applicable significance thresholds. As shown in the table, no thresholds for any pollutant would be exceeded. Therefore, the 2006 EIR concluded that the short-term construction emissions resulting from the approved project would have a less than significant impact on air quality.

TABLE 2
ANNUAL CONSTRUCTION EMISSIONS (UNMITIGATED)
FROM APPROVED PROJECT (2006) (TONS/YEAR)

	ROG	NOx	CO	PM10
Phase 1	3.56	21.49	30.17	11.88
Phase 2	2.27	19.27	13.73	0.98
Significance Threshold (tons/yr)	25	25	100	15
Significant Impact (in given year)?	No	No	No	No

Source: Kern County 2006.

The 2006 EIR noted that while the short-term air quality impacts from construction of the project, by itself, would not result in a significant impact, the cumulative impact would be significant because the Mojave Desert Air Basin (MDAB), where the project is located, is classified as a non-attainment area and thus any increase in air emissions is considered to be a cumulatively significant impact. (This is discussed further under item 'b' below.) Therefore, the 2006 EIR identified mitigation measures for fugitive dust (***Mitigation Measure 4.2-1***) and diesel exhaust emissions (***Mitigation Measured 4.2-2*** and ***4.2-3***), and also noted that the project construction would be subject to dust control measures required under applicable rules of the EKAPCD (Regulation 402) and the AVAQMD (Rule 403).

Construction emissions for the modified water bank project were calculated by Illingworth & Rodkin, Air Quality and Noise Consultants. The results of the emissions modeling are summarized in Table 3 for each year of planned construction. An impact would occur if any of the applicable thresholds (of either the EKAPCD or AVAQMD) are exceeded in any given construction year. As shown in Table 3, the emissions

calculated for every construction year are well below all of the applicable significance thresholds for the pollutants of concern. Therefore, the short-term construction emissions from the modified project would be less than significant. As such, the conclusion of the 2006 EIR that short-term air quality impact from project construction would be less than significant is still valid and applicable to the modified project.

TABLE 3
ANNUAL CONSTRUCTION EMISSIONS (UNMITIGATED)
FROM MODIFIED PROJECT (TONS/YEAR)

	ROG	NOx	CO	PM10	PM2.5	SOx
Year 1 (2019)	1.264	12.522	8.229	4.905	2.04	0.017
Year 2 (2020)	1.481	13.102	10.617	2.101	1.352	0.021
Year 3 (2021)	1.239	11.707	8.893	2.468	1.548	0.022
Year 4 (2022)	0.05	3.695	7.78	2.462	1.257	0.13
Significance Threshold (tons/yr)						
EKAPCD	--	25	100	15	--	27
AVAQMD	35	25	100	15	12	25
Significant Impact?*	No	No	No	No	No	No

* For either Air District in any given construction year.
Source: Illingworth & Rodkin 2018

As was reported in the 2006 EIR, the Mojave Desert Air Basin is still classified as a non-attainment area, and thus any increase in air emissions is considered to be a cumulatively significant impact. (This is discussed further under item 'c' below.) Therefore, the mitigation measures identified in the 2006 EIR identified for fugitive dust (***Mitigation Measure 4.2-1***) and diesel exhaust emissions (***Mitigation Measures 4.2-2*** and ***4.2-3***) would still apply to the modified project. Also, the dust control measures required under EKAPCD Regulation 402 and AVAQMD Rule 403 would apply in any event. EKAPCD Regulation 402 requires the preparation of a Fugitive Dust Emission Control Plan, subject to the Air District's approval, which sets forth in detail planned work and the dust control measures to be carried out, based on specific measures contained in Regulation 402. Under AVAQMD Rule 403, all construction in the Los Angeles County portion of the project would similarly be required to prepare a Dust Control Plan (DCP), for the Air District's approval. The DCP would also set forth detail plan of work and the dust control measures to be implemented, based on applicable measures contained in Rule 403. The dust control measures included in the respective dust control plans would include, but not be limited to the measures specified in Mitigation Measure 4.2-1 of the 2006 EIR.

With respect to Mitigation Measure 4.2-2 (diesel exhaust), there have been substantial advances in emission control technology and corresponding regulatory requirements since the project was approved in 2006. To reflect these changes, Mitigation Measure 4.2-2 is updated as set forth under Section *4.3.2 Mitigation Measures* below.

Increase in Pollutant Emissions from Project Operation

Under ***Impact 4.2-2***, the 2006 EIR identified the primary source of operation emissions as exhaust emissions from the propane-powered well pumps and lift stations that were planned for the approved project. The air quality analysis assumed continuous operation of these pumps to determine worst-case emissions. Table 4 shows that calculated emissions would be below significance thresholds for all pollutants of concern. Therefore, the 2006 EIR concluded that the air quality impacts resulting from operation of the approved project would be less than significant.

TABLE 4
ANNUAL OPERATIONS EMISSIONS FROM APPROVED AND MODIFIED PROJECT (TONS/YEAR)

	ROG	NOx	CO	PM10	PM2.5	SOx
Approved Project	14.1	8.4	33.4	1.1	NA*	NA*
Modified Project	0.003	0.112	0.037	0.001	0.001	0
Significance Threshold (tons/yr)						
EKAPCD	--	25	100	15	--	27
AVAQMD	25	25	100	15	12	25
Significant Impact?**	No	No	No	No	No	No

* Not analyzed in 2006.
** For either Air District.
Sources: Kern County 2006; Illingworth & Rodkin 2018

In the modified project, the number of recovery wells would increase, but the power source for the well pumps would be electric power instead of propane. Since electrical motors result in no air emissions, the emissions from the operation of the modified project are substantially less than the approved project, as shown in Table 4. Therefore, the conclusion of the 2006 EIR that operational emissions would result in less than significant air quality impacts is still valid and applicable to the modified project.

c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)? Specifically, if implementation of the project would exceed any of the following adopted thresholds:

- **ROG – 25 tons per year and 137 lbs/day mobile sources**
- **NOx – 25 tons per year total and 137 lbs/day mobile sources**
- **Sox – 27 tons per year**
- **PM_{10} – 15 tons per year.**

[Note: Numeric thresholds above were added by Kern County.]
(AVAQMD thresholds also include CO – 100 tons per year)

The 2006 EIR addressed the issue of cumulative emissions of criteria pollutants in ***Impact 4.2-3***. The EIR stated the project is located in the Mojave Desert Air Basin (MDAB), which is an area that is designated as nonattainment for federal and state ozone standards as well as state PM10 standards. Under EKAPCD's approach to assessing cumulative impacts, the emissions associated with a project would be cumulatively significant if, with mitigation, there remains an increase in a pollutant for which MDAB is classified as a non-attainment area (i.e., ozone and PM10). The 2006 EIR identified ***Mitigation Measure 4.2-1*** for dust control and ***Mitigation Measures 4.2-2*** and ***4.2-3*** for reduction of diesel exhaust emissions. While the implementation of mitigation measures for dust control and reduction of diesel exhaust would reduce these emissions, some quantity of emissions would still occur after mitigation. As such, the construction and operation of the approved project would result in net emissions of these criteria pollutants after mitigation. Therefore, since the threshold that defines a cumulative impact is any net increase, the approved project would result in a cumulatively significant impact to air quality. The 2006 EIR concluded that this impact would be significant and unavoidable.

The above-described conditions in the Air Basin have not changed since the project was approved in 2006. Therefore, the modified project is subject to same significance threshold for cumulative impacts; that is, any net increase in emissions is considered cumulatively significant. As shown in Table 3 above, the construction of the modified project would result in emissions of ozone precursors (ROG and NOx) and PM10, although these emissions would not exceed the applicable significance thresholds for the project by itself. While the implementation of the mitigation measures mentioned above for dust control and reduction of diesel exhaust would reduce these emissions, some quantity of emissions would still occur after mitigation. As shown in Table 4, project operation would result in very small amounts of these pollutants. As such, the construction and operation of the modified project would result in net emissions of these criteria pollutants after mitigation. Therefore, since the threshold that defines a cumulative impact is any net increase, the modified project would result in a cumulatively significant impact to air quality. Therefore, the conclusion in the 2006 EIR that the cumulative air quality impacts of the project would be significant and unavoidable are still valid and applicable to the modified project.

It is important to note that the level of annual construction emissions resulting from the modified project would be lower for all pollutants in all construction years (except for PM10 in one construction year) compared to the approved project. However, construction impacts would be temporary in any event. More importantly, the operational emissions would be substantially less under the modified project, primarily because the propane powered well pumps in the approved project would be replaced with electric pumps in the modified project. This substantial reduction would recur annually for the life of the project, and thus far outweighs the construction effects. In summary, while the cumulative air quality impact associated with the modified project would be significant and unavoidable, even with the implementation of the mitigation measures identified in the 2006 EIR (which are still applicable to the modified project), the overall level of emissions would be far lower than under the approved project. Therefore, the modified project would not result in a new or substantially more severe significant cumulative impact with regard to air quality than identified for the approved project in the 2006 EIR.

d) Expose sensitive receptors to substantial pollutant concentrations

- **Cancer risk impacts – Maximum Exposed Individual (MEI) exceeds 10 in one million**
- **Chronic non-cancer risk impacts – Chronic Hazard Index (HC) exceeds 1.0.**
  [Note: Numeric risk factors added by Kern County.]

The 2006 EIR includes a detailed discussion of health risks associated with diesel particulate matter (DPM) which is a Toxic Air Contaminant (TAC). The primary source of TACs would be diesel-fueled equipment and vehicles used during grading and construction. Sensitive receptors would include the elderly, children, and

people with heart and lung diseases, who are particularly susceptible to adverse health effects due to exposure to TACs. The 2006 EIR states that sensitive receptors in the project area include scattered residences, and there are no hospitals or elderly care facilities in the area, indicating that the impact would be less than significant.

The modified project would be constructed under similar conditions as the approved project. The construction of the project would involve diesel equipment, although there are relatively few sensitive receptors such as residences which are dispersed throughout the area. Since construction would proceed rapidly through any given area, the duration of potential exposure would be brief at any residence. Also, diesel PM emissions disperse rapidly and fall to near background levels within 1,000 feet of the source. During project operation, there would be no sources of TACs since no diesel fuel would be used in project operations. As such, the project would not expose sensitive receptors to substantial concentrations of TACs during construction or operation. Therefore, the conclusion in the 2006 EIR that the sensitive receptors would not be exposed to substantial pollutant concentrations, indicating a less than significant impact, is still valid and applicable to the modified project.

e) Create objectionable odors affecting a substantial number of people?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is not expected to create objectionable odors, and there would be no impact. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would be very similar in character to the approved project addressed in the 2006 EIR. A potential source of odor during construction is exhaust from diesel equipment. Although there are existing residences in the vicinity of the planned pipelines and other water bank facilities, construction in any given area would proceed rapidly such that any individual residence would be potentially affected for a brief period. In addition, diesel exhaust dispersed rapidly in the atmosphere, with odors diminishing substantially within a few hundred feet of the source. Operation of the project would not add any new odor sources to the area. Therefore, the conclusion in the 2006 EIR that odor impacts would be less than significant is still valid and applicable to the modified water bank project.

Cumulative Impacts

As discussed in detail in item 'c' above, the cumulative impacts associated with the approved project would be significant and unavoidable, and this conclusion also applies to the modified project. However, since the overall emissions from the modified project are far less than the approved project, the level of cumulative impact associated with the modified project is also lower than the approved project. Therefore, the modified project would not result in a new or substantially more severe significant impact with regard to air quality than identified for the approved project in the 2006 EIR.

4.3.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum). Some mitigation measures are noted as being adequate without modification, and some mitigation measures have been updated as indicated with <u>underlining</u> and ~~strikeouts~~.

- **Mitigation Measure 4.2-1: Dust Control Measures** (for full text see MOU pp. 2-3)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.2-2: Diesel Exhaust** (for full text see MOU p. 3)
  This mitigation is updated with the following language changes:

  "During all grading and construction activities, construction contractor shall use off road construction diesel engines that meet, at a minimum, the Tier 4 interim California Emissions Standards, unless such an engine is not available for a particular item of equipment. Tier 3 engines will be allowed on a case by case basis when the contractor has documented that no Tier 4 interim equipment, or emissions-equivalent retrofit equipment is available for a particular equipment type that must be used to complete construction. Documentation shall consist of signed written statements from at least two construction equipment rental firms. ~~at least 10 percent of diesel engine–driven construction equipment on site shall be equipped with Tier 1 or Tier 2 as certified by CARB or with engines certified by the applicable air district (KCAPCD or AVAQMD) to provide equivalent benefits. At least 40 percent of the remaining diesel engine–driven construction equipment shall have diesel particulate filters and lean-NO_x catalysts (or equivalent control devices)~~."

- **Mitigation Measure 4.2-3: Minimize Diesel Engine Idling** (for full text see MOU p. 3)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.2-4: Submittal of Dust Control Plan** (for full text see MOU pp. 3-4)
  This mitigation is updated with the following language changes:

  "To ensure compliance with Regulation 402 o the EKAPCD ~~KCAPCD~~, the owner or operator will submit a fugitive dust plan to the EKAPCD ~~KCAPCD~~ prior to receiving a grading permit for work within Kern County.

  The owner or operator will submit a fugitive dust plan to the AVAQMD prior to receiving a grading permit for work within Los Angeles County."

4.3.4. Conclusion

The modified project would not involve new or substantially more severe significant air quality impacts than were identified for the approved project in the 2006, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to air quality impacts remain valid and are applicable to the modified water bank project without the need for further analysis.

4.4. BIOLOGICAL RESOURCES

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
4. Biological Resources. Would the project:					
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Impacts 4.3-5 through 4.3-14 (pp. 4.3-26→4.3-32)	No	No	No	Yes (Note: Mitigations have been updated.)
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	Impacts 4.3-1 through 4.3-3 (pp. 4.3-24, -25)	No	No	No	Yes (Note: Mitigation has been updated.)
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	Impact 4.3-4 (pp. 4.3-25, -26)	No	No	No	Yes (Note: Mitigation has been updated.)
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	Appendix A – NOP 2. Environmental Checklist, p. 2-10.	No	No	No	NA (Impact was and remains less than significant.)
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	Impact 4.3-3 (pp. 4.3-24, -25)	No	No	No	Yes (Note: Mitigation has been updated.)
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	Appendix A – NOP 2. Environmental Checklist, p. 2-10.	No	No	No	NA (Impact was and remains less than significant.)

4.4.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which affect the analysis of impacts to biological resources. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that has become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. The modified project is described in detail in Section 2.4 and the differences between the modified project and the previously approved project are fully described in that section and illustrated in the accompanying exhibits.

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since the certification of the 2006 EIR, the project setting has undergone substantial changes with the installation of several large solar generating facilities within and around the water bank site as well as the construction of extensive wind generating facilities to the north and west. In addition, the SCE's Tehachapi Renewable Transmission Project has been completed, a segment of which passes through the project site. (These projects are described in Section 2.5 and shown in Figure 6.)

New Information

New information pertaining to biological resources in the project area has become available since the project EIR was certified in 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the preparation of biological technical reports. The findings of these biological reports were reviewed in detail by Live Oak Associates (LOA) in course of their preparation of the biological technical report for this Addendum (the LOA report is contained in Appendix C of this document).

LOA biologists also conducted extensive reconnaissance field surveys of the areas that would be subject to disturbance by the modified project. The fieldwork included a detailed inventory and mapping of Joshua trees that would be potentially subject to impacts from construction of the supply pipeline from the CA aqueduct where it passes through the Joshua Tree Significant Ecological Area (SEA). The LOA biological report includes a detailed comparison of the biological impacts evaluated in the 2006 EIR with the biological impacts of the modified project, considering all of the changes to the project and its setting, and the information on biological resources in the area that has become available since 2006.

The following evaluation is based on the biological analysis contained in the biological technical report prepared by Live Oak Associates (LOA). The LOA report, which is contained in Appendix C this Addendum, contains detailed descriptions of habitats types within the modified project site and includes detailed lists and descriptions of species that occur regionally and species that were observed on the project site during the course of the LOA's field surveys.

4.4.2. Environmental Evaluation

a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

Special Status Plant Species

The 2006 EIR identified 20 special status plant species that occur in the region, but concluded that all of these plant species have specific macrohabitat and microhabitat requirements and have highly restricted geographic distributions that are not present in the project area. As such, no impacts to these species were anticipated in the 2006 EIR.

LOA's biological evaluation for the modified project found that there are currently four special status plant species with the possibility to occur in the project area, although none have been observed. Two of these species were identified in the 2006 EIR (Clokey's cryptantha and short-tailed beavertail cactus) and are now considered to have a possibility to occur in the project area. Two additional species (Alkali Mariposa lily and Spreading Navarretia) are newly identified by LOA as having a possibility to occur in the project area. It is important to note that none of these four plant species has been previously recorded on the site or the project vicinity by the California Natural Diversity Data Base (CNDDB), nor have they been observed in numerous plant surveys conducted throughout the project site as part of EIRs for solar projects constructed on the site, or observed by LOA biologists during their field surveys on the site in May 2018. In the absence of targeted species-specific protocol surveys that would be required during the blooming season for each species in order to determine the presence or absence of these plant species from the site, LOA could not make a definitive conclusion of potential project impacts to these species. However, in order to avoid any possibility of impacts to these plant species, ***Mitigation Measure 4.3-8*** is recommended in this Addendum as a precautionary measure in the unlikely event that any of these species are found to be present within the area subject to project ground disturbance. (The recommended measure is set forth in Section *4.4.3. Mitigation Measures* below.) The potential impacts of the project on special status plant species would be less than significant with implementation of the recommended mitigation. Therefore, the modified project would not result in new significant or substantially more severe impacts to special status plant species than identified in the 2006 EIR.

Special Status Animal Species

The 2006 EIR found that there are 16 special status animal species that occur or potentially occur on the project site, and concluded that six of these species could be subject to potentially significant impacts as a result of the project and identified mitigation measures to avoid impacts to those species. These species included the following: Swainson's hawk, western burrowing owl, horned lark, Le Conde's thrasher, white-tailed kite, and loggerhead shrike.

The LOA biological report for the modified project found that there are currently 10 special status animal species that occur or potentially occur on the project site, including 10 of the 16 of the species noted in the 2006 EIR. The LOA report states the following four species considered in the 2006 EIR to potentially occur on the project site are now considered unlikely to utilize the site: mountain plover, Mohave ground squirrel, fringed myosis, and small-footed myosis (the latter two are species of bat). Also, two species are no longer listed with protected status – horned lark and long-billed curlew – although they are still covered by the Migratory Bird Treaty Act. The LOA report also found that two special status animal species that were noted as present in the area in 2006 but were not present on the project site, currently are considered to have

some potential to occur on the project site (desert tortoise and the American badger). The 10 special status animal species that currently have some potential to occur within the project site include: Swainson's hawk, western burrowing owl, desert tortoise, coast horned lizard, California legless lizard, southern grasshopper mouse, American badger, white-tailed kite, Le Conte's thrasher, and loggerhead shrike. In the following paragraphs, the impacts and mitigation measures identified for these species in the 2006 EIR will be evaluated in the context of current circumstances affecting the modified water bank project.

Swainson's Hawk

The 2006 EIR addressed impacts related to Swainson's hawks in ***Impact 4.3-5*** and ***Impact 4.3-6***. LOA's recent biological evaluation noted that several additional occurrences of Swainson's hawks have been reported near the project area in the intervening years; however, this would not change the conclusion of potential impact to this species. LOA concluded that the impact analysis from the 2006 EIR is still valid and applicable to the project as modified, and that ***Mitigation Measure 4.3-4*** adequately reduces the impacts of the modified project to Swainson's hawks to a less-than-significant level. Therefore, the modified project would not result in new significant or substantially more severe impacts to Swainson's hawks than identified in the 2006 EIR.

Western Burrowing Owl

The 2006 EIR addressed impacts related to western burrowing owls in ***Impact 4.3-7*** and ***Impact 4.3-8***. The EIR concludes that construction of the project could result in the removal of active burrowing owl nests, which would represent a significant impact. In the biological technical report prepared for this Addendum, LOA noted that several additional occurrences of burrowing owls have been documented within the project area in the intervening years; however, this would not change the conclusion of potential impact to this species. LOA concluded that the impact analysis from the 2006 EIR is still adequate and applicable to the project as modified, and that ***Mitigation Measures 4.3-5*** and ***4.3-6*** adequately reduce the impacts of the modified project to burrowing owls to a less-than-significant level. Therefore, the modified project would not result in new significant or substantially more severe impacts to burrowing owls than identified in the 2006 EIR.

Desert Tortoise

The 2006 EIR addresses impacts to desert tortoise in ***Impact 4.3-14***, which states that the project site is outside current range of the desert tortoise, and concludes that the project would not have negative impacts on this species. In the biological technical report prepared for this Addendum, LOA agrees that desert tortoises are considered to have a low-likelihood to occur with the project area. The project area does not support known habitat for the tortoise, and the majority of the project area supports habitats that are generally unsuitable for the tortoise, including agricultural fields, fallow fields, developed areas, ruderal annual grassland areas, and recharge basins. Based on this and the negative findings for desert tortoise in several projects overlapping the WSWB project area, it is not expected that the project would result in a loss of habitat for the desert tortoise. In the unlikely event that a transient tortoise moved onto the site during construction, direct loss of desert tortoise individuals can be avoided through pre-construction surveys, avoidance, and minimization measures which are already required under ***Mitigation Measures 4.3-5*** for burrowing owls. These mitigation measures, as well as ***Mitigation Measure 4.3-7***, are updated in this Addendum to include the desert tortoise. (The updated mitigations are set forth in Section *4.4.3. Mitigation Measures*.) Therefore, the modified project would not result in new significant or substantially more severe impacts to desert tortoise than identified in the 2006 EIR.

Coast Horned Lizard, California Legless Lizard, and Southern Grasshopper Mouse

The 2006 EIR addresses potential impacts to these species during construction (***Impact 4.3-11*** and ***Impact 4.3-13*****)**. Biological surveys conducted for the 2006 EIR documented Coast horned lizards as occurring in the planned footprint of the supply pipeline near the California Aqueduct. The biological surveys conducted for the AV Solar One project in 2009, documented this species as occurring within approximately 1 mile of the planned supply pipeline alignment. The nearest documented occurrence of California legless lizard is 5.8 miles north of the water bank site, and the southern grasshopper mouse has not been documented as occurring within 10 miles of the site, but habitats on the project site are potentially suitable for these species. The 2006 EIR concluded that habitat loss resulting from the project would not have a significant impact on these three species and that no mitigation was required.

In the biological technical report prepared for this Addendum, LOA states that habitat loss for these three species resulting from the modified project is considered to be less than significant since the permanent project footprint represents a minor fraction of regionally available suitable habitats. Construction of the project may impact an unknown number of individuals, but impacts to individuals of these three species are considered to be less than significant for several reasons. All three of these species are species that are not put at risk due to the loss of a few individuals, and since important habitat for these species will not be impacted during project buildout, impacts are considered to be less than significant. Thus the conclusion of the 2006 EIR that project impacts to these species would be less than significant is still valid and applicable to the modified project without the need for further analysis.

American Badger

The 2006 EIR addresses potential impacts to American badger in ***Impact 4.2-13***. It was noted that construction activities, especially digging and trenching, could negatively impact badgers, and individuals could become trapped in trenches that are left open overnight. However, the 2006 EIR did not identify mitigation measures for American badgers.

In the biological technical report prepared for this Addendum, LOA states that American badger is known to occur within the site. Project impacts to badger habitat would primarily be temporary in nature, and permanent impacts would primarily occur within low-quality potential badger habitat areas (e.g., active and fallow agricultural areas and ruderal annual grassland areas). Therefore, the modified project would result in a less-than-significant impact to American badger habitat. Direct impacts to individuals, which are addressed in the 2006 EIR, could result from project construction, but such impacts can be avoided through pre-construction surveys, avoidance, and minimization measures which are already required under ***Mitigation Measures 4.3-5*** for burrowing owls. These mitigation measures are updated in this Addendum to include the American badger. (The updated mitigations are set forth in Section *4.4.3. Mitigation Measures*.) Therefore, the modified project would not result in new significant or substantially more severe impacts to American badger than identified in the 2006 EIR.

Nesting Special Status Bird Species and Other Nesting Migratory Birds

The 2006 EIR states that the project site includes suitable nesting habitat for several species of special status birds, including white-tailed kite, Le Conte's thrasher, and loggerhead shrike. ***Impact 4.3-9*** states that disturbances of nest sites may cause nest failure which would represent a significant impact; and ***Mitigation Measure 4.3-7*** was identified to reduce the impact to less than significant.

In the biological technical report prepared for this Addendum, LOA states that the 2006 EIR adequately addresses potential impacts to these special status bird species. LOA states that *Mitigation Measure 4.3-7* is

adequate mitigation for special status bird species, but does not cover potential impacts to other nesting migratory birds that are also protected under federal and state regulations. As such, *Mitigation Measure 4.3-7* is updated in this Addendum to extend its coverage these other protected bird species. (The updated mitigation is set forth below in Section *4.4.2. Mitigation Measures*.) Therefore, the modified project would not result in new significant or substantially more severe impacts to American badger than identified in the 2006 EIR.

b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?

The 2006 EIR identifies Joshua tree woodland habitat and ephemeral drainages as sensitive natural habitats that are subject to potential impacts from the project. These impacts would be reduced to less-than-significant levels through implementation of ***Mitigation Measure 4.3.-1*** (Joshua tree woodland) and ***Mitigation Measure 4.3-3*** (ephemeral drainages). The modified water bank project would also affect Joshua tree woodland habitat and ephemeral drainages. These potential impacts to these habitat types, compared to the impacts associated with the approved project are discussed under items 'c' and 'e', respectively, below.

For the remaining habitats, the 2006 EIR addresses the potential impacts to annual grassland, agricultural habitats, and rabbitbrush scrub habitats in *Impact 4.3-1 and Impact 4.3-3*, and concludes that the project impacts to these habitats would be less than significant. The 2006 EIR does not address potential impacts to salt brush scrub or creosote scrub habitats. However, LOA has determined that these habitats are locally and regionally common, and therefore project impacts to these habitats would be less than significant.

The modified project includes an expanded wellfield area to the west of 170th Street, and includes a modified alignment for the supply pipeline from the California Aqueduct, as well as a new connecting pipeline to AVEK's SNIP pipeline. However, these newly added areas do not involve any habitat types that were not addressed in the 2006 EIR (see Figures 2a and 2b in LOA's biological report in Appendix C of this Addendum.). As such, the impacts of the modified project on most habitat types would be less than significant, as discussed above for the approved project, except for Joshua Tree Woodland and ephemeral drainages, which are fully addressed under items 'c' and 'e' below.

c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The 2006 EIR addressed potential impacts to 0.19 acres of ephemeral drainages of the site in ***Impact 4.3-4***. The EIR states that all impacts to ephemeral drainages would be in the form of temporary impacts from trenching for pipeline construction along 170th Street. Project plans include reestablishment of natural contours during post-construction activities, limiting construction activities in ephemeral drainages to the dry season, storing any excavated material within upland areas, and ensuring that excavated materials will be placed in a manner that prevents erosional dispersal. The 2006 EIR identified ***Mitigation Measure 4.3.3*** which requires obtaining a Streambed Alteration Agreement from the California Department of Fish and Game, as well as a water quality certification or waiver from the Regional Board, prior to any work in the ephemeral drainages.

The modified project would involve additional ephemeral drainages, specifically in the northwest corner of the expanded wellfield area and along the realigned supply pipeline from the California Aqueduct (see

Figures 2a and 2b in LOA's biological report in Appendix C of this Addendum.) The construction measures described above for the approved project would apply to the modified project and would minimize impacts to the ephemeral drainages.

Some or all of the ephemeral drainage features of the affected by the modified project would likely be considered jurisdictional to the top of the bank by CDFW and to the extent of the ordinary high water (OHW) marks on opposing banks by the Lahontan Regional Water Quality Control Board (LRWQCB), and they may be jurisdictional to the extent of Ordinary High Water (OHW) marks on opposing banks by the U.S. Army Corps of Engineers (USACE), though many or all of the ephemeral drainages may be determined to be isolated waters and not jurisdictional to the USACE. Prior to any work, the applicant would need to submit a formal wetland delineation of the project area to the USACE for verification and would need to apply for any requisite permits from these agencies. The requirement in *Mitigation Measure 4.3.3* to comply with any permit conditions from regulatory agencies is still valid and applicable to the modified project without change.

With the implementation of *Mitigation Measure 4.3.3*, the potential impacts of the modified project to protected wetlands and ephemeral drainages would be reduced to less than significant levels. Therefore, the conclusion from the 2006 EIR that the impact would be less than significant after mitigation is still valid and applicable to the modified project.

d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?

The 2006 EIR does not directly address potential impacts to movement or migratory corridors, but does indirectly address impacts to migratory birds and their available nesting and foraging habitat, as well as impacts on ephemeral drainages which are often used as movement corridors. Potential impacts to ephemeral drainages would be reduced to less-than-significant levels through implementation of ***Mitigation Measure 4.3-3***, as discussed above, which requires permits and authorizations from the resource agencies for any work in the drainages. Potential impacts to foraging habitat for migratory birds were determined to be less than significant. Potential impacts to nesting birds are addressed by ***Mitigation Measure 4.3-4*** (Swainson's hawk), ***Mitigation Measures 4.3-5*** and ***4.3-6*** (burrowing owls), and Mitigation Measure 4.3-7 (other special-status birds). With the implementation of these mitigation measures, the impacts would be reduced to less-than-significant levels.

The modified project site encompasses an area with open expanses of undeveloped land intermixed with developed and low-disturbance lands (i.e., solar fields, rural residential, and agricultural areas). As discussed in the Biological Technical Report by Live Oak Associates (contained in Appendix C of this Addendum), natural habitat areas of the site, including shrubland habitats, Joshua tree woodland, ephemeral drainages, and grasslands would serve as the areas of the site most likely to provide for wildlife movement corridors. Neither the modified project wellfield area or recharge basins, nor the lands affected by off-site pipelines lie within any known wildlife corridors of note. Specifically, the project site does not occur within or along any narrow movement corridor that connects two larger habitat areas. Also, the site is not within mapped "Essential Connectivity Areas," as determined by the California Essential Habitat Connectivity Project (Spencer et al. 2010). The nature of the project itself, consisting largely of a network of underground pipes that would involve temporary ground disturbances, with some areas of scattered permanent ground disturbance in the form of well pads, pump stations, and the recharge basins (planned to mainly occur within areas of active and fallowed agricultural fields), would not result in impacts to movement corridors. As discussed under item 'a' above, potential impacts to nesting birds would be reduced to less-than-significant

levels through implementation of the mitigation measures referenced above, as modified in this Addendum (see Section *4.4.3. Mitigation Measures*). As such, impacts of the modified project on wildlife movement corridors and nursery sites would be less than significant after mitigation. Therefore, the modified project would not result in new or substantially more severe significant impacts with respect to wildlife movement corridors and nursery sites than were identified in the 2006 EIR.

e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?

The 2006 EIR addresses potential impacts to Joshua trees in ***Impact 4.3-3***. In the approved project, the supply pipeline from the California Aqueduct would run along the east side of 170th Street for a distance of 8.25 miles to the water bank site. Approximately 1.0 miles of pipeline would pass through an area designated by Los Angeles County as a Joshua Tree Significant Ecological Area (SEA). It is estimated that several hundred Joshua trees are located within the 100-foot construction corridor for the pipeline section that passes through the SEA. Potential impacts to Joshua tree woodlands are considered to be a significant adverse effect due to the sensitivity of this habitat type and increasing threats to Joshua tree woodlands from anthropogenic pressures throughout its distribution. The 2006 EIR provides ***Mitigation Measures 4.3-1*** and ***4.3-2*** to avoid impacts to Joshua trees; however, the measures do not address direct impacts to Joshua trees that could not be avoided during excavation for the project pipelines. In order to address direct impacts to Joshua tree, *Mitigation Measure 4.3-1* is modified in this Addendum to provide for effective relocation of Joshua trees that would be unavoidably removed by pipeline construction. (The updated mitigation is set forth in Section *4.4.3. Mitigation Measures*.)

During the course of infrastructure planning for the modified project, several alternative routes for the supply pipeline from the California Aqueduct were considered for the crossing of the Joshua Tree SEA. These routes included the original alignment along 170th Street, as well as alternative alignments along 165th, 160th, and 155th Streets. With the exception of the 155th Street alignment, the other alternative routes would each involve the removal of hundreds of Joshua trees of various ages and sizes. The 155th Street alignment was selected because it would involve only a 0.5-mile crossing of the SEA (versus 1.0 mile for all of the other alternatives), and because it would involve the removal of substantially fewer Joshua trees than the other alternative alignments. Therefore, the selected route represents the least environmentally damaging alternative for crossing the Joshua tree SEA, and it would involve a substantially lower level of impact to the Joshua Tree Woodland compared to the 170th Street alignment in the approved project. The potential impacts to Joshua trees due to this pipeline crossing would be mitigated to less than significant levels through implementation of *Mitigation Measure 4.3-1 (as updated in this Addendum)* and *Mitigation Measure 4.3-2.* (The updated mitigation is set forth in Section *4.4.3. Mitigation Measures*.)

The modified project also includes Joshua trees in the newly added west wellfield area of the water bank. Within this area, a number of dispersed Joshua trees are located in the area east of 195th Street between Holiday and Willow Ave./Patterson Road. It is unknown if any wells or collection pipelines would be planned in the immediate vicinity of these Joshua trees during final project design. Any potential impacts to these trees would be mitigated to less-than-significant levels through implementation of *Mitigation Measure 4.3-1 (as updated in this Addendum)* and *Mitigation Measure 4.3-2.* (The updated mitigation is set forth in Section *4.4.3. Mitigation Measures*.)

In summary, the potential impacts of the modified project on Joshua Tree Woodlands and individual Joshua trees would be less than significant after mitigation. Therefore, the modified project would not result in new or substantially more severe significant impacts with respect to Joshua Tree Woodlands and individual Joshua trees than were identified in the 2006 EIR.

f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?

The 2006 EIR describes local policies relevant to the project area. Of particular note, Joshua tree woodlands, like those identified within the project area, are considered to be sensitive by Kern County and Los Angeles County. The Kern County General Plan, Kern County's Willow Springs Specific Plan, and the Los Angeles County Significant Ecological Area (SEA) Ordinance seek to protect this sensitive habitat type. The project design will include measures to avoid the maximum number of Joshua trees as per ***Mitigation Measures 4.3-1*** and ***4.3-2***. In addition, modifications to the *Mitigation Measure 4.3-1*, described above, would ensure that direct impacts to Joshua trees are adequately addressed through properly executed transplantation and post-relocation maintenance and monitoring. Additional project review and permit application measures may also be required by Los Angeles County for the pipeline crossing through the SEA (see Section 2.5 for further discussion).

The project site is located within the boundaries of the draft Desert Renewable Energy Conservation Plan (DRECP), which is a collaborative effort being developed under the California Natural Community Conservation Planning Act (NCCPA) and the Federal Endangered Species Act (FESA), and the Federal Land Policy and Management Act (FLPMA). Phase I of the DRECP was approved by the U.S. Bureau of Land Management (BLM) in 2016. Phase II, currently in progress, focuses on better aligning local, state, and federal renewable energy development and conservation plans, policies, and goals. The project also occurs within the greater boundary of the BLM's West Mojave Plan, which is a habitat conservation plan and federal land use plan amendment that provides a comprehensive strategy to conserve and protect numerous species within the Mojave Desert. Both of these plans are applicable to projects on public lands (e.g., BLM lands). The project site is not located within public lands, so the project would not be subject to these habitat conservation plans. As such, impacts of the proposed project on habitat conservation plans would be less than significant and no mitigation measures are required. This was also the conclusion of the 2006 EIR. Therefore, the modified project would not result in new or substantially severe significant impacts with respect to habitat conservation plans than were identified in the 2006 EIR.

Cumulative Impacts

The 2006 EIR concluded that the biological resources impacts of the approved project would be reduced to less than significant levels with implementation of mitigation measures identified in the EIR. It stated that the biological impacts associated with approved and pending projects in the area would be reduced to less than significant levels by similar mitigation measures that would be required for each such cumulative project. Therefore, it was concluded that the cumulative biological resources impacts would be less than significant, and that the approved project would not contribute considerably to a cumulatively significant impact to biological resources.

The modified project would be subject to the same biological mitigation measures as the approved project, with the addition of updated provisions. It is expected that the same or similar biological mitigations, as applicable, along with regulatory requirements for resource protection, would be required for other cumulative projects. Therefore, the modified project would not contribute considerably to a cumulatively significant impact to biological resources, and the cumulative biological impacts would be less than significant.

4.4.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project (MOU is contained in Appendix A of this Addendum), are applicable to the modified project. Some mitigation measures are noted as being adequate without modification, and some mitigation measures have been updated as indicated with underlining and ~~strikeouts~~.

- **Mitigation Measure 4.3-1: Joshua Tree Mitigation** (for full text see MOU p. 4.)
  This mitigation is updated with the following language to be added at the end of the current measure:

  "For Joshua trees that cannot be avoided and require relocation to avoid being impacted by project construction, a Joshua tree relocation, maintenance, and monitoring plan shall be prepared by a qualified restoration ecologist. The plan, which shall be implemented for all Joshua trees that require relocation, shall include at a minimum the following elements:

  Relocation Measures
  - Transplantation of Joshua trees shall occur between October and March. Priority timing should be planned for fall relocation plantings. Transplanting is not allowed between April and September.
  - In the days prior to excavation for relocation, trees should be watered once per day for 3 days including on the day of relocation.
  - Flagging or a durable but non-permanent mark should be made on the north side of the trunk of trees to be relocated. This will be used to orient trees into relocation holes so they are facing the same orientation.
  - Relocation sites for each tree shall be selected in consultation with a qualified restoration ecologist and with express authorization of the landowner.
  - Relocation sites shall be prepared prior to excavation of the trees.
  - Trees shall be excavated with sufficiently large tree spade to ensure root balls are kept in contact with soils.
  - For trees connected by rhizomes, they should either be relocated together, if feasible, or a clean cut should be made of the connecting root.
  - Exposed roots and root cuts shall be dusted with powdered sulfur or horticultural charcoal to prevent fungal infection.
  - Joshua trees shall be replanted within 48 hours of excavation.
  - Watering shall occur immediately after trees are planted.
  - Where necessary, larger trees should be staked for stability.

  Maintenance Measures
  - Relocated trees should be checked and watered once every 2 weeks, excepting rain events after which they should be watered 2 weeks later.
  - Watering should occur for a minimum of 8 months which shall include the period from relocation through the end of the first annual high heat period.
  - Any staking or other support materials shall be removed after this 8 month period.

Biological Monitoring

- A qualified botanist or restoration ecologist shall monitor the relocated Joshua trees annually in the spring for 3 years after planting. Prior to annual monitoring, a baseline monitoring survey shall be conducted documenting the locations of relocated trees and establishing photo points to be replicated during annual monitoring. Annual reports shall be submitted to Kern and Los Angeles Counties.
- Survival of Joshua trees shall not drop below 75% during annual monitoring.
- If survival of relocated Joshua trees is found to drop below 75% in any annual monitoring survey during the 3-year monitoring period, dead trees shall be replaced during that year's planting season with nursery grown Joshua trees at a rate of 10 seedlings to 1 dead tree. Nursery grown trees shall be sourced from seed collected within the onsite Joshua Tree SEA, and they shall be planted according the measures outlined above, including watering for a minimum of 8 months following installation."

- **Mitigation Measure 4.3-2: Joshua Tree Protection** (for full text see MOU p. 5.)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.3-3: Wetlands and Ephemeral Drainages** (for full text see MOU p. 5.)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.3-4: Swainson's Hawk** (for full text see MOU p. 6.)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.3-5: Pre-Construction Surveys** (for full text see MOU pp. 7-8.)
  This mitigation is updated with the following language to be added at the end of the current measure:

  "Desert Tortoise
  Pre-construction surveys for burrowing owls shall be extended to provide for desert tortoises including surveying within a species-appropriate buffer of the project footprint, as determined by a qualified biologist, and including scoping of any potentially suitable burrows that occur within 50 feet of project impact areas for desert tortoises. Such surveys shall coincide with the phasing of project disturbances of the site, and they shall occur within 14-days prior to any new construction impact in any new impact zones of the site. If no tortoises are detected, no further mitigation is required.

  American Badgers
  Pre-construction surveys for burrowing owls shall be extended to include American badgers. If an active American badger den is identified during pre-construction surveys within or immediately adjacent to the construction envelope, a construction-free buffer of up to 300 feet (or distance specified by the resource agencies, i.e., CDFW) should be established around the den. If the badger den(s) is determined to be a breeding den(s), a biological monitor should be present onsite during construction activities to ensure the buffer is adequate to avoid direct impact to individuals within the den. The monitoring would continue until it is determined that young are of an independent age and construction activities would not harm individual badgers. Once it has been determined that badgers have vacated the site, the burrows can be collapsed or excavated by hand with the biological monitor present, and ground disturbance can proceed."

- **Mitigation Measure 4.3-6: Burrowing Owls** (for full text see MOU p. 6)
  This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.3-7: Impacts to Special Status Species During Construction** (for full text see MOU pp. 7-8.)
  This mitigation is updated with the following language to be added at the end of the current measure:

  "Desert Tortoise
  If desert tortoises are detected adjacent to the project site, all work will cease within ¼ mile of the tortoise, and USFWS and CDFW shall be notified.

  Special Status Birds and Migratory Birds
  Nesting surveys shall be conducted for all species protected by federal and state laws including the Migratory Bird Treaty Act and CDFW Code. Surveys shall occur within 14-days prior to any new construction impact in any new impact zones of the site during the nesting period from February through May and within 30-days prior to such construction impacts from June through August. Nesting surveys shall be phased to occur 14 or 30 days, as described above, prior to initial construction disturbances (i.e., vegetation clearing, grading, mobilization of project equipment and materials, and/or excavation) for any given phase or new impact zone of the project site. To facilitate this, the project manager(s) will ensure the qualified biologist(s) is properly informed of project scheduling.

  Pre-construction survey areas should be based on species-type buffer requirements. Thus, while Mitigation Measure 4.3-7 stipulates that surveys shall be conducted within 0.25 miles of the project site, a 0.25-mile survey area is more than suitable for large raptors nesting on any tall structures of the site, but survey areas for smaller bird species such as perching-bird species, including ground nesting birds shall include the project impact area and an area of no-less than 100 feet from the project impact areas."

- **Mitigation Measure 4.3-8: Special Status Plant Species**
  While a definitive conclusion of impacts to special status plant species cannot be made at this time, the following prescriptive mitigations are recommended as precautionary measures for the purpose to avoiding impacts to special status plant species in the unlikely event they are found to be present within the area subject to project disturbance.

  "Avoidance
  Avoidance of sensitive plant resources is the preferred alternative. The project should be designed to avoid direct (i.e., removal) or indirect impact (i.e., establish a suitable buffer from the work zone of at least 25 to 50 feet) impact to any special status plant species population detected during the rare plant surveys.

  Minimization Measures
  Several measures will need to be implemented to ensure that construction related activities do not inadvertently impact avoided populations of special status plant species, should they be found to be present. The following measures should be employed:

- Erect construction fencing around any identified population of special status plant species to ensure that the project would not inadvertently damage plants that were expected to be avoided.
- Provide for a qualified on-site monitor to be present during construction and trenching activities to ensure that these activities do not inadvertently affect plant populations that are to be avoided

To compensate for any direct impacts to the special status plant species that are detected within the work area and cannot be avoided, the applicant should prepare and implement a site restoration plan for any permanent and/or temporary impacts.

The site restoration plan will be developed to replace any populations of special status plant species that are directly or indirectly impacted by the project. A qualified botanist shall identify all avoidance areas and establish buffer zones of sufficient size around these areas to eliminate potential disturbance to any special status plant species during construction. The size of the buffer zone(s) shall account for such factors type and proximity of construction activities. At a minimum, the site restoration plan shall address the following:

- Location of on-site areas (and suitable buffer) to restore lost plant populations. It is assumed that the topsoil can be stockpiled and replaced once the trenching operation is complete. These areas shall be prepared and, based on appropriate propagation techniques, restored to the reclaimed areas. Once established, these areas would become part of the larger open space area and set aside in perpetuity by establishing a conservation easement.
- Propagation techniques (such as seed collecting, greenhouse efforts to grow plants, etc.) to be employed in the restoration effort.
- The timetable to implement the restoration plan, including pilot-phase studies if necessary.
- Remedial measures to be performed in the event that initial restoration measures are not successful in meeting the performance criteria. The performance criteria would need to ensure that there would be a minimum of a 1:1 replacement of the size of the population and area affected (replaced: lost).
- Site maintenance activities to follow restoration activities, including weed control, irrigation, and control of herbivory wildlife.
- Identification of a suitable land trust organization (approved by the CDFW and USFWS) to take over management of these areas once established by the applicant or its agent.
- Provision of a suitable bond or endowment to adequately fund long-term management of any special status plant species affected by the project."

4.4.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to biological resources than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to impacts to biological resources remain valid and are applicable to the modified project without the need for further analysis.

4.5. CULTURAL AND PALEONTOLOGICAL RESOURCES

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
5. Cultural Resources. Would the project:					
a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?	Impact 4.4-1 (pp. 4.4-19, -20)	No	No	No	Yes (Note: Mitigations have been updated.)
b) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code § 21074?	Not Analyzed (This question was not included in the CEQA Checklist at the time the 2006 EIR was certified.)	No	No	No	NA (Note: This Checklist Question is not applicable to EIR Addendums.)
c) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?	Impact 4.4-1 (pp. 4.4-19, -20)	No	No	No	Yes (Note: Mitigations have been updated.)
d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	Impact 4.4-2 (pp. 4.4-20, -21)	No	No	No	Yes
e) Disturb any human remains, including those interred outside of formal cemeteries?	Impact 4.4-1 (pp. 4.4-19, -20)	No	No	No	Yes (Note: Mitigations have been updated.)

4.5.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of impacts to cultural and paleontological resources. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that has become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. The modified project is described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since the certification of the 2006 EIR, the project setting has undergone substantial changes with the installation of several large solar generating facilities within and around the water bank site as well as the construction of extensive wind generating facilities to the north and west. In addition, the SCE's Tehachapi Renewable Transmission Project has been completed, a segment of which passes through the project site. (These projects are described in Section 2.6 and shown in Figure 6.)

Since the certification of the EIR in 2006, the CEQA Appendix G Checklist has been modified to add analysis of Tribal Cultural Resources to the Cultural Resources section. This new checklist item resulted from the passage of Assembly Bill 52 which is discussed below.

New Information

New information pertaining to cultural resources in the project area has become available since the project EIR was prepared in 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the preparation of cultural resource investigations. The findings of these cultural reports were reviewed in detail by Basin Research Associates (Basin) in the course of their preparation of the cultural resources technical report for this Addendum (the Basin report is contained in Appendix D of this document). Basin also conducted extensive reconnaissance field surveys of the areas that would be subject to disturbance by the modified project. The Basin report includes a detailed summary of the cultural resources identified in the project area since 2006.

The various EIRs prepared on other projects in the immediate area also addressed paleontological resources. The conclusions, which were consistent with the conclusions of the 2006 EIR, were that the younger Holocene sediments derived from alluvial fan deposits that comprise the surface material in the project area have a very low potential to yield fossils because the materials are too young to contain fossils. However, the older Quaternary deposits that lie beneath the surface materials have high potential to yield fossils. At one site (Astoria Solar), a surface exposure of Quaternary material at an exposed stream bank was closely inspected but no fossiliferous materials were found. There have been no discoveries of fossils within the immediate project area since 2006.

Assembly Bill 52

Assembly Bill (AB) 52 (Chapter 532, Statutes of 2014) established a formal consultation process for California Native American tribes as part of CEQA and equates significant impacts on tribal cultural resources with significant environmental impacts (Public Resources Code [PRC] Section 21084.2). AB 52 consultation requirements went into effect on July 1, 2015 for all projects that had not already published a Notice of Intent to Adopt a Negative Declaration or Mitigated Negative Declaration, or published a Notice of Preparation of an Environmental Impact Report prior to that date (Section 11 [c]). Specifically, AB 52 requires that "prior to the release of a negative declaration, mitigated negative declaration, or environmental impact report for a project, the lead agency shall begin consultation" (21808.3.1 [a]), and that "the lead agency may certify an environmental impact report or adopt a mitigated negative declaration for a project with a significant impact on an identified tribal cultural resource only if" consultation is formally concluded (21082.3[d]). It is important to note that AB 52 does not apply to EIR Addendums.

In the case of the current project, the lead agency has prepared this Addendum to the previously certified 2016 EIR in accordance with Section 15164 of the CEQA Guidelines. An addendum was determined to be the

most appropriate document because none of the conditions described in Section 15162, calling for preparation of a subsequent EIR or a supplement to an EIR, have occurred. The Addendum addresses minor technical changes or additions, and confirms that the impacts associated with modified project are consistent with what was previously analyzed under the 2006 EIR. Therefore, the AB 52 procedures specified in PRC Sections 21080.3.1(d) and 21080.3.2 do not apply here and no tribal consultation under AB 52 is required.

The following evaluation is based on the cultural resources investigation contained in cultural resources technical report prepared by Basin Research Associates. The Basin report is contained in Appendix D of this Addendum.

4.5.2. Environmental Evaluation

a) Cause a substantial adverse change in the significance of a historical resource as defined in §15064.5?

[Note: The 2006 EIR combined into one analysis the evaluation of impacts to historical resources (Checklist item 'a'), archaeological resources (Checklist item 'c'), and human remains (Checklist item 'e'). As such, this impact evaluation is organized in the same way to allow for comparison.]
[
The 2006 EIR addresses impacts to historical and archaeological resources (including human remains) in ***Impact 4.4-1***. The EIR states that no cultural resources were recorded in the project area, and none were found during surveys conducted for the EIR. It found that the project area on the valley floor has a low sensitivity to prehistoric and historical cultural resources, while the segments of the supply pipeline between Avenue A and Avenue D have a moderate-to-high sensitivity for buried cultural resources, particularly at stream crossings and alluvial fan deposits. The 2006 EIR concluded that "the project could damage or destroy a significant historical resource and would represent a significant impact." The EIR identified ***Mitigation Measures 4.4-1*** through ***4.4-3*** to avoid potential impacts to historical and archaeological resources, including human remains.

The cultural resources investigation prepared for this Addendum by Basin Research Associates included a thorough review of 40 cultural reports prepared in the project area since 2006. These reports identified a total of 36 historic and prehistoric sites within or immediately adjacent to the areas subject to ground disturbance by the project. These sites are listed and described in the Basin report in Appendix D of this document. Of the sites recorded in the vicinity, only four have been determined to be eligible for listing on the National Register of Historic Places (NRHP), and by extension the California Register of Historical Resources (CRHR), which is a requirement for a site to be considered a significant historical or archaeological resource under CEQA. Of the 36 recorded sites, 28 sites have not been evaluated for eligibility to the NRHP or CRHR, but most consist of modern trash dumping episodes or utility structures and would not be considered eligible.

The four resources that appear or have been determined to be eligible for the NRHP include the following:

- P-19-001780 / 2S2. Prehistoric lithic scatter suggesting reduction/manufacture with many ground stones (milling) indicating possible occupation; subject to site testing/collection and monitored during solar bank installation; portions graded.

- P-15-014603. Possible prehistoric village with occupation loci and numerous associated features; appears eligible under criterion d. Historic component consists of minor agricultural piping and is not eligible.

- P-15-017243 / 2D2. Vincent 220kV Transmission Line - contributing element to Big Creek Hydro System Historic District.

- P-19-186876 / 2D2 or 6Z. SCE Eagle Rock-Pardee & Antelope-Vincent No. 1 220kV Transmission Line Corridor (see P-15-018243). Part of a district; individual resource within district - not eligible.

The Basin investigation also included a field survey of planned water bank infrastructure (recharge basins, pipelines, well sites) that had not been covered by previous cultural investigations for 2006 EIR or for the solar facilities that overlap the water bank site or offsite pipelines. During the field survey, no prehistoric archaeological materials were found, but 12 additional historic-era sites were found, all of which consisted of trash dumping episodes, fire pits with refuse scatters, and livestock enclosures that would not be considered significant.

Based on its extensive literature search and field survey, Basin Research determined that the conclusion of the 2006 EIR that the project would represent a potentially significant impact to historic (and archaeological) resources is still valid and applicable to the modified project. However, the language in these mitigation measures has been updated to reflect current standards of practice (see Section *4.5.3. Mitigation Measures*).

b) Cause a substantial adverse change in the significance of a tribal cultural resource as defined in Public Resources Code § 21074?

As discussed in Section 4.5.1 above, this Checklist item was added to the CEQA Appendix G checklist in 2016 as required under AB 52. As noted, AB 52 requires that lead agencies coordinate with local tribes for the purpose of identifying tribal cultural resources that may be affected by a project. Such consultation is required for actions for which a negative declaration, mitigated negative declaration, or environmental impact report are required under CEQA" (21808.3.1 [a]). However, the 2006 EIR was certified prior to July 1, 2015, the effective date of AB 52. Also, AB 52 does not apply to EIR Addendums such as the subject document. Therefore, no tribal consultation is required and this Checklist item is not applicable.

c) Cause a substantial adverse change in the significance of an archaeological resource pursuant to §15064.5?

This Checklist item is fully addressed in item 'a' above.

d) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

The 2006 EIR addresses impacts to paleontological resources under ***Impact 4.4.2***. The EIR concluded that there was a low potential for fossils to be present in the alluvial materials near the ground surface since these materials consist of younger Quaternary Alluvium that are too young to contain fossils. However, beneath the surface materials, the older Quaternary sediments have a high potential to yield significant vertebrate fossils. Also, at the southern end of the supply pipeline, the older Quaternary sediments are found at or near the ground surface. The EIR concluded that significant impacts could occur to paleontological resources at depths of 5 feet or greater in the modified project area (i.e., recharge basins, and collection pipelines), and as near as the ground surface along the southern segments of the 84-inch supply pipeline near the California Aqueduct. The EIR identified ***Mitigation Measure 4.4-4*** to avoid impacts to paleontological resources.

The modified water bank project is subject to the same geological conditions as the original water bank project, with recent alluvium at the surface and older potentially fossil-bearing alluvium at depth. The paleontological investigations conducted for the nearby solar projects since 2006 have not found any evidence of fossils on the ground surface. As such, the impact conclusions from the 2016 EIR are valid and applicable to the modified project, and ***Mitigation Measure 4.4-4*** is also applicable to the modified project as written.

e) Disturb any human remains, including those interred outside of formal cemeteries?

This Checklist item is fully addressed in item 'a' above.

Cumulative Impacts

The 2006 EIR concluded that the cultural and paleontological resources impacts of the approved project would be reduced to less than significant levels with implementation of mitigation measures identified in the EIR. It stated that the cultural and paleontological resources impacts associated with approved and pending projects in the area would be reduced to less than significant levels by similar mitigation that would be required for each such cumulative project. Therefore, it was concluded that the cumulative cultural and paleontological resources impacts would be less than significant, and that the approved project would not contribute considerably to a cumulatively significant impact to cultural and paleontological resources.

The modified project would be subject to the same basic cultural and paleontological mitigation measures as the approved project, as updated in this Addendum to reflect current standards of practice. It is expected that the same or similar cultural and paleontological resources mitigations, as applicable, would be required for other cumulative projects. Therefore, the modified project would not contribute considerably to a cumulatively significant impact to cultural or paleontological resources, and the cumulative cultural and paleontological resource impacts associated with the modified project would be less than significant.

4.5.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR, and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum). Some mitigation measures are noted as being adequate without modification, and some mitigation measures have been updated as indicated with <u>underlining</u> and ~~strikeouts~~.

- **Mitigation Measure 4.4-1: Cultural Resources Mitigation** (for full text see MOU pp. 7-10.) This mitigation is replaced in its entirety to bring it into line with current standards of practice for mitigation of historic and archaeological resources:

    a) <u>The project proponent shall conduct a pre-construction analysis of any area subject to project ground disturbance that has not been previously reviewed or surveyed for cultural resources. If non-evaluated resources identified in these surveys or previous surveys are present within any area subject to ground disturbance they shall be relocated in the field and evaluated for inclusion on the California Register of Historical Resources. Evaluation may include additional intensive recordation including supplementary archival research and archaeological testing to determine the presence of significant buried cultural materials. The results shall be reported in an appropriate technical document with recommendations</u>

to guide ground disturbing construction. The technical document shall be submitted for review and approval by the appropriate county regulatory agency(s).

b) The project proponent shall note on any plans that require ground disturbing excavation that there is a potential for exposing buried cultural resources.

c) The project proponent shall retain a Professional Archaeologist to provide a pre-construction cultural awareness briefing to supervisory personnel of any excavation contractor to inform construction personnel of the types of cultural resources that may be encountered during construction, and to bring awareness to personnel of actions to be taken in the event of a cultural resources discovery, and to alert them to the possibility of exposing significant historic or prehistoric archaeological resources within the project area. The briefing shall discuss any archaeological objects that could be exposed, the need to stop excavation at the discovery site within a specified radius of the find, and the procedures to follow regarding discovery, protection, and notification of the project proponent and archaeological team until the find has been evaluated.

- **Mitigation Measure 4.4-2: Archaeological Monitoring** (for full text see MOU pp. 10-11.)
  This mitigation is updated in its entirety to bring it into line with current standards of practice for mitigation of historic and archaeological resources:

  a) Archaeological monitoring[1] shall be initiated for ground disturbing construction within a 150-foot radius of the recorded site boundaries of a resource that appears to be eligible for the California Register of Historical Resources (CRHR) or has not been evaluated for inclusion on the CRHR. Monitoring will continue until the Project Archaeologist has determined that there is minimal potential to expose significant archaeological resources. This decision shall be communicated to the appropriate regulatory agency(s).

- **Mitigation Measure 4.4-3a: Inadvertent Cultural Discoveries** (for full text see MOU p. 11.)
  This mitigation is updated in its entirety to bring it into line with current standards of practice for mitigation of historic and archaeological resources:

  a) The project proponent shall retain a Professional Archaeologist on an "on-call" basis during ground disturbing construction for the project to review, identify and evaluate cultural resources that may be inadvertently exposed during construction. Should previously unidentified cultural resources be discovered during construction of the project, the project proponent shall cease work within 100 feet of the resources, and the appropriate Kern or Los Angeles County regulatory agency and the tribes identified by the Native American Heritage Commission for SB 18 consultation shall be notified immediately. The archaeologist shall review and evaluate any discoveries to determine if they are historical resource(s) and/or unique archaeological resources under the California Environmental Quality Act (CEQA).

  b) If the Professional Archaeologist determines that any cultural resources exposed during construction constitute a historical resource and/or unique archaeological resource, he/she shall notify the project proponent and other appropriate parties of the evaluation and

[1]. *Archaeological monitoring r*efers to the controlled observation and regulation of construction operations on or in the vicinity of a known or potentially significant cultural resource in order to prevent or minimize impact to the resource.

recommended mitigation measures to mitigate the impact to a less-than-significant level. Mitigation measures may include avoidance, preservation in-place, recordation, additional archaeological testing and data recovery, among other options. Treatment of any significant cultural resources shall be undertaken with the approval of the project proponent in consultation with the appropriate agency for either Kern County or Los Angeles County, as applicable. The archaeologist shall document the resources using DPR 523 forms and file said forms with the appropriate California Historical Resources Information System, Information Center. The resources shall be photo-documented and collected by the archaeologist for curation with an appropriate facility. The archaeologist shall be required to submit to the County(s) for review and approval a report of the findings and method of curation or protection of the resources. Further grading or site work within the area of discovery shall not be allowed until the preceding steps have been taken.

- **Mitigation Measure 4.4-3b: Human Burials** (for full text see MOU p. 11.)
  This mitigation, which was combined with "inadvertent discoveries" in the 2006 EIR, is assigned to a separate sub-measure, with the language replaced in its entirety to bring it into line with current standards of practice for treatment of human burials:

  a) Pursuant to State Health and Safety Code Section 7050.5(e) and Public Resources Code Section 5097.98, if human bone or bone of unknown origin is found at any time during on- or off-site construction, all work shall stop in the vicinity of the find and the appropriate County Coroner/Medical Examiner shall be notified immediately. If the remains are determined to be Native American, the Coroner shall notify the California State Native American Heritage Commission (NAHC), who shall identify the person believed to be the Most Likely Descendant (MLD). The project proponent, and MLD, with the assistance of the archaeologist, shall make all reasonable efforts to develop an agreement for the treatment of human remains and associated or unassociated funerary objects with appropriate dignity (CEQA Guidelines Sec. 15064.5(d)). The agreed upon Treatment Plan shall address the appropriate excavation, removal, recordation, analysis, custodianship, curation, and final disposition of the human remains and associated or unassociated funerary objects. California Public Resources Code allows 48 hours for the MLD to make their wishes known to the landowner after being granted access to the site. If the MLD and the other parties do not agree on the reburial method, the project will follow PRC Section 5097.98(e) which states that ". . . the landowner or his or her authorized representative shall reinter the human remains and items associated with Native American burials with appropriate dignity on the property in a location not subject to further subsurface disturbance.

  b) The Treatment Plan shall be implemented and any findings shall be submitted by the archaeologist in a professional report submitted to the project applicant, the MLD, the appropriate County agency(s), and the regional California Historical Resources Information System Information Center."

- **Mitigation Measure 4.4-4: Paleontological Resources** (for full text see MOU pp. 11-12.)
  This mitigation is still valid and applicable to the modified water bank project without changes.

4.5.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to cultural or paleontological resources than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to impacts to cultural and paleontological resources remain valid and are applicable to the modified water bank project without the need for further analysis.

4.6. GEOLOGY AND SOILS

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
6. Geology and Soils. Would the project:					
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:					
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?	Impact 4.5-1 (p. 4.5-12.)	No	No	No	NA (Impact was and remains less than significant.)
ii) Strong seismic ground shaking?	Impact 4.5-2 (pp. 4.5-12, -13.)	No	No	No	NA (Impact was and remains less than significant.)
iii) Seismic-related ground failure, including liquefaction?	Impact 4.5-3 (pp. 4.5-13, -14.)	No	No	No	NA (Impact was and remains less than significant.)
iv) Landslides?	Appendix A – NOP 2. Environmental Checklist, p. 2-13.	No	No	No	NA - Impact was and remains less than significant.
b) Result in substantial soil erosion or the loss of topsoil?	Impact 4.5-6 (pp. 4.5-15→4.5-17.)	No	No	No	Yes (Note: Mitigations have been updated.)
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	Impact 4.5-4 (p. 4.5-14.)	No	No	No	NA (Impact was and remains less than significant.)
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	Impact 4.5-5 (p. 4.5-14.)	No	No	No	NA (Impact was and remains less than significant.)

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
6. Geology and Soils. Would the project:					
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	Appendix A – NOP 2. Environmental Checklist, p. 2-13.	No	No	No	NA No impact.

4.6.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of geology and soils impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and any new information that has become available since 2006.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. The modified project is described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since 2006, the project setting has undergone substantial changes with the installation of several large solar generating facilities within and around the water bank area as well as the construction of extensive wind generating facilities to the north and west (see Section 2.6 for a description of these projects).

Modified project boundaries have shifted westward to encompass lands that were not addressed in the 2006 EIR, and which could potentially involve adverse conditions with respect to geology and soils. However, research conducted for this Addendum showed that the western expansion area has the same or similar geologic characteristics as the approved water bank project. Both the approved and modified project sites are entirely located within the Neenach Sub-Basin with the Quaternary alluvium surface formation generally consisting of unconsolidated sand, gravel, and boulders, with small amounts of clay. This area does not contain any adverse conditions related to geology and soils that are different from those identified for the approved project in the 2006 EIR.

Various elements of the modified project are planned for lands that were not addressed in the 2006 EIR, and which could potentially involve adverse conditions with respect to geology and soils. However, research

conducted for this Addendum showed that the additional lands affected by the modified project are composed of the same or similar surface materials as found in the original water bank site and do not contain any adverse conditions related to geology and soils.

New Information

New information pertaining to geology and soils in the project area has become available since 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the evaluation of geological and soils conditions at those sites. The findings of those evaluations were reviewed in detail during the course of the evaluation of geology soils impacts associated with the modified project, as presented below.

4.6.2. Environmental Evaluation

a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:

i. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?

The 2006 EIR addressed the potential for fault rupture in ***Impact 4.5-1***. The EIR noted the presence of several earthquake faults in the water bank vicinity, including the Neenach fault which passes adjacent to the southeast boundary of the wellfield. The supply pipeline running from the California Aqueduct to the water bank crosses an unnamed but potentially active fault about 0.75 miles north of the Aqueduct and could damage the pipeline in the event of fault rupture. Also, surface rupture of the inferred Neenach fault or another inferred fault across the pipeline route cannot be ruled out, although their potential for activity is unknown. Displacement during any surface rupture of these faults would be relatively small because they are short, local faults. However, rupture could shear the buried pipeline and cause flooding in the vicinity. Some possibility exists that such local flooding could damage residential or farm structures if they are located in the immediate vicinity, but the probability of such an event is small. The pipeline would only be used during periods of recharge or recovery. If a rupture were to occur when the pipeline is conveying water, flow in the pipeline would be shut down and released water would tend to infiltrate the nearby soils (most soils in the area are relatively permeable, and none are highly impermeable). There are very few homes near the supply pipeline alignment. Water that contacted a structure foundation would not be deep enough to cause structural damage (or to threaten persons). Accordingly, the 2006 EIR concluded that the potential impact due to fault rupture was less than significant.

The modified project plan would be subject to the same risk of pipeline rupture along the Aqueduct supply pipeline as the approved project. The overall risk may be somewhat greater for the modified project due to the larger volumes of water to be conveyed and the longer periods of the year when the supply pipeline may be in operation. The newly added connecting pipeline to AKEK's SNIP pipeline will also cross the Neenach fault near Avenue A, so there is also a potential for rupture of that buried pipeline and consequent minor flooding as described above for the supply line from the California Aqueduct. Elsewhere, the modified project plan has somewhat lower exposure to fault rupture with the removal of the eastern portion of the wellfield, the southeast boundary of which was coterminous with the Neenach fault. Thus the overall risk to the wellfields and associated infrastructure would be

reduced relative to the approved project. Overall, the potential for damage due to fault rupture would be relatively low under the modified project plan, and would not be substantially different from the potential for damage under the approved project plan.

In summary, the modified project would not result in a new or more severe significant impact as a result of earthquake fault rupture than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact due to fault rupture in the 2006 EIR is still valid and applicable to the modified project.

ii. Strong seismic ground shaking?

The 2006 EIR discussed the potential for ground shaking in ***Impact 4.5-1***. Strong ground shaking could occur at the site during major earthquakes centered on major faults in the region, including the San Andreas fault. It was noted that all project structures would be required to be designed to accommodate predicted seismic forces. In addition, all project structures are either underground or low in profile, with the tallest structures consisting of check structures and perimeter berms at the recharge basins, which would be no more than 4 feet high. In the event of berm failure, the maximum depth of water would be 1-2 feet within the recharge basins, so that any spilled water would tend to infiltrate the permeable soils nearby and result in little or no risk to structure foundations in the area. Thus it was concluded that the potential impacts due to strong ground shaking would be less than significant for the approved project.

The modified project plan includes a substantially reduced area of recharge basins compared to the approved project (i.e. 1,106 gross acres compared to 1,612 gross acres in the approved project). This smaller recharge area reduces the potential for spill and flooding in the event of berm failure. This is somewhat countered by the longer annual operating period for the water bank which would involve recharging larger volumes of water. On balance, the risk of flooding as a result of berm failure under the modified project plan would be similar to that of the approved plan, and the impact would be less than significant. Therefore, the conclusion of less-than-significant impact due to ground shaking in the 2006 EIR is still valid and applicable to the modified project.

iii. Seismic-related ground failure, including liquefaction?

The 2006 EIR addressed the potential for liquefaction in ***Impact 4.5-3***. As stated in the EIR, the conditions necessary for liquefaction to occur include: the presence of sandy substrates; ground saturation within 30 feet of the surface; and intense ground shaking. Under normal conditions, the substrate would not be saturated at this shallow depth. [The conditions for lateral spreading are similar, but occur near an exposed face such as a creek bank causing separation flows of soil masses.] However, during periods of recharge, a large earthquake could induce liquefaction at the recharge basins and result in failure of the containment berms. As with failure caused by ground shaking, discussed above, the limited flooding resulting from berm failure would tend to infiltrate into the permeable substrate in a short time, and the potential for damage to structures and foundations would be small. Also, probability of a large earthquake occurring during ongoing recharge operations is relatively low. As such, the 2006 EIR concluded that the potential impact due to liquefaction failure at the approved project is less than significant.

The modified project plan includes approximately 31 percent less recharge basin area than the approved project. However, the longer annual operating period for the water bank would involve recharging greater volumes of water, so the basins would likely be flooded for longer durations than under the

approved project. On balance, the risk of flooding as a result of berm failure due to liquefaction under the modified project plan would be similar to that of the approved plan, and the potential flooding impact would be less than significant. Therefore, the conclusion of less-than-significant impact due to liquefaction in the 2006 EIR is still valid and applicable to the modified project.

iv. Landslides?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that there was no potential impact from landslides. The accompanying discussion stated that the project area is located on relatively flat topography; therefore, a landslide from seismic activity is unlikely to occur. Therefore, this issue was not addressed further in the body of the EIR.

The modified project plan includes project elements on lands that were not included in the approved project or considered in the 2006 EIR. These include: expansion of the wellfield area to the west of 170th Street; realignment of the northern half of the supply pipeline from the California Aqueduct to the east; and inclusion of a new connecting pipeline to SNIP to the southeast of the wellfield area. All of these new project elements of the modified project plan are located on relatively flat topography and are not in the vicinity of sloping terrain. As such, there is no potential for impacts due to landslides in conjunction with the modified project plan. Therefore, the conclusion of no landslide impact in the 2006 EIR is still valid and applicable to the modified project.

b) Result in substantial soil erosion or the loss of topsoil?

The 2006 EIR addressed the potential for erosion and loss of topsoil in ***Impact 4.5-6***. As discussed in the EIR, the soils of the project area are highly susceptible to erosion by water and wind. To prevent erosion, ***Mitigation Measure 4.5-2*** requires the preparation of a Storm Water Pollution Prevention Plan (SWPPP) which would prescribe Best Management Practices (BMPs) to control erosion and sedimentation during and after construction. The implementation of this measure would reduce the potential erosion impacts to less than significant levels.

The 2006 EIR states that grading could involve mixing of topsoils and subsoils and therefore result in the loss of topsoil as a growth medium. To prevent this, ***Mitigation Measure 4.5-1*** requires that topsoil be stripped from areas to be graded, and stockpiled, and then applied as a top-dressing once final grades are completed. This will primarily occur in the recharge basins, where the reapplied topsoil will facilitate revegetation and prevent long-term soil loss, but will also occur in the areas disturbed during pipeline construction where reapplication of topsoil and revegetation would stabilize these soils and prevent erosion. The implementation of this measure would reduce the potential erosion impacts to less than significant levels.

During operation of the recharge basins, the 2006 EIR discussed the potential for internal erosion within the recharge basins as water levels rose and fell in basins. Since the basins were to have been utilized for agricultural cultivation, involving exposed soils, any eroded soils would be reestablished through plowing the fields or regrading the berms.

Under the modified project plan, the potential for erosion and loss of topsoil would be the similar to the approved plan. The soil types in the western wellfield expansion area are similar to those in the approved plan area and are highly susceptible to erosion. The modified plan involves less grading for recharge basins, but more excavation and trenching for pipelines. The soil conditions would be the same as under the approved plan, and the implementation of ***Mitigation Measures 4.5-1*** and ***4.5-2*** would reduce the impacts

to less than significant levels. Therefore, it is concluded that the mitigation measures from the 2006 EIR would be effective in mitigating the potential impacts from the modified project.

During operation of the recharge basins under the modified project, the basin areas would be devoted to cattle and sheep grazing instead of agricultural cultivation. As such, the surface areas would be retained in vegetative cover which would provide permanent stabilization of soils and minimize the potential for erosion within the basin areas.

In summary, the conclusion in the 2006 EIR that the impact with regard to erosion and loss of topsoil would be less than significant after mitigation is still valid and applicable to the modified project.

c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?

[Note: This discussion addresses subsidence only. The subjects of landslides and liquefaction/lateral spreading are addressed under items 'a.i' and 'a.2' above, respectively.]

The 2006 EIR addressed subsidence in ***Impact 4.5-4***. Land subsidence occurs when surface ground elevations sink as a result of lowering of the water table through pumpage where substrates are susceptible to compaction. Subsidence typically occurs when clays of lacustrine origin are extensive in the dewatered zone. Within the project area, the substrates contain little clay. The 2006 EIR noted that according to the USGS, no measurable subsidence occurred in the water bank area between 1930 and 1992, during which the water table was lowered by up to 200 feet.

During recharge and recovery operations, groundwater levels would fluctuate substantially, with fluctuations of up to 300 feet predicted directly beneath the recharge basins. Given that no subsidence was observed in the past when the groundwater table declined substantially, the substrates in the project area are not considered to be prone to subsidence due to dewatering. Therefore, the 2006 EIR concluded that there would be no impact from subsidence associated with the approved project.

The modified project would involve the recharge of greater volumes of water annually within a smaller area of recharge basins than in the approved project. The modified water bank project would recharge and then recover water from the underlying aquifer, but the requirement that 10 percent of all recharge water be left behind in the aquifer would reduce, offset, and/or remediate overdraft conditions that contribute to subsidence. As such, it is concluded that the modified project would have a beneficial effect and would result in no impact due to subsidence. Therefore, the conclusion in the 2006 EIR of no impact with regard to subsidence is still valid and applicable to the modified project.

d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?

The 2006 EIR addressed soils expansion in ***Impact 4.5-5***. Expansive soils can result in damage to structures by way of shrinking and swelling as moisture is absorbed or lost in these soils. The 2006 EIR stated that all but one soil type in the project area have low or low-to-moderate shrink- swell potential; one soil type has moderate potential. None of the soils would be classified as expansive according to Table 18-1-B of the Uniform Building Code. However, if local areas with expansive soils were encountered, engineered project facilities would be designed according to the Uniform Building Code to prevent structural damage from soil expansion and contraction. The 2006 EIR concluded that there would be no impact due to expansive soil.

The soil conditions evaluated in the 2006 EIR addressed the approved project area located east of 170th Street. The modified project includes a wellfield expansion area covering 3,200 acres between 170th and 195th Streets. Review of the USDA soil survey for Kern Southeast indicated that 73 percent of the western expansion area has low shrink-swell potential, and 26 percent of the area (composed of Rosamond silty clay loam) has moderate shrink swell potential, and less than 0.8 percent (Vernalis loam, located along the north side of Avenue A between 170th and 180th Streets) has high shrink-swell potential (USDA 1981, 2018). Therefore, over 99 percent of the soils within the modified project area are non-expansive. Given the requirement for soil engineering measures in local areas with expansive soils, the potential impact due to soil expansion for the modified project would be less than significant. Therefore, the conclusion of the 2006 EIR of less than significant impact with respect to soils expansion is still valid and applicable to the modified project.

e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?

Since the approved project does not include the use of septic tanks or other wastewater disposal systems, this Checklist item was not addressed in the 2006 EIR.

The modified project is likewise not planned to involve the installation and use of septic tanks or other wastewater systems. Therefore, the modified project would result in no impact with respect to wastewater disposal.

Cumulative Impacts

The 2006 EIR concluded that the impacts related to geology and soils at approved and pending projects in the area would be minimized by design requirements that would be imposed by local governments to minimize geologic and soils hazards at each project site. The potential for soil erosion would be mitigated at the project site through implementation of SWPPPs and erosion control plans, and similar erosion control requirements would apply to other cumulative projects. Therefore, it was concluded that the cumulative impacts related to geology and soils would be less than significant, and that the approved project would not contribute considerably to a cumulatively significant impact regarding geology and soils.

The modified project and other cumulative projects in the area would be subject to design requirements that would minimize geologic and soils hazards at each site. The potential for soil erosion would be mitigated at the project site through implementation of SWPPPs and erosion control plans, and similar erosion control requirements would apply to other cumulative projects. Therefore, the modified project would not contribute considerably to a cumulatively significant impact regarding geology and soils, and the cumulative impacts related to geology and soils associated with the modified project would be less than significant.

4.6.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project are applicable to the modified project (the MOU is contained in Appendix A of this Addendum):

- **Mitigation Measure 4.5-1: Salvage and Reapplication of Topsoil** (for full text see MOU p. 13.) This mitigation is applicable to the modified water bank project without changes.

- **Mitigation Measure 4.5-2: Prepare and Implement SWPPP** (for full text see MOU pp. 13-14.) This mitigation is applicable to the modified water bank project without changes.

4.6.4. Conclusion

The modified project would not involve new or substantially more severe significant geology and soils impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to geology and soils impacts remain valid and are applicable to the modified project without the need for further analysis.

4.7. GREENHOUSE GAS EMISSIONS

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
7. Greenhouse Gas Emissions. Would the project:					
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?	Not Analyzed. (This question was not included in the CEQA Checklist at the time the 2006 EIR was certified.)	No	No	No	NA (GHGs were not addressed in 2006 EIR, and modified project does not require mitigation.)
b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	Not Analyzed. (This question was not included in the CEQA Checklist at the time the 2006 EIR was certified.)	No	No	No	NA (GHGs were not addressed in 2006 EIR, and modified project does not require mitigation.)

4.7.1. Relevant Changes Since 2006

Introduction

The greenhouse gas (GHG) emissions associated with the construction and operation of the approved water bank project were not analyzed in the 2006 EIR. While abundant scientific literature at the time indicated that human-generated emissions of GHGs in excess of natural ambient concentrations are responsible for a trend of unnatural warming of the earth's climate, the subject of GHGs was not commonly addressed in CEQA documents. At the time the 2006 EIR was prepared, no agencies in California, such as the California Air Resources Board (CARB) or the Governor's Office of Planning and Research (OPR) had published recommendations to address GHGs in CEQA documents. Since that time the contribution of GHGs to global climate change has become widely understood, as well as the relationship of land use development and GHG levels. This section provides an overview of the environmental and regulatory setting relevant to GHGs and climate change, as well as new analysis of the level of GHGs associated with the project.

The evaluation provided below does not constitute "new information" as defined in CEQA Guidelines Section 15162, because information was known about GHGs at the time the 2006 EIR was prepared and could have been evaluated at that time. This principle was established in the Appellate Court case *Citizens for Responsible Equitable Environmental Development (CREED) v. City of San Diego (2011)*, in which the court ruled that this issue could have been raised when the original EIR was prepared because there was substantial evidence available at that time regarding the effects of greenhouse gas emissions on climate. Under CEQA Guidelines Section 15162(a)(3), a Subsequent EIR must be prepared if there is substantial evidence that "[n]ew information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified" shows the project will have a significant or

substantially more severe impact that was not addressed in the previous EIR. Since the effects of greenhouse gas emissions on climate change were well known at time the original EIR was prepared, but this issue was not raised at the time, the court held that Statute of Limitations on the original EIR precludes this issue being raised after the fact. Therefore, the court in the CREED case concluded that greenhouse gas emissions did not constitute "new information" regarding a significant impact that would trigger a Subsequent EIR, and that an EIR Addendum was the appropriate form of CEQA review for the modified project in that case. The holding in the CREED case applies to the modified water bank project that is the subject of this EIR Addendum.

GHGs and Climate Change

Greenhouse gases trap heat in the atmosphere and thereby regulate the earth's temperature. This phenomenon, known as the greenhouse effect, is responsible for maintaining a habitable climate. The most common GHGs are carbon dioxide (CO_2) and water vapor but there are also several others, most importantly methane (CH_4), nitrous oxide (N_2O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), and sulfur hexafluoride (SF_6). These are released into the earth's atmosphere through a variety of natural processes and human activities. Sources of GHGs are generally as follows:

- CO_2 and N_2O are byproducts of fossil fuel combustion.
- N_2O is associated with agricultural operations such as fertilization of crops.
- CH_4 is commonly created by off-gassing from agricultural practices (e.g., keeping livestock) and landfill operations.
- Chlorofluorocarbons (CFCs) were widely used as refrigerants, propellants, and cleaning solvents but their production has been stopped by international treaty.
- HFCs are now used as a substitute for CFCs in refrigeration and cooling.
- PFCs and sulfur hexafluoride emissions are commonly created by industries such as aluminum production and semi-conductor manufacturing.

Each GHG has its own potency and effect upon the earth's energy balance. This is expressed in terms of a global warming potential (GWP), with CO_2 being assigned a value of 1 and sulfur hexafluoride being several orders of magnitude stronger with a GWP of 23,900. In GHG emission inventories, the weight of each gas is multiplied by its GWP and is measured in units of equivalent CO_2 (CO_2e).

An expanding body of scientific research supports the theory that global warming is currently affecting changes in weather patterns, average sea level, ocean acidification, atmospheric chemical reaction rates, and precipitation rates, and that it will increasingly do so in the future. The climate and several naturally occurring resources within California could be adversely affected by the global warming trend. Increased precipitation and sea level rise could increase coastal flooding, saltwater intrusion, and degradation of wetlands. Mass migration and/or loss of plant and animal species could also occur. Potential effects of global climate change that could adversely affect human health include more extreme heat waves and heat-related stress; an increase in climate-sensitive diseases; more frequent and intense natural disasters such as flooding, hurricanes and drought; and increased levels of air pollution.

Greenhouse Gas Regulations and Guidance

Regulations addressing GHG emissions from land use development projects are primarily driven by the State. AB 32, the Global Warming Solutions Act of 2006, codifies the State of California's GHG emissions target by directing CARB to reduce the state's global warming emissions to 1990 levels by 2020. AB 32 was signed and passed into law by Governor Schwarzenegger on September 27, 2006. Since that time, CARB, the California Energy Commission (CEC), the California Public Utilities Commission (CPUC), and the Building Standards Commission have all been developing regulations that will help meet the goals of AB 32.

A Scoping Plan for AB 32 was adopted by CARB in December 2008. It contains the State of California's main strategies to reduce GHGs from Business-As-Usual (BAU) emissions projected in 2020 back down to 1990 levels. BAU represents the projected emissions in 2020, including increases in emissions caused by growth, without any GHG reduction measures. The Scoping Plan has a range of GHG reduction actions, including direct regulations, alternative compliance mechanisms, monetary and non-monetary incentives, voluntary actions, and market-based mechanisms such as a cap-and-trade system. It required CARB and other State agencies to develop and adopt regulations and other initiatives reducing GHGs by 2012.

As directed by AB 32, CARB has also approved a statewide GHG emissions limit. On December 6, 2007, CARB staff resolved an amount of 427 Million Metric Tons (MMT) of CO_2e as the total statewide GHG 1990 emissions level and 2020 emissions limit. The limit is a cumulative statewide limit, not a sector- or facility-specific limit. The 2008 Scoping Plan estimated that 2020 BAU emissions would be 596 MMT of CO_2e. In 2011 CARB revised the 2020 BAU annual emissions forecast downward to 507 MMT of CO_2e. In April 2015, Governor Brown signed Executive Order EO-B-30-15 which set a new greenhouse gas emissions target at 40 percent of 1990 levels by 2030. On September 8, 2016, Governor Brown signed SB 32, which established by statute the GHG reduction target of 40 percent of 1990 levels by 2030. On December 14, 2017, CARB adopted *California's 2017 Climate Change Scoping Plan* which incorporates, coordinates, and leverages many existing and ongoing efforts and identifies new policies and actions to accomplish the SB 32 reduction target.

Beyond 2030, Executive Order S-3-05 sets a GHG emissions reduction target of 80 percent below 1990 levels by 2050. The incremental rate of emissions reductions mandated in SB 32, if sustained beyond 2030 on a State-wide basis, would achieve the 2050 target by 2040 (CARB 2017, p. 27).

Local Greenhouse Gas Regulations and Guidance

The Antelope Valley is located in the Mojave Desert Air Basin, but the project facilities are subject to the jurisdiction of two Air Districts which are separated by the Kern-Los Angeles County Line. The majority of the project facilities are located in Kern County, and are subject to the jurisdiction of the Eastern Kern Air Pollution Control District (EKAPCD). The facilities that extend into Los Angeles County (e.g., 84-inch supply pipeline from the CA Aqueduct, and the connecting pipeline to AVEK's South North Intertie Pipeline (SNIP)) are subject to the jurisdiction of the Antelope Valley Air Quality Management District (AVAQMD). Each of these Air Districts has adopted guidelines for addressing GHG emissions under CEQA. The applicable guidelines from each Air District are summarized below.

Eastern Kern Air Pollution Control District

Under the EKAPCD's guidelines, a project is considered to have a significant project impact or a cumulatively considerable impact if it exceeds the following criteria:

- Generate 25,000 metric tons or more of CO2e per year.

The above impact would be considered to be fully reduced to below the significance level if it meets one of the following conditions:

- The project demonstrates to EKAPCD that it is in compliance with a state GHG reduction plan such as AB 32 or future federal GHG reduction plan if it is more stringent than the state plan; or

- Project GHG emissions can be reduced by at least 20 percent below BAU through implementation of one or more of the following strategies:

a. Compliance with a Best Performance Standard (BPS);

b. Compliance with GHG Offset; and/or

c. Compliance with an Alternative GHG Reduction Strategy. (EKAPCD 2012)

Antelope Valley Air Quality Management District

As listed in the AVAQMD CEQA and Federal Conformity Guidelines, the AVAQMD has established a significance threshold of 100,000 tons CO2e per year or a daily threshold of 548,000 pounds CO2e where AVAQMD is the lead agency (AVAQMD 2016, p. 7.)

4.7.2. Environmental Evaluation

a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant effect on the environment?

The 2006 EIR did not address GHG emissions, and doing so was not required by the CEQA Guidelines at the time the 2006 EIR was prepared. Additionally, there were no quantitative emission thresholds and no significance criteria recommended by any federal, state, or local agencies to determine whether a project's GHG emissions would be cumulatively considerable.

In this environmental review, an analysis is conducted to evaluate the project's impacts in the context of the current regulatory environment for GHGs, and, more specifically, to evaluate whether the modified project would have substantially more severe impacts with respect to climate change than the approved project.

In order to provide comparable GHG emission levels for the approved and modified water bank projects, construction- and operational-generated GHG emission were estimated for both by Illingworth & Rodkin, Air Quality and Noise Consultants (see Appendix B for full report). Since the project is located entirely in the Mojave Desert Air Basin, the emissions estimates were calculated for the project as a whole. However, the results are compared to the applicable thresholds of both Air Districts. The results of the comparative GHG analysis are shown in Table 5 on the next page.

As shown in Table 5, the estimated emissions from both the approved project and the modified project would exceed the EKAPCD significance threshold of 25,000 metric tons per year, and thus the GHG emissions of both the approved project and the modified project would be considered significant by the EKAPCD. However, neither the approved nor modified project exceed the AVAQMD's significance threshold of 100,000 metric tons per year; therefore, the GHG emissions of both the approved project and the modified project would not be considered significant by the AVAQMD. Since the majority of the GHG emissions during construction and almost all of the operational emissions would occur in Kern County, the emissions from the Kern County portion of the project would exceed the EKAPCD threshold under both the approved project and the modified project.

As shown in Table 5, the emissions associated with the modified project would be substantially less than the emissions from the approved project. As such, the modified project would not result substantial increase in severity of a GHG impact associated with the approved project.

TABLE 5
COMPARISON OF GHG EMISSIONS BETWEEN APPROVED PROJECT AND MODIFIED WATER BANK PROJECT

Emission Source	Annual GHG Emissions (Metric Tons CO_2e/year)		Difference with Modified Project	
	Approved Project	Modified Project	MT CO_2e	Percent
Construction Emissions*	164	207	+43	+26.2
Operational Emissions (wells)	50,755	38,290	-12,465	-24.6%
Operational Emissions (vehicle exhaust)	20	20	0	0
Total	50,939	38,517	-12,422	-24.4%
AVAQMD Significance Threshold	100,000	100,000	NA	NA
Exceeds AVAQMD threshold?	No	No		
EKAPCD Significance Threshold	25,000	25,000		
Exceeds EKAPCD threshold?	Yes	Yes		
EKAPCD Required GHG Reduction for Less-than-Significant Impact?				-20%
Modified Project Meets GHG Emissions Reduction Requirement for Less-than-Significant Impact?				Yes

***** Total construction emissions of 6208.44 MT CO2e are amortized over 30 years, so the contribution to annual emissions is 1/30th of the total construction emissions that occur over the 4-year construction period.
Source: Illingworth & Rodkin 2018

Per EKAPCD guidance, summarized above, a project's GHG impact would be considered to be fully reduced to below the significance level if it meets one of the several conditions, including a 20 percent reduction in emissions compared to baseline conditions through the implementation of Best Performance Standards (BPS) or Alternative Strategies for Reductions. The guidance states that alternative strategies may include other technologies, equipment designs, or operational/maintenance practices that would result in a 20 percent reduction of GHG emissions compared to baseline conditions. In this case, the approved project serves as the baseline condition since it could be constructed as is without further environmental review. In the modified project, electrically-powered pumps would replace the propane-fueled well pumps that were included in the approved project. Since electrical generation results in substantially lower levels of GHG emissions per unit of energy than propane combustion, this change in power source would provide significant reduction in GHG emissions compared to the baseline approved project. As shown in Table 5, the replacement of propane pumps with electric pumps results in an overall reduction of 24.4 percent in GHG emissions under the modified project compared to baseline conditions under the approval project. Since this reduction is greater than the 20 percent reduction required under the EKAPCD to be considered to be reduced to below the significance level of GHG emissions, the modified project would therefore have a less-than-significant impact related to GHG emissions. Therefore, the modified project would not result in a new significant impact.

In summary, the above analysis shows that the modified project would not result in a new significant impact or a substantial increase in the severity of a GHG impact associated with the approved project.

b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?

As discussed in (a), above, the total GHG emissions resulting from the modified project would be substantially lower than the approved project. The propane-fueled well pumps planned for the approved project would be replaced with electrically-powered well pumps under the modified project, which would result in a 24.4 percent reduction in overall GHG emissions relative to baseline conditions. This would exceed the 20 percent reduction considered under the EKAPCD guidance to provide reduction to below a significant project impact and below a cumulatively considerable impact. Thus the modified project would not conflict with the applicable regulation of EKAPCD for reducing the emissions of greenhouse gases. In summary, the modified project would not result in a new significant impact or a substantial increase in the severity of a previously identified impact with respect to conflicts with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

Cumulative Impacts

As discussed previously in this section, the 2006 EIR did not address GHG emissions because there was not requirement to do so under CEQA at that time. The above estimates of GHG emissions for the approved project indicate that it would exceed the applicable significance thresholds of EKAPCD for GHGs. There are no project features or mitigation measures associated with or applicable to the approved project that would have reduced the GHG emissions to below a level of significant project impact or a cumulatively considerable impact. Therefore, the approved project would result in a significant cumulative impact in terms of GHG emissions.

Under the modified project, the total GHG emissions would be reduced by 24.4 percent compared to baseline conditions under the approved project. This would meet EKAPCD's guidance of 20 percent reduction to reduce GHG emissions to below a significant project impact and below a cumulatively considerable impact. Therefore, the cumulative GHG impacts resulting from the modified project would not contribute considerably to a cumulatively significant impact, and cumulative GHG emissions impact associated with the modified project would be less than significant. As such, the modified project would not result in any new circumstances involving new significant cumulative impacts or substantially more severe cumulative impacts pertaining to GHG emissions compared to the approved project.

4.7.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing GHG emissions impacts, and no new mitigation measures for GHG emissions impacts are required for the modified project.

4.7.4. Conclusion

The modified project would not involve new or substantially more severe significant GHG emissions impacts than would occur under the approved project, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, no further analysis of GHG emissions impacts is required.

4.8. HAZARDS AND HAZARDOUS MATERIALS

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
4. Hazards and Hazardous Materials. Would the project:					
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	Impact 4.6-2 (pp. 4.6-11, 12.)	No	No	No	NA (Impact was and remains less than significant.)
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	Impact 4.6-2 (pp. 4.6-11, 12.)	No	No	No	Yes
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	Appendix A – NOP 2. Environmental Checklist, p. 2-15.	No	No	No	NA (Impact was and remains less than significant.)
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	Impact 4.6-1 (pp. 4.6-1, -2.).	No	No	No	NA (Impact was and remains less than significant.)
e) For a project located within Kern County Airport Land Use Compatibility Plan, would the project result in a safety hazard for people residing or working in the project area?	Impact 4.6-3 (pp. 4.6-12→4.6-14.)	No	No	No	Yes
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	Impact 4.6-3 (pp. 4.6-12→4.6-14.)	No	No	No	Yes
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	Appendix A – NOP 2. Environmental Checklist, p. 2-16.	No	No	No	NA Impact was and remains less than significant.
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	Appendix A – NOP 2. Environmental Checklist, p. 2-16.	No	No	No	NA (Impact was and remains less than significant.)

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
4. Hazards and Hazardous Materials. Would the project:					
i) Generate vectors (flies, mosquitos, rodents, etc.) or have a component that includes agricultural waste. Specifically, exceed the following qualitative threshold: ▪ Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and ▪ Are associated with design, layout, and management of project operations; and ▪ Disseminate widely from the property; and ▪ Cause detrimental effects on the public or wellbeing of the majority of the surrounding population? [Note: This is a Kern County criterion and is not included in the State CEQA Guidelines Appendix G Checklist.]	Impact 4.6-4 (pp. 4.6-15, -16.)	No	No	No	Yes

4.8.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of hazards and hazardous materials impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that has become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. The modified project is described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since 2006, the project setting has undergone substantial changes with the installation of several large solar generating facilities within and around the water bank area as well as the construction of extensive wind generating facilities to the north and west (see Section 2.6 for a description of these projects.)

The project boundaries have shifted westward to encompass lands that were not addressed in the 2006 EIR, and which may have environmental conditions with respect to hazards and hazardous materials. However, research conducted for this Addendum showed that the western expansion area does not contain any known hazardous materials sites.

A notable change that has occurred since 2006 relates to the Skyotee Ranch Airport located south of the recharge basin area. This airfield was in operation in 2006, but has since ceased flight operations.

New Information

New information pertaining to hazards and hazardous materials in the project area has become available since 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the evaluation of hazards and hazardous materials impacts associated with those sites. The findings of those evaluations were reviewed in detail during the course of the evaluation of hazards and hazardous materials impacts associated with the modified project, as presented below.

4.8.2. Environmental Evaluation

a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?

In the 2006 EIR, the issue of public exposure to hazardous materials as a result of the approved project is addressed in ***Impact 4.6-2*****.** The EIR discusses the potential for fuels, lubricants, and other hazardous materials to be released into the environment resulting in potential human exposure to these hazards. To address this hazard, the 2006 EIR sets forth ***Mitigation Measure 4.6-1***, which requires the preparation and implementation of a Spill Prevention Control and Countermeasures Plan (SPCCP) and prescribes detailed measures and procedures to be followed in the event of a release of hazardous materials. With the implementation of this measure, the 2006 EIR concludes that the impact would be less than significant.

The modified project would involve the same construction and operational activities as evaluated in the 2006 EIR for the approved project. The measures prescribed in Mitigation 4.6-1 are applicable to the modified project in their present form. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Mitigation Measure 4.6-1 in conjunction with the modified project. Therefore, the potential impacts due to release of hazardous materials in conjunction with the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.6-1.

b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?

The 2006 EIR addresses potential impacts from known sites of contamination in ***Impact 4.6-1***. According to the EIR, an environmental database review conducted by Environmental Data Resources Inc. (EDR), revealed no potential hazardous waste sites on the parcels planned for the recharge basins. Analysis of groundwater samples likewise revealed no indication of contamination. Therefore, it was concluded that the approved project would not result in the disturbance of hazardous waste sites, and that there would be no impact in this regard.

For the modified project, a review of hazardous materials sites was conducted in June 2018. The review of the EnviroStor and GeoTracker databases (per Government Code Section 65962.5) indicated that there are

no listed hazardous materials sites within or near any of the facilities planned as part of the modified project (DTSC 2018). Therefore, the conclusion of no impact with respect to hazardous materials sites from the 2006 EIR remains valid and is applicable to the modified project.

c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project is not located within ¼ mile of an existing or proposed school, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

There are no existing or proposed schools within ¼ mile of the modified project site. The nearest school to the WSWB project is the Del Sur Elementary School located 9 miles to the southeast at Avenue H and 90th Street. Therefore, the conclusion of no hazardous materials impact to schools from the 2006 EIR remains valid and is applicable to the modified project.

d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is not located on a site that is included on a list of hazardous materials pursuant to Government Code Section 65962.5, and thus there is no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

For the modified project, a review of hazardous materials sites was conducted in June 2018. The review of the EnviroStor and GeoTracker databases (per Government Code Section 65962.5) indicated that there are no listed hazardous materials sites within or near any of the facilities planned as part of the modified project (DTSC 2018). Therefore, the conclusion of no impact with respect to hazardous materials sites from the 2006 EIR remains valid and is applicable to the modified project.

e) For a project located within an airport land use plan or, where such plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

The 2006 EIR addresses aircraft safety hazards in ***Impact 4.6-3***. The EIR evaluated the potential for the recharge basins to attract migrating birds and thus present a potential hazard to aviation associated with flight operations of originating from Edwards Airforce Base and the Skyotee Ranch Airport. The 2006 EIR includes ***Mitigation Measures 4.6-2*** through ***4.6-4***, which require notification of the applicable airport and air base personnel whenever flocks of birds are observed, and require implementation of harassment measures when flocks of large birds, or large flocks of small birds are observed. It was concluded that the implementation of these measures would reduce the impact to less than significant levels.

In the modified project, the overall area planned for recharge basins will be approximately 31 percent smaller than the basins planned in the approved project, although the flooding operations at the recharge basins may occur over longer periods during the year. It is noted that the Skyotee Ranch Airport has discontinued

operations, so the potential hazard to flight operations at that facility has been eliminated. Otherwise, Mitigation Measures 4.6-2 through 4.6-4 are still valid in their current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measures 4.6-2 through 4.6-4 in conjunction with the modified project. Therefore, the potential risks to flight operations in conjunction with the modified project would be reduced to less than significant levels with the implementation of Mitigation Measures 4.6-2 through 4.6-4.

f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?

In the 2006 EIR, the discussion of safety hazards to private airstrips was combined with the discussion of public use airports under the preceding checklist item. Since the only nearby private airstrip, Skyotee Ranch Airport, has discontinued operations since 2006, the safety hazard associated with this airstrip no longer exists. Currently, the nearest private airstrips are located 7 miles and 12 miles to the southeast of the planned recharge basins. At these distances, the recharge basins would pose a minimal hazard to occasional flight operations at these small facilities, with potential hazards further reduced through implementation of Mitigation Measures 4.6-2 through 4.6-4. Therefore, the potential safety hazards to private airstrips resulting from the modified project would be less than significant.

g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would not block or close down roads or impair implementation of any emergency response or evacuation plans, and concluded that no impacts would occur. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would be constructed under similar conditions as prevailed at the time of the EIR preparation in 2006. Although extensive solar development has occurred in the area, the area is sparsely populated and traffic conditions are very light on local roadways. The modified project is not located on a major arterial roadway and thus would not interfere with emergency response or evacuation plans. The project has access to several alternative access roads allowing easy access to the site in the event of emergency at the water bank facility. Therefore, the conclusion of no impact from the 2006 EIR is still valid and applicable to the modified project.

h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is surrounded by farmland and undeveloped land that do not include substantial flammable brush, and as such there would be no impact. Therefore, this issue was not addressed further in the body of the EIR.

The setting of the modified project has changed substantially since 2006. In the intervening years much of the agricultural operations in the area have been replaced by extensive solar development, although the

surrounding areas still include active or fallow farmland, with some brushland. The CalFire Hazard Severity Zone mapping for Kern County maps generally maps the project area as "moderate" fire hazard zone, with the developed and built-up areas of the solar facilities mapped as "Unzoned" (CalFIRE 2007).

The modified project would be required to comply with all existing regulations and requirements of the Kern County Fire Code (Chapter 17.32), and would be reviewed for adherence to prevention measures for wildland fires. With implementation of all applicable regulations to reduce wildfire ignitions and prevent the spread of wildfires, the modified project would not result in significant impacts related to the exposure of people or structures to a significant risk of loss, injury, or death involving wildland fires. Thus the impacts of the modified project relative to exposure to wildland fires would be less than significant.

i) Generate vectors (flies, mosquitos, rodents, etc.) or have a component that includes agricultural waste. Specifically, exceed the following qualitative threshold:

- ***Occur as immature stages and adults in numbers considerably in excess of those found in the surrounding environment; and***
- ***Are associated with design, layout, and management of project operations; and***
- ***Disseminate widely from the property; and***
- ***Cause detrimental effects on the public or wellbeing of the majority of the surrounding population?***

The 2006 EIR evaluated the planned recharge basins for potential to provide breeding areas for mosquitoes in ***Impact 4.6-4***. It was concluded that although recharge water would percolated quickly, there was a potential for a net increase in mosquito production as a result of the project. Accordingly, the 2006 EIR contains ***Mitigation 4.6-5*** which requires entering into an agreement with the Mosquito Abatement District providing for the monitoring and suppression of mosquito production. It was concluded that the implementation of this mitigation measure would reduce the impact to less than significant levels.

In the modified project, the overall area planned for recharge basins has been reduced by about 31 percent relative to the approved project. The smaller area of basins would result in a reduced potential for mosquito breeding but would not eliminate it. Therefore, Mitigation Measure 4.6-5 is still valid in its current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Mitigation Measure 4.6-5 in conjunction with the modified project. Therefore, the potential for mosquito breeding in conjunction with the modified project would be reduced to less than significant levels with the implementation of Mitigation Measures 4.6-5.

Cumulative Impacts

The 2006 EIR discussed that other projects including open water bodies, such as golf courses, recharge basins in other water banks, and water storage and wastewater facilities, could provide breeding habitat for mosquitoes. This could result in a cumulatively significant impact in terms of potential health hazards associated with mosquitoes. However, this impact, along with the potential impacts from hazardous materials spills and bird strike hazards, would be mitigated to less than significant levels through mitigation measures identified in the EIR. With the implementation of these mitigation measures, the potential hazards and hazardous materials impacts associated with the project would be less than cumulatively considerable, and therefore the cumulative impact associated with the project would be less than significant.

The overall area of recharge basins in the modified project would be reduced relative to the basins in the approved project, but would still pose a potential increased health hazard from mosquito breeding. However, this impact, along with the potential impacts from hazardous materials spills and bird strike hazards, would be mitigated to less than significant levels through mitigation measures identified in the 2006 EIR. With the

implementation of these mitigation measures, which require no updating, the potential hazards and hazardous materials impacts associated with the modified project would be less than cumulatively considerable, and therefore the cumulative impact associated with the modified project would be less than significant.

4.8.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project are applicable to the modified project (the MOU is contained in Appendix A of this Addendum).

- **Mitigation Measure 4.6-1: Hazardous Spill Control Measures** (see MOU pp. 15-16.)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measures 4.6-2 thru 4.6-4: Bird Strike Hazard to Aviation** (see MOU pp. 17-18.)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measure 4.6-5: Mosquito Abatement** (see MOU pp. 18-19.)
  This mitigation is applicable to the modified project without changes.

4.8.4. Conclusion

The modified project would not involve new or substantially more severe significant hazards and hazardous materials impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to hazards and hazardous materials impacts remain valid and are applicable to the modified project without the need for further analysis.

4.9. HYDROLOGY AND WATER QUALITY

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
9. Hydrology and Water Quality. Would the project:					
a) Violate any water quality standards or waste discharge requirements?	Impact 4.7-1 (pp. 4.7-14, 15.)	No	No	No	Yes
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	Impact 4.7-2 (pp. 4.7-15→17.)	No	No	No	Yes
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	Impact 4.7-1 (pp. 4.7-14, 15.)	No	No	No	Yes
d) 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 in a manner which would result in flooding on- or off-site?	Impact 4.7-4 (p. 4.7-18.)	No	No	No	NA (Impact was and remains less than significant.)
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	Impact 4.7-4 (p. 4.7-18.)	No	No	No	NA (Impact was and remains less than significant.)
f) Otherwise substantially degrade water quality?	Impact 4.7-5 (pp. 4.7-18, -19.)	No	No	No	Yes
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	Appendix A – NOP 2. Environmental Checklist, p. 2-19.	No	No	No	NA (Impact was and remains less than significant.)
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	Impact 4.7-4 (p. 4.7-18.)	No	No	No	NA (Impact was and remains less than significant.)

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
9. Hydrology and Water Quality. Would the project:					
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	Impact 4.7-4 (p. 4.7-18.)	No	No	No	NA (Impact was and remains less than significant.).
j) Inundation by seiche, tsunami, or mudflow?	Appendix A – NOP 2. Environmental Checklist, p. 2-19.	No	No	No	NA (Impact was and remains less than significant.)

4.9.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of hydrology and water quality impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that has become available since 2006.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. The modified project is described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

At the time the 2006 EIR was prepared, the project setting consisted entirely of rural land including active agriculture, grazing, and undeveloped land. Since 2006, the project setting has undergone substantial changes with the installation of several large solar generating facilities within and around the water bank area as well as the construction of extensive wind generating facilities to the north and west (see Section 2.6 for a description of these projects.)

Various elements of the modified project are planned for lands that were not addressed in the 2006 EIR, and which could potentially involve adverse conditions with respect to hydrology and water quality. However, research conducted for this Addendum showed that the additional lands affected by the modified do not contain any adverse conditions related to hydrology and water quality, as discussed below.

New Information

New information pertaining to hydrology and water quality in the project area has become available since 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which

included the evaluation of hydrology and water quality impacts associated with those projects. The findings of those evaluations were reviewed in detail during the course of the evaluation of hydrology and water quality materials impacts associated with the modified project, as presented below.

4.9.2. Environmental Evaluation

a) Violate any water quality standards or waste discharge requirements?

The 2006 EIR addressed water quality standards in ***Impact 4.7-1***. The EIR discussed that the project would potentially cause degradation of water quality from construction-related activities such grading and excavation for recharge basins, pipelines, recovery wells and other infrastructure. Stormwater runoff could cause soil erosion and transport of sediment and construction-related contaminants such as fuels, concrete, and paint to nearby receiving waters, which could result in violation of federal and state water quality standards. To address erosion and sedimentation impacts, the 2006 EIR includes ***Mitigation Measure 4.7-1*** which requires compliance with the NPDES General Construction Permit, including preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) which shall identify Best Management Practices (BMPs) for erosion and sediment control. To address the potential release of hazardous materials during construction, 2006 EIR includes ***Mitigation Measure 4.7-2***, which requires the preparation and implementation of a Spill Prevention Control and Countermeasures Plan (SPCCP). With the implementation of these mitigation measures, the 2006 EIR concluded that the impact to water quality during construction would be less than significant.

The modified project plan would also involve grading and excavation for recharge basins, pipelines, recovery wells, and other infrastructure, and would employ the same types of construction equipment as the approved project. Given that the construction methods and equipment for the modified project would be essentially the same is evaluated for the approved project in the 2006 EIR, the potential impacts to water quality would also be very similar. Therefore Mitigation Measures 4.7-1 and 4.7-2 are still valid in their current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measures 4.7-1 through 4.7-2 in conjunction with the modified project. Therefore, the potential for water quality impacts to occur during construction of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measures 4.6-2 through 4.6-4.

b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?

Impacts to Groundwater Levels

The 2006 EIR addresses the potential for depletion of groundwater supplies in ***Impact 4.7-2***. The EIR explains that a certain percentage of water applied to the recharge basins is lost to evaporation and an additional percentage is lost during initial recharge operations due to binding of water to the aquifer materials as a result of surface tension. Both of these types of water losses are subtracted from the applied water to calculate net water stored in the groundwater basin. In addition, at least 10 percent of stored water would be left behind and not subject to recovery. The 2006 EIR concluded that this would have a beneficial effect on groundwater supplies, and therefore the approved project would have no impact in terms of depletion of groundwater supplies in the aquifer.

In the modified project, the volumes of water that could be recharged and recovered annually would be greater than the approved project. Based on groundwater modeling conducted by HDR Engineering, which incorporated the results of a pilot recharge program involving 20,000 AF of recharged water in 2010, it was concluded that modified project could recharge a maximum of 250,000 AFY and to recover a maximum of 225,000 AFY, with a maximum overall storage of 1 million acre feet, without causing excessive rise or decline in groundwater levels or impacts to other supply wells. The modified project would also provide for at least 10 percent of stored water that would not be recovered but would remain in the groundwater basin. This would have a beneficial effect on groundwater supplies, and therefore would have no impact in terms of depletion of groundwater supplies in the aquifer.

In summary, the modified project would not result in a new or more severe significant impact with respect to depletion of groundwater supplies than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact to groundwater in the 2006 EIR is applicable to the modified project.

Impacts to Surrounding Wells

The 2006 EIR addresses impacts to surrounding wells in ***Impact 4.7-3***. The EIR explains that groundwater surface elevations will generally be higher than under pre-project conditions, so existing wells in the area would generally not be affected by recovery operations. However, it is possible that during operations of individual recovery wells, nearby existing wells may experience a decrease in static water surface elevation to near or below pre-project levels, which could adversely affect those existing wells. In order to mitigate potential significant impacts on existing wells due to recovery operations, the 2006 EIR includes ***Mitigation Measure 4.7-3***, which requires the formation of a monitoring committed to ensure 10 percent of stored water is left behind, and to monitor water levels in off-site wells and order adjustments to operations in the event water levels drop to unacceptable levels, and to provide compensation or an alternate source of water if necessary. With the implementation of this mitigation measure, the 2006 EIR concluded that the impact to surrounding wells would be less than significant.

The modified project would operate in the same manner as described for the approved project, including the potential for temporary decreases in groundwater elevations below pre-project levels, resulting in potential impacts to nearby existing wells. Therefore Mitigation Measure 4.7-3 in its current form is applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.7-3 during operation of the modified project. Therefore, the potential for impacts to surrounding wells to occur during operation of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.6-3.

In summary, the modified project would not result in a new or more severe significant impact with respect to groundwater levels than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is applicable to the modified project.

c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?

This CEQA Checklist question focuses on the potential for erosion or siltation, which is addressed under item "a" above. The issues of drainage and flooding are addressed in item "d" below.

d) 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 in a manner which would result in flooding on- or off-site?

Drainage and Flooding Impacts

The 2006 EIR addressed flooding and drainage impacts in ***Impact 4.7-4***. The EIR explained that there are no perennial streams in the project area, and that local runoff in the area is directed away from farm fields and flows along the roadways. The water in the recharge basins would be confined by perimeter berms, and most other project elements would be underground. The 2006 EIR concluded that project would have no impact because it would not alter existing drainage patterns or contribute to local or regional flooding.

The modified project is essentially the same in character as the approved project addressed in the 2006 EIR, with the primary differences being in the location and size of the planned facilities. The modified project would have a smaller area devoted to recharge basins, and a larger network of pipelines although these would be underground. The setting of the modified project is the same as described for the approved project, in that there are no perennial streams in the project area, and local runoff in farm fields is directed to flow along the roadways. The construction of solar generating facilities in the project area since 2006 has not substantially altered local drainage patterns because solar facilities are mounted on posts on existing terrain and result in very little impervious surface coverage and thus do not increase the runoff volumes or result in substantial redirection of drainage. The modified project would create a negligible amount of impervious surfaces in the form of well heads and booster pump stations, and thus would not increase runoff rates or intensities or involve the construction of new storm drainage facilities. Therefore, the drainage and flooding impacts of the modified project would be less than significant.

In summary, the modified project would not result in new or more severe significant impacts with respect to drainage and flooding than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact in the 2006 EIR is applicable to the modified project.

e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?

This CEQA Checklist question partially focuses on drainage impacts, which are addressed under item "d" above; and partially focuses on water quality, which is addressed under item "a" above and item "f" below.

f) Otherwise substantially degrade water quality?

The 2006 EIR addresses impacts on groundwater and surface water quality in ***Impact 4.7-5***. The EIR states that there are no water quality issues in the existing groundwater basin, or with the source of recharge water (i.e., State Water Project), and that there are no known hazardous waste sites located in the vicinity of the project. The 2006 EIR concludes that while potential impacts to surface water and groundwater quality are expected to be less than significant, unexpected impacts could result. Therefore, the 2006 EIR requires implementation of ***Mitigation Measures 4.7-1*** and ***4.7-2***, which require implementation of plans to control erosion and prevent spills of hazardous materials. With the implementation of these mitigation measures, the 2006 EIR concluded that the potential impact to surface water and groundwater quality would be less than significant.

The modified project would operate in the same way as planned for the approved project, with the only differences being changes in location of some facilities and larger volumes of planned recharge and recovery. Under current conditions, there are no issues with the water quality of the groundwater basin or of the imported SWP water, and there are no hazardous waste sites which have been identified in the vicinity since 2006. The conclusion of the 2006 EIR that while potential impacts to surface water and groundwater quality are expected to be less than significant, the potential for unexpected impacts still applies. Any unexpected water quality impacts would be addressed by implementation of Mitigation Measures 4.7-1 and 4.7-2, which are still valid in their current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measures 4.7-1 and 4.7-2 during construction and operation of the modified project. Therefore, the potential for impacts to groundwater or surface water quality to occur during construction or operation of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measures 4.7-1 and 4.7-2.

In summary, with the implementation of Mitigation Measures 4.7-1 and 4.7-2, the modified project would not result in a new or more severe significant impact with respect to groundwater and surface water quality than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is applicable to the modified project.

g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project does not include housing, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The modified project also does not include housing, so there would also be no impact associated with the modified project in this regard.

h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?

The 2006 EIR addresses the potential for the project to impede or redirect flood flows in ***Impact 4.7-4***. The EIR states that since any new project features (e.g., containment berms) would be less than 1 foot higher in elevation than the 100-year flood elevation (at the upslope edge of the project near Holiday Avenue), that local runoff would not be redirected and would continue to flow along existing roadways. Therefore the impact would be less than significant.

Since the modified project involves substantial additional lands not covered in the 2006 EIR, the potential for flooding was reexamined in connection with this Addendum. According to FEMA flood zone mapping for the project area, the portion of the project area located east of 170th Avenue and north of Avenue A has as 1 percent annual chance flood hazard. The area west of 170th Street is subject to minimal flood hazard. The area south of Avenue A is generally subject to minimal flood hazard except along ephemeral drainages that pass through the area, which have a 1 percent or 0.2 percent chance of annual flooding depending on location. The base flood elevations in the project area are undetermined (FEMA 2008).

The only WSWB facilities that would be above ground include the recharge basins, booster pump stations, well headworks, and regulating reservoirs. The total area of the recharge basins would be 1,106 gross acres. Although the basins would be enclosed by perimeter berms, the berms would extend a foot or more above existing project ground elevations. The individual spreading cells within the basins would be formed by contour grading to create alternating depressions and cutoff dikes. Since the terrain within the recharge basins generally slopes down-gradient to the southeast, the average slopes would remain unchanged from one end of the basin the other. During flooding events, the berms are intended to be sacrificial. That is incoming sheet flows originating from the northwest would overtop the berms and cause them to fail, which would allow the flood flows to continue in their historic direction. After the flood floods pass, the berms and dykes would be regraded to restore them to their pre-flood condition.

Booster pumps and well headworks would occupy very small areas within the project area, and thus would have no discernable effect on flood flows passing through the site. The two regulating reservoirs associated with the booster pump stations would occupy 12 acres and 6 acres, respectively, and would be contained by earthen berms approximately 4 feet high. These berms would deflect sheet flows in the immediate area and could result in increased flood elevations of several inches extending several hundred feet from the containment berms. The nearest residential and accessory structures would be located at least 1,000 feet from the regulating reservoirs, a distance at which any increase flood elevation from the berms at the regulating reservoirs would have dissipated to negligible levels.

In summary, the project facilities would have a minor effect in terms of diverting sheet flood flows during the 1 percent chance flood; however, the impact would be less than significant. Therefore, the project would not result in new significant flood impact or increase the severity of previously identified flood impact, and the conclusion from the 2006 EIR that flooding impacts would be less than significant remains valid and applicable to the modified water bank project.

i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?

The 2006 EIR addresses the potential for flooding impacts in ***Impact 4.7-4***. The EIR states that since the project would not alter existing drainage patterns or contribute to local or regional flooding, the impact would be less than significant.

In the modified project, the recharge basins would be designed to allow failure of the containment berms in the event of a major flooding event, and thus would not alter existing drainage patterns or contribute to local flooding.

At the two booster pump stations, the modified project also includes two regulating reservoirs that would be contained by dikes up to 4 feet high, with the reservoir areas themselves excavated to about a foot below existing ground surface. The reservoirs could be intermittently filled with water to depths up to 4 feet in order to accommodate surges in flows from the recovery pipelines. However, the water would be stored temporarily and would be pumped out soon after the surge has passed. A risk of localized flooding could occur under worst-case conditions with a full reservoir coinciding with a major earthquake event which causes failure of the containment berms. However, the amount of time that substantial volumes of water would be present in the regulating reservoirs is minimal. As such, the potential risk from flooding in the event of failure of the containment berms is also small. Even in the worst-case scenario, the flows released from the rupture of a full regulating reservoir would spread rapidly over the surrounding level terrain. It is expected that any such flows would percolate rapidly into the permeable soils and dissipate before reaching the nearest residential and accessory structures at least 1,000 feet away.

In summary, the project facilities would pose a minor risk of flooding in the event of failure of a containment berm at one of the regulating reservoirs, and the impact would be less than significant. Therefore, the project would not result in a new significant flood impact or increase the severity of previously identified flood impact, and the conclusion from the 2006 EIR of a less than significant flooding impact remains valid and applicable to the modified project.

j) Inundation by seiche, tsunami, or mudflow?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project is not located near any significantly sized enclosed body of water or coastal area, the project would not be subject to inundation by seiche or tsunami. The project site is not located at or near the foot of any significant topographical feature, and thus the project would not be subject to inundation by mudflow. As such, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The conditions described above have not changed since 2006; as such, the conclusion of no impact with respect to inundation by seiche, tsunami, or mudflow is still valid and applicable to the modified project.

Cumulative Impacts

Water Quality

The 2006 EIR describes the potential for cumulative degradation of water quality as a result of construction runoff from the approved project and other projects in the area. The water quality impacts from the approved project would be mitigated through implementation of best management practices for erosion and sediment control and releases of hazardous materials, as required in Mitigation Measures 4.7-1 and 4.7-2. It was concluded in the 2006 EIR that since other construction projects would be implement similar measures, as required by federal and state regulations, the cumulative water quality impacts would thus be less than significant after mitigation.

The modified project would be subject to the same mitigations as described above, and other current projects in the area would be subject to similar requirements for water quality projection. Therefore, the conclusion of the 2016 EIR that cumulative water quality impacts would be less than significant after mitigation is still valid and applicable to the modified project.

Groundwater Resources

The 2006 EIR describes the overdrafted condition of the underlying aquifer in the Antelope Valley. This cumulative negative effect on groundwater resources has occurred progressively over many years. The approved project would help reduce the rate of overdraft by recovering only up to 90 percent of the surface water that is recharged at the facility. This represents a beneficial impact on the local groundwater resources. Therefore, the project's contribution to the cumulative impact will be less than considerable, and as such the impact of the approved project to groundwater resources will not be cumulatively significant.

The modified project will similarly be required to leave 10 percent of recharged water in the aquifer, and thus will also have a beneficial impact on groundwater resources. Therefore, the conclusion of the 2006 EIR that the cumulative impact of the project on groundwater resources will not be significant is still valid and applicable to the modified project.

4.9.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum):

- **Mitigation Measure 4.7-1: Erosion Control Measures** (for full text see MOU p. 20.)
  This mitigation is applicable to the modified project without changes.
- **Mitigation Measure 4.7-2: Hazardous Spill Measures** (for full text see MOU p. 21-22.)
  This mitigation is applicable to the modified project without changes.
- **Mitigation Measure 4.7-3: Groundwater Monitoring** (for full text see MOU p. 22-24.)
  This mitigation is applicable to the modified project without changes.
- **Mitigation Measure 4.7-4: Flood Prevention** (for full text see MOU p. 24.)
  This mitigation is applicable to the modified project without changes.
- **Mitigation Measure 4.7-5: Well Permits Required** (for full text see MOU p. 24-25.)
  This mitigation is applicable to the modified project without changes.
- **Mitigation Measure 4.7-6: Drinking Water Quality** (for full text see MOU p. 25.)
  This mitigation is applicable to the modified project without changes.

4.9.4. Conclusion

The modified project would not involve new or substantially more severe significant hydrology and water quality impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to hydrology and water quality impacts remain valid and are applicable to the modified project without the need for further analysis.

4.10. LAND USE AND PLANNING

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
10. Land Use and Planning. Would the project:					
a) Physically divide an established community?	Impact 4.8-1 (pp. 4.8-8,-9.)	No	No	No	NA (Impact was and remains less than significant.)
b) Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	Impact 4.8-2 (pp. 4.8-9, -10.)	No	No	No	NA (Impact was and remains less than significant.)
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	Impact 4.8-2 (p. 4.8-10.)	No	No	No	NA (Impact was and remains less than significant.)

4.10.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of land use and planning impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. Most notable in terms of land use and planning, the planned recharge basin area has been modified to remove 806 acres that were originally approved for the basins, and add 300 acres that were not previously planned for recharge basins. All elements of the modified project are described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

Since certification of the EIR in 2006, the most notable change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. The projects that have been approved and constructed within and near the project site are described in Section 2.6 and shown in Figure 6.

As a result of the westward shift in project boundaries, described above, the number of existing residences that could be affected by construction and operation of the project facilities has also changed. The 2006 EIR identified 26 existing dwellings located within the water bank site, and an additional 13 dwellings within ½ mile of the site or the off-site pipeline corridors. For the modified project, there are 13 existing dwellings located within the water bank site and additional 19 dwellings located within ½ mile of the site or the off-site pipeline corridors. Overall, the modified project has seven fewer residences than the approved project which are located within the project site or within ½ mile of the site or the off-site pipeline corridors.

Another change in circumstances relates to the regulatory treatment by Los Angeles County of protected Joshua Tree Woodland located within a designated Joshua Tree Significant Ecological Area (SEA). Since 2006, the Los Angeles County Department of Regional Planning has taken a more restrictive approach to development within the SEA, and the Los Angeles County Code currently requires a separate SEA Conditional Use Permit (CUP) for projects resulting in ground disturbance of over 500 square feet within an SEA (LA County 2018a). This is discussed further under Impact 4.10-2 below.

Another notable change that has occurred since 2006 relates to the Skyotee Ranch Airport located south of the recharge basin area. This airfield was in operation in 2006, but has since ceased flight operations.

New Information

New information pertaining to land use and planning in the project area has become available since 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the evaluation of land use and planning impacts at those sites. The findings of those evaluations were reviewed in detail during the course of the evaluation of land use and planning impacts associated with the modified project, as presented below.

4.10.2. Environmental Evaluation

a) Physically divide an established community?

The 2006 EIR addresses this question in ***Impact 4.8-1***. The EIR states that since there is no established community in the project vicinity, the project would not physically divide an established community. Also the project would not include elements that would restrict movement through or around the area. As such, there would be no impact in this regard.

Since 2006, no new communities have been developed in the area that could be divided by the modified project, and the modified project would also not introduce new elements that would restrict movement through the area. As such, the conclusion of the 2006 EIR that there would be no impact in this regard is still valid and applicable to the modified project.

b) Conflict with applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?

The 2006 EIR addresses the question of consistency with plans, policies, and regulations in ***Impact 4.8-2***. This impact is reevaluated below for Kern County and Los Angeles County, respectively.

Kern County

The EIR concluded that the water bank project would be consistent with all plans, regulations and policies of Kern County upon approval of the amendments to the Willow Springs Specific Plan that were proposed for the water bank project at that time, and which were ultimately approved. Therefore, the impact of the project with respect to plans, policies, and regulations of Kern County was concluded to be less than significant.

The modified project includes some expansion of recharge basins into areas that were not contemplated under the original water bank plan. The planned modifications to the WSWB are not subject to additional discretionary approvals from Kern County, as discussed here. The WSWB project site lies entirely with the planning area of the Willow Springs Specific Plan (WSSP) of the County General Plan. Under the WSSP, approximately 340 acres of the currently planned 1,106-acre recharge basin area have a base land use designation of "8.1 (Intensive Agriculture [Min. 20 Acre Parcel Size])", and approximately 766 acres are designated "8.5 (Resource Management [Min. 20 Acre Parcel Size])" (Kern County 1992, WSSP Exhibit A). Both of these land use designations include "recharge basins" as a permitted use (Kern County General Plan, pp. 53-55). Since "recharge basins" are a permitted use over the entire 1,106 acres planned for recharge basins, no amendment to the Willow Springs Specific Plan is required for the modified project. It is noted that the 300 acres of new lands planned to be added to the modified project are either designated "8.1 (Intensive Agriculture)" or "8.5 (Resource Management)", so the addition of these lands to the recharge basins would not require an amendment to the WWSP.

Under the Kern County Zoning Ordinance, all lands within the planned recharge basin area are zoned "A FPS" meaning that these lands lie within the "Exclusive Agriculture (A) District" and have an overlay zone of "Flood Protection Secondary Combining District." The "A" zoning district specifically allows "water storage or groundwater recharge facilities" without the issuance of a conditional use permit (Kern County Zoning Ordinance Section 19.12.020(F)). The "FPS" combining zone does not require a conditional use permit if the base zoning district (i.e., "A") does not require a conditional use permit for the planned use (i.e., recharge basins)(Kern County Zoning Ordinance Section 19.70.30). Therefore, no conditional use permit is required for the construction of recharge basins under the modified project plan. It is noted that the "A" base zoning district is deemed to be consistent with the WSSP base land use designations applicable to the recharge basin area (i.e., "8.1 (Intensive Agriculture)" and "8.5 (Resource Management)" (Kern County 1992, WSSP, General Plan Land Use & Zoning Consistency Matrix, after p. B-56).

The Kern County Zoning Ordinance, Section 19.08.360 (Large Water Systems – Aboveground Facilities) states: "…above ground structures related to large water systems, excluding well heads, well housing, booster pumps, small pressure tanks, and similar small aboveground structures, as determined by the Planning Director, shall require the processing of a conditional use permit … in the R-1, R-2, R-3, E (1/4), E (1/2), and E (1) Districts." There are no lands within the 8,650-acre modified WSWB project site that are subject to the referenced zoning districts. There are no "R" zones within the project site, and the only "E" zones within the project site consist of the "E-2½" and "E-5" zones which are not subject to this ordinance section. As such, no large aboveground facilities or small aboveground facilities within the modified WSWB project site are

subject to the issuance of a conditional use permit. Therefore, no conditional use permit is required for any infrastructure planned to be constructed under the modified WSWB plan.

In summary, no amendments to the Willow Springs Specific Plan or the Kern County Zoning Ordinance are required for the modified WSWB project, and no conditional use permits are required from Kern County for any land uses or activities planned under the modified project. Therefore, no discretionary approvals of any kind are required from Kern County for the modified WSWB project. As such, the conclusion of the 2006 EIR that the project impact in terms of consistency with Kern County plans, policies, and regulations would be less than significant is still valid and applicable to the modified project.

Los Angeles County

Zoning

Since the 84-inch supply pipeline is largely located in Los Angeles County, the portion of the pipeline south of Avenue A is subject to the County's planning and permit jurisdiction. The 2006 EIR found that the entire pipeline alignment lies within the A-2 (Heavy Agriculture) Zoning District. The Los Angeles County Code lists uses that are permitted in the A-2 Zoning District, including the following uses, subject to approval of a conditional use permit (Los Angeles County Code §22.16.030):

"Water reservoirs, dams, treatment plants, gauging stations, pumping stations, tanks, wells, and any use normal and appurtenant to the storage and distribution of water."

The installation of a new pipeline within Los Angeles County is considered a use "appurtenant to the storage and distribution of water." Therefore, a Conditional Use Permit will be required for construction of the 84-inch pipeline within Los Angeles County. With the approval of the Conditional Use Permit, there would be no conflict with the plans, policies and regulations of Los Angeles County and the impact would be less than significant.

In the modified project, the 84-inch supply pipeline would follow a partly different alignment than planned in 2006; however, the new pipeline route would also pass through lands located entirely within the A-2 Zoning District. In addition, the portion of the connecting pipeline to SNIP located with Los Angeles County is also located entirely within the A-2 Zoning District. As such, both pipelines would be permitted uses under the current zoning, subject to the granting of Conditional Use Permits, and there would be not conflict with the plans, policies and regulations of Los Angeles County, and the impact would be less than significant.

Joshua Tree Significant Ecological Area (SEA)

Under the originally approved project in 2006, an approximately 1-mile segment of the 84-inch supply pipeline was planned to pass through lands that have been designated by Los Angeles County as "Joshua Tree SEA." Under the policies applicable to the SEA at the time, public works projects were permitted within the SEA if they were determined by a biotic survey to be compatible. The 2006 EIR addressed the potential impact to Joshua tree habitat in ***Impact 4.3-3*** in the Biological Resources section, which identified detailed mitigation for the avoidance of Joshua trees in ***Mitigation Measures 4.3-1*** and ***4.3-2***. Accordingly, the impact in terms of consistency with SEA requirements was concluded to be less than significant under ***Impact 4.8-2*** in the Land Use and Planning Section of the 2006 EIR.

Under the modified project plan, the 84-inch supply pipeline alignment has been modified to follow a route that results in the narrowest crossing of the SEA and the least impact to Joshua trees. Under the modified

alignment, an approximately ½ mile segment of the 84-inch supply pipeline, between Avenue C and Avenue B-8, would pass through the Joshua Tree SEA. As such, this portion of the pipeline is subject to the County's SEA Ordinance and the accompanying SEA Implementation Guide (LA County 2018a and 2018b), both of which contain substantially more restrictive provisions and requirements with respect to projects proposed within the SEA than were in effect in 2006. Under the current SEA Ordinance, any project that would result in disturbance of over 500 square feet of land within an SEA is subject to an SEA Conditional Use Permit (SEA CUP), which is separate and distinct from the project CUP described above (Los Angeles County Code §22.102.070). The connecting pipeline to AKEK's SNIP pipeline would not pass through the Joshua Tree SEA. It is anticipated that the project sponsor of the modified water bank project will fully comply with the requirements of the SEA ordinance and that an SEA CUP will be issued for the affected segment of the supply pipeline. As such, the impact of the modified project in terms of conflicts with applicable plans, policies and regulations of Los Angeles County would be less than significant.

In summary, the conclusion of the 2006 EIR that the project impacts in terms of consistency with the plans, policies and regulations of Los Angeles County would be less than significant is still valid and applicable to the modified project.

c) Conflict with any applicable habitat conservation plan or natural community conservation plan?

The 2006 EIR addresses the potential for conflicts with habitat conservation plans in ***Impact 4.8-3***. Of particular note, Joshua tree woodlands, like those identified within the project area, are considered to be sensitive by Kern County and Los Angeles County. The Kern County General Plan, Kern County's Willow Springs Specific Plan, and the Los Angeles County Significant Ecological Area (SEA) Ordinance seek to protect this sensitive habitat type. The project design will include measures to avoid the maximum number of Joshua trees as per ***Mitigation Measures 4.3-1*** and ***4.3-2***. In addition, modifications to the ***Mitigation Measure 4.3-1***, described in Section 4.3.3, would ensure that direct impacts to Joshua trees are appropriately addressed through properly executed transplantation and post-relocation maintenance and monitoring. Additional project review and CUP conditions of approval will also be required of a portion of the supply pipeline project by Los Angeles County for work within the Joshua Tree SEA, as discussed above.

The project site is located within the boundaries of the draft Desert Renewable Energy Conservation Plan (DRECP), which is a collaborative effort being developed under the California Natural Community Conservation Planning Act (NCCPA) and the Federal Endangered Species Act (FESA), and the Federal Land Policy and Management Act (FLPMA). Phase I of the DRECP was approved by the U.S. Bureau of Land Management (BLM) in 2016. Phase II, currently in progress, focuses on better aligning local, state, and federal renewable energy development and conservation plans, policies, and goals (CEC 2018). The project also occurs within the greater boundary of the BLM's West Mojave Plan, which is a habitat conservation plan and federal land use plan amendment that provides a comprehensive strategy to conserve and protect numerous species within the Mojave Desert. Both of these plans are applicable to projects on public lands (e.g., BLM lands). The project site is not located within public lands, so the project would not be subject to these habitat conservation plans. As such, impacts of the proposed project on habitat conservation plans would be less than significant and no mitigation measures are required. In summary, the modified project would not result in new or substantially severe significant impacts with respect to habitat conservation plans than were identified in the 2006 EIR.

Cumulative Impacts

As stated in the 2006 EIR, a cumulative land use impact might occur if the combination of cumulative projects would result in substantial inconsistencies with the County's General Plan, zoning, or other planning programs;

or result in physical division of communities; or conflict with habitat conservation plans (HCPs). However, conflicts with plans, policies and regulations are unlikely to occur since no projects would be approved which are inconsistent with plans and policies, unless amendments to the applicable plan or regulation were included as part of the approval.

Physical division of a community generally occurs with roadway projects or some other type of linear infrastructure that would physically block passage or require other physical methods of travel. None of the projects in the area would result in this type of impact. Conflicts with HCPs would not occur since the only HCPs in the area are only applicable to public lands and not applicable to development on private lands such as the water bank project.

The conditions described above for the approved project are still applicable to the modified project. As such, the modified project would result in no impacts in terms of physically dividing a community, conflicting with plans, policies or regulations, or conflicting with an HCP. As such, the contribution of the modified water bank project to any cumulative land use and planning impact would be not cumulatively considerable, and therefore not cumulatively significant.

4.10.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing land use and planning impacts, and no new mitigation measures for land use and planning impacts are required for the modified project.

4.10.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts in terms of land use and planning than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to land use and planning impacts remain valid and are applicable to the modified project without the need for further analysis.

4.11. MINERAL RESOURCES

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
11. Mineral Resources. Would the project:					
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?	Impact 4.9-1 (p. 4.9-4.)	No	No	No	NA (Impact was and remains less than significant.)
b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	Impact 4.9-1 (p. 4.9-4.)	No	No	No	NA (Impact was and remains less than significant.)

4.11.1. Relevant Changes Since 2006

As discussed in previous sections, changes since 2006 include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since 2006. However, as discussed below, none of these changes affect mineral resources since none occur in the project vicinity.

4.11.2. Environmental Evaluation

a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the State?

The 2006 EIR addresses the loss of availability of sand and gravel resources in ***Impact 4.9-1***. The EIR states that the project area does not contain significant gravel resources. Sand from the project area could possibly be used in the production of construction aggregate, but sand is widespread in the area. The project would have no impact in terms of availability of sand and gravel resources.

The modified project is subject to the same conditions as the prevailed in 2006, and thus the conclusion from the 2006 EIR that the project would have no impact on the availability of sand and gravel resources is still valid and applicable to the modified project.

b) Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project is not located within an area designated as a mineral resource zone by the State, Kern County, or Los Angeles County. The nearest mineral resource zone lies 2 to 3 miles to the northeast of the project site. As such there would be no impact in terms of a loss of availability of a locally important mineral resource recovery site delineated on a land use plan. Therefore, this issue was not addressed further in the body of the EIR.

The conditions described above have not changed since 2006; as such, the conclusion of no impact in terms of a loss of availability of a locally important mineral resource recovery site delineated on a land use plan is still valid and applicable to the modified project.

Cumulative Impacts

The 2006 EIR states that the placement of incompatible uses near mineral recovery sites could prevent the ultimate recovery of such resources and result in cumulative loss of availability of mineral resources. However, the mineral resource designations in state and local land use plans would provide decision makers with information that would help avoid such conflicts. The approved project site contains no important mineral resources and therefore the project contribution to any mineral resources impacts would not be cumulatively considerable and thus the project cumulative impact to mineral resources would be less than significant.

The modified project is subject to the same mineral resource conditions described above for the approved project. Therefore, the conclusion in the 2006 EIR that the project impact to mineral resources would be less than significant is still valid and applicable to the modified project.

4.11.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing impacts to mineral resources, and no new or modified mitigation measures for impacts to mineral resources are required for the modified project.

4.11.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to mineral resources than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to impacts to mineral resources remain valid and are applicable to the modified project without the need for further analysis.

4.12. NOISE

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
11. Noise. Would the project:					
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	Impacts 4.10-3 and 4.10-4 (pp. 4.10-8→ 4.10-10.)	No	No	No	Yes (Note: Mitigations have been updated.)
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	Appendix A – NOP 2. Environmental Checklist, p. 2-23.	No	No	No	NA (Impact was and remains less than significant.)
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	Impact 4.10-5 (pp. 4.10-10→ 4.10-12)	No	No	No	Yes (Note: Mitigations have been updated.)
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	Impact 4.10-1 (pp. 4.10-6 → 4.10-10.)	No	No	No	Yes
e) Be located within the Kern County Airport Land Use Compatibility Plan and expose people residing or working in the project area to excessive noise levels?	Impact 4.10-6 (p. 4.10-12.)	No	No	No	NA (Impact was and remains less than significant.)
f) Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?	Impact 4.10-6 (p. 4.10-12.)	No	No	No	NA (Impact was and remains less than significant.)

4.12.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of noise impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since 2006.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been

shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. Another change that is particularly relevant to the noise analysis is the change from propane-driven wells to electrically powered wells in the modified project. Electric wells produce substantially less noise than propane-fueled wells. All elements of the modified project are described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

Since certification of the EIR in 2006, the greatest change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. The projects that have been approved and constructed within and near the project site are described in Section 2.6.

As a result of the westward shift in project boundaries, described above, the number of existing residences that could be affected by construction and operation of the project facilities has also changed. The 2006 EIR identified 26 existing dwellings located within the water bank site, and an additional 13 dwellings within ½ mile of the site or the off-site pipeline corridors. For the modified project, there are 13 existing dwellings located within the water bank site and additional 19 dwellings located within ½ mile of the site or the off-site pipeline corridors. Overall, the modified project has seven fewer residences than the approved project which are located within the project site or within ½ mile of the site or the off-site pipeline corridors.

Another notable change that has occurred since 2006 relates to the Skyotee Ranch Airport located south of the recharge basin area. This airfield was in operation in 2006, but has since ceased flight operations.

New Information

New information pertaining to the noise environment in the project area has become available since the project EIR was certified in 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the evaluation of noise impacts resulting from those projects. The findings of those evaluations were reviewed in detail during the course of the evaluation of noise impacts associated with the modified project, as presented below.

The following evaluation was prepared with the technical assistance of Illingworth & Rodkin, Noise and Air Quality Consultants, who provided all of the noise calculations for this analysis.

4.12.2. Environmental Evaluation

a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Noise from Operating Wells

The 2006 EIR addressed noise from operating wells in ***Impact 4.10-3***. The EIR evaluated noise generated by well engines with a power rating of up to 466 horsepower fueled by propane. Maximum noise levels were determined to be 82 dBA at 50 feet from the source. The analysis concluded that when well pumps are operated at maximum power, the Kern County nighttime noise standards would be exceeded at residences within 1,600 feet of the well. Accordingly, ***Mitigation Measure 4.10-3*** requires that well installations be restricted to beyond 1,600 feet from residences, where feasible, or that electric pumps (which are 16 dBA quieter than propane fueled pumps) should be used for wells within that distance, and that sound attenuation enclosures should be used to meet Kern County noise standards where they would still be

exceeded. The 2006 EIR concluded that the noise from operation of recovery wells would be less than significant with implementation of this mitigation measure.

In the modified project, only electric well pumps are planned with a maximum power rating of 300 horsepower. These well pumps would produce substantially lower noise levels than the propane well pumps evaluated in the 2006 EIR. Each electric pump would produce a noise level of 66 dBA at 50 from the source. According to Illingworth & Rodkin's calculations, the setbacks required to meet the Kern County noise standards at the affected residences would be 135 feet for the daytime noise standard of 55 dB L50, and 320 feet for the nighttime standard of 45 dB L50. Since the wells would run day and night when in operation, the more restrictive nighttime standard would apply. Depending on the final locations of the recovery wells, approximately 5 existing residences appear to be located within 320 feet of planned well site. Although the overall level of noise impacts would generally be lower than would occur under the approved water bank plan, the impact would still be significant and would require mitigation. Since the quieter and less powerful well pumps planned for the modified project do not result in exceedance of Kern County noise standards at the distances cited in the 2006 EIR, the corresponding mitigation measure is modified to reflect the shorter mitigation distance applicable to the modified project. The revised ***Mitigation Measure 4.10-3*** is set forth in Section 4.10-3 below.

With implementation of Mitigation Measure 4.10-3, as revised, the noise impact to existing residences due to the operation of recovery wells in the modified project would be less than significant.

Noise from Booster Pump Stations

The 2006 EIR addressed noise from the booster pump stations in ***Impact 4.10-4***. The EIR evaluated noise generated from a booster pump station or lift station with a power rating of up to 5,014 horsepower fueled by propane. Maximum noise levels were determined to be 92 dBA at 50 feet from the source. The analysis concluded that when the lift station is operated at maximum power, the Kern County nighttime noise standards would be exceeded at residences within 2,800 feet of the lift station. Accordingly, ***Mitigation Measure 4.10-4*** requires that lift stations be restricted to beyond 2,800 feet from residences, where feasible, or that electric pumps (which are more than 15 dBA quieter than equivalent powered propane fueled engines) should be used for wells within that distance, and that sound attenuation enclosures should be used to meet Kern County noise standards where they would still be exceeded. The 2006 EIR concluded that the noise from operation of the lift station would be less than significant with implementation of this mitigation measure.

In the modified project, two booster pump stations are planned, both powered with electric pumps, and having maximum power ratings of 16,400 and 3,300 horsepower, respectively. The larger pump station is addressed here, and the second booster pump is addressed separately below. The larger booster pump station, planned to be located near the intersection of Gaskell Road and 155th Street, would produce a noise level of 79 dBA at 50 feet, which is 13 dBA lower than the lift station planned in the approved project. According to calculations by Illingworth & Rodkin, the setbacks required to meet the Kern County noise standards at the affected residences would be 420 feet for the daytime noise standard of 55 dB L50, and 1,015 feet for the nighttime standard of 45 dB L50. Since the booster pumps could operate at any time during the day or night, the more restrictive nighttime standard would apply. There is one existing residence located within 1,015 feet of the larger pump station planned for Gaskell Road and 155th Street. That residence is located approximately 600 feet southeast of the planned pump station location. An existing perimeter wall around that residential property would provide some noise shielding from booster pump noise. Although the level of noise impact would generally be lower than would occur under the approved plan, the impact would still be significant and would require mitigation. Since the quieter booster pumps planned for the modified project would not result in exceedance of Kern County noise standards at

the distances cited in the 2006 EIR, the corresponding mitigation measure is modified to reflect the mitigation requirement applicable to the modified project. The revised ***Mitigation Measure 4.10-4*** is set forth in Section 4.10-3 below.

With implementation of Mitigation Measure 4.10-4, as revised, the noise impact to existing residences due to the operation of the booster pump station planned near the northwest corner of Gaskell Road and 155th Street in the modified project would be less than significant.

The second booster pump station would be located west of the existing recharge basins in a currently open area between 155th and 160th Street, and between Holiday and Willow Avenue. The pump station would have a maximum power rating of 3,300 horsepower and would run on electricity. This booster pump would produce a noise level of 77 dBA at 50 feet. The setbacks required to meet the Kern County noise standards for residential uses would be 350 feet for the daytime noise standard of 55 dB L50, and 850 feet for the nighttime standard of 45 dB L50. Since the booster pumps could operate at any time during the day or night, the more restrictive nighttime standard would apply. There are no existing residences located within 850 feet of planned pump station, with the nearest residences located approximately one mile north and one mile south. Therefore, the noise produced by this booster pump would not exceed the applicable Kern County noise standards at the nearest residences, and the noise impact from this pump station would be less than significant.

In summary, with implementation of Mitigation Measure 4.10-4, as revised, the noise impact to existing residences due to the operation of booster pump stations would be less than significant.

b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would not be expected to result in exposure of persons or generation of excessive ground-borne vibration or ground-borne noise levels. It states that sources of ground-borne noise, such as pile driving, are not proposed as part of the project, and that standard construction activities, such as grading, excavation, and site preparation, are not expected to generate significant vibration or ground-born noise. Therefore, this impact is less than significant. No further discussion of vibration or ground-borne noise is included in the 2006 EIR.

In the modified project, the construction equipment and techniques are not anticipated to be different from those evaluated in the 2006 EIR for the approved project. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is applicable to the modified project.

c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

The 2006 EIR addresses increase in ambient noise levels in ***Impact 4.10-5***. The EIR summarizes the discussions of construction and operational noise impacts presented under Impacts 4.10-1 through 4.10-4, and lists again Mitigation Measures 4.10-1 through 4.10-4. For purposes of this Addendum, it is assumed that the repeated mitigation measures 4.10-3 and 4.10-4 are revised as indicated in Section 4.10-3. No further discussion or analysis is required.

d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Grading and Construction Noise

The 2006 EIR addresses grading and construction noise in ***Impact 4.10-1***. The EIR concluded that noise from grading and construction of project pipelines and recharge basins would exceed Kern County noise-level standards for daytime and nighttime activity. It was determined that a significant noise impact would occur during construction at sensitive receptors (e.g., residences) located within 1,200 feet of the construction activity during the daytime hours, and within 2,800 feet of construction activity occurring during the nighttime hours (10 p.m. to 7 a.m.). The 2006 EIR identified a total of 42 dwellings located within the project site or within 0.5 miles of the project pipelines and facilities. Of this total, approximately 19 dwellings would be located within 1,200 feet of grading and excavation activity during the daytime hours. (It is assumed that no grading and excavation would occur during nighttime hours.) To mitigate this impact, the 2006 EIR includes ***Mitigation Measure 4.10-1***, which requires specified noise reduction practices to be employed in order to ensure that the County's noise level standards are not exceeded at the affected residences. With the implementation of Mitigation Measure 4.10-1, the 2006 EIR concluded that the temporary noise impact would be less than significant.

The modified project includes a shift in the wellfield area to the west, and comprises more wells and greater length of pipeline than the approved project, although the planned recharge area has been reduced by about 31 percent in the modified project relative to the approved project. In addition, substantial changes in land use have occurred in the project area since 2006, including the development of over 4,100 acres for solar generating facilities within the project area and another 1,500 acres within ½ mile of the project and related offsite facilities. Also, the number of residences within the modified project site and the immediate vicinity has declined since 2006. The number of residences within the project site has declined from 26 in the approved project to 13 in the modified project, and the residences within ½ mile from the project site and the off-site pipelines has increased from 13 to 19. The total number of dwellings on and within ½ mile of the site and off-site pipelines has declined from 39 to 32 residences. Of this total, approximately 20 dwellings would be located within 1,200 feet of grading and excavation activities for pipelines and other facilities within and outside the site (some of which would be different from those affected by the approved plan). Since this is slightly higher than the 19 residences that would be within this distance and subject to construction noise impacts as under the approved project, the level of construction noise impacts under the modified project would not change substantially relative to those identified in the 2006 EIR. In addition, Mitigation Measure 4.10-1, which is still applicable to the modified project in its current form, would reduce construction noise impacts at the affected residences to less than significant levels. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.10-1 during construction of the modified project. Therefore, the potential for noise impacts from grading and excavation for the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.10-1 as written.

In summary, the modified project would not result in a new or more severe significant impact with respect to construction noise from grading and excavation than the approved project. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is still valid and applicable to the modified project.

Well Drilling Noise

The 2006 EIR addressed well drilling noise in ***Impact 4.10-2***. The EIR concluded that noise from drilling the project recovery wells would exceed Kern County noise-level standards for daytime and nighttime activity. It was determined that a significant noise impact would occur during drilling activities at sensitive receptors (e.g., residences) located within 700 feet of the construction activity during the daytime hours, and within 1,800 feet of construction activity occurring during the nighttime hours (10 p.m. to 7 a.m.). Since well drilling would occur during the day and night, the nighttime distance is applied in identifying adversely affected residences. The 2006 EIR identified a total of 42 dwellings located within the project site or within 0.5 miles of the project pipelines and facilities. Of this total, approximately 21 dwellings would be located within 1,800 feet of well drilling activity and subject to significant noise impacts. To mitigate this impact, the 2006 EIR includes ***Mitigation Measure 4.10-2***, which requires that well drilling activity not occur within 1,800 feet of affected residences during nighttime hours, and not within 700 feet during daytime hours, and that sound attenuation enclosures be installed around noise-generating elements of the drilling operation. With the implementation of Mitigation Measure 4.10-2, the 2006 EIR concluded that the temporary noise impact from well drilling would be less than significant.

The modified project involves a shift in the wellfield area to the west, and includes more wells than the approved project (i.e., 71 new wells versus 52 new wells in the approved project). Under the modified plan, approximately 16 dwellings would be located within 1,800 feet of the planned new wells (some of which would be different from those affected by the approved plan). Since this is lower than the 21 residences that would be within this distance and subject to well drilling noise impacts as under the approved project, the overall level of noise impacts from well drilling under the modified project would be lower relative to those identified in the 2006 EIR. Since well drilling techniques have not changed to result in lower general noise generation levels, Mitigation Measure 4.10-2 is still valid in its current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.10-2 during construction of the modified project. Therefore, the potential for noise impacts from well drilling activity to occur during construction of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.10-2 as written.

In summary, the modified project would not result in a new or more severe significant impact with respect to well drilling noise than the approved project, taking into account the changes to the project setting and circumstances, and considering new information that has become available since 2006. Therefore, the conclusion in the 2006 EIR that well drilling noise would be less-than-significant impact after mitigation is valid and applicable to the modified project.

e) Be located within the Kern County Airport Land Use Compatibility Plan and expose people residing or working in the project area to excessive noise levels?

The project site is not located with an airport planning area as defined the Kern County Airport Land Use Compatibility Plan, nor is it located within Military Influence Area (MIA) or the China Lake NAWS and Edwards AFB Joint Service Restricted R-2058 Complex.

The 2006 EIR addressed exposure to aircraft noise in ***Impact 4.10-6***. The EIR states that no residential units are proposed as part of the project, so no additional residents would be exposed to excessive noise from flight operations. Only 10 employees would work in the project area, and the project is not immediately

adjacent to a public airport. Air traffic associated with military operations in the area is infrequent. The 2006 EIR concludes that noise exposure due to air traffic in the area would be less than significant.

For the modified project, the conditions above have not changed since 2006. Therefore, the conclusion of the 2006 EIR that noise impacts from air traffic in the area are less than significant is still valid and applicable to the modified project.

f) Be located within the vicinity of a private airstrip and expose people residing or working in the project area to excessive noise levels?

The 2006 EIR addressed exposure to private aircraft noise in ***Impact 4.10-6***. The EIR stated that the Skyotee Ranch Airport, located just south of the completed recharge basins, is a private airstrip that serves small private planes on an infrequent basis. The noise impact associated with aircraft operations at this airstrip would be less than significant.

Since the EIR was certified in 2006, the Skyotee Ranch Airport has ceased operations and the landing strip has been unmaintained and become overgrown and unusable. Under these changed conditions, the modified project would not be subject to aircraft noise associated with the Skyotee Ranch Airport and there would be no impact due to exposure to aircraft noise.

Cumulative Impacts

The 2006 EIR states that, with the implementation of mitigation measures identified in the EIR, the project would not make a considerable contribution to any cumulative noise impacts. Therefore, the cumulative noise impacts associated with the project would be less than significant after mitigation.

For the modified project, conditions in the area have changed substantially since the EIR was certified in 2006. The primary change to the setting has been the development of utility-scale solar facilities on approximately 4,100 acres within the water bank site. Approximately, 1,400 acres of additional permitted solar facilities within the project site have not yet been constructed. It is possible that the construction of some of this permitted solar development could occur at the same time as pipeline construction or well installation for the water bank. Any residences subject to such multiple sources of construction noise could be subject to cumulative noise impacts. However, any existing residences within the project area would be subject to noise mitigations identified in the 2006 EIR, as modified by this addendum, and would also be subject to noise mitigations identified in the EIRs for the nearby solar projects. Given the relatively quick pace of pipeline installation (400 feet per day) or well drilling (5 days per well), any residence would be subject to noise impacts for a relatively short time. Given also that the probability is very low that water bank construction would occur simultaneously with solar facility construction in the same location relative to existing residences, the potential for cumulative noise impacts to occur is unlikely. Therefore, the project contribution to any cumulative noise impact would be less than considerable, and cumulative noise impacts associated with the modified project would therefore be less than significant.

4.12.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum). Some mitigation measures are noted as being adequate without modification, and some mitigation measures have been updated as indicated with <u>underlining</u> and ~~strikeouts~~.

- **Mitigation Measure 4.10-1: Construction Noise** (for full text see MOU p. 26)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measure 4.10-2: Well Drilling Noise** (for full text see MOU pp. 26-27)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measure 4.10-3: Operational Well Noise** (for full text see MOU pp. 26)
  This mitigation is updated with the following language changes:

  "If wells are to be located within the distances ~~cited above for~~ from existing nearby residences where the applicable Kern County noise level standards would be exceeded, the owner/operator ~~will~~ shall employ noise-reducing practices so that noise from well operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:

  - restricting well installations to beyond ~~1,600~~ 320 feet from residences, where feasible;
  - ~~using electric pumps when feasible where well installations are within 1,600 feet of residences; and~~
  - using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with Kern County standards for noise-generating elements of the well operation when no other feasible control method is available."

- **Mitigation Measure 4.10-4: Booster Pump Noise** (for full text see MOU pp. 27-28)
  This mitigation is updated with the following language changes:

  "If the booster pump stations are to be located within distances from existing nearby residences where the applicable Kern County noise level standards would be exceeded, ~~if the noise and distance thresholds cited above are to be exceeded,~~ the owner/operator will employ noise-reducing practices so that noise from booster pump ~~lift~~ station operations does not exceed Kern County noise-level standards at adjacent residences. Measures to be implemented may include:

  - restricting booster pump ~~lift~~ station installations to beyond 1,015 ~~2,800~~ feet from residences, where feasible;
  - ~~using electric pumps where lift station installations are within 2,800 feet of residences; and~~
  - using sound attenuation enclosures designed to achieve noise reductions sufficient to comply with Kern County standards for noise generating elements of the pump ~~lift~~ station operation when no other feasible control method is available."

4.12.4. Conclusion

The modified project would not involve new or substantially more severe significant noise impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to noise impacts remain valid and are applicable to the modified project without the need for further analysis.

4.13. POPULATION AND HOUSING

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
13. Population and Housing. Would the project:					
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	Impact 4.11-1 (p. 4.11-7.)	No	No	No	NA (Impact was and remains less than significant.)
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	Appendix A – NOP 2. Environmental Checklist, p. 2-25.	No	No	No	NA (Impact was and remains less than significant.)
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	Appendix A – NOP 2. Environmental Checklist, p. 2-25.	No	No	No	NA (Impact was and remains less than significant.)

4.13.1. Relevant Changes Since 2006

As discussed in previous sections, changes since 2006 include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified. However, as discussed below, none of these changes affect the analysis of population and housing impacts.

4.13.2. Environmental Evaluation

a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?

The 2006 EIR addressed potential growth-inducing impacts in ***Impact 4.11.1***. The EIR states that approximately 60 workers would be employed during the construction phase of the project. This increase would not be expected to result in housing or other economic development, and therefore, the growth inducement impacts of the project would be less than significant.

The modified project would not result in substantial changes to the number of construction workers employed. Therefore, the conclusion of the 2006 EIR that the growth inducement impacts of the project would be less than significant is still valid and applicable to the modified project.

b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project would not involve the removal of existing housing, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR. The modified project also would not involve removal of existing housing, so the conclusion of the 2006 EIR of no impact in this regard is still valid and applicable to the modified project.

c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project would not involve the displacement of people, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR. The modified project also would not involve the displacement of people, so the conclusion of the 2006 EIR of no impact in this regard is still valid and applicable to the modified project.

Cumulative Impacts

The 2006 EIR discussed that population and housing growth would occur in the region in accordance with the approved Kern County General Plan. The proposed project would not induce economic or housing growth, or displacement of existing housing or people, and therefore would not result in a cumulative impact to population and housing. The modified project would involve substantial changes to the number of workers employed at the project, and therefore the conclusion of the 2006 that the project would not result in a cumulative impact on population and housing is still valid and applicable to the modified project.

4.13.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing population and housing impacts, and no new or modified mitigation measures for impacts to population and housing are required for the modified project.

4.13.4. Conclusion

The modified project would not involve new or substantially more severe significant population and housing impacts than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR that the project would result in no population and housing impacts remain valid and are applicable to the modified project without the need for further analysis.

4.14. PUBLIC SERVICES

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
14. Public Services. Would the project:					
a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:		No	No		
i) Fire protection?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)
ii) Police protection?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)
iii) Schools?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)
iv) Parks?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)
v) Other public facilities?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)

4.14.1. Relevant Changes Since 2006

As discussed in previous sections, changes since 2006 include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified. However, as discussed below, none of these changes affect the analysis of public services impacts.

4.14.2. Environmental Evaluation

a) ***Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:***

   i. ***Fire protection?***

   ii. ***Police protection?***

   iii. ***Schools?***

   iv. ***Parks?***

   v. ***Other public facilities?***

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would not result in adverse physical impacts associated with any of the listed public services, and that there would be no impact. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would also represent a very low intensity use with many facilities located underground and the above-ground facilities consisting mainly of recharge basins where vegetation would be managed by grazing. During project operation, it is possible that there may be calls to the site for emergency medical service, or fire, or Sheriff's services, but these instances would occur rarely if at all. There is no potential that the services required for the project would rise to the level where new or altered government facilities would be required which could in turn result in significant environmental impacts. Therefore, the conclusion of no impact in terms of public services is still valid and applicable to the modified project.

Cumulative Impacts

The cumulative growth in the region would generate increased demands for public services such as fire and police protection, schools, parks, and other government services, which could potentially have a cumulatively significant impact on these services. However, the project would result in a very low level of demand for public services and would result in no impact in terms of generating the need for new or expanded facilities for these services. Therefore, the project contribution to any cumulative impact to public services would not be cumulatively considerable, and as such the modified project would not result in a cumulatively significant impact to public services.

4.14.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing impacts to public services, and no new or modified mitigation measures for impacts to public services are required for the modified project.

4.14.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to public services than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusion of the 2006 EIR that the project would result in no impacts to public services remains valid and is applicable to the modified project without the need for further analysis.

4.15. RECREATION

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
15. Recreation.					
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.	No	No	No	NA (Impact was and remains less than significant.)
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?	Appendix A – NOP 2. Environmental Checklist, p. 2-26.			No	NA (Impact was and remains less than significant.)

4.15.1. Relevant Changes Since 2006

As discussed in previous sections, changes since 2006 include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified. However, as discussed below, none of these changes affect recreational resources or the demand for recreational facilities.

4.15.2. Environmental Evaluation

a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would not directly increase population or demand for recreational facilities, and that the impact would be less than significant. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would also not increase population or demand for recreational facilities. Therefore, the conclusion of the 2006 EIR that the impact to recreation is less than significant is valid and applicable to the modified project.

b) Does the project include recreational facilities or require the construction or expansion of recreational facilities, which might have an adverse physical effect on the environment?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project does not include recreational facilities or require the construction or expansion of recreational facilities, and that there would be no impact. Therefore, this issue was not addressed further in the body of the EIR.

After completion of the 320 acres of recharge basins since 2006, it has been observed by WSWB staff that recreationalists occasionally visit the recharge basins when basins are flooded for the purpose of bird watching and hiking along the perimeter berms. This informal recreational activity was not contemplated prior to 2006 and is not recognized in the approved project or addressed in the 2006 EIR.

The modified project includes no formal plans for recreation and includes no facilities or improvements to support recreational use of the recharge basin area. However, the WSWB staff recognizes that informal recreational use will occur and there are no plans to prohibit or preclude such use. It is expected that bird watching and hiking will occur around the perimeter of the existing 320 acres of recharge basins, providing a total perimeter hiking distance of approximately 3.0 miles. The modified project includes no plans for trail improvements, parking areas, restrooms, picnic tables, or any other facilities that would support recreational use. However, the basin perimeter berms are adequate for informal hiking and there is sufficient amount of unused level area at the southwest corner of the completed recharge basins to accommodate informal parking of recreational user vehicles. The general level of recreational activity at the basins is very low and is expected to remain so given the general remoteness of the WSWB from the nearest population centers.

In summary, the modified project includes no construction or expansion of recreational facilities which might have an adverse physical effect on the environment. Therefore, the conclusion of the 2006 EIR that there would be no impact to recreation is still valid and applicable to the modified project.

Cumulative Impacts

The cumulative growth in the region would generate increased demands for recreational facilities, which could potentially have a cumulatively significant impact on recreation. However, the project would not result in any increased demand for recreational facilities. As such, the project contribution to any cumulative impact to recreation would not be cumulatively considerable, and therefore the modified project would not result in a cumulatively significant impact to recreation.

4.15.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing impacts with regard to recreation, and no new or modified mitigation measures for recreation impacts are required for the modified project.

4.15.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts with respect to recreation than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR that recreation impacts are less than significant remain valid and are applicable to the modified project without the need for further analysis.

4.16. TRANSPORTATION/TRAFFIC

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
16. Transportation/Traffic. Would the project:					
a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	Impact 4.12-1 (p. 4.12-7.)	No	No	No	NA (Impact was and remains less than significant.)
b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, as follows: i. Metropolitan Bakersfield General Plan LOS C, and ii. Kern County General Plan LOS D; [BV note – the LOS standards are a Kern County addition]	Impact 4.12-2 (pp. 4.12-7, -8.)	No	No	No	NA (Impact was and remains less than significant.)
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	Impact 4.12-3 (p. 4.12-8.)	No	No	No	NA (Impact was and remains less than significant.)
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	Impact 4.12-4 (pp. 4.12-8, -9.)	No	No	No	Yes
e) Result in inadequate emergency access?	Impact 4.12-5 (p. 4.12-9.)	No	No	No	Yes
f) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	Impact 4.12-7 (p. 4.12-10.)	No	No	No	NA (Impact was and remains less than significant.)
g) Result in inadequate parking supply?	Impact 4.12-6 (p. 4.12-9.)	No	No	Yes	NA (Impact was and remains less than significant.)

4.16.1. Relevant Changes Since 2006

Described below are the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of transportation/traffic impacts. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. Of particular relevance to the traffic analysis, the modified project includes additional pipeline crossings at County roads. These include the crossings at 170th Street for the connecting pipeline to the LA Aqueduct #2, and for collection pipelines from recovery wells; as well as a crossing at Avenue A for the connecting pipeline to AVEK's SNIP pipeline. All elements of the modified project are described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

Since certification of the EIR in 2006, the most notable change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. The projects that have been approved and constructed within and near the project site are described in Section 2.6 and shown in Figure 6.

There have been no substantial changes to the County road network or State highways in the project vicinity since 2006. One notable change that has occurred since 2006 relates to the Skyotee Ranch Airport located south of the complete recharge basins. This airfield was in operation in 2006, but has since ceased flight operations.

New Information

New information pertaining to transportation/traffic in the project area has become available since the project EIR was certified in 2006. All of the solar, wind, and transmission projects mentioned above were subject to CEQA documentation which included the evaluation of transportation/traffic impacts from those projects. The findings of those evaluations were reviewed in detail during the course of the evaluation of transportation/traffic impacts associated with the modified project, as presented below.

4.16.1. Environmental Evaluation

a) Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, including, but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

The 2006 EIR addressed impacts to the performance of the circulation system in ***Impact 4.12-1***. The EIR estimated that there would be a total of 176 daily vehicle trips generated during construction by workers and delivery vehicles. Since pre-project traffic volumes in the area are very light, this increase would be considerable relative to typical traffic volumes. The increase in traffic volume would be temporary and would not be substantial enough to change the operating Level of Service (LOS) A on the surrounding roadways. Therefore, the impact on roadway capacity would be less than significant.

For the modified project, it is estimated that the maximum construction workforce that would be present at the site at any given time during the four-year construction period would be 160 workers when multiple project elements are under construction at the same time. Assuming one arriving trip and one departing trip per worker per day, total daily traffic generation by workers would be 320 trips per day. (Note: Project operations would involve no more than 10 workers, so operational trip generation would be negligible.) Construction would also involve deliveries of equipment and materials. Approximately 60 pieces of construction equipment would be brought to the site and then taken away when no longer needed after construction. Assuming one in-bound and one outbound trip to deliver each piece of equipment, and assuming delivery trucks are equivalent to two passenger vehicles, this equates to about 240 trips, or an average of less than one trip per day. Deliveries of materials such as piping for pipelines and wells, and equipment for wells and booster pump stations would occur daily. During the peak period of construction, with multiple project elements under construction, there would be an average of 4 deliveries per day (resulting in two trip ends each or 8 trips total, which would double to 16 assuming one delivery truck is equivalent to two passenger vehicles). In total, the project would generate up to 337 trips per day during the peak construction period. Approximately 169 trips would occur during the AM peak period and 169 trips would occur during the PM peak period, under the worst-case assumption that workers would arrive after 7 AM and leave after 4 PM.

All roadways in the project vicinity are very lightly traveled and operate at LOS A under current conditions. According to the most recent Kern County traffic counts (2017), Average Annual Daily Trips (AADT) on Avenue A is 658 trips, and on 170th Street the ADDT is 777 trips (Kern COG 2017). According to Caltrans, the AADT on SR-138 in the project vicinity is approximately 3,100 trips with a peak hour volume of 610 trips (Caltrans 2017). On these rural highways and roadways, peak hour volumes are about 20 percent of daily volumes. The peak hour capacity for each of these two-lane paved roadways is 3,200 trips (Kern County 2011, p. 4.10-17). The estimated 169 peak hour trips from the project would temporarily increase peak hour traffic volumes on these nearest roadways by 22 to 28 percent. However, the peak hour totals would not exceed 837 trips on Avenue A, 956 trips on 170th Avenue, or 779 trips on SR-138 (under the worst-case assumption that all project-generated trips would utilize all of these roadways). The project trips would represent a small fraction of roadway capacity, at 5 percent (with overall v/c ratio of less than 0.30), so the level of service would not exceed the v/c ratio of 0.60 that defines the transition from LOS A to LOS B on any of these roadways. As such, the traffic level of service impacts due to construction traffic generated by the modified project would be less than significant. Therefore, the conclusion in the 2006 EIR that project impacts on levels of service and capacity of the surrounding roadways would be less than significant is still valid and applicable to the modified project.

b) Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways, as follows:

i. Metropolitan Bakersfield General Plan LOS C, and

ii. Kern County General Plan LOS D?

The 2006 EIR addressed impacts to transportation levels of service in ***Impact 4.12-2***. The EIR noted that the level of service standards to be maintained in the Kern County General Plan and the Willow Springs Specific Plan are LOS D and LOS C, respectively (i.e., impacts would occur when LOS drops to E in Kern County and LOS D in the Willow Springs Specific Plan area; the Metropolitan Bakersfield LOS standard does not apply). The roadways in the project vicinity were all operating at LOS A, and the temporary addition of project

construction traffic would not result in a drop in LOS below A. Since the project would generate traffic volumes far below the volumes that would result in LOS C or D, the impact on level of service was concluded to be less than significant.

Under current conditions for the modified project, overall traffic volumes on the surrounding roadways have increased incrementally since 2006; however, all nearby roadways still operate at LOS A. As discussed under item 'a' above, the traffic generated during construction of the modified project would not result in service levels dropping below LOS A on any of the nearby roadways, and the LOS would remain well within the LOS impact thresholds of LOS D or C. As such, the traffic level of service impacts due to construction traffic generated by the modified project would be less than significant. Therefore, the conclusion in the 2006 EIR that project impacts on level of service standards and capacity of the surrounding roadways would be less than significant is still valid and applicable to the modified project.

c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?

The 2006 EIR addressed air traffic safety in ***Impact 4.12-3***. The EIR states that the project would not result in alteration of any air traffic patterns or levels, and the construction of project structures and design features would not pose a hazard to air navigation. As such, there would be no impact in terms of safety risks associated with air traffic patterns.

The modified project would not result in changes in design or introduction of new vertical elements that would result in a change in traffic air patterns or levels, or pose a hazard to aviation. A relevant change in the project setting since 2006 is the closure of the Skyotee Ranch Airport, located to the south of the completed recharge basins. The termination of flight operations at this nearby airfield further reduces any safety risks related to air traffic at the project site. As such, the conclusion in the 2006 EIR that there would be no impact in terms of safety risks associated with air traffic patterns is still valid and applicable to the modified project.

d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?

The 2006 EIR addresses transportation safety hazard in ***Impact 4.12-4***. The EIR states that the project does not include any changes to existing roads that would constitute a safety hazard. However, heavy equipment traffic could create conditions that would be incompatible with general purpose traffic in the area. The EIR stated that this potential impact would be significant, and identifies ***Mitigation Measure 4.12-1*** to reduce safety hazards through the preparation of a traffic safety plan to be implemented during construction. With implementation the Mitigation Measure 4.12-1, the EIR concluded that the impact would be less than significant.

The modified project would likewise not make changes to existing roads but would involve heavy equipment traffic that could pose a traffic hazard in the same manner and extent as identified for the approved project in the 2006 EIR. Therefore Mitigation Measure 4.12-1 is still valid in its current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.12-1 during construction of the modified project. Therefore, the potential for traffic safety hazards to occur during construction of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.12-1. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is still valid and applicable to the modified project.

g) Result in inadequate emergency access?

The 2006 EIR addresses the question of emergency access in ***Impact 4.12-5***. The EIR states that during the construction phase of the project, slow-moving traffic could affect emergency response times on roads in the project vicinity. Also, temporary road closures and detours would be required where planned pipeline alignments would cross roadways. The EIR states that this impact would be significant and identifies Mitigation ***Measure 4.12-2*** to require coordination with emergency response agencies regarding planned traffic control measures required during construction. With implementation the Mitigation Measure 4.12-2, the EIR concluded that the impact would be less than significant.

The modified project would likewise involve slow moving traffic and temporary road closures in the same manner and extent as identified for the approved project in the 2006 EIR. Therefore Mitigation Measure 4.12-2 is still valid in its current form and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.12-2 during construction of the modified project. As such, the potential for impacts to emergency access to occur during construction of the modified project would be reduced to less than significant levels with the implementation of Mitigation Measure 4.12-2. Therefore, the conclusion of less-than-significant impact after mitigation in the 2006 EIR is still valid and applicable to the modified project.

h) Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?

The 2006 EIR addresses the potential for conflict with plans and policies for alternative transportation in ***Impact 4.12-7***. The EIR states that since the project does not include residential or employment-generating land use, there is no need for alternative transportation facilities at the project. In addition, no existing or planned pedestrian walkways, bikeways, or roads designated as bike routes would be potentially affected by the project, and the project would not preclude the expansion of alternative transportation in the future. As such, there would be no impact regarding plans and policies for alternative transportation.

The modified project would have the same basic characteristics as the approved project, with some variation in the location and extent of the project elements. As described for the approved project there would be no need for alternative transportation facilities, and the project would not affect plans for future transportation alternatives or preclude such alternatives in the future. Therefore, the conclusion in the 2006 EIR that the project would have no impact by way of conflicting with plans and policies for alternative transportation is still valid and applicable to the modified project.

i) Result in inadequate parking supply

The 2006 EIR addresses the issue of parking supply in ***Impact 4.12-6***. The EIR states that during construction, equipment staging areas and commuter parking areas would be located on private property and would not encroach on roadways. During operations, the water bank would have up to 10 employees stationed at the site, and existing parking areas would be adequate. It is stated in the 2006 EIR that the project would be required to have a plan of the employee parking area approved by Kern County, and includes this requirement as ***Mitigation Measure 4.12-3***. The EIR concludes that there would be no impact after implementation of this mitigation measure.

The modified project would include provisions for off-street worker parking during construction. There is a large area at the existing WSWB maintenance facility at the northwest corner of Gaskell Road and 160th Street that is available for worker parking during construction. For operations, it is anticipated that the modified project would also include up to 10 permanent staff, as was planned for the approved project. Parking spaces for up to 10 permanent employees would be constructed in accordance with the parking lot plan submitted to Kern County for approval, as stipulated in Mitigation Measure 4.12-3, which is still valid and applicable to the modified project. Under the terms of the 2007 MOU with Kern County, the water bank operator would be responsible for implementing Measure 4.12-3 in conjunction with the modified project. As such, the potential for the modified project to result in parking impacts would be reduced to less than significant levels with the implementation of Mitigation Measure 4.12-3. Therefore, the conclusion in the 2006 EIR that the project would have no impact in terms of adequacy of parking supply is still valid and applicable to the modified project.

Cumulative Impacts

Traffic Operations

The 2006 EIR discussed that construction and operation of the approved project would not result in cumulative traffic impacts. Neither project construction nor operation would cause a substantial increase in traffic or exceed existing levels of service.

The modified project would generate somewhat higher traffic volumes than the approved project during construction, but the peak traffic volumes would still be low relative to the capacities of the affected roadways, and the existing level of service A would not be exceeded on any nearby roadway. During operations, the modified project would employ up to 10 employees which would have a negligible traffic effect. Therefore, the impacts of the modified project on traffic operations would be less than significant, as was concluded in the 2006 EIR for the approved project.

Under current conditions, there are several approved utility-scale solar projects in the project site and in the immediate vicinity which have been largely constructed; however, approximately 3,300 acres within these approved solar projects have yet to be constructed. Thus, it is possible that construction of uncompleted portions of approved solar facilities in the vicinity could occur at the same time as construction of the modified project. These construction activities could generate an equivalent volume of commuter and delivery traffic as the modified project. Under a reasonable worst-case assumption that two solar projects could be under construction in the area at the same time as the modified project, the volume of construction traffic would temporarily triple if peak construction periods were to coincide. This could result in a total cumulative peak hour volume of approximately 1,274 vehicles on the heaviest traveled nearby roadway (170th Avenue) and result in a drop in service level from LOS A to LOS B, but that would still be well within the one-hour roadway capacity of 3,200 vehicles, and also well within the impact threshold of LOS C/D applicable within the Willow Springs Specific Plan area. In summary, considering the modifications to the project and the changed circumstance surrounding the project, described above, the conclusion from the 2006 EIR that the cumulative traffic operations impacts of the project would not contribute considerably to a cumulative traffic impact, and that the project would therefore not have a cumulative impact on traffic operations, are still valid and applicable to the modified project.

Traffic Hazards and Emergency Access

The 2006 EIR concludes that the potential traffic hazard created by heavy equipment traffic during construction would be mitigated by Mitigation Measure 4.12-1 which requires the preparation and implementation of a traffic safety plan, and potential impacts to emergency access along local roadways would be mitigated by

Mitigation Measure 4.12-2 which requires notification of emergency service agencies in the event of road closures. The EIR states that the cumulative projects considered in 2006 were too far from the project site and would not use the same roadways, so the project would not contribute considerably to a cumulative traffic impact. Therefore, the 2006 EIR concluded that the project would not have a cumulative impact in terms of traffic hazards and emergency access with implementation of Mitigation Measures 4.12-1 and 4.12-2.

As discussed above, the potential traffic hazards and impacts to emergency vehicle access would also be mitigated through implementation of Mitigation Measures 4.12-1 and 4.12-2, respectively. Unlike conditions that prevailed in 2006, there is a potential that one or more uncompleted solar projects in the project area could be under construction at the same time as the modified water bank project. According to the certified EIRs for these solar projects, all of these projects are subject to the same mitigation measures for implementation of traffic safety plans and notification of emergency agencies in the event of temporary road closures. Therefore, the traffic safety impacts and emergency access impacts would be mitigated to less than significant levels at all of the cumulative projects. The residual impacts after mitigation would not be cumulatively significant, and the contribution of the modified water bank project to any cumulative impact would not be considerable. Therefore, considering the modifications to the project and the changed circumstance surrounding the project, described above, the conclusion from the 2006 EIR that the cumulative traffic hazard and emergency access impacts of the project, as mitigated by Mitigation Measures 4.12-1 and 4.12-2, respectively, would not contribute considerably to a cumulative traffic impact, and that the project would therefore not have a cumulative impact in this regard, are still valid and applicable to the modified project.

4.16.3. Mitigation Measures

The following mitigation measures, as identified in MMRP for the 2006 EIR and as carried forward to the 2007 MOU on the approved project, are applicable to the modified project (the MOU is contained in Appendix A of this Addendum):

- **Mitigation Measure 4.12-1: Prepare Traffic Safety Plan** (for full text see MOU p. 28-29.)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measure 4.12-2: Notify Emergency Response Agencies** (see MOU p. 29.)
  This mitigation is applicable to the modified project without changes.

- **Mitigation Measure 4.12-3: Submit Parking Plan** (for full text see MOU p. 29-30.)
  This mitigation is applicable to the modified project without changes.

4.16.4. Conclusion

The modified project would not involve new or substantially more severe significant transportation/traffic impacts than were identified for the approved project in the 2006, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to transportation/traffic impacts remain valid and are applicable to the modified project without the need for further analysis.

4.17. UTILITIES AND SERVICE SYSTEMS

CEQA Checklist Question	Where in the 2006 EIR was the Impact Analyzed?	Would Modified Project Involve New or Substantially More Severe Significant Impacts due to the Following:			Do Mitigation Measures in 2006 EIR Mitigate Impacts of Modified Project?
		Changes to Project?	Changes in Project Circumstances (i.e., Setting)?	New Information of Substantial Importance?	
17. Utilities and Service Systems. Would the project:					
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)
b) 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?	Impact 4.13-1 (p. 4.13-6.)	No	No	No	NA (Impact was and remains less than significant.)
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)
g) Fail to comply with federal, state, and local statutes and regulations related to solid waste?	Appendix A – NOP 2. Environmental Checklist, p. 2-31.	No	No	No	NA (Impact was and remains less than significant.)

4.17.1. Relevant Changes Since 2006

The paragraphs below describe the changes that have occurred since the 2006 EIR was prepared which are relevant to the analysis of impacts to utilities and service systems. These changes include modifications to the project, the circumstances surrounding the project, including its physical setting, and new information that may have become available since the 2006 EIR was certified.

Modifications to the Project

The Willow Springs Water Bank project that is addressed in this Addendum has been substantially modified from the approved project addressed in the 2006 EIR. Most notably, the physical boundaries of the project have been shifted westward to encompass 3,200 acres located west of 170th Street, while an area of 6,710 acres located east of 140th Street have been removed from the project site. Of particular importance to the discussion of utilities and service systems is that the previously planned connection to the AVEK West Feeder has been completed since 2006 and is not part of the modified project. All elements of the modified project are described in detail in Section 2.4 and shown in Figures 3 and 4. The differences between the modified project and the previously approved project are also described in that section and shown in Figure 5.

Changes in Project Circumstances and Setting

Since certification of the EIR in 2006, the greatest change to the project setting has been the construction of several large solar generating facilities within and around the water bank site. The projects that have been approved and constructed within and near the project site are described in Section 2.6 and shown in Figure 6.

New Information

No new information relevant to utilities and service systems has become available since the 2006 EIR was certified.

4.17.2. Environmental Evaluation

a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project does not include or require wastewater treatment facilities, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The modified project also does not include or require wastewater treatment facilities. Therefore, the conclusion of the 2006 EIR that there is no impact in this regard is still valid and applicable to the modified project.

b) 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:

Temporary Disruption of AVEK West Feeder

The 2006 EIR found that the AVEK West Feeder could be subject to temporary disruption impacts during construction of a pipeline connection with the AVEK West Feeder pipeline, as discussed in ***Impact 4.15-1***. The EIR states that these construction activities would result in potential disruptions of service on AVEK West Feeder while it is temporarily out of service. The EIR concluded that the effects of any such disruption would be minimized because AVEK would ensure that required levels of service would be maintained prior to commencement of construction. Therefore, the temporary impact on operation of the AVEK West Feeder would be less than significant.

In 2010, a 1.5-mile segment of the connecting pipeline to the AVEK West Feeder running along Gaskell Road between 155th Avenue and 140th Avenue was completed with funding through the American Recovery and Reinvestment Act (ARRA).

Under the modified project, the water supplies from the California Aqueduct would be conveyed to the recharge basins via the new 84-inch supply pipeline which would be constructed in the initial stages of the project. As such, the interim use of the AVEK West Feeder to convey State Water Project water to the Willow Springs Water Bank is no longer planned under the modified project. In addition, the planned location of the main booster pump station has been moved southeastward 2.5 miles from 170th/Holiday to Gaskell/155th where the pipeline connector to the AVEK West Feeder currently terminates. As such, the modified project does not include the construction of any of the remaining 2.5-mile portion of the pipeline connection to the AVEK West Feeder, and therefore no disruption to the AVEK West Feeder will occur. Therefore, the conclusion of the 2006 EIR that the temporary impact on the operation of the AVEK West Feeder would be less than significant is still valid and applicable to the modified project.

c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project does not include the construction of new or expanded stormwater drainage facilities, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The modified project also does not include or new or expanded stormwater drainage facilities. Therefore, the conclusion of the 2006 EIR that there would be no impact in this regard is still valid and applicable to the modified project.

d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new and expanded entitlements needed?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would be served by existing entitlements to water and would not require any additional entitlements to be

granted by the State. As such, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would also be served by existing entitlements to water and would not require any additional entitlements to be granted. Therefore, the conclusion of the 2006 EIR that there would be no impact in this regard is still valid and applicable to the modified project.

e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that since the project would not create additional wastewater demand, there would be no impact in this regard. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would likewise not create additional wastewater demand. Therefore, the conclusion of the 2006 EIR that there would be no impact in this regard is still valid and applicable to the modified project.

f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would generate a relatively small volume of solid waste that would not affect a landfill. Therefore, the impact on landfill capacity would be less than significant. As such, this issue was not addressed further in the body of the EIR.

The modified project would likewise generate a relatively small volume of solid waste that would not affect a landfill. Therefore, the conclusion of the 2006 EIR that the impact on landfill capacity would be less than significant is still valid and applicable to the modified project.

g) Fail to comply with federal, state, and local statutes and regulations related to solid waste?

In the Notice of Preparation (NOP) contained in Appendix A of the 2006 EIR, the Kern County staff made a determination, through completion of the CEQA Initial Study/Environmental Checklist, that the project would comply with federal, state, and local solid waste standards, and therefore the impact would be less than significant. Therefore, this issue was not addressed further in the body of the EIR.

The modified project would likewise comply with federal, state, and local solid waste standards. Therefore, the conclusion of the 2006 EIR that the impact in this regard would be less than significant is still valid and applicable to the modified project.

Cumulative Impacts

The 2006 EIR discussed that cumulative growth in the region would generate impacts on public utilities such as water supply service, wastewater collection and treatment, and solid waste collection and disposal that could potentially be cumulatively significant. However, the project would not result in any demand for water and

sewer service and a very low level of demand for solid waste service and therefore the project contribution would not be cumulatively considerable or cumulatively significant. The modified project similarly would result in little or no demand for such services, and therefore the conclusion of the 2006 that the project would not result in a cumulative impact on utilities and service system remains valid and applicable to the modified project.

4.17.3. Mitigation Measures

The 2006 EIR did not include mitigation measures for the purpose of reducing impacts to utilities and service systems, and no new or modified mitigation measures for impacts to utilities and service systems are required for the modified project.

4.17.4. Conclusion

The modified project would not involve new or substantially more severe significant impacts to utilities and service systems than were identified for the approved project in the 2006 EIR, whether as a result of changes to the project, or changes to its circumstances or its setting, or as a result of new information that has become available since 2006. Therefore, the conclusions of the 2006 EIR with regard to no impacts to utilities and service systems remain valid and are applicable to the modified project without the need for further analysis.

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