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INITIAL ENVIRONMENTAL STUDY
HENRY MILLER RECLAMATION DISTRICT #2131

WELL WATER EXCHANGE PROGRAM

March 11, 2019

Summers Engineering, Inc.
Consulting Engineers
Hanford, California

A. BACKGROUND

| | |
|--|--|
| Project Title: | Well Water Exchange Program |
| Project Location: | Portions of San Joaquin, Stanislaus, Merced, Fresno, and Kings Counties |
| Lead Agency Name and Address: | Henry Miller Reclamation District #2131 11704 W. Henry Miller Ave., Dos Palos, CA 93620 |
| Other Public Agencies Whose Approval is Required | United States Bureau of Reclamation (USBR) |
| Zoning | General and Exclusive Agriculture |
| General Plan Designation: | Agriculture |
| Surrounding Land Uses: | The project is located in portions of San Joaquin, Stanislaus, Merced, Fresno, and Kings Counties which are developed for irrigated agriculture or managed wetlands. |

B. PROJECT DESCRIPTION:

San Luis Canal Company (SLCC) is one of four San Joaquin River Exchange Contractors with historic water rights from the San Joaquin River. SLCC's service area encompasses approximately 45,000 acres of irrigable land in Merced County. In most years SLCC receives its surface water from the United States Bureau of Reclamation (USBR) under a long standing Exchange Contract. Water stored in Shasta Reservoir flows south down the Sacramento River and into the Sacramento-San Joaquin River Delta. Water in the Delta is then pumped by the Jones Pumping Plant into the Delta Mendota Canal, which flows southwesterly to Mendota Pool. The other three Exchange Contractors divert their CVP supplies from the Mendota Pool. SLCC's supplies flow north in the San Joaquin River from the Pool to a diversion point at Sack Dam (about 5 miles south of Highway 152). In years with extremely low runoff and a shortage of available CVP supplies, the Exchange Contractors can opt to use their San Joaquin River water rights in lieu of their CVP Exchange Contract.

Delta pumping restrictions, annual changes in hydrology, and increased loss of conveyance flexibility within the Federal and State water distribution systems has restricted the water supply allocations to west side CVP districts and created a demand for reliable supplemental water supplies. The proposed project would allow SLCC landowners the flexibility to provide supplemental water supplies to irrigate land they own in certain west side CVP districts and the Grasslands Groundwater Sustainability Agency (GSA) boundary. Lands within the Grasslands GSA but outside the CVP place of use boundary would not be included. For brevity subsequent references in this document to "west side CVP districts" are intended to include Grassland GSA lands within the CVP place of use boundary. The project would be a yearly exchange program that would provide up to a maximum of 5,500 acre-feet per year of irrigation water to SLCC landowners' properties in west side CVP districts through exchanges. The project would be administered by SLCC in a "pilot" fashion to allow for the implementation of sufficient quality control parameters. The exchange term would commence April 26, 2019. In 2019 a maximum of 500 acre-feet would be exchanged. In 2020 the maximum would be 1,000 acre-feet, and in the remaining years the maximum would be 5,500 acre-feet per year.

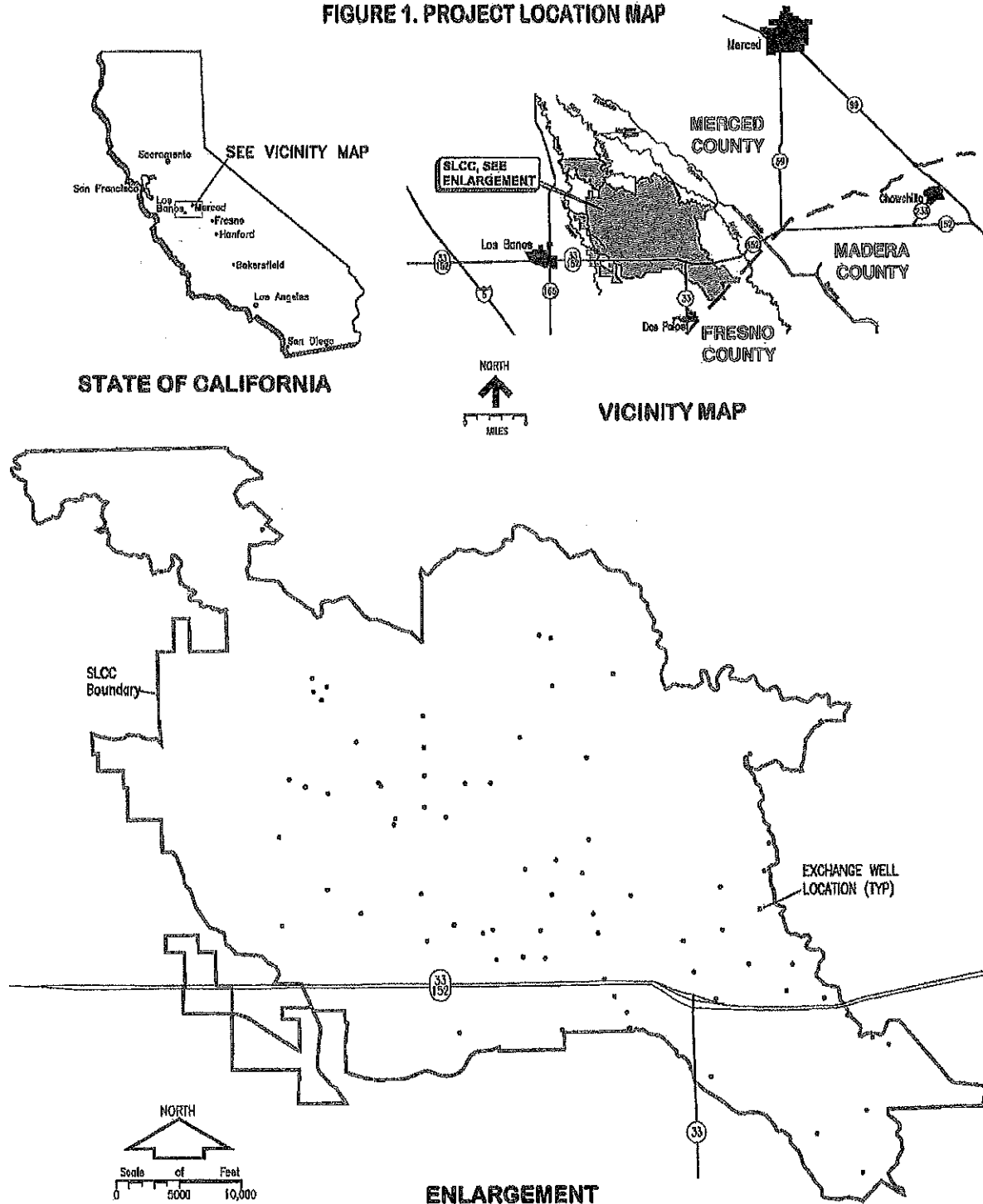
Groundwater pumped by private landowners within SLCC's boundaries would be discharged into existing Henry Miller Reclamation District (HMRD) #2131 conveyance facilities. These facilities consist of canals, drains, low lift pumps, and regulating reservoirs. The types of water already conveyed in these facilities are (1) USBR surface water (CVP water from the Delta or San

Joaquin River water), (2) irrigation tail water generated within SLCC's boundaries, (3) groundwater pumped from HMRD #2131 wells, and (4) groundwater pumped from SLCC landowners' private wells. Groundwater pumped into the system under the project would be blended at a rate that meets daily flow and water quality objectives established by SLCC.

The private landowners participating in the exchange program would be credited a like amount of CVP water (less the SLCC established loss rate), up to the maximum totals specified above, which could then be distributed to their lands in the following west side CVP districts: Del Puerto Water District, Pacheco Water District, Patterson Irrigation District, Panoche Water District, San Luis Water District, and Westlands Water District; and to Grasslands GSA lands within the CVP place of use boundary. The San Luis and Delta Mendota Water Authority (Water Authority) operates the Delta Mendota Canal (DMC) for delivery of USBR contract water. The California Department of Water Resources (DWR) operates the San Luis Canal for delivery of USBR contract water. HMRD staff would collect and tabulate monthly meter readings from the private wells to provide an accounting of each participant's pumping and total pumping for the program. The Water Authority would coordinate with USBR and DWR for deliveries to properties that receive water from the San Luis Canal and DMC. In exchange for these deliveries to west side CVP districts, the Water Authority would deduct a like amount from SLCC's allocation of CVP water.

Only existing wells would initially be used for the program. New wells are not proposed for the program, but wells drilled by private landowners in SLCC after the program is initiated would be eligible to participate under the same terms as the existing wells. The wells that would be used to participate in the program are in Merced County, within SLCC or within parcels that adjoin SLCC. The program would be administered by SLCC and through the Water Authority as described above. **Figure 1** includes location maps of SLCC and the existing wells that would be eligible to participate in the program.

FIGURE 1. PROJECT LOCATION MAP



**SAN LUIS CANAL COMPANY
EXCHANGE WELLS**
SUMMERS ENGINEERING INC.
Consulting Engineers
19400000 FEBRUARY 2010 CALIFORNIA

C. ADDITIONAL DATA:

C.1: Site Description

No new construction is proposed for the project. The existing groundwater wells that would participate in the program, and any new wells that could potentially participate in the program in the future, are in southwestern Merced County, within the SLCC boundary or within parcels that adjoin SLCC. The area is exclusively irrigated agricultural. The city of Los Banos, which has a population of approximately 40,000, is located several miles west of the SLCC boundary. The city of Dos Palos, which has a population of approximately 5,500, is located several miles south of the SLCC boundary. The crops grown within SLCC include nuts, alfalfa, cotton, tomatoes, corn, and winter forage crops.

The lands that would receive the exchange water are located in Del Puerto Water District (Merced, Stanislaus, and San Joaquin Counties), Pacheco Water District (Merced and Fresno Counties), Patterson Irrigation District (Stanislaus County), Panoche Water District (Merced and Fresno Counties), San Luis Water District (Merced and Fresno Counties), Westlands Water District (Fresno and Kings Counties), and within the Grasslands GSA boundary (Merced County). These areas are exclusively irrigated agricultural and managed wetlands. Del Puerto Water District is located along Interstate 5 between the small community of Santa Nella (population 1,500) and the city of Tracy (population 83,000). Del Puerto adjoins the west side of Patterson (population 22,000). Patterson Irrigation District adjoins the north, east, and south sides of Patterson. The city of Dos Palos (population 5,500) is located several miles north of the Panoche Water District boundary. The city of Los Banos (population 40,000) is located several miles east of the San Luis Water District boundary. San Luis Water District's boundary adjoins the south side of Santa Nella. Westlands Water District's boundary extends from Kettleman City (population 1,500) to a few miles south of Firebaugh (population 7,500). Westlands adjoins the west side of Mendota (population 11,000) and encompasses the city of Huron (population 7,000). The Grasslands GSA boundary is located south, east, and north of Los Banos. The southern end is a few miles southwest of Dos Palos and the northern end is a few miles south of the small community of Stevinson (population 300).

C.2: Water, Source, and Distribution

The SLCC boundary encompasses the lands owned by the shareholders of the company. The HMRD boundary encompasses the water conveyance facilities (downstream of the diversion point from the San Joaquin River) used to deliver irrigation water to the lands in SLCC. HMRD's water conveyance facilities include canals, drains, low lift pumps, and regulating reservoirs. The types of water conveyed in these facilities are surface water from the Delta or San Joaquin River, irrigation tail water, and groundwater pumped from both District and private wells. The upstream end of HMRD's system begins near Sack Dam on the San Joaquin River, which is located approximately 5 miles south of Highway 152. The lower end of the system is located east of Highway 165, about 8 miles north of Los Banos. Irrigation deliveries to growers are generally diverted from the canals. A system of drainage channels throughout the District collects storm water and tail water from irrigation. Low lift pumps are used in the drains to recirculate tail water into the canals. Canal regulating reservoirs provide short term storage to improve the efficiency of canal operations.

C.3: Details of Proposed Use

The project would be used to exchange CVP water supplies to lands owned by SLCC property owners in other west side CVP districts for a like amount of groundwater pumped by those same landowners into the HMRD conveyance system for irrigation in SLCC. The exchange program would give SLCC landowners flexibility to provide supplemental water supplies to irrigate land they own in the west side CVP districts.

D: AGENCIES WHOSE APPROVAL IS REQUIRED (RESPONSIBLE, TRUSTEE, AND AGENCIES WITH JURISDICTION)

The exchange program would involve CVP deliveries through the Delta Mendota Canal and San Luis Canal, which are USBR facilities. Therefore, USBR must approve the project. USBR is preparing an Environmental Assessment in accordance with the National Environmental Policy Act (NEPA) concurrent to the preparation of this document.

E: CONSISTENCY WITH EXISTING GENERAL PLAN, ZONING, AND OTHER APPLICABLE LAND USE CONTROLS

Wells that would participate in the program already exist and are used to pump groundwater into HMRD's conveyance system. The project does not involve any changes in zoning or land use and is therefore consistent with existing general planning, zoning, and land use controls. No conflicts with the Sustainable Groundwater Management Act (SGMA) are anticipated. However, any program participation determined to be in conflict with SGMA would be terminated.

F: IDENTIFICATION OF SIGNIFICANT EFFECTS

An environmental checklist was used as a guideline to evaluate the environmental impacts of the proposed project, and is attached as Appendix A. Based on the findings of this Initial Environmental Study and the associated environmental checklist, the proposed project will have a less than significant effect on the environment. A Mitigated Negative Declaration will be filed by (the lead agency) HMRD #2131 and is attached as Appendix B.

G: MITIGATION MEASURES

Under the proposed project, landowners in SLCC would pump groundwater in order to exchange a like amount of SLCC's CVP water to the landowners' properties in other west side CVP districts. The pumped groundwater could be in addition to the water already being pumped in SLCC to meet irrigation needs. Increased groundwater pumping could reduce groundwater levels. However, the program would mitigate these impacts by managing pumping in accordance with a groundwater monitoring program that triggers annual limits on pumping when hydro-geologic conditions warrant.

SLCC has adopted a well water exchange policy which requires all participants to apply to SLCC for eligibility in the program and requires SLCC to carefully review and approve each exchange. The policy limits annual pumping based on the acreage attributed to the participating well and the CVP allocation deficit for the lands receiving the exchanged water. No well would be approved for exchanges in more than 2 out of 3 consecutive years. Additionally, the lands receiving the exchanged water would have to be in a west side CVP district that conducts a water conservation program with efficient water management practices, or is in compliance with an urban water management plan under Water Code Section 10610 et seq., an urban water shortage contingency plan under Water Code Sections 10621, 10631 and 10656, or an agricultural water management plan adopted pursuant to Water Code Section 10800 et seq. Because the participating landowners would be managing their water resources in SLCC and the applicable west side CVP districts, they would have the flexibility to curtail demands by altering cropping patterns.

The depths of the participating wells must be above the Corcoran Clay geologic formation, which significantly reduces the potential for subsidence due to over pumping of the aquifer.

Wells in SLCC that are above the Corcoran Clay generally have poorer water quality (higher electrical conductivity [EC]) than the CVP surface water SLCC receives. HMRD monitors EC at locations throughout the HMRD conveyance system using electronic sensors connected to the District's Supervisory Control and Data Acquisition (SCADA) system. The well water exchange policy would set maximum allowable EC levels for the participating wells.

Additional details of groundwater level monitoring, water quality monitoring, and the resulting pumping constraints that would be implemented under the program are provided in the following subsections.

G.1: Groundwater Level Monitoring

Central California Irrigation District (CCID) is one of the Exchange Contractors that diverts CVP water from the Mendota Pool. SLCC's southern boundary is contiguous to a portion of CCID's northeastern boundary. CCID has implemented similar well water exchanges with west side CVP districts since the early 1990's. Most recently, CCID was granted USBR approval for a five year exchange program from 2014 through 2018, and it is currently in the process of renewal. CCID's existing program and SLCC's proposed program would rely on a groundwater monitoring program and an annual analysis by Kenneth D. Schmidt and Associates to determine the pumping that can be sustained by the aquifer. A letter from Mr. Schmidt to SLCC, dated January 30, 2019, is attached as Appendix C. The letter which outlines the recommended monitoring and analysis is summarized as follows:

- Monthly well readings are available from 22 DWR wells and 4 California Statewide Groundwater Elevation Monitoring (CASGEM) wells located within SLCC. The shallowest levels of the year, which typically occur in January or February, would be compared to the previous year's levels and pumping for each individual well. This determines if the groundwater levels recovered from the prior year's pumping. Short term hydrographs would be prepared from monthly water level and pumping data. Long term hydrographs would be prepared from semi-annual and annual water level and pumping data. Groundwater level contour maps would be prepared for the seasonally shallowest levels. In addition to the DWR and CASGEM well data, static levels in HMRD's production wells and other privately-owned production wells in SLCC would be measured at their shallowest levels.
- At locations where there are concerns about neighboring wells being drawn down due to the exchange pumping, aquifer tests would be conducted. In these tests the participating wells would be pumped for a period of 24 to 72 hours and the water levels measured in the neighboring wells of concern. These measurements would be used to determine the transmissivity of the aquifer which, together with the storage coefficient, would be used to estimate the drawdown at various distances from the participating well after longer periods of time such as 100 or 200 days. If the water levels fluctuate significantly the exchange would be permitted, unless the seasonally shallowest static level is below a certain level. This level, which is like the "trigger level" used for SGMA, would be determined after several years of monitoring records were available.
- The well level and pumping data, hydrographs, and groundwater contour maps would be compiled by Mr. Schmidt's firm for the previous calendar year. In March of the subsequent year a report which summarizes and interprets the data would be submitted to HMRD together with a determination of the exchanges that should be allowed for the coming irrigation season.

G.2: Water Quality Monitoring

SLCC has adopted a well water exchange policy that establishes water quality limits for the participating wells. All wells enrolled in the program would have to be tested for EC, Boron, and Selenium concentrations at the beginning of each year. Wells that are currently allowed to pump into HMRD facilities must have EC's below 1,500 micro-Siemens per centimeter (uS/cm), Boron concentrations below 2.0 parts per million (ppm), and Selenium concentrations below 0.0 ppm. The well water exchange policy would set limits on these water quality constituents as determined

by the SLCC Board, and wells exceeding the limits would not be approved to participate. If SLCC suspects the water quality of a well has exceeded the limits at other times during the year, it will require additional testing to assure compliance.

The well water exchange policy would also include disincentives for using wells with water quality near the acceptable limits. SLCC would charge tiered per acre-foot fees for the exchanges based on the water quality of the participating well. For example, wells with EC readings of 0-1,000 uS/cm may be exempt from the fees, while wells with EC readings of 1,000-1,500 uS/cm may be charged a fee of \$5 per acre-foot, subject to the Board approved policy. Note, these EC ranges and charges are used to illustrate the idea and may not be representative of the actual water quality values and charges adopted in the policy.

H: PREPARERS AND CONSULTANTS

The following people were involved in the preparation of this initial study:

John Wiersma, San Luis Canal Company/Henry Miller Reclamation District
Scott Jacobson, Summers Engineering, Inc

APPENDIX A ENVIRONMENTAL CHECKLIST

PROJECT INFORMATION

- | | |
|--|--|
| 1. Project Title: | Well Water Exchange Program |
| 2. Lead Agency Name and Address: | Henry Miller Reclamation District #2131 |
| 3. Contact Person and Phone Number: | John Wiersma, (209) 826-5112 |
| 4. Project Location: | Portions of Merced, Fresno, Kings, Stanislaus and San Joaquin Counties |
| 5. Project Sponsor's Name and Address: | Henry Miller Reclamation District #2131 |
| 6. General Plan Designation: | Agriculture |
| 7. Zoning: | Exclusive Agriculture |

8. Description of Project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)

The proposed project would allow San Luis Canal Company (SLCC) landowners the flexibility to provide supplemental water supplies to irrigate land they own in certain west side Central Valley Project (CVP) districts and the Grasslands Groundwater Sustainability Agency (GSA) boundary. Lands within the Grasslands GSA but outside the CVP place of use boundary would not be included. For brevity subsequent references in this document to "west side CVP districts" are intended to include Grassland GSA lands within the CVP place of use boundary. The project would be a yearly exchange program that would provide up to a maximum of 5,500 acre-feet per year of irrigation water to SLCC landowners' properties in west side CVP districts through exchanges. The project would be administered by SLCC in a "pilot" fashion to allow for the implementation of sufficient quality control parameters. The exchange term would commence April 1, 2019. In 2019 a maximum of 500 acre-feet would be exchanged. In 2020 the maximum would be 1,000 acre-feet, and in the remaining years the maximum would be 5,500 acre-feet per year.

Groundwater pumped by private landowners within SLCC's boundaries would be discharged into existing Henry Miller Reclamation District (HMRD) #2131 conveyance facilities. Groundwater pumped into the system under the project would be blended at a rate that meets daily flow and water quality objectives.

The private landowners participating in the exchange program would be credited a like amount of CVP water (less the SLCC established loss rate), up to the maximum totals specified above, which could then be distributed to their lands in the following west side CVP districts: Del Puerto Water District, Pacheco Water District, Patterson Irrigation District, Panoche Water District, San Luis Water District, and Westlands Water District; and to Grasslands GSA lands within the CVP place of use boundary. HMRD staff would collect and tabulate monthly meter readings from the private wells to provide an accounting of each participant's pumping and total pumping for the program. The San Luis and Delta Mendota Water Authority (Water Authority) would coordinate with the United States Bureau of Reclamation (USBR) and California Department of Water Resources (DWR) for deliveries to the properties in the CVP districts from the Delta Mendota Canal and San Luis Canal. In exchange for these deliveries to west side CVP districts, the Water Authority would deduct a like amount from SLCC's allocation of CVP water.

Only existing wells would initially be used for the program. New wells are not proposed for the program, but wells drilled by private landowners in SLCC after the program is initiated would be eligible to

participate under the same terms as the existing wells. The wells that would be used to participate in the program are in Merced County, within SLCC or within parcels that adjoin SLCC.

9. Surrounding Land Uses and Setting:

The area where the participating wells are located is exclusively irrigated agricultural. The city of Los Banos, which has a population of approximately 40,000, is located several miles west of the SLCC boundary. The city of Dos Palos, which has a population of approximately 5,500 is located several miles south of the SLCC boundary. The crops grown within SLCC include nuts, alfalfa, cotton, tomatoes, corn, and winter forage crops.

The lands that would receive the exchange water are located in Del Puerto Water District (Merced, Stanislaus, and San Joaquin Counties), Pacheco Water District (Merced and Fresno Counties), Patterson Irrigation District (Stanislaus County), Panoche Water District (Merced and Fresno Counties), San Luis Water District (Merced and Fresno Counties), Westlands Water District (Fresno and Kings Counties), and within the Grasslands GSA boundary (Merced County). These areas are exclusively irrigated agricultural and managed wetlands. Del Puerto Water District is located along Interstate 5 between the small community of Santa Nella (population 1,500) and the city of Tracy (population 83,000). Del Puerto adjoins the west side of Patterson (population 22,000). Patterson Irrigation District adjoins the north, east, and south sides of Patterson. The city of Dos Palos (population 5,500) is located several miles north of the Panoche Water District boundary. The city of Los Banos (population 40,000) is located several miles east of the San Luis Water District boundary. San Luis Water District's boundary adjoins the south side of Santa Nella. Westlands Water District's boundary extends from Kettleman City (population 1,500) to a few miles south of Firebaugh (population 7,500). Westlands adjoins the west side of Mendota (population 11,000) and encompasses the city of Huron (population 7,000). The Grasslands GSA boundary is located south, east, and north of Los Banos. The southern end is a few miles southwest of Dos Palos and the northern end is a few miles south of the small community of Stevenson (population 300).

10. Other public agencies whose approval is required:

The exchange program would involve water exchanges through the Delta Mendota Canal and San Luis Canal, which are USBR facilities. Therefore, USBR must approve the project. USBR is preparing an Environmental Assessment in accordance with the National Environmental Policy Act (NEPA) concurrent to the preparation of this document.

11. Have California Native American tribes traditionally and culturally affiliated with the project area requested consultation pursuant to Public Resources Code section 21080.3.1? If so, is there a plan for consultation that includes, for example, the determination of significance of impacts to tribal cultural resources, procedures regarding confidentiality, etc.?

No Native American tribes are affiliated with the project and none have requested consultation.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

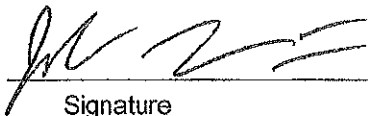
The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages. Where checked below, the topic with a potentially significant impact will be addressed in an environmental impact report.

- | | | |
|--|---|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agriculture and Forest Resources | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Energy |
| <input type="checkbox"/> Geology / Soils | <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards / Hazardous Materials |
| <input type="checkbox"/> Hydrology / Water Quality | <input type="checkbox"/> Land Use / Planning | <input type="checkbox"/> Mineral Resources |
| <input type="checkbox"/> Noise | <input type="checkbox"/> Population / Housing | <input type="checkbox"/> Public Services |
| <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation | <input type="checkbox"/> Tribal Cultural Resources |
| <input type="checkbox"/> Utilities / Service Systems | <input type="checkbox"/> Wildfire | <input type="checkbox"/> Mandatory Findings of Significance |
| | <input type="checkbox"/> None | <input type="checkbox"/> None with Mitigation Incorporated |

DETERMINATION (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- ☐ I find that the proposed project could not have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- ☒ I find that although the proposed project COULD have a significant effect on the environment, there WILL NOT be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- ☐ I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- ☐ I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- ☐ I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.


Signature

MARCH 8, 2019
Date

JOHN WIERSMA
Printed Name

GENERAL MANAGER
Title

HENRY MILLER RECLAMATION DISTRICT #2131
Agency

EVALUATION OF ENVIRONMENTAL IMPACTS

1. A brief explanation is required for all answers except "No Impact" answers that are adequately supported by the information sources a lead agency cites in the parentheses following each question. A "No Impact" answer is adequately supported if the referenced information sources show that the impact simply does not apply to projects like the one involved (e.g., the project falls outside a fault rupture zone). A "No Impact" answer should be explained where it is based on project-specific factors as well as general standards (e.g., the project will not expose sensitive receptors to pollutants, based on a project-specific screening analysis).
2. All answers must take account of the whole action involved, including off-site as well as on-site, cumulative as well as project-level, indirect as well as direct, and construction as well as operational impacts.
3. Once the lead agency has determined that a particular physical impact may occur, then the checklist answers must indicate whether the impact is potentially significant, less than significant with mitigation, or less than significant. "Potentially Significant Impact" is appropriate if there is substantial evidence that an effect may be significant. If there are one or more "Potentially Significant Impact" entries when the determination is made, an EIR is required.
4. "Negative Declaration: Less Than Significant With Mitigation Incorporated" applies where the incorporation of mitigation measures has reduced an effect from "Potentially Significant Impact" to a "Less Than Significant Impact." The lead agency must describe the mitigation measures, and briefly explain how they reduce the effect to a less than significant level (mitigation measures from "Earlier Analyses," as described in (5) below, may be cross-referenced).
5. Earlier analyses may be used where, pursuant to the tiering, program EIR, or other CEQA process, an effect has been adequately analyzed in an earlier EIR or negative declaration. Section 15063(c)(3)(D). In this case, a brief discussion should identify the following:
 - a) Earlier Analysis Used. Identify and state where they are available for review.
 - b) Impacts Adequately Addressed. Identify which effects from the above checklist were within the scope of and adequately analyzed in an earlier document pursuant to applicable legal standards, and state whether such effects were addressed by mitigation measures based on the earlier analysis.
 - c) Mitigation Measures. For effects that are "Less than Significant with Mitigation Measures Incorporated," describe the mitigation measures which were incorporated or refined from the earlier document and the extent to which they address site-specific conditions for the project.
6. Lead agencies are encouraged to incorporate into the checklist references to information sources for potential impacts (e.g., general plans, zoning ordinances). Reference to a previously prepared or outside document should, where appropriate, include a reference to the page or pages where the statement is substantiated.
7. Supporting Information Sources: A source list should be attached, and other sources used or individuals contacted should be cited in the discussion.
8. This is only a suggested form, and lead agencies are free to use different formats; however, lead agencies should normally address the questions from this checklist that are relevant to a project's environmental effects in whatever format is selected.
9. The explanation of each issue should identify:
 - a) the significance criteria or threshold, if any, used to evaluate each question; and
 - b) the mitigation measure identified, if any, to reduce the impact to less than significance.

1.1 AESTHETICS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| I. Aesthetics. | | | | |
| Except as provided in Public Resources Code section 21099 (where aesthetic impacts shall not be considered significant for qualifying residential, mixed-use residential, and employment centers), would the project: | | | | |
| a) Have a substantial adverse effect on a scenic vista? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.1.1 Environmental Setting

1.1.2 Discussion

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

The project would not require any new construction. Therefore, there would be no adverse effect 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?

The project would not require any new construction. Therefore, there would be no damage to scenic resources.

c) In non-urbanized areas, substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from publicly accessible vantage points.) If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?

The project would not require any new construction. Therefore, it would not degrade the existing visual character or quality of public views, or conflict with zoning regulations governing scenic quality.

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

The project would not create a new source of substantial light or glare. Therefore, it would not adversely affect views in the area.

1.2

AGRICULTURE AND FOREST RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|----------------------|--------------------------------------|--|------------------------------------|--------------|
|----------------------|--------------------------------------|--|------------------------------------|--------------|

II. Agriculture and Forest Resources.

In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997, as updated) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland.

In determining whether impacts to forest resources, including timberland, are significant environmental effects, lead agencies may refer to information compiled by the California Department of Forestry and Fire Protection regarding the state's inventory of forest land, including the Forest and Range Assessment Project and the Forest Legacy Assessment project; and forest carbon measurement methodology provided in Forest Protocols adopted by the California Air Resources Board.

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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict with existing zoning for agricultural use or a Williamson Act contract? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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))? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in the loss of forest land or conversion of forest land to non-forest use? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.2.1 Environmental Setting

1.2.2 Discussion

- 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 project would not convert any farmland to non-agricultural use.

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

The project would not conflict with existing zoning or a Williamson Act contract.

- 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))?

The project would not involve forest land or timberland production and therefore would not conflict with existing zoning thereof.

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

The project would not involve loss or conversion of forest land.

- 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?

The project would not involve other changes in the existing environment that could result in conversion of farmland to non-agricultural use. The project should bolster agricultural use of the lands involved by providing greater flexibility to receive supplemental irrigation supplies.

1.3 AIR QUALITY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| III. Air Quality. | | | | |
| Where available, the significance criteria established by the applicable air quality management district or air pollution control district may be relied on to make the following determinations. | | | | |
| Are significance criteria established by the applicable air district available to rely on for significance determinations? | <input type="checkbox"/> Yes | <input checked="" type="checkbox"/> No | | |
| Would the project: | | | | |
| a) Conflict with or obstruct implementation of the applicable air quality plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Expose sensitive receptors to substantial pollutant concentrations? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.3.1 Environmental Setting

1.3.2 Discussion

- a) Conflict with or obstruct implementation of the applicable air quality plan?
The project would not conflict with or obstruct implementation of an air quality plan.
- b) 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?
The project would not require any new construction or generate air pollution otherwise. Therefore, it would not result in a cumulatively considerable net increase of air pollutants.
- c) Expose sensitive receptors to substantial pollutant concentrations?
The project would not expose sensitive receptors to substantial pollutant concentrations.
- d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?
The project would not result in other emissions such as odors.

1.4 BIOLOGICAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| IV. 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 Wildlife or the U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations or by the California Department of Fish and Wildlife or the U.S. Fish and Wildlife Service? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.4.1 Environmental Setting

1.4.2 Discussion

- 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 Wildlife or the U.S. Fish and Wildlife Service?

The project does not require any new construction that could adversely affect wildlife habitat. Lands the project would involve are currently farmed or managed wetlands, so there would be no change in developed or undeveloped land that potentially provides wildlife habitat.

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

The project would not involve or adversely affect riparian habitat.

- c) Have a substantial adverse effect on state or federally protected wetlands (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?

The project would not adversely affect any wetlands.

- 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?

No change in land use is proposed for the project, so there would be no potential to interfere with the movement of resident or migratory fish or wildlife or their corridors, nor would the project impede the use of wildlife nursery sites.

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

The project would not adversely affect biological resources. Therefore, it would not conflict with any local policies or ordinances that protect biological resources.

- 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 project would not adversely affect wildlife habitat. Therefore, it would not conflict with any habitat conservation plans.

1.5 CULTURAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| V. Cultural Resources. | | | | |
| Would the project: | | | | |
| a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Disturb any human remains, including those interred outside of dedicated cemeteries? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.5.1 Environmental Setting

1.5.2 Discussion

- a) Cause a substantial adverse change in the significance of a historical resource pursuant to Section 15064.5?

The project would not involve any changes to historical resources.

- b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to Section 15064.5?

The project would not require new construction or excavations, nor would it involve any changes in land use that could potentially disturb archaeological resources.

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

The project would not require new construction or excavations, nor would it involve any changes in land use that could potentially disturb human remains.

1.6 ENERGY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| VI. Energy. | | | | |
| Would the project: | | | | |
| a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.6.1 Environmental Setting

1.6.2 Discussion

- a) Result in potentially significant environmental impact due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?

The project would not require any new construction that could involve wasteful, inefficient, or unnecessary consumption of energy resources.

Additional energy would be needed to pump groundwater for the exchanges. Some of the additional energy use could be offset by changes in cropping patterns resulting from the project. For instance, land in SLCC might have fewer crop rotations or be fallowed at times in order to exchange the water supplies to lands in west side CVP districts, and this reduction in crop production would result in less energy usage.

The use of wasteful or highly inefficient well pumps would be an economic detriment to the landowners participating in the program. Therefore, the pumps would be expected to have relatively good efficiency. The use of pumps for irrigated agricultural is common and widespread in the region. Their use of energy for this purpose is inherently beneficial. The additional energy that would be needed for the project is de minimis compared to the overall energy needs of farming in the region. As such, the consumption of energy resources for the project would be less than significant.

- b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency

The project would not involve any changes in land use so it would not conflict with planning for renewable energy or energy efficiency.

1.7 GEOLOGY AND SOILS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| VII. Geology and Soils. | | | | |
| Would the project: | | | | |
| a) Directly or indirectly cause 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 California Geological Survey Special Publication 42.) | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Strong seismic ground shaking? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) Seismic-related ground failure, including liquefaction? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Landslides? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Result in substantial soil erosion or the loss of topsoil? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994, as updated), creating substantial direct or indirect risks to life or property? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.7.1 Environmental Setting

1.7.2 Discussion

- a) Directly or indirectly cause 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 California Geological Survey Special Publication 42.)

ii) Strong seismic ground shaking?

iii) Seismic-related ground failure, including liquefaction?

iv) Landslides?

The project would not require any new construction or other activities that could directly or indirectly cause the rupture of an earthquake fault, strong seismic ground shaking, seismic-related ground failure, or landslides.

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

The project would not require new construction or involve activities that could result in soil erosion or loss of topsoil.

- 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?

The project would not involve any lands that are subject to instability, lateral spreading, landslides, liquefaction or collapse. Potential impacts to land subsidence would be mitigated by carefully monitoring hydro-geologic conditions as described in Section 1.10.2b). The depths of the wells that would participate in the program are above the Corcoran Clay geologic formation, which significantly reduces the potential for subsidence due to over pumping of the aquifer. Therefore, potential impacts to land subsidence would be less than significant with mitigation incorporated.

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

The project would not require new construction or any type of structures that would be at risk due to underlying expansive soils.

- 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?

The project would not involve the use of septic tanks or waste disposal systems.

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

The project would not require new construction or involve any excavations that could directly or indirectly destroy paleontological resources or geologic features.

1.8 GREENHOUSE GAS EMISSIONS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|-------------------------------------|-------------------------------------|
| VIII. Greenhouse Gas Emissions. | | | | |
| Would the project: | | | | |
| a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |
| b) Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.8.1 Environmental Setting

1.8.2 Discussion

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

The project would not require any new construction that could generate additional greenhouse gas emissions.

Additional energy would be needed to pump groundwater for the exchanges, although some of the additional energy use could be offset by changes in cropping patterns as described earlier in Section 1.6.2a). Additional energy use could result in additional greenhouse gas emissions either directly from well pumps that are powered using diesel or natural gas engines, or indirectly from power plants used to supply energy for pumps with electric motors. The wells that would initially participate in the program are already in operation and any of these wells that utilize diesel or natural gas engines are subject to current California Air Resources Board (CARB) regulations which serve to minimize greenhouse gas emissions. Growers in the area are continually installing small solar farms on their lands to supplement traditional energy supplies. Therefore, the increased use of solar energy over time will offset some of the additional greenhouse gas emissions generated from the project. The additional energy that would be needed for the project and the resulting increase in greenhouse gas emissions would be de minimis compared to the overall energy and non-energy related emissions from farming in the region. As such, the additional greenhouse gas emissions that could potentially result from the project are less than significant.

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

The project would be consistent with existing conditions and greenhouse gas emissions would be less than significant.

1.9 HAZARDS AND HAZARDOUS MATERIALS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| IX. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and/or accident conditions involving the release of hazardous materials into the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.9.1 Environmental Setting

1.9.2 Discussion

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

The project would be consistent with existing conditions and would not create a significant risk to the public or the environment from the transport, use, or disposal of hazardous materials.

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

The project would not involve any hazardous waste, so there would be no risk to the public from a potential accident or release of hazardous materials in connection with the 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?

The project would not involve any hazardous emissions, or the handling of hazardous materials, substances, or waste. Therefore, it would not pose a risk to existing or proposed schools.

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

The project would not involve any hazardous material sites, so there would be no risk to the public or the environment in connection with the project.

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

The project would not involve any lands located within an airport land use plan, nor within two miles of a public use airport. Therefore, it would not pose a safety hazard or result in excessive noise for people residing in the project area.

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

The project would not involve any facilities that could physically interfere with an emergency response plan or evacuation plan.

- g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?

The project would involve lands that are currently farmed or managed wetlands. The risk of a wildland fire reaching these lands is very low. Therefore, the project would not expose people or structures to any significant risk of loss, injury, or death due to wildland fires.

1.10 HYDROLOGY AND WATER QUALITY

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| X. Hydrology and Water Quality. | | | | |
| Would the project: | | | | |
| a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would: | | | | |
| i) Result in substantial on- or offsite erosion or siltation; | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite; | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iii) 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; or | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| iv) Impede or redirect flood flows? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.10.1 Environmental Setting

1.10.2 Discussion

- a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or groundwater quality?

The project would not violate any water quality standards or involve waste discharge requirements. It would not substantially degrade surface or groundwater quality, but could result in poorer water quality in HMRD's conveyance system. The associated risk posed to crops grown in SLCC would be mitigated by a well water exchange policy to be adopted by SLCC. Under the policy, all wells enrolled in the program would have to be tested for EC, Boron, and Selenium concentrations at the beginning of each year.

Wells that are currently allowed to pump into HMRD facilities must have EC's below 1,500 micro-Siemens per centimeter (uS/cm), Boron concentrations below 2.0 parts per million (ppm), and Selenium concentrations below 0.0 ppm. The well water exchange policy would set limits on these water quality constituents as determined by the SLCC Board, and wells exceeding the limits would not be approved to participate. If SLCC suspects the water quality of a well exceeds the limits at other times during the year, it will require additional testing to assure compliance.

The well water exchange policy would also include disincentives for using wells with water quality near the acceptable limits. SLCC would charge tiered per acre-foot fees for the exchanges based on the water quality of the participating well. For example, wells with EC readings of 0-1,000 uS/cm may be exempt from the fees, while wells with EC readings of 1,000-1,500 uS/cm may be charged a fee of \$5 per acre-foot, subject to Board approved policy. Note, these EC ranges and charges are used to illustrate the idea, and may not be representative of the actual water quality values and charges adopted in the policy.

With the SLCC well water exchange policy that will be adopted, the impacts to surface water quality in HMRD's conveyance system will be less than significant with mitigation incorporated.

b) Substantially decrease groundwater supplies or interfere substantially with groundwater recharge such that the project may impede sustainable groundwater management of the basin?

The project would not interfere with groundwater recharge or impede sustainable groundwater management of the basin.

Landowners in SLCC would pump groundwater in order to exchange a like amount of SLCC's CVP water to the landowners' properties in other west side CVP districts. The pumped groundwater would be in addition to the water already being pumped in SLCC to meet irrigation needs. Increased groundwater pumping could reduce groundwater levels. However, the program would mitigate these impacts by managing pumping in accordance with a groundwater monitoring program that triggers annual limits on pumping when hydro-geologic conditions warrant. The consulting firm of Kenneth D. Schmidt and Associates would compile the monitoring data and conduct an annual analysis to determine the pumping that can be sustained by the aquifer. The monitoring and analysis that would be done are summarized as follows.

- Monthly well readings are available from 22 DWR wells and 4 California Statewide Groundwater Elevation Monitoring (CASGEM) wells located within SLCC. The shallowest levels of the year, which typically occur in January or February, would be compared to the previous year's levels and pumping for each individual well. This determines if the groundwater levels recovered from the prior year's pumping. Short term hydrographs would be prepared from monthly water level and pumping data. Long term hydrographs would be prepared from semi-annual and annual water level and pumping data. Groundwater level contour maps would be prepared for the seasonally shallowest levels. In addition to the DWR and CASGEM well data, static levels in HMRD's production wells and other privately owned production wells in SLCC would be measured at their shallowest levels.
- At locations where there are concerns about neighboring wells being drawn down due to the exchange pumping, aquifer tests would be conducted. In these tests the participating wells would be pumped for a period of 24 to 72 hours and the water levels measured in the neighboring wells of concern. These measurements would be used to determine the transmissivity of the aquifer which, together with the storage coefficient, would be used to estimate the drawdown at various distances from the participating well after longer periods of time such as 100 or 200 days. If the water levels fluctuate significantly the exchange would be permitted, unless the seasonally shallowest static level is below a certain level. This level, which is like the "trigger level" used for the Sustainable Groundwater Management Act (SGMA), would be determined after several years of monitoring records were available.
- The well level and pumping data, hydrographs, and groundwater contour maps would be compiled for the previous calendar year. In March of the subsequent year a hydro-geologic report which summarizes and interprets the data would be submitted to HMRD together with a determination of the exchanges that should be allowed for the coming irrigation season.

No conflicts with SGMA are anticipated. However, any program participation determined to be in conflict with SGMA would be terminated.

With the monitoring plan and analysis described above, the impacts to groundwater levels will be less than significant with mitigation incorporated.

- c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:

- i) Result in substantial on- or offsite erosion or siltation;
- ii) Substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or offsite;
- iii) 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; or

- iv) Impede or redirect flood flows?

The project would not require any new construction or excavations that alter the existing drainage pattern of the lands involved, nor would it alter the course of any stream or river. Therefore, it would not result in any erosion, siltation, or flooding. It would not create or contribute to runoff that exceeds existing drainage systems, nor provide additional sources of polluted runoff. It would not impede or redirect flood flows.

- d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?

The project does not involve any lands located in flood hazard, tsunami, or seiche zones. Therefore, it would not pose any increased risk of pollutants being released due to inundation of the land.

- e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?

The project would not obstruct implementation of any external water quality control plan. The project would include monitoring and control of water quality within HMRD's conveyance system as described above in Section 1.10.2a).

Enrollment in the exchange program would be denied and/or terminated at any time if the exchange pumping creates any detrimental impacts as determined by the San Joaquin River Exchange Contractor's Water Authority Groundwater Sustainability Agencies' Groundwater Sustainability Plan (GSP), now being prepared in accordance with SGMA. Enrollment would also be contingent upon compliance with applicable County ordinances and other jurisdictional agency requirements. Therefore, the project would not conflict with a sustainable groundwater management plan.

1.11 LAND USE AND PLANNING

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| XI. Land Use and Planning. | | | | |
| Would the project: | | | | |
| a) Physically divide an established community? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.11.1 Environmental Setting

1.11.2 Discussion

a) Physically divide an established community?

The project would not involve any changes in existing land use and would therefore not physically divide an established community.

b) Cause a significant environmental impact due to a conflict with any land use plan, policy, or regulation adopted for the purpose of avoiding or mitigating an environmental effect?

The project would not involve any changes in existing land use and would therefore not conflict with any land use plan, policy, or regulation.

1.12 MINERAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| XII. 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.12.1 Environmental Setting

1.12.2 Discussion

- 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 project would not involve mineral resources and therefore would not result in the loss of availability of mineral resources.
- 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?
- The project would not involve mineral resources or mineral resource recovery sites and therefore would not result in the loss of availability of such sites.

1.13 NOISE

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------|--|------------------------------|-------------------------------------|
| XIII. Noise. | | | | |
| Would the project result in: | | | | |
| a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Generation of excessive groundborne vibration or groundborne noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.13.1 Environmental Setting

1.13.2 Discussion

- a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or in other applicable local, state, or federal standards?
- The project would not result in any increase in ambient noise levels. The well pumps that would be involved are already in operation, so there would not be new or additional sources of noise.
- b) Generation of excessive groundborne vibration or groundborne noise levels?
- The project would not require any new construction or equipment that could cause groundborne vibration or noise.
- c) For a project located within the vicinity of a private airstrip or an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?
- The project would not be located within the vicinity of a private airstrip or public airport, exception for crop duster landing strips. The well pumps that would be involved are already in operation and would not expose people residing or working in the project area to excessive noise levels.

1.14 POPULATION AND HOUSING

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| XIV. Population and Housing. | | | | |
| Would the project: | | | | |
| a) Induce substantial unplanned 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)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.14.1 Environmental Setting

1.14.2 Discussion

- a) Induce substantial unplanned 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 project would not involve or induce any direct or indirect population growth.

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

The project would not involve or cause any displacement of people or housing.

1.15 PUBLIC SERVICES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|-------------------------------------|
| XV. Public Services. | | | | |
| Would the project: | | | | |
| a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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: | | | | |
| Fire protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Police protection? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Schools? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Parks? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| Other public facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.15.1 Environmental Setting

1.15.2 Discussion

- a) Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, or the 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:

Fire protection?

Police protection?

Schools?

Parks?

Other public facilities?

The project would not result in any need for additional public services, including fire protection, police protection, schools, or parks, nor would it require any facilities construction for these services.

1.16 RECREATION

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| XVI. Recreation. | | | | |
| Would the project: | | | | |
| a) 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.16.1 Environmental Setting

1.16.2 Discussion

- a) 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?
- The project would not cause any increase in the use of existing neighborhood or regional parks or other recreational facilities.
- b) Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?
- The project would not involve any recreational facilities or the construction or expansion thereof.

1.17 TRANSPORTATION

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| XVII. Transportation. | | | | |
| Would the project: | | | | |
| a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Conflict or be inconsistent with CEQA Guidelines section 15064.3, subdivision (b)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Result in inadequate emergency access? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.17.1 Environmental Setting

1.17.2 Discussion

- a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle, and pedestrian facilities?
The project would not involve or impact any transportation facilities so it would not conflict with programs, plans, or ordinances for such facilities.
- b) Conflict or be inconsistent with CEQA Guidelines section 15064.3(b), which pertains to vehicle miles travelled?
The project would not involve or impact transportation so it would not be in conflict or inconsistent with CEQA guidelines pertaining to vehicle miles travelled.
- c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?
The project would not involve or impact any transportation design features. All the lands involved are currently farmed or managed wetlands so there would not be any new or additional impacts to transportation from these operations.
- d) Result in inadequate emergency access?
The project would not involve anything that could change or otherwise impact emergency access.

1.18 TRIBAL CULTURAL RESOURCES

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--|
| XVIII. Tribal Cultural Resources. | | | | |
| Has a California Native American Tribe requested consultation in accordance with Public Resources Code section 21080.3.1(b)? | <input type="checkbox"/> Yes | | | <input checked="" type="checkbox"/> No |
| Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is: | | | | |
| a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.18.1 Environmental Setting

1.18.2 Discussion

Would the project cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:

- a) Listed or eligible for listing in the California Register of Historical Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k)?
- b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1? In applying the criteria set forth in subdivision (c) of Public Resource Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.

The project would not involve any changes or adverse impacts to tribal cultural resources, including geographically defined sites, features, sacred places, cultural landscapes, or objects with cultural value. The project would not require new construction or excavations, nor would it involve any changes in land use that could potentially disturb or otherwise impact tribal cultural resources.

1.19 UTILITIES AND SERVICE SYSTEMS

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|--|--------------------------------------|--|------------------------------------|-------------------------------------|
| XIX. Utilities and Service Systems. | | | | |
| Would the project: | | | | |
| a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years? | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Result in a determination by the wastewater treatment provider that 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? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.19.1 Environmental Setting

1.19.2 Discussion

- a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or stormwater drainage, electric power, natural gas, or telecommunication facilities, the construction or relocation of which could cause significant environmental effects?

The project would not require any new construction. The groundwater wells that would be involved are already in operation and being supplied with existing energy resources. Therefore, no new construction or expansion of water, wastewater treatment, stormwater drainage, electric power, natural gas, or telecommunications facilities would be necessary to support the project.

- b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry and multiple dry years?

The project would serve to bolster supplemental irrigation water supplies to eligible lands in certain west side CVP districts. The additional groundwater supplies needed for the project would be managed through the mitigation measures described earlier in Section 1.10.2b). It is anticipated that sufficient

water supplies will be available to serve the project during years with normal hydrologic conditions. Following dry or multiple dry years it may be necessary to reduce groundwater pumping for the project to mitigate impacts to groundwater resources.

With the monitoring plan and analysis described in Section 1.10.2b), the impacts to groundwater supplies will be less than significant with mitigation incorporated.

- c) Result in a determination by the wastewater treatment provider that 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?

The project would not involve the generation of wastewater so it would not impact any wastewater treatment providers or the capacity of their facilities.

- d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?

The project would not involve the generation of solid waste so it would not impact the capacity of any waste disposal facilities nor impair the attainment of waste reduction goals.

- e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?

The project would not involve the generation of solid waste. Therefore, compliance with federal, state and local solid waste management and reduction statutes and regulations would not be applicable to the project.

1.20 WILDFIRE

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|------------------------------------|--|
| XX. Wildfire. | | | | |
| Is the project located in or near state responsibility areas or lands classified as high fire hazard severity zones? | | | | |
| If located in or near state responsibility areas or lands classified as very high fire hazard severity zones, would the project: | <input type="checkbox"/> Yes | | | <input checked="" type="checkbox"/> No |
| a) Substantially impair an adopted emergency response plan or emergency evacuation plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |

1.20.1 Environmental Setting

1.20.2 Discussion

- a) Substantially impair an adopted emergency response plan or emergency evacuation plan?
The project is not located near state responsible areas or lands classified as high fire hazard severity zones, nor would it impair an adopted emergency response plan or emergency evacuation plan.
- b) Due to slope, prevailing winds, and other factors, exacerbate wildfire risks, and thereby expose project occupants to pollutant concentrations from a wildfire or the uncontrolled spread of a wildfire?
The project would not exacerbate wildfire risks, therefore it would not impact the exposure of project occupants to pollutant concentrations from a wildfire.

- c) Require the installation of associated infrastructure (such as roads, fuel breaks, emergency water sources, power lines or other utilities) that may exacerbate fire risk or that may result in temporary or ongoing impacts to the environment?

The project would involve lands that are currently farmed or managed wetlands. It would not require any new construction that could exacerbate fire risk or cause related impacts to the environment.

- d) Expose people or structures to significant risks, including downslope or downstream flooding or landslides, as a result of runoff, post-fire slope instability, or drainage changes?

The project would involve lands that are currently farmed or managed wetlands and rarely subject to wild fires. Therefore, the project would not expose people or structures to significant risks from post-fire downstream flooding, slope instability, landslides, or drainage changes.

1.21 MANDATORY FINDINGS OF SIGNIFICANCE

| ENVIRONMENTAL ISSUES | Potentially Significant Impact | Less Than Significant with Mitigation Incorporated | Less Than Significant Impact | No Impact |
|---|--------------------------------------|--|-------------------------------------|-------------------------------------|
| XX. Mandatory Findings of Significance. | | | | |
| a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> |
| b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.) | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly? | <input type="checkbox"/> | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

1.21.1 Environmental Setting

1.21.2 Discussion

- a) Does the project have the potential to substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory?

The project does not require any new construction that could degrade the quality of the environment, including habitat for fish and wildlife species. The project would involve lands that are currently farmed or managed wetlands, so there would be no change in developed or undeveloped land that potentially provides fish or wildlife habitat. The project would not cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of an endangered, rare, or threatened species, or eliminate important examples of the major periods of California history or prehistory.

- b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)

Landowners in SLCC would pump groundwater in order to exchange a like amount of SLCC's CVP water to the landowners' properties in other west side CVP districts. The pumped groundwater would be in addition to the water already being pumped in SLCC to meet irrigation needs. Over pumping of groundwater from below the Corcoran Clay has resulted in cumulatively considerable adverse impacts to groundwater levels and subsidence in regions immediately east of SLCC. Efforts are underway in these regions to reduce pumping from below the Corcoran Clay by modifying existing well casings, replacing existing deep wells with new shallow wells, and importing surface water supplies for irrigation and direct groundwater recharge of the shallow aquifer. Coupled with these efforts by neighboring districts and private growers, the project's annual groundwater monitoring and analysis of sustainable pumping would mitigate the cumulative impacts. Details of this management plan were provided earlier in Section 1.10.2b). Therefore, cumulative impacts to groundwater levels and subsidence will be less than significant with mitigation incorporated.

- c) Does the project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?

The project would not cause substantial adverse effects on human beings. It could have a minor effect on farm labor needs if participating growers change cropping patterns. However, these effects would be less than significant.

Authority for the Environmental Checklist: Public Resources Code Sections 21083, 21083.5.

Reference: Government Code Sections 65088.4.

Public Resources Code Sections 21080, 21083.5, 21095; *Eureka Citizens for Responsible Govt. v. City of Eureka* (2007) 147 Cal.App.4th 357; *Protect the Historic Amador Waterways v. Amador Water Agency* (2004) 116 Cal.App.4th at 1109; *San Franciscans Upholding the Downtown Plan v. City and County of San Francisco* (2002) 102 Cal.App.4th 656.

APPENDIX B

Mitigated Negative Declaration

Prepared in Accordance with the
California Environmental Quality Act (CEQA)
Pursuant to Division 13, Public Resources Code

Project Proponent: Henry Miller Reclamation District #2131
11704 W. Henry Miller Ave.
Dos Palos, CA 93620

Project Title: Well Water Exchange Program

Project Location: The Proposed Project will be located in portions of San Joaquin, Stanislaus, Merced, Fresno, and Kings Counties.

Lead Agency: San Luis Canal Company / Henry Miller Reclamation District #2131

Project Description: The proposed project would allow San Luis Canal Company (SLCC) landowners the flexibility to provide supplemental water supplies to irrigate land they own in certain west side Central Valley Project (CVP) districts and the Grasslands Groundwater Sustainability Agency (GSA) boundary. Lands within the Grasslands GSA but outside the CVP place of use boundary would not be included. For brevity subsequent references in this document to "west side CVP districts" are intended to include Grassland GSA lands within the CVP place of use boundary. The project would be a yearly exchange program that would provide up to a maximum of 5,500 acre-feet per year of irrigation water to SLCC landowners' properties in west side CVP districts through exchanges. The exchange term would commence April 1, 2019. In 2019 a maximum of 500 acre-feet would be exchanged. In 2020 the maximum would be 1,000 acre-feet, and in the remaining years the maximum would be 5,500 acre-feet per year. Groundwater pumped by private landowners within SLCC's boundaries would be discharged into existing Henry Miller Reclamation District (HMRD) #2131 conveyance facilities. The private landowners participating in the exchange program would be credited a like amount of CVP water, up to the maximum totals specified above, for distribution to their lands in the following west side CVP districts: Del Puerto Water District, Pacheco Water District, Patterson Irrigation District, Panoche Water District, San Luis Water District, and Westlands Water District; and to Grasslands GSA lands within the CVP place of use boundary. HMRD staff would administer the program through the San Luis and Delta Mendota Water Authority (Water Authority) which would make the corresponding deliveries from CVP facilities to the SLCC landowners' properties in the CVP districts. In exchange for these deliveries to west side CVP districts, the Water Authority would deduct a like amount from SLCC's allocation of CVP water.

The wells that would be used to participate in the program are located in Merced County, within SLCC or within parcels that adjoin SLCC.

Determination: An Initial Study has been prepared by HMRD. Based on this study, it has been determined that the proposed project would not have a significant effect on the environment for the following reasons:

The proposed project would have no impact or less-than-significant impacts on:

- Aesthetics
- Agriculture and Forest Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Energy
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation
- Tribal Cultural Resources

Potentially significant impacts would be mitigated to less-than-significant levels for:

- Geology and Soils
- Hydrology and Water Quality
- Utilities and Service Systems

Mitigation Measures: The proposed project will employ the following measures to mitigate potentially significant impacts to the environment.

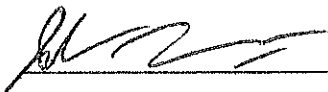
Groundwater Level Monitoring

Monthly, semi-annual, and annual well readings would be collected from Department of Water Resources (DWR), California Statewide Groundwater Elevation Monitoring (CASGEM), HMRD, and private wells in SLCC. The shallowest levels of the year, which typically occur in January or February, would be compared to the previous year's levels and pumping for each individual well to determine if the groundwater levels recovered from the prior year's pumping. Short term hydrographs would be prepared from monthly water level and pumping data. Long term hydrographs would be prepared from semi-annual and annual water level and pumping data. Groundwater level contour maps would be prepared for the seasonally shallowest levels. At locations where there are concerns about neighboring wells being drawn down due to the exchange pumping, aquifer tests would be conducted to determine the transmissivity of the aquifer and estimate the drawdown at various distances from the participating well. If the water levels fluctuate significantly the exchange would be permitted, unless the seasonally shallowest static level was below a certain critical level. The well level and pumping data, hydrographs, and groundwater contour maps would be compiled for the previous calendar year. In March of the subsequent year a hydro-geologic report which summarizes and interprets the data would be submitted to HMRD together with a determination of the exchanges that should be allowed for the coming irrigation season.

Water Quality Monitoring

A well water exchange policy has been adopted to establish water quality limits for the participating wells. All wells enrolled in the program would have to be tested for EC, Boron, and Selenium concentrations at the beginning of each year. Wells with EC's, and Boron and Selenium concentrations above the adopted limits would not be approved to participate. Testing at other times of the year would be required for wells suspected of exceeding the water quality limits. The well water exchange policy may also include tiered per acre-foot surcharges as disincentives for using wells with water quality near the acceptable limits.

Public Review: The public review period for this Mitigated Negative Declaration and Initial Study shall be 30 days, beginning on March 18, 2019 and ending April 17, 2019.



John Wiersma, General Manager
Henry Miller Reclamation District #2131
Lead Agency

MARCH 8, 2019

Date Signed

KENNETH D. SCHMIDT AND ASSOCIATES

APPENDIX C

GROUNDWATER QUALITY CONSULTANTS

600 WEST SHAW, SUITE 250

FRESNO, CALIFORNIA 93704

TELEPHONE (559) 224-4412

January 30, 2019

Mr. John Wiersma
General Manager
San Luis Canal Co.
11704 W. Henry Miller Ave.
Dos Palos, CA 93620

Re: Transfer Projects

Dear John:

I have reviewed the information that you provided on groundwater monitoring. In terms of evaluating possible transfer projects, monthly water-level measurements are needed. I understand that monthly measurements are now available for 22 DWR wells and 4 CASGEM wells. For the time being, these appear to be adequate. We normally evaluate the shallowest water level each year (usually in January or early February) and compare this to the previous years pumpage (well by well). It is important to determine if the water level fully recovered or not from the last years pumping. Short-term water-level and pumpage hydrographs are prepared based on monthly measurements, and long-term water-level and pumpage hydrographs are based on the annual pumpage and semi-annual water-level measurements. Alejandro has recently prepared both types of hydrographs for a number of wells.

It is also useful to prepare detailed water-level maps, based on the seasonal shallowest water levels. We prepared one for February 2017, based mainly on the DWR wells. For the future, it would be useful to also measure the static water levels in the SLCC production wells and private production wells (with annual agreements) during the shallowest water-level period (January or early February).

Another issue in some transfers is the concern of one or more neighbors about drawdowns in their wells due to the proposed transfer pumping. In the CCID, this has occurred both in the Los Banos Creek area southwest of the city and in the Headgate Area (northwest of Mendota). In both cases we conducted aquifer

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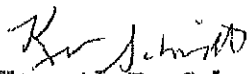
tests, whereby the well or wells proposed for transfer were pumped for a period of about 24 to 72 hours, and water levels measured in the wells of concern. District staff assisted with the measurements. From the aquifer test we determined the transmissivity. This value and the storage coefficient are used to estimate drawdowns at various distances from the pumped well after a longer period of pumping (ie 100 days, 200 days, etc). In areas where the water levels fluctuate significantly, the transfer is possible, except when static levels in January are below a certain depth. We usually determine this after several years of monitoring records are available. This level has been termed the "trigger level", somewhat similar to threshold water levels in the SGMA context.

For the CCID, we prepare annual pumping program reports for each calendar year, normally by about the next March, and this information is used to determine what transfers will be allowed. Included are the water-level and pumpage hydrographs previously discussed and the interpretation, as well as a summary of pumpage in each District well field area (both District and private wells). Groundwater quality is also evaluated.

I hope this discussion makes sense. Overall, the existing groundwater monitoring program is adequate, except for January water level measurements for the SLCC production wells and private wells with agreements. If it is too much of a burden to do all of the wells, we could select several dozen to supplement the DWR and CASGEM well measurements.

Please call me if you have any questions.

Sincerely Yours,


Kenneth D. Schmidt

KDS/ms

