

Addendum #2 to the Initial Study/
Mitigated Negative Declaration for
the Liberty Packing Expansion
Project, Merced County, California
(SCH #2014011039; CUP02-001)

FEBRUARY 2025

PREPARED FOR

Merced County

Community and Economic Development Department

PREPARED BY

SWCA Environmental Consultants

**ADDENDUM #2 TO THE
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
FOR THE
LIBERTY PACKING EXPANSION PROJECT,
MERCED COUNTY, CALIFORNIA
(SCH #2014011039; CUP02-001)**

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CONTENTS

1	Introduction and Summary of Conclusions	1-1
1.1	Introduction	1-1
1.2	Purpose of Addendum	1-1
1.3	Summary of Conclusions	1-1
2	Project Modifications	2-1
2.1	Project Location	2-1
2.2	Summary of Original Approved Project Description	2-4
2.3	Revised Project.....	2-4
2.4	Modifications to Mitigation Measures	2-5
3	Environmental Impacts Analysis	3-1
3.1	Aesthetics	3-1
3.2	Agriculture and Forest Resources	3-2
3.3	Air Quality.....	3-3
3.4	Biological Resources	3-7
3.5	Cultural Resources	3-9
3.6	Energy	3-10
3.7	Geology and Soils	3-12
3.8	Greenhouse Gas Emissions	3-13
3.9	Hazards and Hazardous Materials.....	3-14
3.10	Hydrology and Water Quality	3-15
3.11	Land Use and Planning.....	3-16
3.12	Mineral Resources	3-17
3.13	Noise.....	3-17
3.14	Population and Housing	3-18
3.15	Public Services	3-19
3.16	Recreation.....	3-19
3.17	Transportation	3-20
3.18	Tribal Cultural Resources.....	3-21
3.19	Utilities and Service Systems	3-21
3.20	Wildfire	3-22
4	Conclusion	4-1
5	References	5-1

Appendices

Appendix A. 2014 Initial Study/Mitigated Negative Declaration	
Appendix B. Addendum #1 to the 2014 Initial Study/Mitigated Negative Declaration	
Appendix C. Mitigation Monitoring and Reporting Program	
Appendix D. CalEEMod Results	
Appendix E. IPaC, CNDDDB, and CNPS Species Lists	

Figures

Figure 1. Project Vicinity Map.	2-2
Figure 2. Project Location Map.	Error! Bookmark not defined.
Figure 3. Revised Project Site Plan.....	Error! Bookmark not defined.

Tables

Table 1. Annual Construction Emissions for the Revised Project	Error! Bookmark not defined.
Table 2. Annual Operational Emissions for the Revised Project.....	Error! Bookmark not defined.
Table 3. Annual Energy Demand for the Revised Project	Error! Bookmark not defined.
Table 4. Annual Construction GHG Emissions for the Revised Project	3-13

1 INTRODUCTION AND SUMMARY OF CONCLUSIONS

1.1 INTRODUCTION

In March 2014, the County of Merced (County), as the lead agency under the California Environmental Quality Act (CEQA), adopted an Initial Study/Mitigated Negative Declaration (IS/MND) for the Liberty Packing Expansion Project (2014 IS/MND) (ICF International 2014; State Clearinghouse #2014011039; Appendix A) and approved a Major Modification (MM13-017) to Conditional Use Permit (CUP) (CUP02-001) to allow for the expansion of the Liberty Packing Company tomato processing facility located at 12045 South Ingomar Grade Road (Approved Project). The Approved Project included improvements to the existing Liberty Packing Company tomato processing facility, which, at the time of approval, encompassed approximately 290 acres of an 841-acre parcel, approximately 7 miles northwest of the city of Los Banos. The Approved Project included expansion of the existing 60-acre cooling pond, expansion of the existing 1.25-acre settling pond, expansion of the product filling and packaging building, construction of five small utility sheds and a large pole shed, installation of new production equipment, increase in truck and trailer space, expansion of product storage space, installation of an additional railroad spur with associated loading docks, and septic system improvements.

In January 2024, the County adopted an IS/MND Addendum to the 2014 IS/MND (IS/MND Addendum #1) and approved a CUP (CUP22-014) to allow for additional improvements to the existing tomato processing facility to improve working conditions for employees, provide additional protected areas for equipment and material storage, improve overall operations of the facility, and increase the land application area that receives wash water from the plant for agricultural irrigation reuse purposes (Addendum #1 Approved Project; see Appendix B). IS/MND Addendum #1 concluded that the Addendum #1 Approved Project did not raise any new environmental issues or exceed the levels of impact significance identified in the 2014 IS/MND. For purposes of this analysis, all modifications constructed to date have been included as baseline conditions of the project site.

Liberty Packing Company, LLC (Applicant) is currently requesting a CUP (CUP24-008) to allow for the construction of a new 400,000-square-foot unrefrigerated warehouse within the footprint of the existing tomato processing facility to store finished tomato products. This addendum to the 2014 IS/MND (IS/MND Addendum #2) has been prepared to address the potential environmental impacts associated with the construction of the proposed warehouse (Revised Project).

1.2 PURPOSE OF ADDENDUM

The purpose of this review is to evaluate potential environmental impacts associated with proposed changes to the Approved Project. Pursuant to Section 15162 of the State CEQA Guidelines, when a lead agency has adopted an IS/MND for a project, a subsequent IS/MND does not need to be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

1. Substantial project changes are proposed that will require major revisions of the previous IS/MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous IS/MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

3. New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous IS/MND was adopted shows any of the following:
 - The project will have one or more significant effects not discussed in the previous IS/MND;
 - Significant effects previously examined will be substantially more severe than identified in the previous IS/MND;
 - Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
 - Mitigation measures or alternatives that are considerably different from those analyzed in the previous IS/MND would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Pursuant to Section 15164 of the State CEQA Guidelines, preparation of an Addendum to an IS/MND is appropriate when none of the conditions specified in Section 15162 (above) are present and some minor technical changes to the previously adopted IS/MND are necessary.

1.3 SUMMARY OF CONCLUSIONS

This IS/MND Addendum to the 2014 IS/MND demonstrates that the environmental analysis, impacts, and mitigation requirements identified in the 2014 IS/MND remain substantively unchanged by the project modifications described herein. The analysis provided within this IS/MND Addendum supports the finding that the project does not raise any new issues and does not exceed the levels of impact significance identified in the 2014 IS/MND. Accordingly, preparation of a subsequent IS/MND is not necessary pursuant to State CEQA Guidelines Sections 15162 and 15164. This determination is based on substantial evidence, as set forth in the following discussion of the Revised Project and the environmental impacts associated with the Revised Project.

This IS/MND Addendum is not required to be circulated for public review per State CEQA Guidelines Section 15164(c); however, the IS/MND Addendum is required to be considered by the decision-making body along with the previously certified 2014 IS/MND prior to making a decision on the Revised Project (State CEQA Guidelines Section 15164(d)).

2 PROJECT DESCRIPTION

2.1 PROJECT LOCATION

The project site is located approximately 7 miles northwest of the city of Los Banos in Merced County, California (Figure 1). The project site consists of the Liberty Packing Company tomato processing facility, which is a 290-acre tomato processing facility on an 841-acre parcel (Assessor's Parcel Number [APN] 070-112-038) located at 12045 South Ingomar Grade Road. The project site is surrounded by agricultural land uses in all directions. The Volta State Wildlife Area is located to the northeast of the project site on the eastern side of Ingomar Grade Road.

The Liberty tomato processing facility currently consists of a 30-acre tomato processing plant (approximately 240,000 square feet of buildings, equipment, and parking lots), extensive outside storage areas and warehouses, and wash water treatment facilities. The Liberty tomato processing facility also supports a 60-acre cooling pond, which holds water from the packing plant's evaporation equipment, and a 1.25-acre settling pond, which holds wash water and allows any solids to settle out before it is recycled for use within the plant's operations. The proposed warehouse site consists of an entirely developed, 400,000-square-foot area that is used as an outdoor storage location for packaging materials.



Figure 1. Project Vicinity Map.

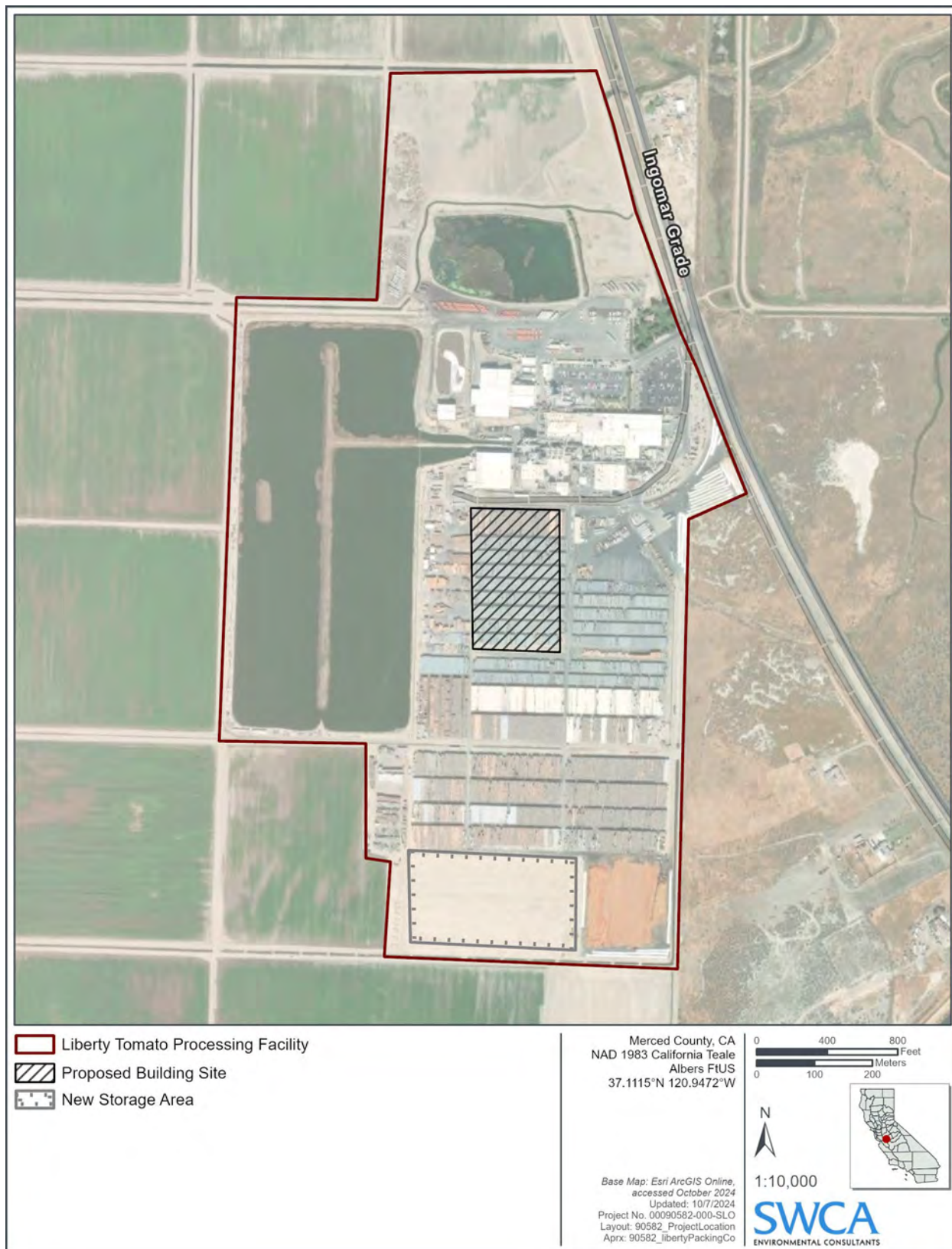


Figure 2. Project Location Map.

2.2 SUMMARY OF 2014 IS/MND APPROVED PROJECT

The Approved Project included a request for a Major Modification (MM13-0017) to CUP02-001 to allow improvements to the existing Liberty tomato processing facility. The following includes a summary of the Approved Project components and their current status:

- **Expansion of the cooling pond.** The Approved Project included the expansion of the existing 60-acre cooling pond to 140 acres in size. The expanded cooling pond encompasses the western portion of the project site. As of the date of this IS/MND Addendum #2, expansion of the cooling pond has not been completed.
- **Expansion of the settling pond.** The Approved Project included the expansion of the existing 1.25-acre settling pond to 2.5 acres in size. The settling pond is located in the central-northern portion of the project site. As of the date of this IS/MND Addendum #2, expansion of the settling pond has not been completed.
- **Expansion of the product filling and packaging building.** The Approved Project included the expansion of the existing product filling and packaging building approximately 75,000 square feet to the west and 1,500 square feet to the south. The product filling and packaging building is located in the central-southern portion of the tomato processing facility. Expansion of the product filling and packaging building has been completed.
- **Construction of five small utility sheds.** The Approved Project included the construction of five small utility sheds of less than 1,000 square feet in size at various locations throughout the tomato expansion facility. Construction of the utility sheds has been completed.
- **Construction of a pole shed.** The Approved Project included the construction of a 65,000-square-foot pole shed to the southeast of the tomato processing facility. The pole shed is intended to provide shelter from sun, heat, and rain for greater worker safety and efficiency. As of the date of this IS/MND Addendum, expansion of the pole shed has not been completed.
- **Installation of new production equipment.** The Approved Project included the installation of new processing equipment that increased the plant's processing capacity by 23%. Installation of this equipment has been completed.
- **Increase in truck and trailer space.** The Approved Project included a 4.7-acre increase in truck and trailer storage space, which would occur on low-quality farmland located to the northwest of the existing tomato processing facility. Construction of the additional truck and trailer space has been completed.
- **Expansion of product storage space.** The Approved Project expanded the existing 43-acre open product storage space to 55 acres. The open product storage space is located in the southern portion of the project site. Expansion of the product storage space has been completed.
- **Railroad spur and loading docks.** The Approved Project included the installation of an additional railroad spur with associated loading docks along the eastern edge of the existing open storage area. As of the date of this IS/MND Addendum #2, installation of this railroad spur has not been completed.
- **Septic system improvements.** The Approved Project included improvements to the existing septic systems to satisfy the Merced County Environmental Health Division's requirements. The Approved Project included a future mounded septic leach mound system replacement area, that would be located north of the existing tomato processing facility. Improvements to the septic system have been completed.

The Approved Project resulted in an increase in fresh tomato processing capacity of approximately 23% through the addition of evaporation equipment and steam capacity. The Approved Project resulted in an

additional 120 tomato truck trips per day associated with receiving and unloading tomatoes, resulting in a total of approximately 620 truck trips per day. The increase in truck traffic was provided for under a Roadway Impact Agreement with the County, which requires increased fees for any road impacts commensurate to the volume of truck traffic. The Approved Project did not result in an increase of the number of employees per shift. Additionally, the Approved Project resulted in little to no increase in the volume of wastewater generated as a result of wash water that is applied to Liberty's farm fields. For the purposes of this analysis, it is assumed that components of the Approved Project that have not been completed at this time are no longer proposed or have been modified and are included in the Addendum #1 Approved Project, as described below.

2.3 SUMMARY OF ADDENDUM #1 APPROVED PROJECT

The Approved Project included a request for a CUP (CUP22-014) by Liberty Packing Company, LLC to allow for improvements to the existing Liberty tomato processing facility and increase the wash water application area for the facility to include an additional 662 acres of surrounding agricultural lands.

The proposed facility improvements included construction and use of a 60,000-square-foot packaging and material storage building (Building A), a 25,000-square-foot packaging and equipment storage building with potential to expand by an additional 15,000 square feet in the future (total of 40,000 square feet in total) (Building B), a 5,000-square-foot dry pomace¹ loading station and canopy over an existing rail spur (Building C), and 120,000 square feet of combined canopy covers over existing loading docks and staging areas on-site (Structures D and E) (Approved Project). In addition, the Approved Project expanded the existing wash water land application area to include 662 acres of agricultural land located to the north of the facility through existing irrigation ditches and new pipelines located along an existing fence line to the west on Ingomar Grade Road.

The purpose of the Approved Project was to improve working conditions for employees, provide additional protected areas for equipment and material storage, improve overall operations of the facility, and increase the land application area that receives wash water for agricultural irrigation reuse purposes. Use of new equipment is anticipated to result in increased packaging efficiency by automating certain tasks that are currently completed by hand by employees. While overall processing capacity was not expected to change, this efficiency is anticipated to result in an overall reduction of current employee vehicle trips by 50 average daily trips (ADT).

Construction of Approved Project began with Building B in 2023, and the rest of the components are anticipated to be constructed over the next 5 years (2024–2029). For purposes of this analysis, any approved modifications constructed to date have been identified as baseline conditions at the project site. To date, the following components have been constructed or are currently under construction:

- 20,000-square-foot Packaging and Equipment Storage Building (referred to as Building B)
- 1,000-square-foot equipment storage adjutant to the Packaging and Equipment Storage Building (Building B)

2.4 REVISED PROJECT DESCRIPTION

The Revised Project includes a request for a CUP (CUP24-008) by Liberty Packing Company, LLC to allow for the construction of a new 400,000-square-foot warehouse within the footprint of the existing

¹ Pomace is the leftover residue after juice has been squeezed from fruit.

Liberty Packing Company tomato processing facility to store finished tomato products. Under current operations, finished tomato products are shipped to off-site warehouse facilities located in Modesto, California, resulting in approximately 700 truck trips per year. The purpose of the Revised Project is to establish an indoor, on-site location to store finished tomato products and eliminate the need to transport and store finished tomato products at an off-site facility prior to distribution to retailers.

The proposed warehouse would have approximate dimensions of 500 feet by 800 feet (total of 400,000 square feet in size) and would have a maximum height of 25 feet. The proposed warehouse would be equipped with a new loading dock for rail cars on the northern side of the proposed building adjacent to the existing rail spur on site. Pallets of packaged tomato products would be moved manually from the warehouse to the existing truck loading dock located approximately 400 feet east of the proposed warehouse. The warehouse would be connected to the main electrical distribution panel and the existing storm water system within the Liberty tomato processing facility. The warehouse would not be connected to any water lines. No new sources of outdoor lighting would be installed.

The project would result in approximately 11 acres of ground disturbance with a maximum depth of excavation of approximately 2.5 feet. Construction is anticipated to occur over a period of 9 months beginning in October 2025 and ending in June 2026. Construction activities would occur between 8:00 a.m. and 6:00 p.m. Monday through Friday, unless otherwise authorized by the County. During peak construction activities, it is anticipated that up to 12 construction workers would be on-site and no more than 120 total truck trips to transport material and equipment would occur throughout the construction period. All areas of temporary ground disturbance would be restored and stabilized following the completion of construction activities.

The Revised Project would not result in an increase of the facility's existing tomato processing capacity or the number of employees working on-site during operation, and no change to operation hours would occur as a result of the Revised Project. The Revised Project is anticipated to result in a reduction of roughly 12 to 18 truck trips per day during the regular packing and shipping season, which typically occurs from July through early November, for a total estimated reduction of approximately 700 truck trips per year as a result of establishing an on-site warehouse facility to store finished tomato projects, ultimately eliminating the need to transport finished products to off-site locations prior to distribution to retailers.

2.5 MODIFICATIONS TO MITIGATION MEASURES

Modifications to mitigation measures identified in the 2014 IS/MND are included in Section 3, Environmental Impacts Analysis, and are proposed for the following reasons:

- To clarify the intent and applicability of the mitigation measure relative to the Revised Project and identified impact.
- To update language that may be outdated due to changes in regulations or agency-adopted mitigation measures and standards.

All modifications to previously adopted mitigation measures are shown in ~~striketrough~~ for deleted text and underlined for new text. The revised Mitigation Monitoring and Reporting Program is included in Appendix C.

3 ENVIRONMENTAL IMPACTS ANALYSIS

The 2014 IS/MND evaluated the following environmental issue areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

These issues, and all other issues areas required to be evaluated under CEQA, including, but not limited to, Energy, Tribal Cultural Resources, and Wildfire, have been evaluated in this IS/MND Addendum for the Revised Project. This evaluation determines whether the Revised Project would result in any new significant impacts or substantially more severe impacts than those identified in the 2014 IS/MND for the Approved Project. Any future development outside of the scope of this IS/MND Addendum would need to be evaluated for consistency with the 2014 IS/MND and, at that point, a CEQA determination, separate from this IS/MND Addendum, would be made.

3.1 AESTHETICS

3.1.1 Evaluation

Section 2.3, *Aesthetics*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to aesthetic resources. According to the 2014 IS/MND, the project site is not located in or near a designated scenic vista, does not provide views of designated scenic vistas, and is not located within the viewshed of a designated or eligible state scenic highway. It was determined that the Approved Project would not alter the existing visual character of the surrounding area because it is entirely located in the immediate vicinity of the existing tomato processing facility and would not result in the conversion of adjacent agricultural lands or rural residential areas to industrial uses. The 2014 IS/MND also stated that project construction activities would be limited to daytime hours (between 7:00 a.m. and 6:00 p.m.) and therefore would not create a new source of substantial lighting that would affect nighttime views in the area. Further, it was determined that based on required compliance with the County's Lighting Code (Merced County Code Section 18.41.060), which requires the use of directional lighting and minimization of glare and reflections, the Approved Project would not introduce substantial light or glare that would adversely affect daytime or nighttime views in the project area. Therefore, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to aesthetic resources and no mitigation measures were necessary.

Consistent with the Approved Project, the new warehouse facility proposed by the Revised Project would be entirely located within the footprint of the existing tomato processing facility and would not be located within the viewshed of a scenic vista or a designated or eligible state scenic highway or result in any significant changes to the existing visual character of the site or surrounding area. The new building

would be constructed entirely within a previously disturbed area within the project site, currently used for materials storage. The visual character of the warehouse building would be consistent with the existing industrial components of the tomato processing facility and would not alter the existing visual character of the project area. Materials currently stored within the proposed footprint of the warehouse would be relocated to the southern storage site within the project site, an existing developed area, and the relocation of these materials would be visually consistent with the adjacent industrial storage areas on-site. The Revised Project construction activities would be limited to daytime hours (between 7:00 a.m. and 6:00 p.m.) and would not create a new source of substantial lighting that would affect nighttime views in the area. The Revised Project would continue to be subject to the County's Lighting Code (Merced County Code Section 18.41.060), to minimize impacts related to lighting and glare. Therefore, the Revised Project would not create new or more severe impacts to aesthetic resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.1.2 Conclusion

Potential impacts associated with aesthetics would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe visual impacts than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.2 AGRICULTURE AND FOREST RESOURCES

3.2.1 Evaluation

Section 2.4, *Agricultural Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to agricultural resources. As identified in the 2014 IS/MND, the project site is not located on property subject to a Williamson Act contract, nor is it located within the Merced County Agricultural Preserve. Further, there are no areas designated for forest or timber land within the county; therefore, it was concluded that the Approved Project would not result in impacts related to those resources. According to the 2014 IS/MND, the project site is located on land designated as Grazing Land (the trailer storage yard), Farmland of Statewide Importance (a portion of the cooling pond), and Unique Farmland (a portion of the cooling pond and the outdoor warehouse expansion) by the Farmland Mapping and Monitoring Program (FMMP). It was determined that the Approved Project would be limited to the footprint of the existing tomato processing facility and would not result in expansion onto adjacent farmlands, nor would it result in the loss of crop production for Merced County. Additionally, it was determined that the tomato processing facility and related facilities are allowed under the General Agricultural (A-1) zoning designation pursuant to the existing CUP (CUP 02-001). Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than significant impacts related to agriculture and forest resources.

Consistent with the Approved Project, the new warehouse facility proposed by the Revised Project would be entirely located within the footprint of the existing tomato processing facility. The Revised Project would not result in any substantive changes to the proposed additional land application area's agricultural resources because the new building would be constructed entirely within a previously disturbed area within the project site, currently used for materials storage, and would not interfere with existing or future agricultural use. Materials currently stored within the proposed footprint of the warehouse would be relocated to the southern storage site within the project site, an existing developed area within the packing plant facility. Therefore, the Revised Project would result in similar impacts related to agricultural resources as the Approved Project. Consistent with the Approved Project, the Revised Project would not be subject to a Williamson Act Contract and would be consistent with the allowable uses under the A-1 zoning designation. The Revised Project would not expand active operations onto adjacent farmlands or

otherwise reduce the availability of cropland within the region. The Revised Project would not interfere with forest or timber land or land use designations for those uses. Therefore, the Revised Project would not create new or more severe impacts to agriculture and forest resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.2.2 Conclusion

The Revised Project's potential impacts to agriculture and forestry resources would be less than significant. Therefore, the revised would not result in any new or more severe impacts associated with agriculture or forest resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.3 AIR QUALITY

3.3.1 Evaluation

Section 2.5, *Air Quality*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to air quality. The 2014 IS/MND determined that the Approved Project would not conflict with relevant San Joaquin Valley Air Pollution Control District (SJVAPCD) air quality plans, including the SJVAPCD Clean Air Plan (CAP) (SJVAPCD 2018), because the Approved Project would not increase employment or otherwise increase population growth within the region and would increase the efficiency of existing equipment and reduce the intensity of on-site water and energy consumption. Further, it was determined that the Approved Project would not result in emissions of adverse odors. However, the 2014 IS/MND determined that the Approved Project would have the potential to increase fugitive dust emissions and expose sensitive receptors to fugitive dust emissions during proposed construction activities. Mitigation Measure AQ-1 was identified in Section 2.3, *Air Quality*, of the 2014 IS/MND to reduce fugitive dust emissions through implementation of a dust control plan. Therefore, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to air quality with mitigation.

The Revised Project includes the construction of a 400,000-sf facility to store finished tomato products on-site, reducing the need to transport finished products to off-site locations. Consistent with the Approved Project, the Revised Project would not increase employment or otherwise increase population growth within the region and would increase the efficiency of existing facility equipment, which would be consistent with the SJVAPCD CAP. Any odors generated by construction activities would be intermittent and temporary and would dissipate considerably before leaving the boundaries of the project site; therefore, the Revised Project would not result in emissions of objectionable odors affecting a substantial number of people.

Estimated construction and operational air pollutant emissions were calculated for the Revised Project by using the California Emissions Estimator Model (CalEEMod) (Tables 1 and 2; Appendix D). In addition, as not all facilities proposed under Addendum #1 are built, Tables 1 and 2 also include construction and operational emissions estimates for facilities associated with the Addendum #1 Approved Project. This provides a cumulative, reasonable worst-case scenario evaluation if the proposed warehouse facility were to be constructed within the same year as construction of remaining facilities of the Addendum #1 Approved Project.

Table 1. Annual Construction Emissions for the Revised Project and Addendum #1 Approved Project

Source	Criteria Pollutant (TPY)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
New Warehouse Building	1.0	0.69	0.83	<0.005	0.09	0.05
Addendum #1 Approved Project	1.5	1.62	1.59	0.58	0.7	1.81
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Exceed threshold?	No	No	No	No	No	No

Source: SWCA (2024)

Note: TPY = tons per year; ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 10 microns in diameter

Based on estimated construction air emissions that were calculated for the Revised Project, construction of the new warehouse building associated with the Revised Project would not result in any exceedances of SJVAPCD thresholds for criteria air pollutants (SWCA 2024; SJVAPCD 2015). Construction activities would be limited in scale, short-term, and temporary and would not result in a substantial increase in air pollutant emissions in a manner that could exceed SJVAPCD thresholds for criteria air pollutants. The SJVAPCD requires all construction activities to comply with fugitive dust control requirements under Regulation VIII; therefore, the Revised Project would continue to be required to implement Mitigation Measure AQ-1 as identified in Section 2.3, *Air Quality*, of the 2014 IS/MND to reduce fugitive dust emissions during construction activities.

During operation, the project would result in air quality emissions associated with operation and use of the proposed warehouse facility. As shown in Table 2, the Revised Project would not result in any exceedances of SJVAPCD operational thresholds for criteria air pollutants when considered cumulatively with air quality emissions resulting from the Addendum #1 Approved Project.

Table 2. Cumulative Annual Operational Emissions for the Revised Project and Addendum #1

Source	Criteria Pollutant (TPY)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
New Warehouse Building	2.41	0.84	5.33	0.01	0.78	0.21
Addendum #1 Approved Project	1.02	0.07	0.94	<0.005	<0.005	<0.005
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
Exceed threshold?	No	No	No	No	No	No

Source: SWCA (2024)

Note: TPY = tons per year; ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 10 microns in diameter

The Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees or daily truck trips in a manner that could substantially increase operational air emissions. The Revised Project would result in a reduction of 12 to 18 truck trips per day as a result of establishing an on-site warehouse facility to store finished tomato projects, ultimately eliminating the need to transport finished products to off-site locations. This reduction in truck trips would ultimately reduce operational air emissions associated with vehicle trips to and from the site. Operational maintenance activities associated with the warehouse

facility would be consistent with current maintenance activities on the existing land application area on the and no additional employees would be necessary. The Revised Project does not include the construction of new or extended dirt roads or other components that could increase long-term fugitive dust emissions.

Based on the analysis provided above, with implementation of Mitigation Measure AQ-1 (as identified and updated to meet current SJVAPCD standards below), the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

Mitigation Measure AQ-1: Prepare and implement a Dust Control Plan to comply with SJVAPCD Regulation VIII requirements to control construction emissions of PM10.

At the time of application for building permits, to ~~to~~ control the generation of construction-related PM10 emissions, the primary construction contractors shall will prepare and submit for approval a dust control plan to the San Joaquin Valley Air Control District (SJVAPCD) and submit evidence of plan approval to the County of Merced Community Development Department. No person shall perform any construction, demolition, excavation, extraction, or other earth-moving activities unless measures are sufficiently implemented to limit visible dust emissions (VDE) to 20% opacity and comply with the conditions for a stabilized surface area when applicable, at least 30 days prior to any earthmoving or construction activities. The dust control plan shall include measures, including, but not limited to: ~~Potential measures that might be included in the dust control plan could include, but are not limited to:~~

- a. *Pre-activity.*
 1. *Pre-water the work site sufficient to limit VDE to 20 percent opacity, and*
 2. *Phase work to reduce the amount of disturbed surface area at any one time.*
- b. *During Active operations.*
 1. *Apply water or chemical/organic stabilizers/suppressants to dry areas during leveling, grading, trenching, and earthmoving activities to limit VDE to 20% opacity.*
 2. *Construct and maintain wind barriers to limit VDE to 20% opacity. If utilizing wind barriers, control measure a.1 above shall also be implemented; and*
 3. *Apply water or chemical/organic stabilizers/dust suppressants to the unpaved ~~disturbed surface areas~~ vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.*
- c. *Inactive operations, including after work hours, weekends, and holidays.*
 1. *Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.*
- d. *Temporary stabilization of areas that remain unused for seven or more days.*
 1. *Restrict vehicular access to the area;*
 2. *Apply ~~and maintain~~ water or chemical/organic stabilizers/dust suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for 7 or more days, the area must comply with the conditions for a stabilized surface area as defined in Section 3.58 of Rule 8011. ~~on all unvegetated areas.~~*
 3. *~~Establish vegetation on all previously disturbed areas.~~*
 4. *~~Apply and maintain gravel at all previously disturbed areas.~~*
 5. *~~Pave previously disturbed areas.~~*

- ~~e. Unpaved Access and haul roads, traffic and equipment storage areas.~~
 - ~~1. Apply water or dust suppressants to unpaved haul and access roads.~~
 - ~~2. Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.~~
 - ~~3. Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.~~
- f. Wind events.
 - 1. Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.
 - 2. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- g. Outdoor handling of bulk materials.
 - 1. Water or dust suppressants will be applied when handling bulk materials.
 - 2. Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
- h. Outdoor storage of bulk materials.
 - 1. Water or dust suppressants will be applied to storage piles.
 - 2. Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - 3. Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - 4. A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.
- i. On-site transporting of bulk materials.
 - 1. Vehicle speed will be limited on the work site.
 - 2. All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.
 - 3. A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - 4. Haul trucks will be covered with a tarp or other suitable cover.
- j. Off-site transporting of bulk materials.
 - 1. The following practices will be performed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- k. Outdoor transport using a chute or conveyor.
 - 1. No open chutes or conveyors will be used.
 - 2. Chutes or conveyors will be fully enclosed.
 - 3. Water spray equipment will be used to sufficiently wet the materials.
 - 4. Transported materials will be washed or screened to remove fines (PM10 or smaller).

3.3.2 Conclusion

With implementation of Mitigation Measure AQ-1, as revised to be consistent with current SJVAPCD requirements, the Revised Project's potential impacts associated with air quality would be reduced to less-than-significant levels. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no additional mitigation is required.

3.4 BIOLOGICAL RESOURCES

3.4.1 Evaluation

Section 2.6, *Biological Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to biological resources. The 2014 IS/MND did not identify any potential adverse impacts to special-status plant species. However, the 2014 IS/MND determined that the Approved Project would have the potential to disturb the following special-status animal species:

- American badger (*Taxidea taxus*)
- burrowing owl (*Athene cunicularia*)
- cackling goose (*Branta hutchinsii leucopareia*)
- giant garter snake (*Thamnophis gigas*)
- northern harrier (*Circus cyaneus*)
- San Joaquin kit fox (*Vulpes vulpes macrotis*)
- Swainson's hawk (*Buteo swainsoni*)
- tricolored blackbird (*Agelaius tricolor*)
- western pond turtle (*Actinemys marmorata*)
- white-tailed kite (*Elanus leucurus*)
- yellow-headed blackbird (*Xanthocephalus xanthocephalus*)

The Approved Project included removal of approximately 96 acres of cultivated lands for the expansion of the cooling pond, the open product storage area, and trailer storage yard. These cultivated lands were determined to support potentially suitable habitat for the above-listed special-status species. Mitigation Measures BIO-1 through BIO-8 were identified in Section 2.6, *Biological Resources*, of the 2014 IS/MND to avoid and/or minimize the Approved Project's potential impacts on special-status animal species. The Approved Project was determined that no special-status plant species, riparian habitat, or other sensitive natural communities had the potential to occur within the project site. Further, the 2014 IS/MND determined that the Approved Project would avoid wetland, marsh, and jurisdictional habitat located to the north of the processing facility; would not interfere with the movement of any fish species, native resident, or migratory wildlife bird species; and would not conflict with local plans or ordinances or a habitat conservation plan (HCP). With the implementation of Mitigation Measures BIO-1 through BIO-8, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to biological resources.

Based on an updated nine-quadrant query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDB) (CDFW 2024), the following special-status wildlife species have been previously recorded within the project region:

- blunt-nosed leopard lizard (*Gambelia sila*)
- California red-legged frog (*Rana draytonii*)
- California tiger salamander – central California Distinct Population Segment (DPS) (*Ambystoma californiense* pop. 1)
- Conservancy fairy shrimp (*Branchinecta conservation*)
- foothill yellow-legged frog – central coast DPS (*Rana boylei* pop. 4)
- giant garter snake (*Thamnophis gigas*)
- giant kangaroo rat (*Dipodomys ingens*)
- longhorn fairy shrimp (*Branchinecta longiantenna*)
- Nelson’s antelope squirrel (*Ammospermophilus nelson*)
- northwestern pond turtle (*Actinemys marmorata*)
- San Joaquin kit fox (*Vulpes vulpes macrotis*)
- steelhead – Central Valley DPS (*Oncorhynchus mykiss irideus* pop. 11)
- Swainson's hawk (*Buteo swainsoni*)
- tricolored blackbird (*Agelaius tricolor*)
- valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)
- vernal pool tadpole shrimp (*Lepidurus packardii*)

An updated resource list was obtained from the USFWS Information for Planning and Consultation (IPaC) system (USFWS 2024) that includes federally threatened and endangered species known to occur within the vicinity of the Revised Project. Additionally, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2024) was reviewed to provide additional information on rare plants that are known to occur in the area. The IPaC resource list, results of the CNDDB query, and CNPS inventory search results are included in Appendix E.

The Revised Project includes the construction of a 400,000-square-foot warehouse within the footprint of the existing Liberty tomato processing facility to store finished tomato products. Construction activities for the Revised Project would occur entirely within previously disturbed areas and would not disturb cultivated areas, riparian habitat, or other sensitive natural communities. The new warehouse building would not interfere with the movement of migratory or native species. There are no trees, cattails, or other vegetation in proximity to proposed work areas that would provide potential nesting habitat for special-status species birds or other bird species protected under the Migratory Bird Treaty Act (MBTA). The Revised Project would not require tree removal, nor would it conflict with an adopted HCP.

The project site consists of a tomato processing facility that experiences frequent pedestrian and vehicle disturbance; therefore, the site does not support suitable habitat for special-status animal species. The only special-status animal species not evaluated in the 2014 IS/MND is the longhorn fairy shrimp; however, the project would avoid wetland, marsh, and jurisdictional habitat located to the north of the tomato processing facility that could provide habitat for this species. Therefore, the Revised Project would not result in any potentially significant impacts to sensitive biological resources, and no mitigation is

necessary. Therefore, the Revised Project would not create new or more severe impacts to biological resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.4.2 Conclusion

The Revised Project would not result in any potentially significant impacts related to biological resources, and no mitigation is necessary. Therefore, the Revised Project would not result in any new or more severe impacts related to biological resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.5 CULTURAL RESOURCES

3.5.1 Evaluation

Section 2.7, *Cultural Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to historical, archaeological, and paleontological resources. The 2014 IS/MND determined that the Approved Project would not result in any impacts to historical resources because there are no historic buildings or structures within the project area. Further, it was determined that the Approved Project would not result in an adverse change to the significance of any archaeological, paleontological, or human resources through implementation of Mitigation Measures CUL-1 through CUL-3 as identified in Section 2.7, *Cultural Resources* of the 2014 IS/MND. Therefore, with implementation of Mitigation Measures CUL-1 through CUL-3, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to cultural resources.

The Revised Project does not include the removal or modification of any existing buildings or structures on-site and would not have the potential to result in the adverse change in significance of a listed or eligible historical resource. Based on a records search of the California Historical Resources Information System (CHRIS) conducted at the Central California Information Center (CCIC), located at California State University, Stanislaus, on January 23, 2023, one previous study has been conducted within the project area and no cultural resources have been previously documented within the project area.

The Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility. In the event that previously unidentified cultural resources are uncovered during proposed ground-disturbing activities, Mitigation Measures CUL-1 and CUL-3, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would reduce potential impacts to less than significant. Therefore, the Revised Project would not result in any new or more severe impacts related to cultural resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required. An evaluation of the Revised Project's potential to result in impacts associated with paleontological resources is provided in Section 3.7, *Geology and Soils*.

Mitigation Measure CUL-1: Stop work if buried cultural deposits are encountered during construction activities. *If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.*

Mitigation Measure CUL-3: Stop work if human remains are encountered during construction activities. *If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).*

- *If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed.*
- *If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per Public Resources Code (PRC) 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement.*

If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PRC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S Code sec. 7050.5, 7052.

3.5.2 Conclusion

Upon implementation of Mitigation Measures CUL-1 and CUL-3 as identified above, the Revised Project's potential impacts associated with cultural resources would be reduced to less than significant. Therefore, the Revised Project would not result in any new or more severe impacts related to cultural resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.6 ENERGY

3.6.1 Evaluation

At the time the 2014 IS/MND was prepared and certified, CEQA did not yet require the evaluation of a proposed project's impacts associated with consumption of energy resources. A 2016 court case, *Ukiah Citizens for Safety First v. City of Ukiah* (248 Cal.App.4th 256), first confirmed that environmental documents must include an energy analysis. In 2019, Energy was added to the State CEQA Guidelines Appendix G, Environmental Checklist Form, as a standalone section.

According to CalEEMod calculations conducted for the Revised Project (see Appendix D), during construction of the Revised Project, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. The energy consumed during construction would be temporary in nature and typical of other similar construction activities in the county. Federal and state regulations in place require the use of fuel-efficient equipment and vehicles and require wasteful activities, such as diesel idling, to be

limited. Construction contractors, in an effort to ensure cost efficiency, would not be expected to engage in wasteful or unnecessary energy and fuel practices. Further, although not required to reduce impacts related to energy consumption, Mitigation Measure GHG-1, included in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND, would further reduce the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities by requiring the use of alternative fuel for construction equipment. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy consumption during construction, and no mitigation measures would be required.

During operation, the Revised Project would include use of a 400,000-square-foot unrefrigerated warehouse to store finished tomato products. Use and operation of the warehouse would result in operational energy use associated with electricity used for lighting and other building equipment. The Revised Project would not increase the packing facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees or daily vehicle trips in a manner that could increase energy consumption through fuel use. Table 3 shows the Revised Project's estimated annual operational energy demand that was calculated using CalEEMod (see Appendix D).

Table 3. Annual Energy Demand for the Revised Project

Source	Electricity Consumption (kWh/year) ¹	Natural Gas Consumption (kBTU/year) ²
New Warehouse Building	4,295,926	2,133,660

Source: SWCA (2024)

¹ kWh/year = kilowatt hours per year ² kBTU/year = one thousand British thermal unit per year

³ MMBTU/year = one million British thermal unit per year

As shown in Table 3, the Revised Project would result in an increase in operational energy consumption. However, new buildings would be required to be constructed in compliance with Title 24 of the California Energy Code and California Building Code (CBC) 2022 Building Energy Efficiency Standards to further reduce operational energy use through implementation of green building and energy-efficient building design. Further, the Revised Project would result in a reduction of 12 to 18 truck trips per day during the shipping season as a result of establishing an on-site warehouse facility to store finished tomato projects in lieu of transporting finished products to offsite warehouse facilities prior to distribution. This reduction in truck trips would ultimately reduce the operational consumption of non-renewable energy resources. Therefore, the Revised Project would not result in wasteful, inefficient, or unnecessary energy consumption during use of the project, and no mitigation measures would be required.

The 2030 Merced County General Plan Natural Resources Element identifies goals and policies to increase energy conservation and efficiency in the county. Based on required compliance with diesel-idling restrictions, CBC building regulations, and SJVAPCD BPS, as well as an overall reduction in operational vehicle trips to and from the project site, the Revised Project would not conflict with a state or local plan for renewable energy, including the Natural Resources Element. Therefore, the Revised Project would not result in any new or more severe impacts related to cultural resources than were previously analyzed in the 2014 IS/MND, and no mitigation measures would be necessary.

3.6.2 Conclusion

Based on required compliance with existing regulations and reduction of overall employee vehicle trips during use of the facility, the Revised Project would result in less-than-significant impacts related to

consumption of energy resources. Therefore, no new or more severe impacts related to energy consumption would occur, and no additional mitigation is necessary.

3.7 GEOLOGY AND SOILS

3.7.1 Evaluation

Section 2.8, *Geology and Soils*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to geology and soil resources. As stated in the 2014 IS/MND, according to the 2030 Merced County General Plan, the project site is not located within a mapped fault zone or located in close proximity to an active fault. Further, the project site is not located in an area at risk for liquefaction, landslide, lateral spreading, subsidence, or soil expansion. However, it was determined that the project site is located in a seismically active region and would and could be subject to seismic ground shaking. Mitigation Measure GEO-1 has been identified in Section 2.8, *Geology and Soils*, of the 2014 IS/MND, which requires the project to be constructed in accordance with the most recent CBC and project-specific building techniques to withstand the effects of seismic ground shaking. Further, it was concluded that the Approved Project would be required to comply with County building standards to minimize the susceptibility of soils to septic failure and with Central Valley Regional Water Quality Control Board (RWQCB) requirements for preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) with best management practices (BMPs) to address erosion control at the project site. As discussed in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, the Approved Project would not result in an adverse change to the significance of any paleontological resources through implementation of Mitigation Measures CUL-1 through CUL-3 as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND and Section 3.5, *Cultural Resources*, of this IS/MND Addendum. Based on required compliance with County building standards and implementation of Mitigation Measures GEO-1 and CUL-1 through CUL-3, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to geology and soils.

The Revised Project would be located within the footprint of the existing tomato processing facility; therefore, the Revised Project would not be at risk for liquefaction, landslide, lateral spreading, subsidence, or soil expansion. Similarly, the Revised Project would result in similar risk associated with seismic ground shaking. Proposed buildings and structures associated with the Revised Project would be required to comply with current CBC and County building standards to minimize risk associated with seismic hazards and the susceptibility of soils to septic failure. The Revised Project would also be subject to Central Valley RWQCB requirements for preparation and implementation of a SWPPP with BMPs to address erosion control at the project site. The Revised Project would also be required to comply with the County's Stormwater Ordinance (Merced County Code Section 9.53.010), which requires implementation of BMPs during project construction, preparation of an Erosion Control Plan (ECP), and implementation of post-construction stormwater control measures.

According to the U.S. Geological Survey (USGS), the project site is underlain by alluvial gravel, sand, and clay sediments (Qa) from the Holocene era, which has a low paleontological sensitivity due to the relatively young age of the geologic unit (USGS 2007). The Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility. Mitigation Measure CUL-2, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would require excavation activities to halt in the event of discovery of buried paleontological resources during project construction activities. The Revised Project's impacts associated with paleontological resources would be less than significant with implementation of this mitigation measure. Therefore, no new or more severe impacts related to geology and soils would result under the Revised Project, and no additional mitigation is necessary.

Mitigation Measure CUL-2: Stop work if buried paleontological resources are encountered during construction activities. *If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.*

3.7.2 Conclusion

The Revised Project would not result in any potentially significant impacts associated with rupture of a known earthquake fault or other seismic hazards, soil erosion, land instability, expansive soil, or inadequate soil conditions for wastewater disposal. Potential impacts associated with paleontological resources would be less than significant with implementation of Mitigation Measure CUL-2, as identified in the 2014 IS/MND. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.8 GREENHOUSE GAS EMISSIONS

3.8.1 Evaluation

Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to greenhouse gas (GHG) emissions. The 2014 IS/MND determined that the Approved Project would marginally increase GHG emissions during construction and use of the improved tomato processing facility due to direct emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Based on the severity of potential impacts associated with global climate change and the lack of an established threshold for GHG emissions, Mitigation Measures GHG-1 and GHG-2 were identified in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND to reduce GHG emissions during construction and operation of the Approved Project through implementation of BMPs during construction and SVAPCD BPS during operation of the facility. With implementation of Mitigation Measures GHG-1 and GHG-2, the 2014 IS/MND determined that the Approved Project would not result in substantial GHG emissions or interfere with state or local plans to reduce GHG emissions, resulting in a less-than-significant impact related to GHG emissions.

The Revised Project would require construction activities that would be similar in scale to those required for construction under the Approved Project and would have similar potential to marginally increase short-term GHG-emissions. Estimated annual construction GHG emissions were calculated for the Revised Project using CalEEMod (Table 4; see Appendix D).

Table 4. Annual Construction GHG Emissions for the Revised Project

Construction Year	Emissions (MTCO ₂ e/year) ¹
2025	167
2026	214
Total	381

Source: SWCA (2024)

¹ MTCO₂e/year = metric tons of carbon dioxide equivalent per year

As shown in Table 4, the Revised Project would result in a marginal increase in GHG emissions during construction of the Revised Project. Based on the analysis provided in Addendum #1, the Addendum #1

Approved Project would result in annual construction emissions of approximately 226.67 MTCO₂e/year. Therefore, based on a reasonable worst-case scenario of the Addendum #1 Approved Project components were developed concurrently with the proposed warehouse, cumulative annual construction emissions would be approximately 607.67 MTCO₂e/year.

Federal and state regulations in place require fuel-efficient equipment and vehicles and prohibit wasteful activities, such as diesel idling. Construction contractors, in an effort to ensure cost efficiency, would not be expected to engage in wasteful or unnecessary energy and fuel practices. Further, the Revised Project would be required to comply with applicable SJVAPCD Rules and Regulations, including SJVAPCD Standard Regulation IV (Prohibitions), which would further reduce the potential for diesel idling. Compliance with existing state and local regulations would reduce GHG emissions during construction activities; therefore, short-term construction activities would not generate substantial GHG emissions that may have a significant impact on the environment, and construction-related impacts would be less than significant.

During operation, the Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees or daily truck trips in a manner that could increase operational GHG emissions. The Revised Project would result in a reduction of 12 to 18 truck trips per day as a result of establishing an on-site warehouse facility to store finished tomato projects, ultimately eliminating the need to transport finished products to off-site locations. additional employees would be necessary. This reduction in truck trips would ultimately reduce mobile source GHG emissions compared to existing conditions; therefore, the Revised Project would not be required to implement mitigation that was previously identified to reduce operational GHG emissions.

3.8.2 Conclusion

The Revised Project's potential impacts associated with GHG emissions would be less than significant. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 Evaluation

Section 2.10, *Hazards and Hazardous Materials*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to hazards and hazardous materials. According to the 2014 IS/MND, the project site is not located within 0.25 mile of an existing or proposed school, the vicinity of an airstrip or airport, or an area with high or very high risk for wildland fire. It was identified that the project site is located on a site included on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5; however, soil tests conducted at the site found that the soil was within acceptable control limits for listed contaminants, including diesel and kerosene. Further, it was determined that the Approved Project would have potential to result in risk associated with hazardous materials use at the project site; however, it was determined that adherence to applicable federal standards and state and local regulations, including California Division of Occupational Safety and Health of California (Cal/OSHA), for the storage and handling of hazardous materials would reduce risk associated with hazardous materials use at the project site. Based on required compliance with existing regulations, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to hazards and hazardous materials.

The nearest school facility to the project site is Volta Elementary School, located approximately 0.67 mile southeast of the project property, and the nearest airstrip or airport to the site is the Los Banos Municipal Airport, located approximately 4.5 miles southeast of the project property; therefore, the Revised Project would not be located within 0.25 mile of an existing or proposed school or within close vicinity of an airstrip or airport. Based on the 2022 Merced County State Responsibility Area Fire Hazard Severity Zones Map, the project is not located adjacent to or within a High or Very High Fire Hazard Severity Zone (California Department of Forestry and Fire Protection [CAL FIRE] 2024). Consistent with the 2014 IS/MND, the Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility, which is located on a site included on a list of hazardous materials sites pursuant to California Government Code Section 65962.5 (California Department of Toxic Substance Control [DTSC] 2024); State Water Resources Control Board [SWRCB] 2024); however, soil tests conducted at the site found that the soil was within acceptable control limits for listed contaminants, including diesel and kerosene. Therefore, the Revised Project would not disturb any contaminated soils associated with a hazardous materials site pursuant to California Government Code Section 65962.5. The Revised Project would require construction activities that would be similar in scale to those required for construction under the Approved Project and would result in similar risk associated with hazardous materials use as compared to the Approved Project. The Revised Project would be required to comply with existing regulations, including federal and Cal/OSHA standards for the transportation, use, and handling of hazardous materials, which would reduce risk associated with hazardous materials use at the project site. The Revised Project would not increase the facility's existing processing capacity or increase the use or storage of hazardous materials on-site. The project site would be accessed by existing driveways that allow for adequate emergency response and evacuation to and from the project site. In addition, the Revised Project would not result in a significant increase in vehicle trips or traffic or otherwise have the potential to adversely affect local emergency evacuation plans. Therefore, no new or more severe impacts related to hazards and hazardous materials would result under the Revised Project, and no mitigation is necessary.

3.9.2 Conclusion

Potential impacts associated with hazards and hazardous materials would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to hazards and hazardous materials than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Evaluation

Section 2.11, *Hydrology and Water Quality*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to hydrology and water quality. The 2014 IS/MND determined that the Approved Project was consistent with Liberty Packing Company's existing Central Valley RWQCB WDR (Order No. R5-2019-0012) because it would reclaim a portion of the process water, therefore offsetting the volume of water needed by the improved capacity of the plant. During use of the Approved Project, the WDR would continue to be enforced, effluent process water would continue to be monitored for water quality, and soil and groundwater would also continue to be tested for constituents of concern; therefore, it was determined that the Approved Project would not violate water quality standards. Further, it was determined that temporary construction-related water quality impacts would be minimized by adhering to the National Pollutant Discharge Elimination System (NPDES) Construction General Permit and required SWPPP. Stormwater would be retained at the project site. The eastern portion of the project site is located within a 100-year flood zone; however, the 2014 IS/MND concluded that placement of

structures within the 100-year flood zone would not impede or redirect flood flows to any substantially greater extent than the existing facility because new structures would be placed adjacent to the existing processing facility. The project site is not located in an area at risk of inundation through dam failure, tsunami, or seiche. Based on required compliance with existing regulations and permits, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to hydrology and water quality.

The new warehouse building proposed by the Revised Project would be located on a previously disturbed area within the footprint of the existing tomato processing facility; therefore, the Revised Project would not be located in an area at risk of inundation by dam failure, tsunami, or seiche. However, the Revised Project would be partially located within a 100-year flood zone. Consistent with the Approved Project, the new warehouse building proposed by the Revised Project would be within the existing tomato processing facility and would not impede or redirect flood flows to any substantially greater extent than the existing facility. Further, the Revised Project would be required to comply with Section 17.48.140 of the Merced County Code of Ordinances, which establishes construction standards to prevent flood damage.

The Revised Project would be required to comply with the County's Stormwater Ordinance (Merced County Code Section 9.53.010), which requires implementation of BMPs during project construction, preparation of an ECP, and implementation of post-construction stormwater control measures. The Revised Project would continue to be required to comply with the NPDES General Construction Permit for the implementation of a SWPPP with BMPs to address short- and long-term erosion and pollutant control at the project site. In addition, the Revised Project would not increase the facility's existing processing capacity; therefore, the Revised Project would not increase the generation of process water at the site in a manner that could interfere with the existing WDR (Order No. R5-2019-0012). Based on required compliance with existing regulations and permit requirements, the Revised Project would result in less-than-significant impacts related to hydrology and water quality. Therefore, no new or more severe impacts related to hydrology and water quality would result under the Revised Project, and no mitigation is necessary.

3.10.2 Conclusion

Based on required compliance with existing regulations, potential impacts associated with hydrology and water quality would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to hydrology and water quality than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.11 LAND USE AND PLANNING

3.11.1 Evaluation

Section 2.12, *Land Use and Planning*, of the 2014 IS/MND evaluated the Approved Project's potential impacts associated with division of an established community and inconsistency with land use plans, policies, and zoning. According to the 2014 IS/MND, the Approved Project would not physically divide an established community or conflict with an adopted HCP. In addition, the Approved Project was found to be consistent with the project site's Agricultural land use designation and applicable goals and policies set forth in the *2030 Merced County General Plan*. Therefore, the Approved Project was determined to have less-than-significant impacts related to land use and planning.

The new warehouse building proposed by the Revised Project would be located on a previously disturbed area within the footprint of the existing tomato processing facility and does not include any features that could physically divide an established community. The Revised Project includes the construction of a new 400,000-square-foot warehouse to store finished tomato products. The Revised Project does not include establishment of new activities that would be inconsistent with the project site's Agricultural land use designation or provisions of the *2030 Merced County General Plan*. Therefore, no new or more severe impacts related to land use and planning would result under the Revised Project, and no mitigation is necessary.

3.11.2 Conclusion

Potential impacts associated with land use and planning would be less than significant. The Revised Project would not result in any new or more severe impacts related to land use and planning than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.12 MINERAL RESOURCES

3.12.1 Evaluation

Section 2.13, *Mineral Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to mineral resources. The 2014 IS/MND determined that the Approved Project would not impact mineral resources because the project site has been historically developed as agricultural land and there are no known mineral resources or existing mining operations in the immediate vicinity of the project site. Therefore, the Approved Project was determined to have no impacts related to mineral resources.

The Revised Project would be located entirely within the footprint of the existing tomato processing facility in a previously disturbed area currently used for materials storage; therefore, the Revised Project would not result in impacts related to mineral resources because there are no known mineral resources or existing mining operations in the immediate vicinity of the project site. Therefore, no new or more severe impacts related to mineral resources would result under the Revised Project, and no mitigation is necessary.

3.12.2 Conclusion

No impacts related to mineral resources would occur under the Revised Project. The Revised Project would not result in any new or more severe impacts related to mineral resources than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.13 NOISE

3.13.1 Evaluation

Section 2.14, *Noise*, of the 2014 IS/MND evaluates the Approved Project's potential impacts related to noise. The 2014 IS/MND identified the Approved Project's potential to increase noise and short-term groundborne vibration at the project site as a result of improved operations; however, it was concluded that this increase in noise would remain below the County's noise thresholds and there are no noise sensitive land uses within the immediate vicinity of the project site that would be adversely affected by the marginal increase in noise. The project site is not located within close proximity to an airport or

within an airport land use plan. Therefore, the Approved Project was determined to have less-than-significant impacts related to noise.

The new warehouse building proposed by the Revised Project would be located on a previously disturbed area within the footprint of the existing tomato processing facility. The Revised Project would not result in new or incompatible land uses that could result in a noticeable increase in long-term ambient noise within the project site. The Revised Project would ultimately result in a reduction in truck trips and therefore would not increase noise along proximate roadways from vehicles trips. The Revised Project would require construction activities that would be similar in scale to those required for construction under the Approved Project and would have similar potential to increase short-term construction-related noise and groundborne vibration. However, consistent with the Approved Project, construction-related noise associated with the Revised Project would remain below the County's noise thresholds and the Revised Project would not be in close proximity to any noise-sensitive land uses. Therefore, no new or more severe impacts related to noise would result under the Revised Project, and no mitigation is necessary.

3.13.2 Conclusion

Potential impacts associated with noise would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe noise impacts than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.14 POPULATION AND HOUSING

3.14.1 Evaluation

Section 4.15, *Population and Housing*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to population growth. As determined in the 2014 IS/MND, the Approved Project would not increase the number of employees, and short-term construction-related positions would be expected to be filled by members of the local workforce. Further, the Approved Project would not require the removal of existing housing or construction of replacement housing elsewhere. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to population and housing.

Consistent with the Approved Project, the Revised Project would not increase the number of employees, and short-term construction-related positions would be expected to be filled by members of the local workforce. The Revised Project does not include the removal of existing housing or construction of replacement housing elsewhere. Therefore, no new or more severe impacts related to population and housing would result under the Revised Project, and no mitigation is necessary.

3.14.2 Conclusion

Potential impacts associated with population and housing would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to population and housing than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.15 PUBLIC SERVICES

3.15.1 Evaluation

Section 4.16, *Public Services*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to an increase in demand on public services, including fire protection services, police protection services, public schools, and parks. According to the 2014 IS/MND, the Approved Project would not result in an increase of the number of employees and, therefore, would not increase demand on police protection services, schools, parks, or other public facilities. The 2014 IS/MND identified that the Approved Project would be subject to County Impact Fees, which would include the payment of its fair share of costs for fire protection facilities and services to ensure that the County is able to maintain adequate fire protection services. The Approved Project would also be subject to CAL FIRE and Merced County Fire Department safety regulations to further reduce fire risk and reduce the increase in demand on fire protection services. Based on required compliance with CAL FIRE and Merced County Fire Department fire safety regulations, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to public services.

Consistent with the Approved Project, the Revised Project would not increase the number of employees at the tomato processing facility; therefore, the Revised Project would not increase demand on police protection services, schools, parks, or other public facilities. Further, the Revised Project would be subject to the payment of County Impact Fees for fire protection facilities and services to offset the project's marginal increased demand on County fire protection services. The development and improvements associated with the Revised Project would also be subject to CAL FIRE and Merced County Fire Department safety regulations to further reduce fire risk and reduce the increase in demand on fire protection services. The Revised Project would not result in any new or more severe impacts related to public services than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.15.2 Conclusion

Potential impacts associated with public services would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to public services than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.16 RECREATION

3.16.1 Evaluation

Section 4.17, *Recreation*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to an increase in demand on recreational facilities. No parks or recreational facilities are located on the project site. According to the 2014 IS/MND, the Approved Project would not include development of residential uses or result in an increase of the number of permanent or seasonal employees employed on the project site and, therefore, would not increase demand on nearby recreational facilities; therefore, it was determined that the Approved Project would not result in impacts related to recreation.

Consistent with the Approved Project, the Revised Project would not include development of residential uses or result in an increase of the number of permanent or seasonal employees employed at the tomato processing facility; therefore, the Revised Project would not increase demand on nearby recreational facilities. In addition, the Revised Project does not include the construction of any new or expanded recreational facilities. The Revised Project would not result in any new or more severe impacts related to recreation than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.16.2 Conclusion

No impacts related to recreation would occur under the Revised Project. The Revised Project would not result in any new or more severe impacts related to recreation than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.17 TRANSPORTATION

3.17.1 Evaluation

Section 2.18, *Traffic and Transportation*, of the 2014 IS/MND evaluates the Approved Project's potential impacts associated with traffic and transportation. It was determined that the Approved Project would result in a short-term increase in construction-related trips and an increase of approximately 120 truck trips per day. However, it was determined that South Ingomar Grade Road could support this increase while maintaining acceptable roadway operations in accordance with the *2030 Merced County General Plan Circulation Element*. Further, the 2014 IS/MND identified that the Approved Project would be subject to the payment of road impact fees to offset the incremental increase of truck trips along public roads. The Approved Project would not interfere with air traffic patterns, increase roadway hazards, interfere with emergency access, or be inconsistent with applicable plans or policies related to bicycle, transit, or pedestrian circulation. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to traffic and transportation.

The Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees, employee vehicle trips, or daily truck trips. The Revised Project would result in a reduction of 12 to 18 truck trips per day as a result of establishing an on-site warehouse facility to store finished tomato projects, ultimately eliminating the need to transport finished products to off-site locations. Therefore, the Revised Project would ultimately reduce the overall number of vehicle trips along South Ingomar Grade Road. The Revised Project would not interfere with air traffic patterns, increase roadway hazards, interfere with emergency access, or be inconsistent with plans or policies related to bicycle, transit, or pedestrian circulation.

Merced County adopted the Merced County Association of Governments (MCAG) *VMT Thresholds and Implementation Guidelines* (2022), which identifies the CEQA VMT metric, VMT screening criteria, and VMT analysis thresholds for jurisdictions within the MCAG. According to the MCAG *VMT Thresholds and Implementation Guidelines*, a project consistent with the jurisdiction's General Plan may be screened from VMT thresholds if the project would generate fewer than 1,000 average daily trips (ADT), while a project not consistent with the jurisdiction's General Plan may be screened if the project would generate fewer than 500 ADT. The 2014 IS/MND did not evaluate the Approved Project's potential impacts related to VMT. As previously discussed, the Revised Project would not increase employee vehicle trips or daily truck trips and would result in a reduction of approximately 12 to 18 truck trips per day. Therefore, the Revised Project would not result in or exceed 1,000 trips per day and would not generate a significant increase in VMT.

Therefore, the Revised Project would not result in any new or more severe impacts related to transportation and traffic than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.17.2 Conclusion

Potential impacts associated with transportation and traffic would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to transportation and traffic than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Evaluation

Assembly Bill (AB) 52, approved by the Governor of California on September 25, 2014, requires public agencies to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of proposed projects subject to CEQA. Because the 2014 IS/MND was certified prior to approval of AB 52, no notification specific to AB 52 requirements was conducted at that time. Further, this IS/MND Addendum does not require public circulation and would not be subject to tribal consultation pursuant to AB 52.

Based on an updated CHRIS records search conducted at the CCIC on January 23, 2023, one previous study has been conducted within the project area and no cultural resources have been previously documented within the project area. Further, ground disturbance associated with the Revised Project would occur in a previously disturbed area within the footprint of the developed existing tomato processing facility, which would reduce the potential to encounter intact tribal cultural resources. As identified in Section 3.5, *Cultural Resources*, of this IS/MND Addendum, implementation of Mitigation Measures CUL-1 and CUL-3, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would reduce the potential to disturb unknown archaeological or human resources during proposed ground-disturbing activities. Therefore, the Revised Project would not result in any new or more severe impacts related to tribal cultural resources than were previously analyzed in the 2014 IS/MND, and no mitigation is required.

3.18.2 Conclusion

No impacts related to tribal cultural resources would occur under the Revised Project, and no mitigation is necessary.

3.19 UTILITIES AND SERVICE SYSTEMS

3.19.1 Evaluation

Section 2.19, *Utilities and Service Systems*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to utilities and service systems, including utility installation, water supply, wastewater generation, and solid waste generation. According to the 2014 IS/MND, the Approved Project would not impede the ability to maintain conformance with the site's existing WDR. The Approved Project would not require the use of substantial amounts of additional water, nor would it require additional entitlements for increased water supply. Further, it was concluded that the Approved Project's solid waste generation would be met by existing infrastructure and would not interfere with waste-reduction goals. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to utilities and service systems.

The Revised Project would not increase the facility's existing processing capacity; therefore, the Revised Project would not increase the generation of process water at the site in a manner that could interfere with the existing WDR (Order No. 90-223), nor would it result in an increase in water usage, wastewater generation, or solid waste generation. Therefore, the Revised Project would not result in any new or more severe impacts related to utilities and service systems than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.19.2 Conclusion

Potential impacts associated with utilities and service systems would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to utilities and service systems than were previously analyzed in the 2014 IS/MND, and no mitigation is necessary.

3.20 WILDFIRE

3.20.1 Evaluation

At the time the 2014 IS/MND was prepared and certified, CEQA did not yet require the evaluation of a proposed project's impacts associated with wildfire as an independent section under State CEQA Guidelines Appendix G, Environmental Checklist Form. However, the Approved Project's potential impacts associated with exposure of people or structures to significant risk of loss, injury, or death involving wildland fires were evaluated in Section 2.10, *Hazards and Hazardous Materials*, of the 2014 IS/MND. The 2014 IS/MND stated that the project site is not located in an area with high or very high risk of wildland fire. The Approved Project site consisted of existing development, including large man-made ponds, which would reduce wildfire hazards within and adjacent to the project site. In addition, while potential fire risks may be increased during construction activities through use of equipment, fuels, and combustible materials, construction contractors would be required to comply with state regulations pertaining to use, storage, and handling of combustible substances and the existing *Liberty Packing Company Hazardous Materials Business Plan* (HMBP) for the tomato processing facility, which also includes an emergency response plan. Based on compliance with these existing regulations, the 2014 IS/MND concluded that the Approved Project would have no impacts associated with exposure of people or structures to significant risks associated with wildland fires, and no mitigation was necessary.

Based on the 2022 Merced County State Responsibility Area Fire Hazard Severity Zones Map, the project is not located adjacent to or within a High or Very High Fire Hazard Severity Zone (CAL FIRE 2024). The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding active agricultural land and would not extend into previously undeveloped areas or areas designated as having high or very high risk of wildland fire. Further, the project would be required to meet all applicable standards for fire prevention pursuant to the CBC and California Fire Code to reduce the risk of fire ignition at the project site. The Revised Project does not include the installation of new permanent features that could increase the risk of wildfire ignition at the project site. Potential fire risks may be slightly increased during construction activities through use of equipment, fuels, and combustible materials. Construction contractors would be required to comply with state regulations pertaining to use, storage, and handling of combustible substances and the existing HMBP for the tomato processing facility, which also includes an emergency response plan. The project would not result in a significant increase in vehicle trips or traffic or otherwise have the potential to adversely affect local emergency evacuation plans. Due to the developed and previously disturbed nature of the project site, the Revised Project would not increase risk associated with post-fire hazards such as downstream flooding, landslides,

or slope instability. Therefore, the Revised Project would not exacerbate wildfire risk at the project site, and no mitigation measures are necessary.

3.20.2 Conclusion

Based on required compliance with existing regulations, the Revised Project would result in less-than-significant impacts associated with wildfire. Therefore, the Revised Project would not result in any new or more severe impacts associated with wildfire, and no mitigation is required.

4 CONCLUSION

The evaluation of all impact areas presented in Section 3 of this IS/MND Addendum indicate that the proposed modifications associated with the Revised Project would not result in any significant new information related to new significant impacts or a substantial increase in the severity of previously identified significant impacts beyond those identified in the 2014 IS/MND. An updated MMRP has been prepared for the Revised Project to clarify the applicability of mitigation measures as well as to reflect the most up to date regulatory requirements as needed (see Appendix C).

In summary, the analysis concludes that none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a subsequent IS/MND have occurred, and, thus, an Addendum to the 2014 IS/MND is appropriate to satisfy CEQA requirements for the Revised Project. The evaluation presented in this IS/MND Addendum supports the finding that no circumstances or conditions requiring the preparation of a subsequent IS/MND are present in this case.

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APPENDIX A

2014 Initial Study/Mitigated Negative Declaration

DRAFT

**INITIAL STUDY/
MITIGATED NEGATIVE DECLARATION
LIBERTY PACKING COMPANY**

**MAJOR MODIFICATION No. MM 13-017 TO
CONDITIONAL USE PERMIT No. CUP 02-001**

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**This document is available online on the Merced County
Planning and Economic Development Department
Environmental Document Web Page:
<http://www.co.merced.ca.us/index.aspx?nd=414>**

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Contents

Tables	iv
Figures	v
Acronyms and Abbreviations	vi
Chapter 1 Project Description	1-1
1.1 Project Location	1-1
1.2 Existing Conditions	1-1
1.3 Project Objectives	1-1
1.4 Proposed Project Improvements	1-2
1.4.1 Expanded Cooling Pond	1-2
1.4.2 Expanded Settling Pond	1-2
1.4.3 Packaging Buildings	1-2
1.4.4 Utility Buildings	1-3
1.4.5 Production Equipment	1-3
1.4.6 Additional Truck Trips and Trailer Storage Yard	1-3
1.4.7 Warehouse Space	1-3
1.4.8 Railroad Spur and Loading Docks	1-3
1.4.9 Pole Shed for Current Loading Docks	1-4
1.4.10 Septic System	1-4
1.4.11 Required Permits and Approvals	1-4
Chapter 2 Environmental Checklist	2-1
2.1 Environmental Factors Potentially Affected	2-2
2.2 Determination	2-2
2.3 Aesthetics	2-3
2.3.1 Setting	2-3
2.3.2 Impact Discussion	2-4
2.4 Agricultural Resources	2-6
2.4.1 Setting	2-6
2.4.2 Impact Discussion	2-7
2.5 Air Quality	2-9
2.5.1 Environmental Setting	2-9
2.5.2 Regulatory Setting	2-15
2.5.3 Discussion	2-20
2.6 Biological Resources	2-27
2.6.1 Setting	2-28

2.6.2	Impact Discussion	2-29
2.7	Cultural Resources	2-39
2.7.1	Setting	2-39
2.7.2	Significance Criteria	2-40
2.7.3	Impact Discussion	2-41
2.8	Geology and Soils	2-43
2.8.1	Environmental Setting	2-43
2.8.2	Regulatory Setting	2-44
2.8.3	Impact Discussion	2-46
2.9	Greenhouse Gas Emissions	2-48
2.9.1	Environmental Setting	2-48
2.9.2	Regulatory Setting	2-49
2.9.3	Discussion	2-52
2.10	Hazards and Hazardous Materials	2-58
2.10.1	Environmental Setting	2-58
2.10.2	Regulatory Setting	2-59
2.10.3	Impact Discussion	2-63
2.11	Hydrology and Water Quality	2-66
2.11.1	Environmental Setting	2-66
2.11.2	Regulatory Setting	2-67
2.11.3	Impact Discussion	2-68
2.12	Land Use and Planning	2-70
2.12.1	Setting	2-70
2.12.2	Impact Discussion	2-72
2.13	Mineral Resources	2-73
2.13.1	Setting	2-73
2.13.2	Impact Discussion	2-73
2.14	Noise	2-74
2.14.1	Environmental Setting	2-74
2.14.2	Regulatory Setting	2-76
2.14.3	Impact Discussion	2-77
2.15	Population and Housing	2-80
2.15.1	Setting	2-80
2.15.2	Impact Discussion	2-80
2.16	Public Services	2-81
2.16.1	Setting	2-81
2.16.2	Impact Discussion	2-82

2.17	Recreation	2-83
2.17.1	Setting	2-83
2.17.2	Impact Discussion	2-83
2.18	Transportation and Traffic	2-84
2.18.1	Environmental Setting	2-84
2.18.2	Regulatory Setting	2-85
2.18.3	Impact Discussion	2-85
2.19	Utilities and Service Systems.....	2-88
2.19.1	Setting.....	2-88
2.19.2	Impact Discussion	2-88
2.20	Mandatory Findings of Significance	2-91
2.21	Mitigation Measures	2-92
Chapter 3	References Cited	3-1
3.1	Printed References.....	3-1
3.2	Personal Communication	3-4

Appendix A Air Quality and Greenhouse Gas Technical Report

Appendix B November 2011 Biology Field Survey

Tables

Tables	Page
1 Site Soils Agricultural Quality.....	2-6
2 Ambient Air Quality Monitoring Data from Madera Monitoring Station	2-13
3 Federal and State Attainment Status for Merced County	2-14
4 Federal and State Ambient Air Quality Standards	2-16
5 Estimated Construction Emissions.....	2-21
6 Estimated Operational Emissions	2-24
7 Site Soils Limitations	2-44
8 Lifetimes and Global Warming Potentials	2-49
9 Summary of Construction Emissions	2-52
10 Summary of Operational Emissions without State Mandates.....	2-53
11 Summary of Operational Emissions with State Mandates	2-54
12 Potential SJVAPCD BPS Available to Reduce Operation-Related Project Emissions.....	2-55
13 Merced County Code Sound Level Limits	2-76
14 Land Use Compatibility Standards for Residential Land Use	2-76
15 On-Road Vehicles	2-86

Figures

Figures	Follows Page
1 Vicinity Map	1-2
2 Project Site Plan	1-2
3 Liberty Packing Property	2-32
4 Proposed Mounded Leach Field Location.....	2-38
5 100-year Floodplain	2-68

Acronyms and Abbreviations

µg/m ³	micrograms per cubic meter
AB	Assembly Bill
AB 32	California's Global Warming Solutions Act
AB 1807	Toxic Air Contaminant Identification and Control Act
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
ADT	average daily trips
BAU	business-as-usual
BPS	Best Performance Standards
CAA	Clean Air Act
CAAQS	California ambient air quality standards
CAL FIRE	California Department of Forestry and Fire Protection
Cal/OSHA	California Occupational Safety and Health Administration
CalEPA	California Environmental Protection Agency
CalRecycle	California Department of Resources Recycling and Recovery
CARB	California Air Resources Board
CDFW	California Department of Fish and Wildlife
CEQA	California Environmental Quality Act
CERCLA	Comprehensive Environmental Response, Compensation and Liability Act of 1980
CFR	Code of Federal Regulations
CH ₄	methane
CNDDB	California Natural Diversity Database
CNPS	California Native Plant Society
CO	carbon monoxide
CO ₂	carbon dioxide
CO ₂ e	CO ₂ equivalents
County	Merced County
dB	Decibel
dBA	A-Weighted Decibel
DPM	diesel particulate matter
DTSC	Department of Toxic Substances Control
DWR	Department of Water Resources
EIR	environmental impact report
EOP	Emergency Operations Plan
EPA	U.S. Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRMS	Flood Insurance Rate Maps
FMMP	Farmland Mapping and Monitoring Program
GHG	greenhouse gas
GWP	global warming potential
GWR	gross vehicle weight rating

HCP	Habitat Conservation Plan
HMBP	Hazardous Material Business Management Plan
HSAA	Hazardous Substances Account Act
HSC	California Health and Safety Code
HWCL	California Hazardous Waste Control Law
I-5	Interstate 5
ICF	ICF International
IPCC	Intergovernmental Panel on Climate Change
L_{dn}	Day-Night Level
L_{eq}	Equivalent Sound Level
$L_{eq} 1h$	1-hour A-weighted equivalent sound level
L_{max}	maximum sound level
L_{min}	minimum sound level
LOS	level of service
MBTA	Migratory Bird Treaty Act
MCFD	Merced County Fire Department
MCHD/EHD	Merced County Health Department, Environmental Health Division
mg/L	milligrams per liter
mg/m ³	milligrams per cubic meter
MLD	Most Likely Descendant
MT	metric tons
MWh	megawatt hour
N ₂ O	nitrous oxide
NAAQS	national ambient air quality standards
NAHC	Native American Heritage Commission
NCCP	Natural Community Conservation Plan
NO	oxides of nitrogen
NO ₂	nitrogen dioxide
NO _x	nitrous oxides
NPDES	National Pollutant Discharge Elimination System
OES	Merced County Office of Emergency Services
Pb	lead
PCBs	polychlorinated biphenyls
PM	particulate matter
PM ₁₀	particulate matter smaller than 10 microns or less in diameter
PM _{2.5}	particulate matter smaller than 2.5 microns or less in diameter
PPD	pounds per person per day
ppm	parts per million
ppt	parts per trillion
project	Liberty Packing Company project
PRC	Public Resources Code
QA	qualified archaeologist

RCRA	Resource Conservation and Recovery Act of 1974
ROGs	reactive organic gases
RWQCB	Regional Water Quality Control Board
SARA	Superfund Amendments and Reauthorization Act of 1986
SF ₆	sulfur hexafluoride
SHPO	State Historic Preservation Officer
SIP	State Implementation Plan
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District
SO ₂	sulfur dioxide
SR 152	State Route 152
SWPPP	Storm Water Pollution Prevention Plan
TACs	Toxic air contaminants
TSCA	Toxic Substances Control Act
USFWS	U.S. Fish and Wildlife Service
USGS	U.S. Geological Survey
VERA	Voluntary Emission Reduction Agreement
VOCs	volatile organic compounds
WDR	Waste Discharge Requirement

1.1 Project Location

The location of the proposed modification (MM 13-017) to the Liberty Packing Conditional Use Permit (CUP) is in Merced County (County) approximately 7 miles northwest of the City of Los Banos (see Figure 1, Vicinity Map) at 12045 South Ingomar Grade Road in the Volta area. The site supports a tomato packing plant and is in an agriculture area, surrounded by farmlands.

The facility encompasses a property of approximately 841 acres in area. The existing area of active operations is approximately 290 acres, including a 30-acre tomato processing factory (approximately 240,000 square feet of buildings, and parking lots), extensive outside storage areas and warehouses, and washwater treatment facilities. The site also supports a 60-acre cooling pond that holds water from the packing plants evaporation equipment, and a 1.25-acre settling pond that holds wash water and allows any solids to settle out before it is recycled for use in the plant. Land uses in the area include general agricultural uses. The Volta State Wildlife Area is located east of the project.

The nearest residence is located approximately 200 yards east of the project site, on the west side of South Ingomar Grade Road.

1.2 Existing Conditions

The facility operates under Merced County Conditional Use Permit #CUP 02001, as previously modified.

Process wastewater generated by the facility is discharged to land under Waste Discharge Requirements (WDRs) issued by the Regional Water Quality Control Board, Central Valley Region, Order #90-223. The WDR limits the 30-day dry weather discharge flow to a maximum of 4 million gallons. To put this number into context, the average gallons per day discharge flows in 2012 and 2013 during July and August ranged from approximately 2.6 million gallons to 3.7 million gallons.

1.3 Project Objectives

The objectives of the project are listed below.

- Expand the existing facility's production capacity.
- Enhance the existing facility's environmentally positive features by expanding the cooling pond to reduce the plant's demand for electricity and expanding the settling pond to enhance the recycling of wash water.
- Continue to comply with the existing Waste Discharge Requirements issued by the Central Valley Regional Water Quality Control Board.
- Avoid adverse environmental effects to the extent practical through site design.

1.4 Proposed Project Improvements

The project analyzed in this Initial Study is the proposed modification to the operation's existing Conditional Use Permit (CUP 02-001). The modifications would allow improvements and an expansion to the existing tomato packing facility. Specific proposed modifications are described below. Figure 2 is the plot plan illustrating the existing facility and proposed modifications.

The applicant anticipates no change in the number of employees per shift and little to no increase in the volume of wash water applied to Liberty's farm fields as a result of the proposed expansion. No change to Order #90-223 will be necessary.

1.4.1 Expanded Cooling Pond

The existing cooling pond occupies approximately 60 acres of land on the west side of the project site. The project includes an 80-acre expansion of that pond. The 80 acres adjoin the southern end of the existing cooling pond. The land on which the proposed 80-acre pond expansion is proposed is currently irrigated with wash water from the tomato packing facility.

The cooling pond enables the recirculation of water used to condense steam from the evaporation process. This replaces the energy and chemical intensive cooling towers utilized in all other similar factories. The evaporated water (steam) is condensed into the recirculating cooling pond water, which then heats that water by approximately 20 degrees. The cooling pond naturally cools this water, enabling its reuse for cooling in the evaporation equipment. This steam is pure water, and the water discharged to the cooling pond is very high quality water. Enlarging the pond will allow the water to cool quicker, resulting in less water to condense the steam and, thus, less electricity used for pumping. Negating the requirement for cooling towers, this reduces construction cost, electricity consumption, and chemical usage. The cooling pond expansion is labeled as item "A" in Figure 2.

1.4.2 Expanded Settling Pond

Part of the packing operation includes washing the tomatoes. Tomatoes are harvested from farmers' fields into containers. In the process of washing the tomatoes, the wash water picks up soil and tomato juice. The settling pond holds the wash water long enough to settle out the sand particles from the soil, enabling the packing facility to recycle used wash water. This reduces water and energy consumption. Prior to each season, the topsoil that accumulates in the pond is removed and distributed to Liberty's farm fields.

A 1.25-acre settling pond is located in the northwest corner of the tomato processing plant site. The project proposes to expand this pond onto approximately 1.15 acres of adjoining land to the west. The resultant pond would total 2.5 acres in area.

The settling pond expansion is labeled as item "B" in Figure 2.

1.4.3 Packaging Buildings

The project includes the construction of two extensions to the current product filling and packaging building of approximately 7,500 square feet to the west (see the area labeled as item "E" in Figure 2) in order to accommodate the filling requirements of the expanded production capability described

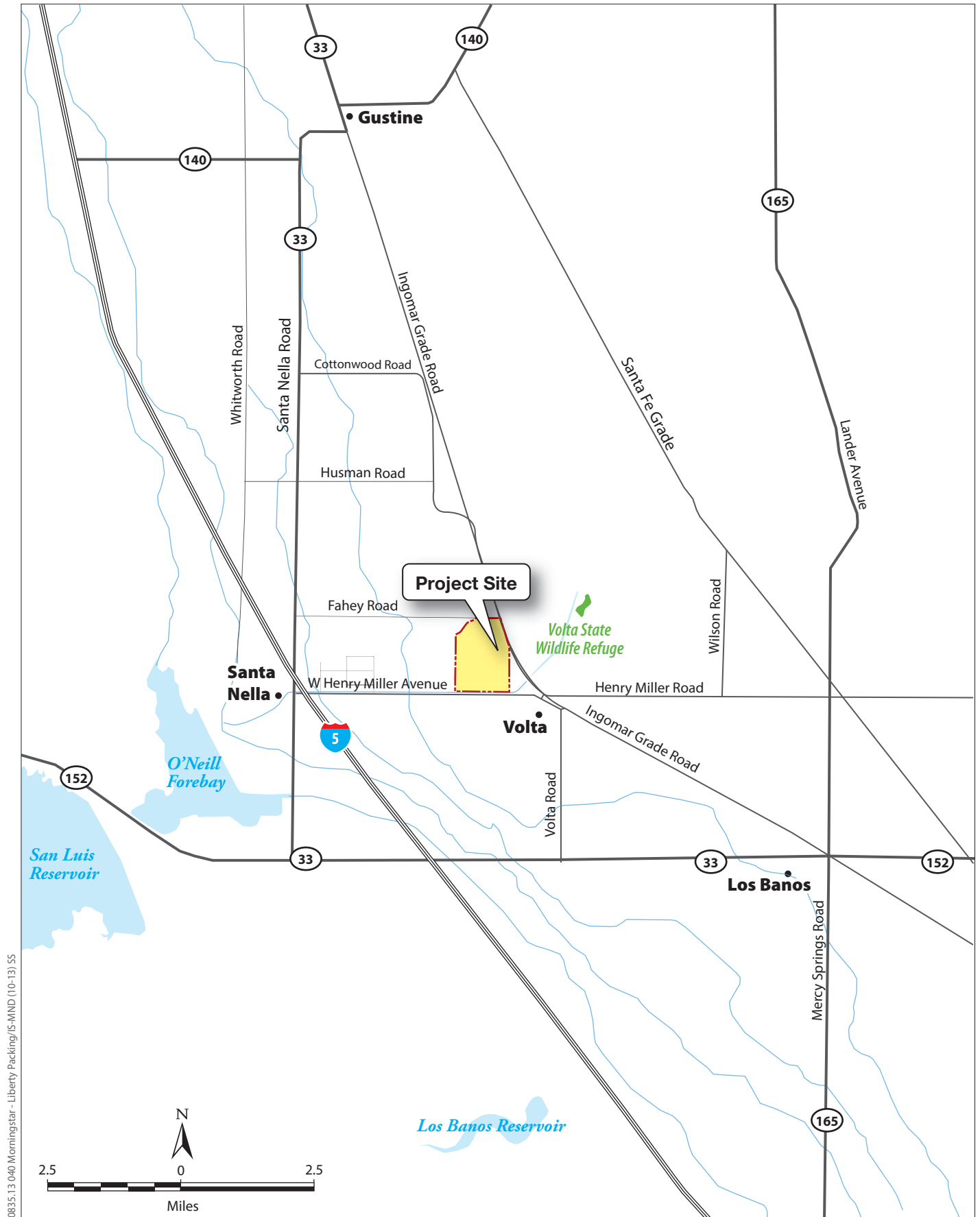


Figure 1
Project Vicinity

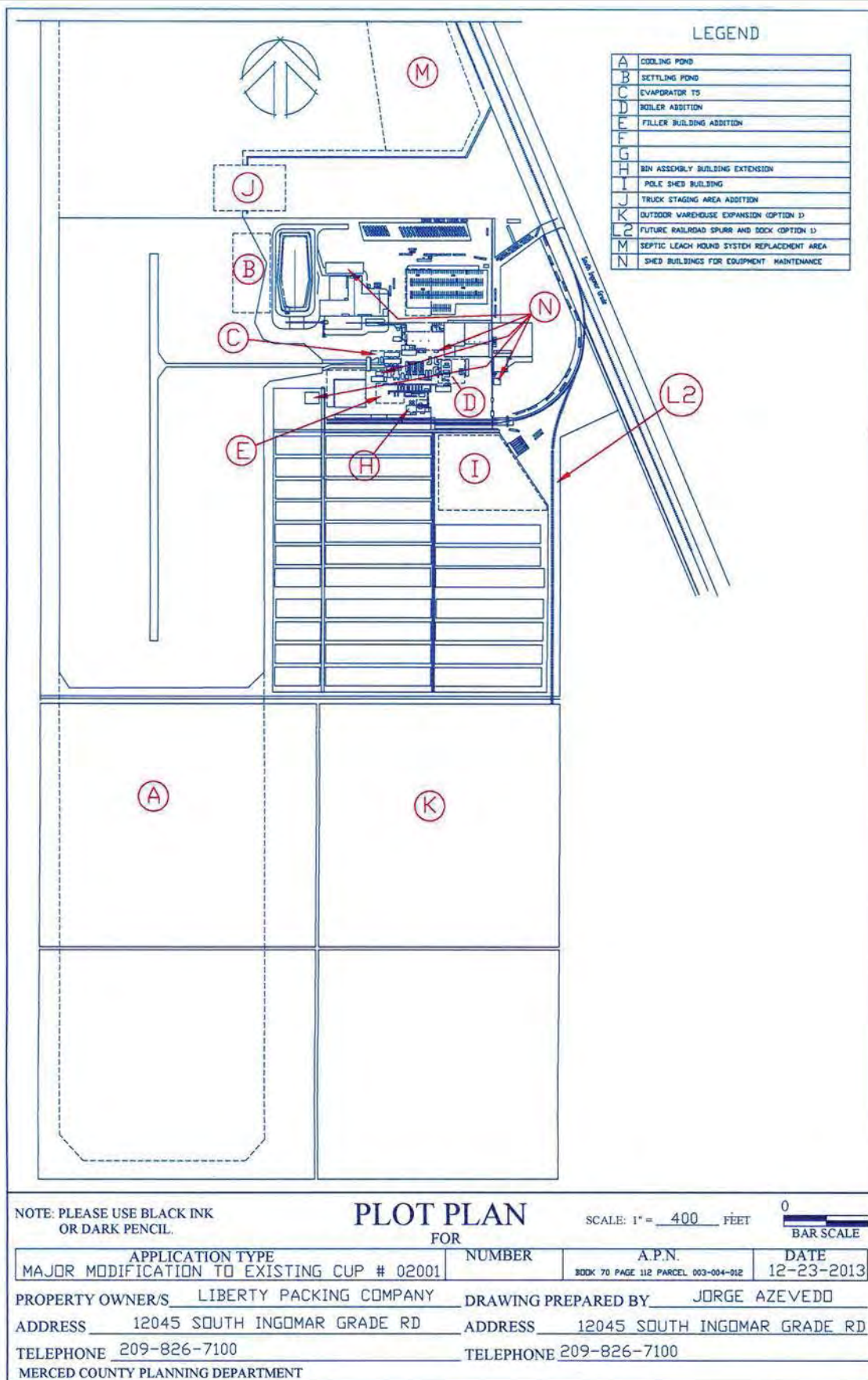


Figure 2
Project Site Plan

below. The building would also be extended to the south by approximately 1,500 square feet (see the area labeled as item “H” in Figure 2).

1.4.4 Utility Buildings

The project includes the construction of five small utility sheds of less than 1,000 square feet at various locations within the plant (see the areas labeled item “N” in Figure 2).

1.4.5 Production Equipment

The project will provide for an increase in fresh tomato processing capacity of approximately 23 percent through the addition of evaporation equipment (see the area labeled item “C” in Figure 2) and steam capacity (see the areas labeled item “D” in Figure 2). The proposed new boiler equipment will generate additional air emissions, and has already received the necessary Authority to Construct permit from the San Joaquin Valley Air Pollution Control District.

1.4.6 Additional Truck Trips and Trailer Storage Yard

An additional 120 tomato trucks per day will be received and unloaded as part of the project. Under existing operations, 502 trucks per day visit the facility (2013)¹. The increase in truck traffic is provided for under a Roadway Impact Agreement with Merced County, which requires increased fees for any road impacts commensurate to the volume of truck traffic. The applicant submitted Contract No. 850-023 to the County in August 2013 to account for the additional truck trips under a Roadway Impact Agreement.

The existing facility includes approximately 3.7 acres of tomato truck and trailer storage space located at the north end of the facility. The project proposes to add an additional 4.7 acres of storage space directly north of the settling pond (see the area labeled item “J” in Figure 2). This would be northwest of the current space and is located on low quality farmland so as to avoid the existing ponds north of the facility.

1.4.7 Warehouse Space

The existing facility includes approximately 43 acres of open product storage space. In order to accommodate the increase in production associated with the project, the applicant proposes to add 12 acres of open product storage space. The proposed location is labeled item “K” in Figure 2. It is located directly south of the existing storage area.

1.4.8 Railroad Spur and Loading Docks

Increased production associated with the project will result in corresponding increases in outbound deliveries. The project includes an additional railroad spur with associated loading docks to be located along the eastern edge of the existing open storage area (see the alignment labeled “L2” in Figure 2).

¹ Average daily truck traffic varies with operations. Daily averages over the past five years were 502 (2013), 570 (2012), 548 (2011), 533 (2010), and 543 (2009).

1.4.9 Pole Shed for Current Loading Docks

The project includes installation of product shipping equipment to optimize the facility's existing shipping activities. The project includes a pole shed of approximately 65,000 square feet in area, with less than 20 percent wall coverage, to provide shelter from sun, heat, and rain for greater worker safety and efficiency. The proposed location of the pole shed is labeled item "I" in Figure 2.

1.4.10 Septic System

The project includes improvements to the existing septic systems to satisfy the Merced County Environmental Health Department's requirements. A future mounded septic leach mound system replacement area is proposed to be located north of the existing tomato processing facility, if required, at the site labeled as item "M" in Figure 2.

1.4.11 Required Permits and Approvals

The proposed project would require approval from the following agencies.

- **Merced County Planning and Economic Development Department.** Conditional Use Permit Modification.
- **Merced County Department of Public Works, Building and Safety Division.** Building Permits.
- **San Joaquin Valley Unified Air Pollution Control District.** Issued permits for the new boiler on August 27, 2013.
- **Merced County Health Department, Environmental Health Division.** Liberty Packing will be required to update their existing Hazardous Material Business Management Plan (HMBP) to reflect project-related changes in hazardous materials uses. The HMBP would be reviewed by the Merced County Division of Environmental Health. The Health Department will also issue the permit for the changes to the septic system.
- **Central Valley Regional Water Quality Control Board.** The project is expected to adhere to existing WDRs and not exceed discharge volumes or violate water quality conditions.

Chapter 2

Environmental Checklist

1. Project Title: Liberty Packing Company Tomato Processing Facility Expansion
2. Lead Agency Name and Address: Merced County Planning and Economic Development Department
3. Contact Person and Phone Number: Oksana Newmen
(209) 385-7654, Extension 4415
4. Project Location: 12045 South Ingomar Grade Road
Los Banos, CA 93635
5. Project Sponsor's Name and Address: Liberty Packing Company, LLC
12045 South Ingomar Grade Road
Los Banos, CA 93635
6. General Plan Designation: Agriculture
7. Zoning: General Agricultural (A-1)
8. Description of Project:
Merced County is considering an application by Liberty Packing Company for a major modification to Conditional Use Permit CUP 02-001 to allow for construction of expansion of various facilities that are part of its existing tomato processing facility.
9. Surrounding Land Uses and Setting:
Rural Agricultural Uses and Volta State Wildlife Area.
10. Other Public Agencies Whose Approval is Required:
Merced County Department of Public Works, Building and Safety Division; Merced County Health Department, Environmental Health Division.

2.1 Environmental Factors Potentially Affected

The environmental factors checked below would potentially be affected by this project (i.e., the project would involve at least one impact that is a “Potentially Significant Impact”), as indicated by the checklist on the following pages.

- | | | |
|---|--|---|
| <input type="checkbox"/> Aesthetics | <input type="checkbox"/> Agricultural and Forestry | <input type="checkbox"/> Air Quality |
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Greenhouse Gas Emissions | <input type="checkbox"/> Hazards and 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/Traffic | <input type="checkbox"/> Utilities/Service Systems | <input type="checkbox"/> Mandatory Findings of Significance |

2.2 Determination

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 to 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 an impact on the environment that is “potentially significant” or “potentially significant unless mitigated” 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 ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier ENVIRONMENTAL IMPACT REPORT or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the project, nothing further is required.

Signature

Date

Oksana Newmen, Planner III

Merced County Planning and Economic Development

Aesthetics	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings along a scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.3 Aesthetics

2.3.1 Setting

The proposed project is located in Merced County, in the San Joaquin Valley. Merced County is known for its panoramic views of the Sierra Nevada Mountains and the Coast Ranges, mix of open orchard lands and field crop areas, and the seasonal contrasts of lush hillsides and wetlands with distant snow-capped mountains. Scenic vistas in the project area include distant views of the Coastal and Sierra mountain ranges.

The existing processing facility is located northwest of Los Banos in a rural agricultural setting that includes irrigated crops, dairy farming, two (2) similar agricultural processing facilities 2 and 5 miles away, scattered residences, and the small community of Volta. The facility consists of a number of buildings and storage areas. These structures vary in height and are up to 30 feet tall. Some of the onsite equipment is up to 90 feet tall.

Typical viewers of the proposed project site are motorists along South Ingomar Grade Road, which is oriented in a northwest to southeast direction along the project frontage, and the east-west Henry Miller Road some distance to the south of the project site. Views are generally limited to the existing facility and the surrounding agricultural lands. The Volta State Wildlife Area is located across South Ingomar Grade Road and east of the project and provides a view of open space, in contrast to the agriculturally-dominated views along this road.

According to the California Department of Transportation State Scenic Highway Mapping System, there are two designated scenic highways within the Merced County. Interstate 5 (I-5) runs south to north approximately 4 miles west of the proposed project site, and State Route 152 (SR 152) runs east to west approximately 5 miles south of the proposed project site (Caltrans 2013). These highways are also County-designated scenic highways. The proposed project site is not visible from

either I-5 or SR 152. South Ingomar Grade Road, which adjoins the east side of the project site, is not a locally designated scenic road.

2.3.2 Impact Discussion

Would the project:

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

Less-than-Significant Impact. As discussed above, the proposed project site is not considered a scenic vista and does not provide views of scenic vistas as defined by the County. Although the project is near the Volta State Wildlife Area, implementation of the proposed project would not block views of the Wildlife Area. Similarly, because the proposal site is already developed with a substantial processing facility, the proposed modifications would not substantially change views from South Ingomar Grade Road. This impact is less than significant.

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

Less-than-Significant Impact. As described above, the proposed project site is not located adjacent to scenic highways. Because there are no significant scenic resources at the project site or in its proximity, the proposed project would not substantially damage such resources. This impact is less than significant.

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

Less-than-Significant Impact. The existing tomato processing facility includes structures up to approximately 30 feet tall and equipment up to 90 feet tall. Other developed features include an administration building, paved access roads, surface parking areas, and extensive outdoor storage. The proposed new structures, pond expansions, and facilities would be consistent with the existing developed character at the tomato processing facility. Furthermore, the proposed project would be entirely on Liberty Packing property and would not extend onto adjacent agricultural lands or rural residences, and therefore would not alter the existing visual character of the surrounding area because it is entirely located in the immediate vicinity of an existing tomato processing complex and will integrate with that complex, rather than be separate from it. Therefore, the proposed project would not alter the existing visual character of the site or surroundings areas. This impact is less than significant.

d. Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?

Less-than-Significant Impact. Construction of the proposed project would be limited to daytime hours, typically between 7 a.m. and 6 p.m., and would not create a new source of substantial lighting that would affect nighttime views in the area. The facility's operational hours are not changing as part of this project. Any new project lighting would be required to meet Merced County's lighting code (Section 18.41.060), which requires the use of directional lighting and minimization of glare and reflections. Compliance with the County's lighting code would minimize potential impacts. Therefore, the proposed project would not create a new source of substantial light or glare that would affect nighttime or daytime views in the area, and impacts are less than significant.

Agriculture and Forestry Resources	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
In determining whether impacts on agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Department of Conservation as an optional model to use in assessing impacts on agriculture and farmland. In determining whether impacts on 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 the 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 checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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 that, 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"/>

2.4 Agricultural Resources

2.4.1 Setting

The Department of Conservation's Farmland Mapping and Monitoring Program (FMMP) identifies several types of land uses on the project site. The existing processing facility is identified as "urban and built up land;" the northern portion of the property is identified as "grazing land;" and the area surrounding the processing facility in the southern portion of the property is identified as "farmland of statewide importance," "unique farmland," and "semi-agricultural and rural commercial." (Department of Conservation 2010) The proposed project site is currently zoned A-1 General Agricultural and is designated Agricultural ("A") by the County General Plan. Existing tomato processing operations are identified as agriculture-related manufacturing and storage uses that are allowed under the zoning designation. The project site is not enrolled in the Williamson Act.

The proposed project site does not contain any forest lands or timberlands nor is it zoned for forest or timberland uses.

The site is underlain by the following soils types: Chivnar Loam is found in a band that runs approximately east-west across the lower quarter of the existing plant and its cooling ponds; Pedcat Loam underlies the southern half of the site, including the areas proposed for the cooling pond expansion and outdoor warehouse expansion; and Pedcat Clay Loam underlies the upper $\frac{3}{4}$ of the existing plant and the proposed truck parking and septic leach mound areas. The quality of site soils is summarized in Table 1, below.

Table 1. Site Soils Agricultural Quality

Soil Name	Storie Index Rating	Land Capability Subclass	
		Irrigated	Non-Irrigated
Chivnar Loam	Grade 4: Poor	3s	4s
Pedcat Loam	Grade 5: Very Poor	--	7w
Pedcat Clay Loam, Leveled	Grade 5: Very Poor	4w	7w

Source: USDA 2013

The Storie Index is a rating based on the soils properties and suitability for agricultural production in California. Soils are rated on a scale of 0–100, with 100 being highest quality, based on four productivity characteristics: soil profile, surface texture, degree of slope, and manageable features (e.g., drainage, fertility, erosion, and salt). Storie Index ratings have been combined into six grades classes. The pertinent classes for these soils are Grade 4 (poor: Storie Index rating of 39-20) and Grade 5 (very poor: Storie Index rating of 19-10).

The land capability class illustrates the general suitability of soils for field crops. Capability classes are arranged by numbers 1 through 8, with 1 representing soils with the least limitations for agriculture and 8 representing the most limited soils. Pertinent to this site, Class 3 is described as having severe limitations that restrict the choice of plants and require special management; Class 4 is described as having very severe limitations that restrict the choice of plants and require special management; and Class 7 is described as having very severe limitations and as unsuitable for cultivation, but suitable for grazing or wildlife habitat. The "s" subscript indicates that the soil is shallow, droughty, or stony; the "w" subscript indicates that water in or on the soil interferes with plant growth.

2.4.2 Impact Discussion

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?

and

b. Conflict with existing zoning for agricultural use or conflict with a Williamson Act contract?

and

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))? Because there is no timberland or forest land in this part of the County, this question is not relevant to the project analysis.

Less-than-Significant Impact. As described above, the FMMP identifies several different land uses on the site. The proposed modifications to the facility would affect lands identified as grazing land (the trailer storage yard), farmlands of statewide importance (a portion of the cooling pond expansion), and unique farmlands (a portion of the cooling pond expansion and the outdoor warehouse expansion). Conversion of this farmland to an agricultural processing use associated with the proposed project would not result in the loss of crop production for Merced County and would not convert prime farmland to a non-agricultural use. As shown in Table 1, the site soils are of low agricultural productivity. Additionally, the proposed project would occur within the existing Liberty Packing farm property and would not require expansion of the tomato processing facility onto adjacent farmlands under adopted Merced County policies.

Change in use of the farmland on the project site by means of an agricultural-industrial processing plant expansion is not identified as a “conversion” by existing or proposed Merced County policies and regulations, and is consistent with General Plan policies calling for diversification and strengthening of the agricultural sector within the County. Expansion of the Liberty Packing facility supports the processing of tomatoes grown within Merced County and neighboring counties. Therefore, proposed project-related impacts on farmlands and agricultural uses are considered less than significant.

With respect to the Williamson Act, the project site is not under Williamson Act contract, and is not located within the Merced County Agricultural Preserve. Therefore, the proposed expansion does not conflict with the Williamson Act.

As described above, the proposed project site is zoned as A-1 “General Agricultural.” The tomato processing facility and related facilities are allowed under this zoning designation pursuant to the existing conditional use permit (CUP 02-001) now proposed for modification. Because the proposed project would be consistent with existing zoning for agricultural uses and CUP 02-001, impacts would be less than significant.

d. Result in the loss of forest land or conversion of forest land to non-forest use? Because there is no timberland or forest land in this part of the County, this question is not relevant to the project analysis.

and

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?

No Impact. The proposed project will modify an existing agricultural processing facility to increase its capacity and efficiency. The availability of agricultural processing facilities is important to the economic viability of the tomato industry. The project will therefore reinforce the agricultural economy and encourage the continued production of tomatoes in the surrounding region. This helps to avoid the potential for conversion of productive farmland.

Air Quality	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a. Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.5 Air Quality

2.5.1 Environmental Setting

Ambient air quality is affected by the climate, topography, and type and amount of pollutants emitted. The proposed location for the project is subject to a combination of topographical and climatic factors that result in high potential for regional and local accumulation of pollutants. The following discussion describes climatic and topographic characteristics of the San Joaquin Valley Air Basin (SJVAB), a description of criteria pollutants, relevant air quality standards, and existing air quality conditions within the basin.

Climate and Topography

The project site is located in the SJVAB. The mountain ranges bordering the air basin near the project site (the Coast Ranges to the west and Sierra Nevada to the east) influence wind directions and speeds and atmospheric inversion layers in the San Joaquin Valley. These mountain ranges channel winds through the valley, affecting both the climate and dispersion of air pollutants.

Because of the mountain ranges bordering the air basin, temperature inversions occur frequently in the valley. Inversions occur when the upper air is warmer than the air beneath it, thereby trapping pollutant emissions near the surface and not allowing them to disperse upward. Inversions occur frequently throughout the year in the San Joaquin Valley, though they are more prevalent and of a greater magnitude in late summer and fall.

Criteria Pollutants

The federal and state governments have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for six criteria pollutants: ozone, carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM), which consists of PM that is 10 microns in diameter or less (PM₁₀) and PM that is 2.5 microns in diameter or less (PM_{2.5}). Ozone and NO₂ are considered regional pollutants because they (or their precursors) affect air quality on a regional scale; NO₂ reacts photochemically with reactive organic gases (ROGs) to form ozone, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO₂, and Pb are considered to be local pollutants that tend to accumulate in the air locally. Particulate matter is considered to be a local, as well as a regional pollutant.

The primary pollutants of concern in the study area are ozone, CO, and PM. Principle characteristics surrounding these pollutants and other criteria air pollutants are discussed below. Valley fever, toxic air contaminants (TACs), and GHG are also discussed, although no air quality standards exist for these pollutants. Regulations related to these pollutants are discussed below under Regulatory Setting. For a more detailed discussion of other pollutants, see Appendix A, Air Quality and Greenhouse Gas Technical Report.

Ozone

Ozone is a respiratory irritant that increases susceptibility to respiratory infections, and is a severe eye, nose, and throat irritant. It is also an oxidant that can cause substantial damage to vegetation and other materials. Ozone causes extensive damage to plants by leaf discoloration and cell damage.

Ozone also attacks synthetic rubber, textiles, plants, and other materials. Ozone is primarily a summer air pollution problem. The ozone precursors ROG and oxides of nitrogen (NO_x) are mainly emitted by mobile sources and by stationary combustion equipment.

Organic Gases

Hydrocarbons are organic gases that are made up of hydrogen and carbon atoms. There are several subsets of organic gases, including ROG and volatile organic compounds (VOCs). ROG are defined by state rules and regulations; VOCs are defined by federal rules and regulations. For the purposes of this assessment, hydrocarbons are classified and referred to as ROG. Both ROG and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels, or as a product of chemical processes. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry-cleaning solutions, and paint (through evaporation).

The health effects of hydrocarbons result from the formation of ozone. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons are considered TACs. There are no separate health standards for ROG, although some are also toxic; an example is benzene, which is both an ROG and a carcinogen.

Nitrogen Oxides

Nitrogen oxides are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. Nitrogen dioxide, often used interchangeably with NO_x , is a brownish, highly reactive gas that is present in all urban environments. The major human sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 (U.S. Environmental Protection Agency 2012a). The combined emissions of NO and NO_2 are referred to as NO_x and reported as equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a particular geographical area may not be representative of local NO_x emission sources.

Inhalation is the most common route of exposure to NO_2 . Because NO_2 has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects primarily depends on the concentration inhaled rather than the duration of exposure. At atmospheric concentration, NO_2 is only potentially irritating. In high concentrations, the result is a brownish-red cast to the atmosphere and reduced visibility. An individual may experience a variety of acute symptoms, such as coughing, difficulty breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe symptomatic NO_2 intoxication after acute exposure has been linked to prolonged respiratory impairment, with such symptoms as chronic bronchitis and decreased lung function (U.S. Environmental Protection Agency 2012a). There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm).

Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere.

Particulate matter less than 10 microns in diameter, about 1/7th the thickness of a human hair, is referred to as PM10. Particulate matter that is 2.5 microns or less in diameter, roughly 1/28th the diameter of a human hair, is referred to as PM2.5. Major sources of PM10 include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. PM2.5 results from fuel combustion (from motor vehicles, power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM10 and PM2.5 can be formed in the atmosphere from gases such as SO₂, NO_x, and VOCs.

PM10 and PM2.5 pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM10 and PM2.5 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body; they can also transport absorbed gases such as chlorides or ammonium into the lungs and cause injury. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, and contribute to haze and reduce regional visibility.

Carbon Monoxide

CO has little effect on plants and materials, but it can have significant effects on human health. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects range from slight headaches to nausea to death.

Motor vehicles are the primary source of CO emissions in most areas. In the project area, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. Dramatic reductions in CO levels across California, including a 50 percent decrease in statewide peak CO levels between 1980 and 2004, have been witnessed during the past several decades. These reductions are primarily a result of California Air Resources Board (CARB) requirements for cleaner vehicles, equipment, and fuels (California Air Resources Board 2004:1).

Toxic Air Contaminants

Although NAAQS and CAAQS exist for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, CARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC

may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment. TACs include air pollutants that can produce adverse human health effects, including carcinogenic effects, after short-term (acute) or long-term (chronic) exposure. Examples of TAC sources within the SJVAB include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor, called a Hazard Index, is used to evaluate risk.

Valley Fever

Coccidioidomycosis, more commonly known as “Valley Fever,” is primarily a disease of the lungs caused by inhalation of spores of the *Coccidioides immitis* fungus. The spores are found in the soil, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever symptoms generally occur within 2 to 3 weeks of exposure. Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. In some cases, painful red bumps may develop. It is important to note these symptoms are not unique to Valley Fever and may be caused by other illnesses as well.

Valley Fever is not contagious and therefore cannot be passed from person to person. Most of those who are infected will recover without treatment within 6 months and will have a lifelong immunity to the fungal spores. In severe cases, such as patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. Only 1 to 2 percent of those exposed who seek medical attention will develop a disease that disseminates (spreads) to other parts of the body other than the lungs.

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. In addition, residents new to the San Joaquin Valley are at a higher risk of infection, due primarily to low immunity to this particular fungus. Many longtime residents exposed to Valley Fever have recovered and therefore developed a life-long immunity to the disease.

The *Coccidioides immitis* fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, or other activities.

Greenhouse Gases

According to Assembly Bill 32 (AB 32), California’s Global Warming Solutions Act, GHGs include the following gases: CO₂, methane (CH₄), nitrous oxide (N₂O), perfluorinated carbons, sulfur hexafluoride (SF₆), and hydrofluorocarbons. California Environmental Quality Act (CEQA) Guidelines (§15364.5) also identify these six gases as GHGs. Primary GHGs by the project include CO₂, CH₄, N₂O, hydrofluorocarbons, and SF₆.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in the Intergovernmental Panel on Climate Change

(IPCC) reference documents (Intergovernmental Panel on Climate Change 1996, 2001:241–280). The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO₂ equivalent (CO₂e), which compares the gas in question to that of the same mass of CO₂ (CO₂ has a global warming potential of 1 by definition). Refer to the Greenhouse Gas section below and Appendix A, Air Quality and Greenhouse Gas Technical Report, for a more detailed discussion greenhouse gases and climate change.

Monitoring Data

Existing air quality conditions in the study area can be characterized by monitoring data collected in the region. The air quality monitoring station at 28261 Avenue 14 near Madera, which is located approximately 47.3 miles southeast of the project site, provided background air quality data. There are no monitoring stations in the vicinity of the Project, the Madera station is one of the closest.

Recent air quality monitoring results from the Madera station are summarized in Table 2. The data represent air quality monitoring for the last three years for which a complete dataset is available (2009 through 2011). As indicated in Table 2, the Madera monitoring station has experienced frequent violations of state and federal ozone standards during this time period.

Table 2. Ambient Air Quality Monitoring Data from Madera Monitoring Station

Pollutant Standards	2009	2010	2011
<i>Ozone (O₃)</i>			
Maximum 1-hour concentration (ppm)	-	0.120	0.095
Maximum 8-hour concentration (ppm)	-	0.107	0.085
Number of days standard exceeded ^a			
CAAQS 1-hour (>0.09 ppm)	-	9	1
CAAQS 8-hour (>0.070 ppm)	-	11	15
NAAQS 8-hour (>0.075 ppm)	-	18	28
<i>Carbon Monoxide (CO)</i>			
Maximum 8-hour concentration (ppm)	-	-	-
Maximum 1-hour concentration (ppm)	-	-	-
Number of days standard exceeded ^a			
NAAQS 8-hour (≥9 ppm)	-	-	-
CAAQS 8-hour (≥9.0 ppm)	-	-	-
NAAQS 1-hour (≥35 ppm)	-	-	-
CAAQS 1-hour (≥20 ppm)	-	-	-
<i>Particulate Matter (PM₁₀)^b</i>			
National ^d maximum 24-hour concentration (µg/m ³)	-	111.9	118.8
National ^d second-highest 24-hour concentration (µg/m ³)	-	111.8	106.5
State ^e maximum 24-hour concentration (µg/m ³)	-	-	-
State ^e second-highest 24-hour concentration (µg/m ³)	-	-	-
National annual average concentration (µg/m ³)	-	26.9	31.2
State annual average concentration (µg/m ³)	-	-	-
Number of days standard exceeded ^a			
NAAQS 24-hour (>150 µg/m ³)	0	0	0

Pollutant Standards	2009	2010	2011
CAAQS 24-hour (>50 µg/m ³)	-	-	-
<i>Particulate Matter (PM_{2.5})</i>			
National ^d maximum 24-hour concentration (µg/m ³)	-	62.7	71.2
National ^d second-highest 24-hour concentration (µg/m ³)	-	58.4	70.1
State ^e maximum 24-hour concentration (µg/m ³)	-	-	-
State ^e second-highest 24-hour concentration (µg/m ³)	-	-	-
National annual average concentration (µg/m ³)	-	-	-
State annual average concentration (µg/m ³)	-	-	-
Number of days standard exceeded ^a			
NAAQS 24-hour (>35 µg/m ³)	-	-	34
Notes			
ppm = parts per million			
NAAQS = National Ambient Air Quality Standards			
CAAQS = California Ambient Air Quality Standards			
µg/m ³ = micrograms per cubic meter			
mg/m ³ = milligrams per cubic meter			
- = data not available			
^{a.} An exceedance is not necessarily a violation.			
^{b.} National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.			
Source: California Air Resources Board 2012b			

Air Quality Standards and Attainment Status

Areas are classified as either attainment or nonattainment with respect to state and federal air quality standards. These classifications are made by comparing actual monitored air pollutant concentrations to state and federal standards. If a pollutant concentration is lower than the state or federal standard, the area is classified as being in *attainment* of the standard for that pollutant. If a pollutant violates the standard, the area is considered a *nonattainment* area. If data are insufficient to determine whether a pollutant is violating the standard, the area is designated *unclassified*. Areas that were previously designated as nonattainment areas, but have recently met the standard are called *maintenance* areas.

Local monitoring data (Table 2, preceding) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. Table 3 below summarizes the attainment status of the Merced County with regard to the NAAQS and CAAQS.

Table 3. Federal and State Attainment Status for Merced County

Criteria Pollutant	Federal Designation	State Designation
O ₃ (1-hour)	-- ^a	Extreme Nonattainment
O ₃ (8-hour)	Extreme Nonattainment	Nonattainment
CO	Attainment	Unclassified
PM ₁₀	Serious Maintenance	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
NO ₂	Attainment	Attainment

Criteria Pollutant	Federal Designation	State Designation
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No Federal Standard)	Attainment
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility	(No Federal Standard)	Unclassified
Notes:		
CO	= carbon monoxide	
O ₃	= ozone	
PM ₁₀	= particulate matter less than or equal to 10 microns	
PM _{2.5}	= particulate matter less than or equal to 2.5 microns	
NO ₂	= nitrogen dioxide	
SO ₂	= sulfur dioxide	
^a The federal 1-hour standard of 12 parts per hundred million was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in the state implementation plans.		
Source: California Air Resources Board 2012c; U.S. Environmental Protection Agency 2012b		

Sensitive Receptors

The San Joaquin Valley Air Pollution Control District (SJVAPCD) generally defines a *sensitive receptor* as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants, such as children, the elderly, and people with illnesses. Examples of sensitive receptors include residential areas, schools, and hospitals. There are no sensitive receptors within the immediate vicinity (i.e., within 0.5 mile) of the project site. The closest receptors include a few scattered rural single family residences located approximately 0.7 mile north of the project. Volta Elementary School is also located about 1 mile south of the project.

2.5.2 Regulatory Setting

Federal

The federal Clean Air Act (CAA), promulgated in 1963 and amended several times thereafter, including the 1990 Clean Air Act amendments, establishes the framework for modern air pollution control. The act directs the U.S. Environmental Protection Agency (EPA) to establish NAAQS for the six criteria pollutants (discussed above). The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life. Table 4 summarizes the NAAQS.

Areas that do not meet the federal ambient air quality standards shown in Table 4 are called *nonattainment* areas. For these nonattainment areas, the CAA requires states to develop and adopt State Implementation Plans (SIPs), which are air quality plans showing how air quality standards will be attained. The SIP, which is reviewed and approved by EPA, must demonstrate how the federal standards will be achieved. In California, EPA has delegated authority to prepare SIPs to CARB, which has delegated that authority to individual air districts.

Clean Air Non-road Diesel Rule

To reduce emissions from off-road diesel equipment, EPA established a series of increasingly strict emission standards for new engines. Locomotives and marine vessels are exempt from this rule. Manufacturers of off-road diesel engines would be required to produce engines meeting certain emission standards based on the model year the engine was manufactured based on the following compliance schedule:

- Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category.
- Tier 2 standards were phased in from 2001 to 2006.
- Tier 3 standards were phased in from 2006 to 2008.
- Tier 4 standards, which likely will require add-on emissions control equipment to attain them, will be phased in from 2008 to 2015.

On-road Diesel Engine Rule

In December 2000, EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers are required to produce new diesel vehicles that meet PM and NO_x emission standards beginning with model year 2007 and phased-in between 2007 and 2010. The phase-in is based on a percent-of-sales basis: 50 percent from 2007 to 2009 and 100 percent in 2010 (U.S. Environmental Protection Agency 2010).

Table 4. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards ^a	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None	None
	8-hour	0.070 ppm	0.075 ppm	0.075 ppm
PM ₁₀	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual mean	20 µg/m ³	None	None
PM _{2.5}	24-hour	None	35 µg/m ³	35 µg/m ³
	Annual mean	12 µg/m ³	15.0 µg/m ³	15.0 µg/m ³
CO	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
NO ₂	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
SO ₂ ^e	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.014 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Pb	30-day Average	1.5 µg/m ³	None	None
	Calendar quarter	None	1.5 µg/m ³	1.5 µg/m ³
	3-month average	None	0.15 µg/m ³	0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	None	None

Criteria Pollutant	Average Time	California Standards	National Standards ^a	
			Primary	Secondary
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Notes:

µg/m³ = micrograms per cubic meter

ppm = parts per million

National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

Source: California Air Resources Board 2012a

State

CARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs. Table 4 identifies California's ambient air quality standards.

Responsibilities of air districts include overseeing stationary source emissions, approving permits, maintaining emissions inventories, maintaining air quality stations, overseeing agricultural burning permits, and reviewing air quality-related sections of environmental documents required by CEQA.

Statewide Truck and Bus Regulations

Originally adopted in 2005, the on-road truck and bus regulation requires heavy trucks to be retrofitted with PM filters. The regulation applies to privately and federally owned diesel fueled trucks with a gross vehicle weight rating (GWR) greater than 14,000 pounds. Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) phase-in schedule. Compliance paths ensure that by January 2023, nearly all trucks and buses will have 2010 model year engines or newer.

State Tailpipe Emissions Standards

To reduce emissions from off-road diesel equipment, on-road diesel trucks, and harbor craft, CARB established a series of increasingly strict emission standards for new engines. New construction equipment used for the project, including heavy duty trucks and off-road construction equipment will be required to comply with the standards.

Toxic Air Containment Regulations

California regulates TACs primarily through the Toxic Air Contaminant Identification and Control Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). In the early 1980s, CARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. AB 1807 created California's program to reduce exposure to air toxics. The Air Toxics "Hot Spots" Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

In August 1998, CARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, CARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (California Air Resources Board 2000). The goal of the plan is to reduce diesel PM10 emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identifies 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). CARB will implement over the plan next several years. Because CARB measures are enacted before any phase of construction, the project would be required to comply with applicable diesel control measures.

AB 1807 sets forth a formal procedure for CARB to designate substances as TACs. This includes research, public participation, and scientific peer review before CARB designates a substance as a TAC. To date, CARB has identified 21 TACs, and has also adopted EPA's list of Hazardous Air Pollutants as TACs. In August 1998, diesel particulate matter (DPM) was added to the CARB list of TACs (California Air Resources Board 1998).

The Hot Spots Act requires that existing facilities that emit toxic substances above specified levels complete the following.

- Prepare a toxic emission inventory.
- Prepare a risk assessment if emissions are significant (i.e., 10 tons per year or on SJVAPCD's Health Risk Assessment list).
- Notify the public of significant risk levels.
- Prepare and implement risk reduction measures.

CARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California. For example, CARB adopted an idling regulation for on-road diesel-fueled commercial vehicles in July 2004 and updated in October 2005. The regulation applies to public and privately owned trucks with a GWR greater than 10,000 pounds. Vehicles subject to the regulation are prohibited from idling for more than five minutes in any one location. CARB also adopted a regulation for diesel-powered construction and mining vehicles operating. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which CARB must obtain authorization from EPA prior to enforcement. The regulation also imposes a five-minute idling limitation on owners, operators, and renters or lessees of off-road diesel vehicles. In some cases, the particulate matter reduction strategies also reduce smog-forming emissions such as NO_x. As an ongoing process, CARB reviews air contaminants and identifies those that are classified as TACs. CARB also continues to establish new programs and regulations for the control of TACs, including DPMs, as appropriate.

Local

SJVAPCD has local air quality jurisdiction over projects in Merced County. Pursuant to the Clean Air Act amendments, SJVAPCD has adopted attainment plans to address ozone, PM, and CO. The 2007 Ozone Plan contains a comprehensive list of regulatory and incentive-based measures to reduce VOC and NO_x emissions within the SJVAB. In particular, the plan proposes a 75 percent reduction in NO_x and 25 percent reduction in VOC by 2023. SJVAPCD's 2007 PM10 Maintenance Plan and 2008 PM2.5 Plan likewise include strategies to reduce PM emissions throughout the air basin. Finally, the

2004 California State Implementation Plan for Carbon Monoxide addresses CO emissions throughout the state.

The project may be subject to the following district rules. This list of rules may not be all encompassing, as additional SJVAPCD rules may apply to the action alternatives as specific components are identified. These are rules that have been adopted by SJVAPCD to reduce emissions throughout the San Joaquin Valley.

- Rule 2201 (New and Modified Stationary-Source Review Rule). This rule applies to all new stationary sources and all modifications to existing stationary sources subject to SJVAPCD permit requirements that, after construction, emit or may emit one or more pollutants regulated by the rule. Because the facility is subject to SJVAPCD Rule 2201, it is not subject to the SJVAPCD's Indirect Source Review Guidelines (SJVAPCD Rule 9510), per Section 4.4.3 of Rule 9510.
- Rule 3135 (Dust Control Plan Fees). This rule requires the applicant to submit a fee in addition to a dust control plan. The purpose of this rule is to recover SJVAPCD's cost for reviewing these plans and conducting compliance inspections.
- Rule 4101 (Visible Emissions). This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- Rule 4102 (Nuisance). This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and subject to SJVAPCD enforcement action.
- Rule 4701 (Internal Combustion Engines—Phase 1). This rule limits the emissions of NO_x, CO, and VOC from internal combustion engines. These limits are not applicable to standby engines as long as they are used fewer than 200 hours per year (e.g., for testing during non-emergencies).
- Rule 4702 (Internal Combustion Engines—Phase 2). This rule limits the emissions of NO_x, CO, and VOC from spark-ignited internal combustion engines.
- Regulation VIII (Fugitive PM₁₀ Prohibitions). This is a series of rules (Rules 8011–8081) designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, and other activities.

SJVAPCD has developed an off-site mitigation program to reduce ROG and NO_x emissions in the SJVAB. SJVAPCD's Voluntary Emission Reduction Agreement (VERA) is a means of generating revenue to fund the SJVAPCD's Emissions Reduction Incentive Program. The Emissions Reduction Incentive Program funds grants and projects to achieve emissions reductions in the SJVAB. The SJVAPCD has operated the incentive program since 1992, resulting in considerable criteria pollutant reductions throughout the region. Project applicants relying on the VERA to reduce adverse air quality impacts must 1) calculate the off-site mitigation fee required to reduce project-level emissions to below applicable thresholds, and 2) include the mitigation fee in the environmental document, project approval conditions, and in the Mitigation Monitoring and Reporting Protocol. Example programs funded through the VERA include the following.

- On-Road Truck Voucher Program
- Burn Clean Program

- Heavy Duty Engine Program
- Cordless Zero-Emission Commercial Lawn & Garden Equipment Demonstration Program
- Statewide School Bus Retrofit Program

2.5.3 Discussion

The State CEQA Guidelines Appendix G (14 CCR 15000, et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing air quality. According to these Guidelines, a project impact would be considered significant if construction or operation of the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

SJVAPCD's published guidelines, *Guide for Assessing Air Quality Impacts* (San Joaquin Valley Air Pollution Control District 2002) do not require the quantification of construction emissions. Rather, the guidelines require implementation of effective and comprehensive feasible control measures to reduce PM₁₀ emissions (San Joaquin Valley Air Pollution Control District 2002). SJVAPCD considers PM₁₀ emissions to be the greatest pollutant of concern when assessing construction-related air quality impacts and has determined that compliance with its Regulation VIII, including implementation of all feasible control measures specified in its *Guide for Assessing Air Quality Impacts* (San Joaquin Valley Air Pollution Control District 2002), constitutes sufficient mitigation to reduce construction-related PM₁₀ emissions to less-than-significant levels and minimize adverse air quality effects. All construction projects must abide by Regulation VIII. Since the publication of their guidance manual, SJVAPCD has revised some of the rules comprising Regulation VIII. Guidance from SJVAPCD staff indicates that implementation of a Dust Control Plan would satisfy all of the requirements of SJVAPCD Regulation VIII (Siong pers. comm.).

The SJVAPCD's applied thresholds of significance used in this analysis, as indicated in their *Guide for Assessing and Mitigating Air Quality Impacts* (San Joaquin Valley Air Pollution Control District 2002) and through consultation with SJVAPCD staff (Siong pers. comm.), are summarized below.

- A significant impact would occur if ROG emissions would exceed 10 tons/year.
- A significant impact would occur if NO_x emissions would exceed 10 tons/year.
- A significant impact would occur if PM₁₀ emissions would exceed 15 tons/year.
- A significant impact would occur if PM_{2.5} emissions would exceed 15 tons/year.

A detailed analysis of the quantified impacts of the project's air quality emissions resulting from construction and operation is found in Appendix A, Air Quality and Greenhouse Gas Technical Report. The results of that analysis are summarized below.

Would the project:***a. Conflict with or obstruct implementation of the applicable air quality plan?***

Less-than-Significant Impact. The SJVAPCD plans estimate future emissions in the SJVAB and determine strategies necessary for emissions reductions through regulatory controls. Emissions projections are based on population, vehicle, and land use trends typically developed by the SJVAPCD and San Joaquin Council of Governments.

A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds estimates used to develop applicable air quality plans. If a project proposes development that is greater than that anticipated growth projections, the project would be in conflict with the SJVAPCD air quality plans, and might therefore have a potentially significant impact on air quality because emissions would exceed those estimated for the region.

The purpose of the proposed project is to expand operational capacity at an existing tomato packing facility. The project would not increase employment or growth within the region. Moreover, the project would enhance environmentally positive features on the site. The modifications proposed as part of the project will increase the efficiency of existing equipment and reduce the intensity of water and energy consumption. Accordingly, the project contributes to the region's long term goals of increasing energy efficiency and reducing air pollution. Because the project does not result in changes to employment, it is also consistent with recent growth projections for the region and would not conflict with the current SJVAPCD air quality plans. As discussed further below, the project will also comply with all SJVAPCD rules and regulations. Based on the above analysis, the project would not conflict with or obstruct implementation of any applicable land use plan or policy. Therefore, the impact would be less than significant.

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

Less-than-Significant Impact with Mitigation Incorporated.

Construction

Construction of the project has the potential to create air quality impacts through the use of heavy-duty construction equipment, worker vehicle trips, and haul truck trips. In addition, earthmoving activities would result in minor fugitive dust emissions. Mass criteria pollutant emissions generated by these sources were quantified using standard air quality models and information provided by the project applicant. Emissions associated with construction of the project are presented in the following Table 5. As indicated in Table 5, emissions are well below SJVAPCD's numeric significance thresholds for criteria pollutants.

Table 5. Estimated Construction Emissions (tons per year)

Year	ROG	NO_x	CO	SO₂	PM₁₀	PM_{2.5}
2013	0.0	0.0	0.1	0.0	0.0	0.0
2014	0.3	2.4	1.2	0.0	0.2	0.1
<i>SJVAPCD Numeric Thresholds</i>	10	10	-	-	15	15
Source: CalEEMod (see Appendix A, Air Quality and Greenhouse Gas Technical Report)						

SJVAPCD requires all construction activities to comply with fugitive dust control requirements under Regulation VIII. Guidance from SJVAPCD staff indicates that implementation of a Dust Control Plan would satisfy all of the requirements of SJVAPCD Regulation VIII (Siong pers. comm. September 2011).

Implementation of Mitigation Measure AQ-1 would ensure that fugitive dust emissions from construction activities are less-than-significant. Pursuant to Regulation VIII, the project-specific Dust Control Plan will be required to be prepared and submitted to SJVAPCD at least 30 days prior to the start of construction (as indicated in Mitigation Measure AQ-1).

Mitigation Measure AQ-1: Prepare and implement a Dust Control Plan to comply with SJVAPCD Regulation VIII requirements to control construction emissions of PM10.

To control the generation of construction-related PM10 emissions, construction contractors will prepare and submit for approval a dust control plan to the SJVAPCD at least 30 days prior to any earthmoving or construction activities. Potential measures that might be included in the dust control plan could include, but are not limited to:

- Pre-activity.
 - Pre-water the work site and phase work to reduce the amount of disturbed surface area at any one time.
- Active operations.
 - Apply water to dry areas during leveling, grading, trenching, and earthmoving activities.
 - Construct and maintain wind barriers and apply water or dust suppressants to the disturbed surface areas.
- Inactive operations, including after work hours, weekends, and holidays.
 - Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.
- Temporary stabilization of areas that remain unused for seven or more days.
 - Restrict vehicular access and apply and maintain water or dust suppressants on all un-vegetated areas.
 - Establish vegetation on all previously disturbed areas.
 - Apply and maintain gravel at all previously disturbed areas.
 - Pave previously disturbed areas.
- Unpaved Access and haul roads, traffic and equipment storage areas.
 - Apply water or dust suppressants to unpaved haul and access roads.
 - Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.
 - Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.
- Wind events.
 - Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.

- Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- Outdoor handling of bulk materials.
 - Water or dust suppressants will be applied when handling bulk materials.
 - Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
- Outdoor storage of bulk materials.
 - Water or dust suppressants will be applied to storage piles.
 - Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.
- On-site transporting of bulk materials.
 - Vehicle speed will be limited on the work site.
 - All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.
 - A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - Haul trucks will be covered with a tarp or other suitable cover.
- Off-site transporting of bulk materials.
 - The following practices will be performed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- Outdoor transport using a chute or conveyor.
 - No open chutes or conveyors will be used.
 - Chutes or conveyors will be fully enclosed.
 - Water spray equipment will be used to sufficiently wet the materials.
 - Transported materials will be washed or screened to remove fines (PM10 or smaller).

Operation

Operation of the project has the potential to create air quality impacts primarily associated with mobile sources. Mobile sources would include haul trucks, employee vehicles, and locomotives. Natural gas combustion by on-site boilers would generate criteria pollutants, but these emissions are subject to SJVAPCD Rule 2201. Under Rule 2201, permitted emissions in excess of regulatory thresholds must be offset to net zero. Accordingly, criteria pollutants associated with on-site natural

gas combustion are not included in the impact determination. The existing packing facility currently operating on the project site represents a source of emissions. Emissions generated by these uses represent existing conditions, against which the project must be evaluated. Estimated operational emissions under both existing and project conditions are summarized in Table 6. The difference in operational emissions between the project and the existing facility represents the net new impact of the project.

Table 6. Estimated Operational Emissions (tons per year)

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
<i>No Project (Existing Conditions) ^a</i>						
Employee Trips	1	1	15	0	0	0
Haul Trucks ^b	3	54	14	0	4	2
Locomotives	3	109	28	0	2	2
Back-up Generator	0	0	0	0	0	0
<i>Total Emissions</i>	<i>6</i>	<i>164</i>	<i>57</i>	<i>0</i>	<i>6</i>	<i>3</i>
<i>Project Conditions (2014) ^c</i>						
Employee Trips	0	1	13	0	0	0
Haul Trucks ^b	3	61	14	0	4	2
Locomotives	3	109	28	0	2	2
Back-up Generator	0	0	0	0	0	0
<i>Total Emissions</i>	<i>6</i>	<i>171</i>	<i>55</i>	<i>0</i>	<i>5</i>	<i>3</i>
<i>Net Annual Emissions ^{d, e}</i>						
<i>Project Conditions minus</i>	<i>0</i>	<i>6.45</i>	<i>-3</i>	<i>0</i>	<i>0</i>	<i>0</i>
<i>No Project (Existing Conditions) ^f</i>						
SJVAPCD Thresholds	10	10	-	-	15	15

Notes

- a. Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.
- b. Includes both tomato and bag and box trucks.
- c. Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.
- d. Represents the net project impact, or the change in emissions relative to existing conditions.
- e. Natural gas combustion by on-site boilers would generate criteria pollutants. However, these emissions are subject to SJVAPCD Rule 2201 and are therefore not included in the impact determination. Nevertheless, emissions associated with existing and project natural gas combustion are provided below for informational purposes.
Existing conditions (tons/year): ROG, 9; NO_x, 84; CO, 71; SO₂, 1; PM10, 6; PM2.5, 6
Project conditions (tons/year): ROG, 11; NO_x, 104; CO, 87; SO₂, 1; PM10, 8; PM2.5, 8
Net project impact (tons/year): ROG, 2; NO_x, 20; CO, 16; SO₂, 0; PM10, 1; PM2.5, 1
- f. Emissions may not total due to rounding to the closest whole number.

As shown in Table 6, net annual NO_x emissions during operations would not exceed the SJVAPCD significance thresholds in the assumed first full build out year (2014). Therefore, operational impacts would be less than significant and no mitigation is required.

c. Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?

Less-than-Significant with Mitigation Incorporated. The SJVAPCD has identified project-level thresholds to evaluate impacts to air quality. In developing these thresholds, SJVAPCD considered levels at which project emissions would be cumulatively considerable. For example, as noted in the SJVAPCD's (2002) *Guide for Assessing and Mitigating Air Quality Impacts*, "any proposed project that would individually have a significant air quality impact...would also be considered to have a significant cumulative air quality impact."

The criteria pollutant thresholds presented above therefore represent the maximum emissions the project may generate before contributing to a cumulative impact on regional air quality as determined by the SJVAPCD. Therefore, exceedances of the project-level thresholds would be cumulatively considerable. As discussed in item *b* above, construction emissions associated with the project are not expected to exceed the SJVAPCD's quantitative thresholds. Pursuant to SJVAPCD regulations, Mitigation Measure AQ-1 is required to reduce construction-related fugitive dust emissions to less than significant.

d. Expose sensitive receptors to substantial pollutant concentrations?

Less-than-Significant with Mitigation Incorporated.

Diesel Particulate Matter

Diesel-fueled engines, which generate DPM, would be used during project construction. However, due to the short-term nature of construction activities, the SJVAPCD does not consider cancer risks associated with construction to be a significant issue (Siong pers. comm. May 2012). Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. Although elevated cancer rates can result from exposure periods of less than 70 years, acute exposure (i.e., exposure periods of 2 to 3 years) is not anticipated to result in an increased health risk.

Construction activities would occur in nine phases, requiring no more than 160 days (see Table 6-1 in Appendix A, Air Quality and Greenhouse Gas Technical Report). Accordingly, health impacts associated with exposure to diesel exhaust from project construction are not anticipated to be significant because construction activities are expected to be well below the 70-year exposure period used in Health Risk Assessments. Moreover, there are no sensitive receptors within one mile of the construction site. Because DPM concentrations dissipate as a function of distance, potential exposure to the nearest receptors would be substantially reduced. Therefore, construction of the project is not anticipated to result in an elevated cancer risk to exposed persons.

Long-term project operations would result in an increase of 120 daily truck trips during the peak season (July to November). This represents an increase of approximately 24 % over the 2013 daily average of 502 trips. Potential health risks associated with these vehicles were estimated using the SJVAPCD's diesel truck travel health risk assessment screening tool (see Section 6.1.2.7 of Appendix A, Air Quality and Greenhouse Gas Technical Report). Based on the conservative screening analysis, potential health risks associated with increased truck traffic were estimated to result in 3.11 additional cases of cancer per one million, which is well below the accepted threshold of 10 cases

per million (see Section 6.2.1 of Appendix A, Air Quality and Greenhouse Gas Technical Report). Consequently, this impact would be less than significant and no mitigation is required.

Carbon Monoxide

Elevated CO concentrations are typically found in areas with significant traffic congestion. CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. The SJVAPCD requires an analysis of localized CO concentrations associated with traffic congestion to ensure concentrations remain below CAAQS and NAAQS. The SJVAPCD has developed a set of preliminary screening criteria that can be used to determine whether a project would cause or contribute to an existing or future violation of the ambient air quality standards. According to the guidelines, projects that meet either of the following criteria would likely result in a localized CO “hotspot” and should be evaluated further, while projects that do not affect intersections meeting either of the following criteria are assumed to not result in any potential violations of the CO NAAQS or CAAQS.

- Level of service (LOS) on one or more streets or intersections will be reduced to LOS E or F.
- Congestion and/or traffic on LOS F streets or intersections would be substantially increased.

According to Merced County General Plan Background Report, South Ingomar Grade Road and surrounding intersections operate at LOS C or better (Mintier & Associates 2012). Therefore, the proposed project would not cause or contribute to an existing or future violation of the NAAQS or CAAQS. This impact would be less than significant.

Valley Fever

Although not a direct air pollutant, valley fever (*coccidioidomycosis*) fungal spore infections develop through inhalation of airborne fungal spores contained in windblown dust, and is recognized to be endemic in the San Joaquin Valley due to the dry, alkaline soil conditions. The project site is surrounded by agricultural fields that are frequently tilled, so baseline windblown dust concentrations are likely elevated. In order to prevent exacerbating the existing windblown dust issues at the project site, all construction activity for the proposed project will be conducted under a rigorous Dust Control Plan prepared in accordance with SJVAPCD Regulation VIII (Mitigation Measure AQ-1). Adherence to the Dust Control Plan would prevent the proposed project from substantially increasing windblown dust concentrations compared to background levels. Therefore, with implementation of Mitigation Measure AQ-1, this impact would be less than significant.

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

Less-than-Significant Impact. While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and air districts. Any project with the potential to frequently expose the public to objectionable odors would be deemed as one having a significant impact. According to CARB’s (2005) *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, and manufacturing. Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, schools, etc., warrant the closest scrutiny; but consideration should also be given to other land uses where people may congregate, such as recreational facilities, work sites, and commercial areas. The project may cause temporary odors resulting from diesel exhaust during construction equipment operation and truck activity, as well as from truck deliveries during long-

term operations. Although these emissions may be noticeable from time to time, they would be localized and are not likely to adversely affect people off-site resulting in confirmed odor complaints. Operation of the project is not expected to result in substantial odors, relative to existing conditions. Moreover, as previously discussed, there are no sensitive receptors within one mile of the project. Any odors generated during operations would dissipate as a function of distance. Accordingly, this impact would be less than significant.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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 U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marshes, vernal pools, coastal wetlands, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input 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"/>

2.6 Biological Resources

The discussion of biological resources present on the expansion site and its surrounding areas and potential project impacts on these resources is based in part on previous studies conducted on

portions of the project facility, specifically a biological reconnaissance-level survey, botanical surveys, and a wetland delineation. However, these studies did not include the area being expanded into to the south of the existing facility, which consists of low-productivity farmland.

2.6.1 Setting

The following sources were used to identify sensitive habitats and special status plant and animal species that are known to occur or with potential to occur at the expansion site and its surroundings:

- A search of the California Natural Diversity Database (CNDDB) of the U.S. Geological Survey (USGS) Volta and surrounding eight 7.5-minute Quadrangles.
- U.S. Fish and Wildlife Service (USFWS) list of endangered, threatened, and proposed species for the U.S. Geological Survey Volta 7.5-minute Quadrangles
- The 1960 (photo revised 1971) USGS 7.5-minute Volta, California Topographic Quadrangle.
- Professional experience with the local flora and fauna.

The existing site is mostly developed with buildings, parking lots, outside storage areas, wastewater treatment facilities, and a 60-acre cooling pond that holds water for the facilities evaporation equipment. The expansion portion of the project site consists of cultivated fields that appear to be planted in either hay or grain crops, and a large seasonal wetland occurring to the north of facilities. The fields also have ditches on them that are used to circulate water from the packing facility to the fields. The southern-most portion of this area is bordered by the San Luis Wasteway, which routes water from O'Neill Forebay east to the Volta Wildlife Area. The project site is surrounded by cultivated lands to the north, west, and south, which appear to all be planted in hay and grain crops. The California Department of Fish and Wildlife's (CDFW) Volta Wildlife Area and a natural area with residences and outbuildings occurs to the east of the project site.

A reconnaissance-level field survey of portions of the project site was conducted by ICF International (ICF) biologists on November 2, 2011. This is attached this Initial Study as Appendix B. Though the specific areas surveyed do not include the currently proposed expansion areas to the south, they do provide general information on biological conditions in the vicinity. The report documenting these findings notes that 11 special-status wildlife species and 20 special-status plants have a potential to occur within the project vicinity. The report identified sensitive wildlife that have a potential to occur on the project site and vicinity, which include the state and federally listed as threatened giant garter snake (*Thamnophis gigas*), western pond turtle (*Actinemys marmorata*), the state threatened Swainson's hawk (*Buteo swainsoni*), western burrowing owl (*Athene cunicularia*), and the state threatened and federally endangered San Joaquin kit fox (*Vulpes macrotis mutica*). Special-status plants were also identified as potentially occurring in the current project site, specifically areas to the northern of the developed portion of the site, which include a perennial marsh and seasonal wetlands.

Botanical surveys were conducted by ICF botanists in the natural area adjacent to the existing facility (east of the existing storage yard and west of Ingomar Grade) in May and August of 2012. The botanist also considered the potential for special-status plants to occur in the cooling pond expansion area, which is currently cultivated. These surveys identified two sensitive species: spiny-sealed button celery (*Eryngium spinosepalum*) and lesser saltscale (*Atriplex minuscula*). Both of these plants are California Native Plant Society (CNPS) List 1B species. The report also notes that no

special-status plant species would occur within the cooling pond expansion area due to the high level of disturbance.

A delineation of waters of the United States was conducted at the existing facility and the natural area to the west where the aforementioned studies occurred but not within the agricultural fields to the south where the expansion will occur. These surveys identified several wetlands and other waters within the facility, some of which would be within and adjacent to the proposed facilities. The wetland delineation identified two seasonal wetlands that are heavily vegetated and a perennial marsh that has areas of open water and emergent vegetation. Several irrigation ditches were identified as other waters due to their ultimate hydrologic connectivity to the San Joaquin River. The existing cooling pond was determined to not be a water of the United States.

In addition to these studies, an ICF biologist reviewed aerial photos, topographic maps, and CNDDB data to assess the potential for special-status species and other sensitive biological resources to occur on or adjacent to the project site.

The expansion area to the south of the existing facilities (the cultivated lands) has not been surveyed. There are ditches here that are part of an on-site system to move water produced by the facility and apply the water to the farmland. These are man-made ditches constructed in uplands that do not have off-site connections. For these reasons, it is concluded that they would not be considered jurisdictional waters of the United States.

2.6.2 Local Regulatory Setting

The recently adopted Merced County 2030 General Plan includes goals, policies, and implementation programs to protect natural and environmental resources of the County. The following policies and programs are directly relevant to the review of the proposed expansion of the Liberty Packing facility which is located within the Grasslands Ecological Area and near the Volta Wildlife Area managed by CDFW.

Policy NR-1.21, Special Status Species Surveys and Mitigation

Incorporate the survey standards and mitigation requirements of state and federal resource management agencies for use in the County's review process for both private and public projects.

Program NR-E: Biological Resources Review Requirements

County biological resources review requirements should identify state and federal biological significance thresholds and species-specific survey guidelines, and should include types of survey reports, surveyor qualifications, countywide habitat classifications, foraging crop habitat values, approved mitigation banks, and procedures to facilitate pre-consultation with state and federal agencies. State and federal mitigation standards should be considered as minimum County standards.

Submit results of biological resources assessments, surveys and proposed mitigation measures to the appropriate state and federal agency as early in the review process as practicable, to expedite and ensure regulatory consistency among local, regional, state, and federal agencies with jurisdiction over such resources.

Policy LU-4.7, Wetland Habitat Area Separation

Do not allow rural commercial and industrial uses, secondary residences, and ancillary agricultural uses within a half mile of either State or Federal wildlife refuges, or managed wetlands within the Grasslands Ecological Area when it is determined by the County that there could be an unmitigated impact to natural resources or habitat.

Policy LU-1.13, Wetland Habitat Area Separation

Do not allow rural commercial and industrial uses, secondary residences, and ancillary agricultural uses within a half mile of either State or Federal wildlife refuges, or managed wetlands with the Grasslands Ecological Area when it is determined by the County that there could be an unmitigated impact to natural resources or habitat.

Policy LU-10.14: Consultation with Grassland Resources Regional Working Group

Consult with the Grasslands Resources Regional Working Group during project review and conservation planning efforts for projects within the boundaries of the Grasslands Focus Area.

These policies and programs are also supported by the County's "Open Space Development Review System" (OSDRS) which is contained in Program NR-G. Based on the biological resources inventory conducted by ICF biologists, both through literature and available databases, and through site reconnaissance, a thorough evaluation of the existing biological resources and potential resources was established. The following analysis in Section 2.6.3 contains the conclusions of this evaluation and recommends several mitigation measures to ensure impacts to biological resources are reduced to a less than significant level as mandated by the General Plan policies listed above. In addition, this Draft Initial Study will be forwarded to the responsible and trustee Federal and State agencies for review and comment, and to the Grasslands Resources Regional Working Group due to the project's location within the Grasslands Ecological Area.

2.6.3 Impact Discussion

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?

Less-than-Significant Impact with Mitigation Incorporated. The proposed project would remove approximately 96 acres of cultivated lands for the expansion of the cooling pond (80 acres), the open product storage area (12 acres), and the trailer storage yard (4 acres). Also an unspecified amount of cultivated lands would be impacted by the mounded septic system proposed north of the existing facility and identified as area "M" on Figure 2. These areas represent potential habitat for special-status species.

The project site is not in a designated critical habitat area for any federally listed species. Portions of the project site provide potentially suitable habitat for eleven special-status wildlife species with potential to occur on the project site. These species include giant garter snake, western pond turtle, Swainson's hawk, white-tailed kite (*Elanus leucurus*), northern harrier (*Circus cyaneus*), tricolored blackbird (*Agelaius tricolor*), yellow-headed blackbird (*Xanthocephalus xanthocephalus*), burrowing

owl, cackling goose (*Branta hutchinsii leucopareia*), San Joaquin kit fox, and American badger (*Taxidea taxus*). Additional details about these species' potential to occur within the project site and site characteristics are included below.

The seasonal wetlands identified during the wetland delineation do not represent suitable habitat for vernal pool species based on the vegetation in these features. The wetlands were not found to be densely vegetated with saltgrass (*Distichlis spicata*), curly dock (*Rumex crispus*), bulrush (*Schoenoplectus acutus*), baltic rush (*Juncus balticus*), and several small willow trees (*Salix laevigata*). The presence of these plants indicates that these areas remain saturated for an extended portion of the year, which would not support vernal pool species that are adapted to dry summer conditions.

Giant garter snake is known to occur to the east in the Volta Wildlife Area, approximately 2.25 miles northeast of the project site (California Department of Fish and Wildlife 2013). The irrigation ditch to the north of processing facility along Ingomar Grade is hydrologically connected to the Volta Wildlife Area. The San Luis Wasteway, which is just south of the proposed expansion area for the cooling pond, also has direct hydrologic connection to the Volta Wildlife Area. The perennial marsh and irrigation ditch to the north of the processing facility represent suitable habitat for giant garter snake. The perennial marsh has emergent vegetation and open areas along the banks suitable for basking, which would be suitable for giant garter snake. Though, as noted in the 2011 reconnaissance survey, the general area around this wetland lacks mammal burrows, giant garter snakes can disperse to upland wintering habitat as far 250 meters from wetland habitats (U.S. Fish and Wildlife Service 1999). Portions of the irrigation ditch have emergent vegetation, but most of it is unvegetated and thus may only represent potential dispersal habitat for giant garter snakes. The cooling pond is less likely to have giant garter snake because it lacks emergent vegetation and does not have a hydrologic connection to more suitable habitats. The ditches within the cultivated areas where the expanded cooling pond and storage areas would be may possess suitable habitat for giant garter snake though these feature lack a direct hydrologic connection to the San Luis Wasteway or the aforementioned perennial marsh.

Western pond turtle may occur in the perennial marsh, the irrigation and other ditches, and the cooling pond within the project site. No western pond turtles were observed in the perennial marsh during the 2011 reconnaissance level surveys. This species is known to occur at the Volta Wildlife Area and in the San Luis Wasteway (California Department of Fish and Wildlife 2013).

The cultivated lands and wetlands within the project site provide potential foraging habitat for Swainson's hawk, white-tailed kite, and northern harrier. There are some large trees located outside, but within 0.5 mile, of the project site that may provide suitable nesting habitat for these species. Swainson's hawk and northern harrier have been documented nesting as close as within 1 mile of the project site (California Department of Fish and Wildlife 2013). The loss of Swainson's hawk foraging habitat within 5 miles of an active Swainson's hawk nest would also be a significant impact, but the level of impact would be reduced to less than significant through the implementation of the mitigation measures described below.

Burrowing owl may occur within portions of the project area where ground squirrel burrows are artificial structures suitable for nesting or cover occur (e.g., culverts, debris piles, pipes), in particular on the edges of the cultivated fields and adjacent natural areas.

Tricolored black bird and yellow-headed blackbird may nest in the dense vegetation observed in the seasonal wetlands and perennial marsh identified to the north of the developed portions of the project site, and may forage in the cultivated areas.

Cackling geese and other waterfowl may forage in the cultivated lands and roost in the perennial marsh and cooling pond during the winter months.

Portions of the project site and areas adjacent provide potential nesting habitat for birds protected under the Migratory Bird Treaty Act (MBTA) and Fish and Game Code 3503.

The project site provides low quality habitat for San Joaquin kit fox and American badger. There are several occurrences of San Joaquin kit fox approximately 4 miles to the west, generally to the west of I-5, where there is more suitable grasslands habitat. There have also been several historic sightings of kit fox to the northeast of the project site on the San Luis National Wildlife Refuge. American badger typically occurs in grasslands but is known to also occur in agricultural areas with sufficient prey base, which typically consists of ground squirrels. Small mammal burrows were identified in the natural area to the east of the project site as well as the scat of a small canid during the reconnaissance level surveys. No potential den sites for kit fox or badger were identified during the reconnaissance level surveys and the likelihood of dens occurring in the agricultural areas or seasonal wetland would be low.

The aforementioned wildlife species are protected under federal and state laws, including the federal Endangered Species Act, the California Endangered Species Act, the MBTA, and California Fish and Game Code. Impacts to these species or their habitats would result in potentially significant impacts. With implementation of the following mitigation measures, this impact would be reduced to a less than significant level. Implementation will be required as a condition of approval of the proposed conditional use permit.

Mitigation Measure BIO-1: Develop a Worker Awareness Program.

Prior to construction, a Worker Awareness Program must be conducted to inform construction project workers of their responsibilities regarding sensitive environmental resources. Such a program shall include environmental education about the giant garter snake, western pond turtle, burrowing owl, Swainson's hawk, American badger, San Joaquin kit fox, and nesting birds. The Worker Awareness Program is to be prepared by a qualified biologist and is the responsibility of the applicant to implement. The applicant shall submit the draft program to the Planning and Economic Development for adequacy review and approval prior to issuance of the building permit.

Mitigation Measure BIO-2: Avoid effects on giant garter snake.

The following measures will be implemented to avoid effects on giant garter snake.

- Disturbance to suitable aquatic and upland sites in or near the project footprint will be avoided to the extent feasible, and the loss of aquatic habitat and associated upland vegetation will be minimized through adjustments to project design, as practicable. A map of the areas of concern is included in the IS/MND as Figure 3, Liberty Packing Property.
- To the extent practicable, construction activities will be avoided within 200 feet of the banks of giant garter snake aquatic habitat, which would include the irrigation ditch and perennial marsh in the northern part of the project area. Ground disturbance will be confined to the



end

Project Area

Other Aquatic/Wetland Habitats

minimal area necessary to facilitate construction activities. Giant garter snake habitat will be clearly designated with construction fencing and signage identifying these areas as sensitive.

- Twenty-four hours prior to construction activities, suitable habitat in the project area should be surveyed for giant garter snakes. Survey of the project area should be repeated if a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Any sightings will be reported to the USFWS and CDFW within 24 hours.
- A USFWS- and CDFW-approved biologist will determine where exclusion fencing will be installed to protect giant garter snake habitat adjacent to the defined project footprint and to minimize the potential for giant garter snakes to enter the construction work area. The perimeter of construction sites will be fenced with giant garter snake exclusion fencing between May 1 and September 1 (well in advance of snakes seeking overwintering refugia). The giant garter snake exclusion fencing will be shown on the final construction plans. Where construction access is necessary, gates will be installed with the exclusion fence.
- A biological monitor and construction foreman will be responsible for checking the exclusion fencing around the work areas daily to ensure that they are intact and upright. This will be especially critical during rain events, when flowing water can easily dislodge the fencing. Any necessary repairs will be immediately addressed. The giant garter snake exclusion fencing will remain in place for the duration of construction.
- If exclusion fencing is found to be compromised, a survey will be conducted immediately preceding construction activity that occurs in designated giant garter snake habitat or in advance of any activity that may result in take of the species. The biologist will search along exclusion fences and in pipes and beneath vehicles before they are moved. Any giant garter snake found will be captured and relocated to suitable habitat a minimum of 200 feet outside of the work area in a location that is identified by a qualified biologist and approved by USFWS and CDFW prior to commencement of construction.
- The ditches associated with the cultivated lands in the expansion areas will be dewatered and remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.
- After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions.
- Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

Mitigation Measure BIO-3: Avoid and minimize effects on western pond turtle.

Effects on western pond turtle will be avoided and minimized by many of the same measures listed above in Mitigation Measure BIO-2. In addition to these measures, the cooling pond should be dewatered prior to commencing any construction activities in the pond to allow pond turtle to relocate to nearby suitable habitat, which would include the perennial marsh and irrigation ditch to the north, and the Volta Wildlife Area to the east. The Volta Wildlife Area is accessible from the project site via the irrigation ditch in the northern portion of the project site.

Mitigation Measure BIO-4: Avoid and minimize effects on Swainson's hawk.

- A protocol-level survey will be conducted in conformance with the "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley," Swainson's Hawk Technical Advisory Committee (May 31, 2000) prior to construction. This protocol prescribes minimum standards for survey equipment, mode of survey, angle and distance to tree, speed, visual and audible clues, distractions, notes and observations, and timing of surveys.
 - Nesting surveys can only be performed between January 1 and July 30 and will vary depending on seasonal conditions and the actual nesting period.
 - Surveys must be performed by a biologist with experience in identifying Swainson's hawks and their nests.
 - A written report with the pre-construction survey results will be provided to CDFW within 30 days prior to commencement of construction-related activities. The report shall include: the date of the report, authors and affiliations, contact information, introduction, methods, study location, including map, results, discussion, and literature cited.
- If active nests are documented during the surveys, within the CNDDDB or other source, the following measures should be implemented:
 - **No intensive new disturbances** (for example, heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities), habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging, should be initiated within 0.5 mile of an active nest between March 1 and September 15, or sooner if authorized by CDFW.
 - **Nest trees shall not be removed** unless there is no feasible way of avoiding it. If a nest tree must be removed it should be done between October 1 and February 1.
 - **If disturbances, habitat conversions, or other project-related activities**, that may cause nest abandonment or forced fledging, are necessary, within the nest protection buffer zone, monitoring of the nest site by a biologist with Swainson's hawk experience, would be done to determine if the nest is abandoned. If the nest is abandoned, but the nestlings are still alive, the project proponent is required to fund the recovery and hacking that is the controlled release of captive reared young of the nestling.
 - **Routine disturbances** such as agricultural activities, commuter traffic, and routine maintenance activities within 0.25 mile of an active nest are not prohibited.

Mitigation Measure BIO-5: Compensate for loss of Swainson's hawk foraging habitat.

As described above, known nesting trees are located within one mile of the project site, and therefore the project site qualifies as foraging habitat. The Merced County Planning and Economic Development Department has developed a standard Swainson's hawk mitigation measure that, when implemented, will mitigate for the loss of suitable foraging habitat. Compensation for the permanent loss of foraging habitat is based on the distance from the nearest nest, as provided in the table below. The specific compensation ratio will be based on the results of the preconstruction survey described in Mitigation Measure BIO-4.

Distance from Project Boundary Mitigation Acreage Ratio^a	
Within 1 mile	1.00:1 ^b
Between 1 and 5 miles	0.75:1
Notes	
a. Ratio means [acres of mitigation land] to [acres of foraging habitat impacted].	
b. This ratio shall be 0.5:1 if the acquired lands can be actively managed for prey production.	

Compensation can be provided through fee title acquisition or conservation easement acquisition of comparable foraging habitat with implementation of a County-approved habitat management plan. Alternatively, mitigation credits may be purchased from a County-approved mitigation bank for Swainson's hawk foraging habitat in Merced County or other San Joaquin Valley county. An offsite habitat mitigation plan describing the method of compensation must be submitted to the Merced County Planning and Economic Development Department within 30 days of its execution or prior to the start of construction-related activities, whichever is earlier.

Mitigation Measure BIO-6: Avoid and minimize effects on western burrowing owl.

The methods described below are consistent with the current accepted survey protocol for western burrowing owl (California Burrowing Owl Consortium 1993).

Prior to any ground disturbance related to project activities, a qualified biologist will conduct preconstruction surveys within the project area. The purpose of the preconstruction survey is to document the presence or absence of western burrowing owls on the project site.

Preconstruction surveys should be conducted no less than 14 days prior to ground disturbing activities with an additional survey within 24 hours of ground disturbance. Occupied burrows will be considered fully avoided if construction activity is more than 500 meters from an active nest. However, this distance may be reduced after consultation with CDFW.

If occupied burrows can't be avoided, an exclusion plan must be developed in consultation with CDFW to passively relocate owls. Passive relocation will not be allowed while owls are actively nesting.

Mitigation Measure BIO-7: Avoid and minimize effects on nesting tricolored blackbird, yellow-headed blackbird, northern harrier, white-tailed kite and other nesting migratory birds and raptors.

To avoid and minimize impacts on nesting special-status birds and migratory birds and raptors, which are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes, the following surveys and restrictions will be implemented.

- If construction activities are scheduled to occur during the breeding season for migratory birds and raptors (generally between January 1 and August 31), a wildlife biologist will conduct nesting surveys before the start of construction. Because only a minimal amount of natural vegetation will be removed and the other areas consist of cultivated and developed lands, a single survey should be conducted in the 5 days prior to the start of construction. This survey will occur in the project area and include any trees and shrubs immediately adjacent to the project area. Surveys for nesting raptors will occur in a 500-foot area around the project site (i.e., the areas of new construction). Surveys should occur during the height of the breeding season (March 1 to June 1).
 - If no active nests are detected during these surveys, no additional mitigation is required.

- If active nests are found in the survey area, a no-disturbance buffer will be established around the site to avoid disturbance or destruction of the nest site until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with California Department of Fish and Wildlife and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed to make an appropriate decision on buffer distances. Suitable buffer distances may vary between species.

Mitigation Measure BIO-8: Avoid and minimize effects on American badger and San Joaquin kit fox.

Because American badger and San Joaquin kit fox use similar habitats, the measures developed for avoiding effects on San Joaquin kit fox are considered sufficient to avoid and minimize effects on badgers.

The following measures are based on the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance (U.S. Fish and Wildlife Service 2011).

Within 14 to 30 days prior to ground disturbance related to the project, a qualified biologist with experience surveying for and observing the species will conduct a preconstruction survey in the undeveloped portions of the project site. The biologist will survey the project footprint and the area within 250 feet beyond the footprint to identify known or potential San Joaquin kit fox dens. Adjacent parcels under different land ownership will not be surveyed unless access is granted within the 250-foot radius. The biologists will conduct these searches by systematically walking 30- to 100-foot-wide transects throughout the survey area; transect width will be adjusted based on vegetation height and topography. The biologist will conduct walking transects such that 100 percent visual coverage of the project footprint is achieved. Dens will be classified in one of the following four den status categories.

- **Potential den.** Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens comprise any suitable subterranean hole or any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use. If a potential den is found, the biologist will establish a 50-foot buffer using flagging.
- **Known den.** Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox.
- **Natal or pupping den.** Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den and may have a broader apron of matted dirt and/or vegetation at

one or more entrances. A natal den, defined as a den in which kit fox pups are actually whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition, either term applies. If a natal den is discovered, a buffer of at least 200 feet will be established using fencing.

- **Atypical den.** Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings. If an atypical den is discovered, the biologist will establish a 50-foot buffer using flagging.

Disturbance to all San Joaquin kit fox dens will be avoided, to the extent possible. Limited destruction may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed.

- If a suitable San Joaquin kit fox den is discovered in the project footprint, the den will be monitored for 4 days by a USFWS- and CDFW-approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
- Unoccupied dens will be destroyed immediately to prevent subsequent use. The den will be fully excavated by hand, filled with dirt, and compacted to ensure that San Joaquin kit foxes cannot reenter or use the den during the construction period.
- If an active or natal or pupping den is found, USFWS and CDFW will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further coordination with USFWS and CDFW.
- If kit fox activity is observed at the den during the initial monitoring period, den use will be actively discouraged, as described below, and monitoring will continue for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated by hand when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities). If at any point during excavation a kit fox is discovered inside the den, the excavation activity will cease immediately and monitoring of the den, as described above, will be resumed. Destruction of the den may be completed when, in the judgment of the biologist, the animal has escaped from the partially destroyed den.
- Construction and operational requirements from *Standardized Recommendations for Protection of the San Joaquin Kit Fox prior to or during Ground Disturbance* (U.S. Fish and Wildlife Service 2011) or the latest guidelines will be implemented.
- If suitable dens are identified in the project footprint or within a 250-foot buffer, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones will be circular, with a radius measured outward from the den entrance(s). No covered activities will occur within the exclusion zones. Exclusion zone radii for atypical dens and suitable dens will be at least 50 feet and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100 feet and

will be demarcated with staking and flagging that encircle each den or cluster of dens but do not prevent access to the den by the foxes.

- Written results of the surveys will be submitted to USFWS within 5 calendar days of the completion of surveys and prior to the beginning of ground disturbance and/or construction activities likely to affect San Joaquin kit foxes.

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 U.S. Fish and Wildlife Service?

Less-than-Significant Impact. There is no riparian habitat that would be impacted by associated with the proposed project. The proposed mounded leach line system would avoid the seasonal wetlands in the northeast portion of the project site.

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

Less-than-Significant Impact. Wetland delineations of portions of the Liberty Packing property were performed in order to inform the design of the project. The delineations identified areas on the north of the existing facility as seasonal wetlands and perennial marsh.

The project has been designed to avoid wetlands and jurisdictional waters of the United States to the extent practicable (see Figure 4, Proposed Mounded Leach Field Location). Figure 4 provides a more accurate representation of the proposed location for the mounded leach field location than the general location shown in Figure 2. The wetlands and marsh would be fully avoided. The man-made ditches that would be affected by the proposed cooling pond and outdoor warehousing area expansions are part of an on-site system to supply/control irrigation water from the facility and re-apply the water to the farmland. As discussed above, it is assumed that they would not be considered jurisdictional waters of the United States.

Impacts to wetlands and other waters would be less than significant.

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?

Less than Significant. The proposed project would not interfere with the movement of any fish species, native resident or migratory wildlife bird species or with established native resident or migratory wildlife corridors, and would not impede the use of native wildlife nursery sites. Development of the project site could impede wildlife movement; however, the site is not unique as it possesses similar characteristics as the land uses surrounding the project site. The high degree of routine disturbance and activity associated with the existing facility combined with the extensive agricultural development surrounding the project site significantly reduce the likelihood that migratory wildlife would utilize the project site to move through the area. Therefore, the project's impact is considered to be less than significant.

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Figure 4
Proposed Mounded Leach Field Location

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

No Impact. No protected trees would be removed as part of the project and no other biological resources regulated by local policies or ordinances occur in the vicinity of the project site; therefore, no impact would occur.

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?

No Impact. There are no existing or proposed Habitat Conservation Plans (HCPs) or Natural Community Conservation Plan (NCCPs) within the vicinity of the project site. Since there are no HCPs or NCCPs that apply to the project site, no impact would occur.

Cultural Resources	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Cause a substantial adverse change in the significance of a historical resource as defined in 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.7 Cultural Resources

2.7.1 Setting

Archaeological evidence indicates that human occupation of California began at least 12,000 years ago. Early occupants appear to have had an economy based largely on hunting, with limited exchange, and social structures based on the extended family unit. Later, milling technology and an inferred acorn economy were introduced. This diversification of economy appears to be coeval with the development of sedentism and population growth and expansion. Sociopolitical complexity and status distinctions based on wealth are also observable in the archaeological record, as evidenced by an increased range and distribution of trade goods (e.g., shell beads, obsidian tool stone), which are possible indicators of both status and increasingly complex exchange systems.

At the time of European settlement, the project site was situated in an area controlled by the Northern Valley Yokuts. The Northern Valley Yokuts were hunter-gatherers who lived in rich environments that allowed for dense populations with complex social structures. They settled in

large, permanent villages about which were distributed seasonal camps and task-specific sites. Primary village sites were occupied throughout the year and other sites were visited in order to procure particular resources that were especially abundant or available only during certain seasons. Sites often were situated near fresh water sources and in ecotones where plant life and animal life were diverse and abundant.

The project site has been used for farming and those portions of the site that are not currently developed are regularly cultivated. No archaeological or paleontological resources have been found on the site during past activities. Therefore, any undiscovered archaeological or paleontological resources that may exist on the site are buried deeper than the depth of cultivation. There is no historic structure on the site.

The existing tomato processing facility overlies portions of the proposed improvements (e.g., packaging building, utility buildings, and production equipment). Due to the intensive nature of this use and the disturbance that occurred as a result of its construction, those portions of the proposal located within the facility are unlikely to support undiscovered cultural resources. Other components of the project will not result in substantial ground disturbance below the depth of cultivation (e.g., trailer storage yard, outdoor warehouse space, railroad spur and loading docks, and pole shed). Therefore, this part of the proposed project is unlikely to disturb archaeological or paleontological resources, even if they are present.

The project components that have the potential to disturb archaeological or paleontological resources, if any are present, are the expansions of the cooling and settling ponds. This would occur as a result of the excavations.

There are no known cultural resources within the project area. However, the project area has not been previously surveyed. There are no historic structures on the site.

2.7.2 Significance Criteria

Evaluation of a project's potential to affect potentially significant cultural resources is required under CEQA to determine whether an impact would occur. The importance of a cultural resource is measured in terms of criteria for inclusion on the California Register of Historical Resources (Title 14 CCR, §4852(a)) as listed below. A resource may be important if it meets any one of the criteria below, or if it is already listed on the California Register of Historical Resources or a local register of historical resources. An important historical resource is one that:

1. Is associated with events that have made a significant contribution to the broad patterns of local or regional history, or the cultural heritage of California or the United States.
2. Is associated with the lives of persons important to local, California, or national history.
3. It embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of a master or possesses high artistic values.
4. It has yielded, or may be likely to yield, information important to the prehistory or history of the local area, California, or the nation.

In addition to meeting one or more of the above criteria, eligibility for the California Register requires that a resource retains sufficient integrity to convey a sense of its significance or importance. Seven elements are considered key in considering a property's integrity: location, design, setting, materials, workmanship, feeling, and association.

Additionally, the state Office of Historic Preservation advocates that all historical resources over 45 years old be recorded for inclusion in the Office of Historic Preservation filing system (Office of Historic Preservation 1995), although the use of professional judgment is urged in determining whether a resource warrants documentation.

2.7.3 Impact Discussion

a. Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?

No Impact. There are no historic buildings or structures within the project area. The proposed project presents no potential to cause direct, indirect, or cumulative significant impact to architectural resources, including buildings older than 50 years of age. The project would not have the potential to destroy any significant historic structure, therefore there is no impact.

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

Less-than-Significant Impact with Mitigation Incorporated. There are no known archaeological resources located on the project site. However, it is possible that buried archaeological resources are present within those portions of the proposed project area that will be excavated below the depth of cultivation. Disturbance or destruction of these resources may result from ground-disturbing activities associated with proposed expansion of the cooling and settling ponds. This impact would be significant, but implementation of the following Mitigation Measure CUL-1 and Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-1: Stop work if buried cultural deposits are encountered during construction activities.

If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.

c. Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?

Less-than-Significant Impact with Mitigation Incorporated. There are no known paleontological resources and no unique geologic features located on the project site. However, it is possible that buried paleontological materials are present on the proposed project site below the depth of cultivation. Disturbance or destruction of these resources may result from ground-disturbing activities associated with construction of the cooling and settling ponds. This impact would be significant, but implementation of the following Mitigation Measure CUL-2 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-2: Stop work if buried paleontological resources are encountered during construction activities.

If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.

d. Disturb any human remains, including those interred outside of formal cemeteries?

Less-than-Significant Impact with Mitigation Incorporated. No known human remains are present within the proposed project site. However, it is possible that construction activities for the cooling and settling pond expansions would result in the discovery of human remains. This impact would be significant, but implementation of the following Mitigation Measure CUL-3 would reduce this impact to a less-than-significant level.

Mitigation Measure CUL-3: Stop work if human remains are encountered during construction activities.

If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).

- If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed.
- If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per Public Resources Code (PRC) 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement.

If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PRC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S Code sec. 7050.5, 7052.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Geology and Soils				
Would the project:				
a. Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Strong seismic groundshaking?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4. 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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<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 wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

2.8 Geology and Soils

2.8.1 Environmental Setting

The proposed project site lies within the Great Valley geomorphic province of California, a northwest trending depression bounded on the west by the Coast Ranges geomorphic province and on the east by the Sierra Nevada geomorphic province. The Great Valley floor is an alluvial plain, an accumulation of sediments derived from the slopes of the Coast Ranges and the Sierra Nevada.

The Ortigalita Fault on the eastern side of the Coast Ranges is the only fault that passes through the county. The Ortigalita has never been active in historic times. Faults that pass near Merced County

are the San Andreas and the Calaveras faults on the west, and the Bear Mountain Fault on the east in the Sierra foothills (Merced County 2012). Although no earthquakes are known to have originated from within the county, major earthquakes originating outside the county have been felt throughout the county (Merced County 2012). The project area is not within a current Alquist-Priolo Earthquake Fault Zone (California Department of Conservation 2007) (see *Regulatory Setting* below). The project area has not been mapped for the Seismic Hazard Zonation Program (California Department of Conservation 2013) (see *Regulatory Setting* below), although it is in an area subject to moderate to severe seismic groundshaking from earthquakes on faults throughout the area. The topography at the proposed project site is relatively flat, there are no steep slopes nearby, and the project site is not included in or adjacent to an earthquake-induced landslide zone.

According to the Merced County 2030 General Plan, no specific liquefaction hazard areas have been identified in the county. However, the General Plan assumes that liquefaction hazards exist in many of Merced County's wetland areas, which extend from the San Joaquin River west to the Union Pacific Railroad and east toward SR 99 and SR 59 south. Wetlands adjoin the project site on the north.

The site is underlain by the following soils types: Chivnar Loam, Pedcat Loam, and Pedcat Clay Loam.

Table 7. Site Soils Limitations

Soil Name	Limitations for Small Commercial Buildings	Limitations for Shallow Excavations
Chivnar Loam	Shrink-swell	Caving potential is low
Pedcat Loam	Shrink-swell	Caving potential is low
Pedcat Clay Loam, Leveled	Shrink-swell	Caving potential is low
Source: USDA 2013		

2.8.2 Regulatory Setting

State

Alquist-Priolo Earthquake Fault Zoning Act

California's Alquist-Priolo Earthquake Fault Zoning Act (Public Resources Code Sec. 2621 et seq.) is intended to reduce the risk to life and property from surface fault rupture during earthquakes. The Alquist-Priolo Act prohibits the location of most types of structures intended for human occupancy² across the traces of active faults and strictly regulates construction in the corridors along active faults (*earthquake fault zones*). It also defines criteria for identifying active faults, giving legal weight to terms such as *active*, and establishes a process for reviewing building proposals in and adjacent to Earthquake Fault Zones.

Under the Alquist-Priolo Act, faults are zoned and construction along or across them is strictly regulated if they are "sufficiently active" and "well-defined." A fault is considered *sufficiently active* if

² With reference to the Alquist-Priolo Act, a *structure for human occupancy* is defined as one "used or intended for supporting or sheltering any use or occupancy, which is expected to have a human occupancy rate of more than 2,000 person-hours per year" (California Code of Regulations, Title 14, Div. 2, Section 3601[e]).

one or more of its segments or strands shows evidence of surface displacement during Holocene time (defined for purposes of the Act as referring to approximately the last 11,000 years). A fault is considered *well defined* if its trace can be clearly identified by a trained geologist at the ground surface or in the shallow subsurface, using standard professional techniques, criteria, and judgment (Department of Conservation 2007).

Seismic Hazards Mapping Act

Like the Alquist-Priolo Act, the Seismic Hazards Mapping Act of 1990 (PRC Sections 2690–2699.6) is intended to reduce damage resulting from earthquakes. While the Alquist-Priolo Act addresses surface fault rupture, the Seismic Hazards Mapping Act addresses other earthquake-related hazards, including strong groundshaking, liquefaction³, and seismically induced landslides. Its provisions are similar in concept to those of the Alquist-Priolo Act: the state is charged with identifying and mapping areas at risk of strong groundshaking, liquefaction, landslides, and other corollary hazards, and cities and counties are required to regulate development within mapped Seismic Hazard Zones. Mapping has been proceeding slowly due to insufficient funding and no maps have been prepared that include the project site.

Local

Merced County General Plan

The Health and Safety chapter of the Merced County 2030 General Plan includes goals, objectives, and policies to protect its residents from seismic hazards and other hazards related to geology and soils, including the following requirements (Merced County 2013b).

- All habitable structures must be located and designed in compliance with the Alquist-Priolo Earthquake Fault Zoning Act.
- Structures must be designed and constructed in accord with accepted building code (Merced County requires compliance with International Building Code 2009).
- Structures that would be located in areas of unstable soils (e.g., subsidence, liquefaction) must comply with all standards contained in the International Building Code.

Merced County Building Standards

Unincorporated areas in Merced County must currently comply with 2009 International Building Code provisions or to updated versions of this code, which set minimum standards for design and construction of structures.

Merced County building code requires a soils report for most non-residential structures to identify potential hazards posed by unstable soils, including expansive soils and soils subject to differential settling, liquefaction, and slope failure.

³ *Liquefaction* is a phenomenon in which the strength and stiffness of a soil are reduced by earthquake shaking or other rapidly applied loading. Liquefaction and related types of ground failure are of greatest concern in areas where well-sorted sandy unconsolidated sediments are present in the subsurface and the water table is comparatively shallow.

2.8.3 Impact Discussion

Would the project:

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

a1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.

Less-than-Significant Impact. As described above, the project site is not located within a fault zone or near an active known fault. Therefore, the potential for a surface rupture to occur at the project site is low and impacts related to rupture of a known earthquake fault are less than significant.

a2. Strong seismic groundshaking?

Less-than-Significant Impact with Mitigation Incorporated. As discussed in the response to VI.a1, the proposed project is not located immediately adjacent to a fault zone. However, because of the project site's location within a seismically active region and in relatively close proximity to several major active faults, the project site is likely to experience moderate to strong groundshaking during the lifespan of the proposed project. All structures in the region could be affected by groundshaking in the event of an earthquake. The amount of groundshaking depends on the magnitude of the earthquake, the distance from the epicenter, and the type of earth materials between the receptor and the epicenter. The proposed project would comply with California design requirements, which would ensure that the project would not expose persons or property to strong seismic ground shaking hazards. Implementation of Mitigation Measure GEO-1, which requires the proposed project to fully comply with the California Building Code and implement specific building techniques to minimize seismic damage, would reduce seismic groundshaking impacts to a less-than-significant level.

Mitigation Measure GEO-1: Prepare a design-level geotechnical investigation report.

Prior to the issuance of any site-specific building permits, a design-level geotechnical investigation will be prepared by the project applicant and submitted to the Merced County Building and Safety Division for review and confirmation that the proposed development fully complies with the California Building Code. The report will address potential seismic hazards such as groundshaking, liquefaction, and expansive soils. The report will identify building techniques appropriate to minimize seismic damage. The project applicant shall ensure that the seismic safety recommendations of this report are included as conditions of building permit issuance.

a3. Seismic-related ground failure, including liquefaction?

No Impact. As discussed above, liquefaction hazards exist in many of the County's wetlands. As the project site is not located on a wetland and no new buildings/structures are proposed near the wetlands at the northern end of the site, the overall risk from liquefaction is low. As a result, implementation of the proposed project would not expose people or structures to substantial adverse effects involving liquefaction and no impacts would occur.

a4. Landslides?

No Impact. Landslides and other slope failures are secondary seismic effects that are common during or soon after earthquakes. Areas that are most susceptible to earthquake-induced landslides are steep slopes underlain by loose, weak soils, and areas on or adjacent to existing landslide deposits. As discussed above, the project site is relatively flat, there are no steep slopes near the project site. Hence, the project site has no probability for an earthquake-induced landslide to occur. As a result, implementation of the proposed project would not expose people or structures to substantial adverse effects involving landslides. No impacts would occur.

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

No Impact. Construction activities such as excavation and grading could result in loss of topsoil through removal of the topsoil and through accelerated erosion. However, all topsoil removed during construction will be spread on Liberty Packing lands to prevent off-haul of excavated soils. Furthermore, as discussed below under the *Hydrology and Water Quality* section, temporary construction-related water quality impacts will be mitigated by adherence to the required Storm Water Pollution Prevention Plan (SWPPP), which will describe procedures and best management practices to control accelerated erosion and sedimentation.

Although stockpiling excavated topsoil and minimizing erosion associated with construction of the proposed project will offset losses, it will not address loss of the soil profile within the proposed project footprint. However, the quality of its topsoil is low, as indicated by its Storie Index and Capability Class ratings.

Because erosion will be controlled with a SWPPP and because the project would not result in the loss of high-quality topsoil, there would be no impact. No mitigation is required.

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 an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?

Less-than-Significant Impact. Refer to the response to VI.a3 for a description and impact discussion related to potential liquefaction impacts, and the response to VI.a4 for information related to potential landslide impacts.

Lateral spreading is a phenomenon in which surficial soil displaces along a shear zone that has formed within an underlying liquefied layer. Upon movement, the surficial soils are transported down slope by an earthquake and gravitational forces. Lateral spreading is generally the most pervasive and damaging type of ground failure generated by earthquakes. However, because the project site is generally flat, impacts related to lateral spreading would be less than significant.

Subsidence is the settling of parts of the earth's crusts, usually over a long period of time. In Merced County, subsidence is most commonly caused by groundwater withdrawal, hypocompaction, and earthquakes. According to the Merced County General Plan, the project site is not located within a known subsidence area.

Therefore, impacts related to soil stability as a result of the project would be less than significant.

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

No Impact. As discussed above, the soil underlying the project site has a liquid limit rating of 25 and plasticity index of 1.2. The liquid limit and plasticity index properties of this soil would rank the soil as possessing a low shrink-swell potential. Delhi loamy sand—the soil underlying the project site—is not an expansive soil. Therefore, no impacts related to expansive soils are anticipated.

e. Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?

Less-than-Significant Impact. Human waste at the facility is disposed of with a septic tank system (Merced County Local Agency Formation Commission 2007). Soils at the Liberty Packing facility have limitations on their suitability for septic systems, primarily from high groundwater conditions. The proposal includes the construction of a mounded septic system north of the existing facilities. All new facilities would be constructed in accordance with Merced County building standards, which would address minimizing the susceptibility of soils to septic failure. This impact would be less than significant.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>

2.9 Greenhouse Gas Emissions

2.9.1 Environmental Setting

This section provides an analysis of climate change impacts resulting from the proposed project. It describes greenhouse gas (GHG) emissions commonly generated, discusses recent GHG inventories, and summarizes the current regulatory framework related to GHG emissions and climate change. Environmental impacts related to climate change, as well as mitigation measures to reduce or eliminate potential impacts are also discussed.

Global Climate Change

Global climate change is caused in large part by anthropogenic (man-made) emissions of GHGs released into the atmosphere through the combustion of fossil fuels and by other activities such as deforestation and land-use change. Unlike criteria air pollutants, which are discussed in the *Air Quality* section above, GHGs tend to persist in the atmosphere where they can trap infrared

radiation emitted from the Earth's surface. This phenomenon, known as the "greenhouse effect," is necessary to keep the Earth's temperature warm enough for successful habitation by humans. Emissions of GHGs in excess of natural ambient concentrations; however, are responsible for the enhancement of the greenhouse effect. This trend of warming of the Earth's natural climate is termed "climate change."

Greenhouse Gases

The principle GHGs contributing to global warming are carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and fluoridated compounds. Because construction equipment and heavy duty trucks primarily generate GHG emissions consisting of CO₂, CH₄, N₂O, the following discussion focuses on these pollutants.

CO₂ is the most important anthropogenic GHG, followed by CH₄ and N₂O. It is estimated that CO₂ accounts for more than 75 percent of all anthropogenic GHG emissions. Three quarters of anthropogenic CO₂ emissions are the result of fossil fuel burning (and to a very small extent, cement production), and approximately one quarter of emissions are the result of land-use change (Intergovernmental Panel on Climate Change 2007). CH₄ is the second largest contributor of anthropogenic GHG emissions and is the result of growing rice, raising cattle, fuel combustion, and mining coal (National Oceanic and Atmospheric Administration 2005). N₂O, while not as abundant as CO₂ or CH₄, is a powerful GHG. Sources of N₂O include agricultural processes, nylon production, fuel-fired power plants, nitric acid production, and fuel combustion.

In order to simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the "global warming potential" (GWP) methodology defined in the IPCC reference documents (1996, 2001). The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO₂ equivalents (CO₂e), which compares the gas in question to that of the same mass of CO₂ (CO₂ has a GWP of 1 by definition). Table 8 lists the global warming potential of CO₂, CH₄, and N₂O; their lifetimes; and abundances in the atmosphere in ppm and parts per trillion (ppt).

Table 8. Lifetimes and Global Warming Potentials

GHG	Global Warming Potential (100 years)	Lifetime (years)	2005 Atmospheric Abundance
Carbon Dioxide (ppm)	1	50-200	379
Methane (ppt)	21	9-15	1.7
Nitrous oxide (ppt)	310	120	0.32

Sources: Intergovernmental Panel on Climate Change 1996, 2001, 2007.

2.9.2 Regulatory Setting

Although there is currently no federal overarching law specifically related to climate change or the reduction of GHGs, EPA is developing regulations under the CAA that may be adopted pursuant to EPA's authority under the CAA in the next 2 years. Foremost among recent developments have been the settlement agreements between EPA, several states, and nongovernmental organizations to address GHG emissions from electric generating units and refineries; the U.S. Supreme Court's decision in *Massachusetts v. EPA*. Although periodically debated in Congress, no federal legislation

concerning greenhouse gas limitations has been enacted. In *Coalition for Responsible Regulation, Inc., et al. v. EPA*, the United States Court of Appeals upheld EPA's authority to regulate GHG emissions under the CAA. Legislation applicable to the project is described below.

For more detail on the regulatory setting, see Appendix A, Air Quality and Greenhouse Gas Technical Report.

Federal

Under the authority of the Clean Air Act, EPA is beginning to regulate GHG emissions starting with large stationary sources. In 2010, EPA set GHG thresholds to define when permits under the New Source Review Prevention of Significant Deterioration and Title V Operating Permit programs are required for new and existing industrial facilities. In 2012, EPA proposed a carbon pollution standard for new power plants. However, this is not applicable to the proposed project.

State

The State of California has adopted legislation, and regulatory agencies have enacted policies, addressing various aspects of climate change and GHG emissions mitigation. Much of this legislation and policy activity is not directed at individual development permits, but rather establishes a broad framework for the state's long-term GHG mitigation and climate change adaptation program. Legislation applicable to the project is described below.

Assembly Bill 32: Global Warming Solutions Act of 2006

Assembly Bill (AB) 32 sets the same overall year 2020 GHG emissions reduction goals as Executive Order S-3-05, while further mandating that CARB create a "Scoping Plan" that establishes the state's target for GHG emissions reduction and identifies programs (including market mechanisms such as carbon trading) that will allow the state to meet that overall target. AB 32 further directs state agencies and the newly created state Climate Action Team to identify discrete early action GHG reduction measures. These actions were adopted in early 2010 and relate to truck efficiency, port electrification, tire inflation, and reduction of perfluorinated carbons, propellants, and sulfur hexafluoride. Although AB 32 does not establish regulations that are directly applicable to the project, it does establish the statewide context under which project-level emissions are considered.

CARB's Climate Change Scoping Plan prepared pursuant to AB 32 contains the main strategies California will use to reduce GHG from business-as-usual emissions projected for 2020 back to 1990 levels (California Air Resources Board 2008b). As part of the scoping plan, CARB and other agencies are undertaking programs to achieve the emissions cap by 2020.

In March 2011, a San Francisco Superior Court enjoined the implementation of CARB's Scoping Plan, finding the alternatives analysis and public review process violated both CEQA and CARB's certified regulatory program (*Association of Irrigated Residents, et al v. California Air Resources Board* Case No. CPF-09-509562, March 18, 2011). In response to this litigation, CARB adopted the new CEQA document (*Final Supplement to the AB 32 Scoping Plan Functional Equivalent Document*) on August 24, 2011.

State CEQA Guidelines, as Amended in 2010

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions resulting from a project. Moreover, the guidelines emphasize the necessity to determine potential climate change effects of the project and propose mitigation as necessary. The guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if “there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements” (Section 15064.4).

State CEQA Guidelines §15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency’s decision; implementation of project features, project design, or other measures which are incorporated into the project to substantially reduce energy consumption or GHG emissions; off-site measures, including offsets that are not otherwise required, to mitigate a project’s emissions; and, measures that sequester carbon or carbon-equivalent emissions.

Local

Appendix G in the CEQA Guidelines state that the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to determine the project’s level of impact in terms of GHG emissions. The SJVAPCD has not adopted quantitative significance thresholds for operational GHG emissions from development and stationary source projects. Instead, SJVAPCD’s GHG guidance is intended to streamline CEQA review by pre-quantifying emissions reductions that would be achieved through the implementation of best performance standards (BPS). Projects are considered to have a less-than-significant cumulative impact on climate change if any of the following conditions are met.

- Comply with an approved GHG reduction plan.
- Achieve a score of at least 29⁴ using any combination of approved operational BPS.
- Reduce operational GHG emissions by at least 29 percent over “business as usual” (BAU) conditions (demonstrated quantitatively).
- SJVAPCD guidance recommends quantification of GHG emissions for all projects in which an EIR is required, regardless of whether BPS achieve a score of 29 (San Joaquin Valley Air Pollution Control District 2009). The guidance document does not establish an emissions threshold for construction-related emissions.

Significance Criteria

Based on the CEQA Guidelines Appendix G, an impact pertaining to climate change is considered significant if it would:

- generate a significant amount of GHG emissions, either directly or indirectly; or

⁴ A score of 29 represents a 29 percent reduction in GHG emissions relative to unmitigated conditions (1 point = 1 percent). This goal is consistent with the reduction targets established by AB 32.

- conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHGs.

2.9.3 Discussion

Would the project:

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

Less-than-Significant Impact. Project construction would generate direct emissions of CO₂, CH₄, and N₂O from mobile and stationary construction equipment exhaust, as well as employee haul truck vehicle exhaust. Estimated construction emissions resulting from construction of the project are summarized in Table 9. Emissions are presented with and without implementation of state mandates to reduce GHG emissions. These mandates do not require additional action on the part of the project applicant, but will contribute to GHG emissions reductions. For example, state and federal regulations will improve the fuel efficiency of vehicles and reduce the carbon content of transportation fuels. Equipment used to construct the project will therefore be cleaner and less GHG intensive than if these mandates had not been established.

Table 9. Summary of Construction Emissions (Metric Tons)

Year	Construction Equipment			On-road Vehicles		CO ₂ e
	CO ₂	CH ₄	N ₂ O	CO ₂	Other ^a	
Emissions without State Mandates						
2013	0.00	0.00	0.00	0.00	0.00	0.00
2014	228	0.02	0.01	11	0.51	242
<i>Total</i>	<i>228</i>	<i>0.02</i>	<i>0.01</i>	<i>11</i>	<i>0.51</i>	<i>242</i>
Emissions with State Mandates ^b						
Year	Construction Equipment			On-road Vehicles		CO ₂ e
	CO ₂	CH ₄	N ₂ O	CO ₂	Other ^a	
2013	0.00	0.00	0.00	0.00	0.00	0.00
2014	225	0.02	0.01	10	0.46	238
<i>Total</i>	<i>225</i>	<i>0.02</i>	<i>0.01</i>	<i>10</i>	<i>0.46</i>	<i>238</i>

Notes

a. Includes CH₄ and N₂O emissions.

b. Assumes implementation of “Pavley” fuel economy regulations and Low Carbon Fuel Standards.

As shown in Table 9, construction of the project would generate a total of 238 metric tons of CO₂e after implementation of state mandates. This is equivalent to adding 44 single-occupancy vehicles to the road during the construction period (U.S. Environmental Protection Agency 2011). Accordingly, based on the magnitude of emissions relative to the various inventories, as well as the emissions sources associated with the project, construction of the project is not expected to impede California’s ability to implement AB 32 or other GHG reduction programs. However, given the severity of potential impacts associated with global climate change, as well as the lack of an established threshold for construction emissions, Mitigation Measure GHG-1 is required to further reduce construction-related GHG emissions to the maximum extent practical and a less than significant level.

Mitigation Measure GHG-1: Implement GHG Best Management Practices for construction.

The project applicant will require all construction contractors to implement the Best Management Practices to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures.

- Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.
- Recycle at least 50 percent of construction waste.
- Use at least 10 percent local building materials (from within 100 miles of the project site).

Project operation would generate direct and indirect GHG emissions. Sources of direct emissions include mobile vehicle trips and natural gas and diesel combustion. Indirect emissions would be emitted by electricity generation and consumption, as well as through use of air conditioning units. Estimated operational emissions under both existing and project conditions are summarized in Tables 10 and 11. The difference in operational emissions between the project and the existing facility represents the net new impact of the project. Note that Table 10 presents emissions without implementation of state mandated programs to reduce GHGs, whereas Table 11 assumes the implementation of these measures and related reduction in statewide emissions.

Table 10. Summary of Operational Emissions without State Mandates (Metric Tons per Year)

Source	CO₂	CH₄	N₂O	SF₆	R-410A	CO₂e
<i>No Project (Existing Conditions) ^a</i>						
Electricity	1,847	0.12	0.03	0.00	-	1,889
Natural Gas	91,194	1.75	1.66	-	-	91,745
Employee Trips	1,808	85.86 ^b	-	-	-	1,893
Haul Trucks ^c	8,953	0.68	0.30	-	-	9,061
Locomotives	11,167	0.88	0.28	-	-	11,274
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
Total Emissions	114,970	89	2	0	6	128,077
<i>Project Conditions (2014) ^d</i>						
Electricity	2,029	0.13	0.03	0.00	-	2,074
Natural Gas	112,169	2.15	2.04	-	-	112,846
Employee Trips	1,680	84.02 ^b	-	-	-	1,764
Haul Trucks	10,536	0.69	0.31	-	-	10,646
Locomotives	11,167	0.88	0.28	-	-	11,274
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
Total Emissions	137,583	88	3	0	6	150,820
<i>Net Annual Emissions ^e</i>						
<i>Project Conditions minus No Project (Existing Conditions)</i>	<i>22,612</i>	<i>-1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>22,743</i>

Notes

- No emissions are associated with the source.

a. Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.

b. Includes emissions from both CH₄ and N₂O (values could not be separated due to calculation methodology. See Section 6.1.2 of Appendix A).

c. Includes both tomato and bag and box trucks.

d. Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.

e. Represents the net project impact, or the change in emissions relative to existing conditions.

Table 11. Summary of Operational Emissions with State Mandates (Metric Tons per Year) ^a

Source	CO₂	CH₄	N₂O	SF₆	R-410A	CO₂e
<i>No Project (Existing Conditions) ^b</i>						
Electricity	1,764	0.11	0.02	0.00	-	1,804
Natural Gas	91,194	1.75	1.66	-	-	91,745
Employee Trips	1,695	80.51 ^c	-	-	-	1,776
Haul Trucks ^d	5,954	0.50	0.23	-	-	6,034
Locomotives	11,056	0.88	0.28	-	-	11,162
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
Total Emissions	111,664	84	2	0	6	124,737
<i>Project Conditions (2014) ^e</i>						
Electricity	1,891	0.12	0.03	0.00	-	1,936
Natural Gas	112,169	2.15	2.04	-	-	112,846
Employee Trips	1,471	73.57 ^c	-	-	-	1,545
Haul Trucks ^d	7,280	0.56	0.22	-	-	7,360
Locomotives	11,056	0.88	0.28	-	-	11,162
Back-up Generator	1	0	0	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
Total Emissions	133,868	77	3	0	6	147,064
<i>Net Annual Emissions ^e</i>						
<i>Project Conditions minus</i>						
<i>No Project (Existing Conditions)</i>	22,204	-7	0	0	0	22,327
Notes						
- No emissions are associated with the source.						
^{a.} State mandates include Renewables Portfolio Standards, Low Carbon Fuel Standards, and Pavley.						
^{b.} Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.						
^{c.} Includes emissions from both CH ₄ and N ₂ O (values could not be separated due to calculation methodology. See Section 6.1.2 of Appendix A).						
^{d.} Includes both tomato and bag and box trucks.						
^{e.} Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.						
^{f.} Represents the net project impact, or the change in emissions relative to existing conditions.						

As shown in the table above, operation of the project would result in a net increase of 22,327 metric tons of CO₂e per year relative to existing conditions (assuming implementation of state mandates to reduce GHGs). This increase is primarily due to increased electricity and natural gas consumption associated with expanded facility operations. There is also a slight increase in on-road haul truck emissions. Although Table 11 accounts for state mandates to reduce GHG emissions, the analysis is based on emission factors for 2014. Emissions rates will continue to decrease in the future due to additional requirements for renewable energy production and fuel efficiency. This analysis thus provides a worst-case scenario annual GHG emissions associated with the project.

There is currently no adopted GHG reduction plan for Merced County. Accordingly, option 1 from the SJVAPCD GHG guidance—comply with an approved GHG reduction plan—cannot be used to evaluate project significance. An assessment as to whether the project can achieve a score of 29 percent through the implementation of BPS (option 2) or reduce operational GHG emissions by 29 percent relative to BAU conditions (option 3) was therefore conducted.

The majority of BPS identified in the SJVAPCD's GHG guidance are designed for mixed-used or residential projects, and therefore do not directly apply to the proposed project. Based on a review of SJVAPCD's GHG guidance, Table 12 identifies BPS that could potentially be implemented by the project to reduce operational GHG emissions. Estimated CO₂e point reductions for each BP are also provided.

Table 12. Potential SJVAPCD BPS Available to Reduce Operation-Related Project Emissions

BPS Name	Description	CO₂e point reduction
Energy Star Roof	Install Energy Star labeled roof materials. Energy star qualified roof products reflect more of the sun's rays, decreasing the amount of heat transferred into a building	0.5
On-site renewable energy system	Project provides on-site renewable energy system(s).	1
Exceed title 24	Project Exceeds title 24 requirements by 20%	1
Non-Roof Surfaces	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's non-roof impervious surfaces	1
Green Roof	Install a vegetated roof that covers at least 50% of roof area. Project should demonstrate detailed graphics depicting the planned roof, detailed information on maintenance requirements for the roof, and the facilities plan for maintaining the roof post construction	0.5
Tree Planting	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.	n/a
Total		4

Based on Table 12 above, applicable BPS identified in the SJVAPCD's GHG guidance could potentially achieve a GHG reduction score of 4. This would not be sufficient to reduce operational GHG emissions to a less-than-significant level (score of 29). Accordingly, a quantitative analysis (option 3) of emissions reductions was performed.

Operational emissions associated with the project under BAU conditions equate to 22,743 metric tons (MT) CO₂e per year (see Table 11). Implementation of state mandates will reduce operational emissions by 416 metric tons from 22,743 MT CO₂e (see Table 12) to 22,327 MT CO₂e, or by approximately 1.83 percent, relative to BAU conditions. Consistent with the SJVAPCD GHG guidance, the project must therefore reduce operational GHG emissions by an additional 27.17 percent (6,066 metric tons) to achieve a less than significant CEQA finding. Mitigation Measure GHG-2 outlines additional strategies that will be incorporated into the project design to achieve these reductions. Accordingly, operation of the project would not contribute to a cumulatively considerable GHG impact with implementation of Mitigation Measure GHG-2.

Mitigation Measure GHG-2: Implement GHG reduction measures to reduce operation-related GHG emissions by 6,000 metric tons of CO₂e per year.

The project applicant will identify and implement feasible strategies to reduce GHG emissions generated by operation of the proposed project. When taken together, the strategies shall reduce operation-related GHG emissions by 6,066 metric tons CO₂e, or by 27.17 percent, relative

to BAU conditions. The project applicant will determine the nature and form of the strategies in consultation with the SJVAPCD. Specific strategies that could be incorporated into the project design are summarized below. Quantitative information on the potential capacity of each strategy is provided when available.

- **Strategy-1: Renewable Energy Purchase Agreement:** Enter into a power purchase agreement with PG&E to purchase electricity from renewable sources. Renewable sources must be zero emissions energy sources (e.g., wind, solar, hydro) and may not be accounted to utility RPS goals. Sufficient renewable resources exist within the state (currently 30,005 gigawatt-hours per year) to offset 100 percent of net emissions generated by operational electricity (185 MT CO₂e from Table 6-11 in Appendix A).
- **Strategy-2: On-site Renewable Energy:** Develop an on-site renewable energy system (rooftop solar, ground-mounted photovoltaic) capable of supplying a portion or all of the required electrical demand for the proposed project (10,060 megawatt-hour [MWh]). In order to offset net electricity emissions generated by the project (185 MT CO₂e from Table 6-11 in Appendix A), a 902-MWh system would need to be installed.⁵ Larger systems could potentially achieve greater reductions.
- **Strategy-3: Energy Efficiency Upgrades:** Develop and implement an energy efficiency upgrade to improve facility wide energy efficiency by 15 percent, relative to current energy consumption levels. Measures should target existing boilers and other equipment that utilize natural gas. Other options could include cool or green roofs, as well as solar orientation and shading.
- **Purchase Carbon Offsets:** In partnership with offset providers, purchase carbon offsets. Offset protocols and validation could tier off existing standards (e.g., Climate Registry Programs) or could be developed independently, provided such protocols satisfy basic criteria of additionally (i.e., the reductions would not happen without the financial support of purchased offset credits). CARB is currently in the process of establishing a Cap and Trade registry that will identify qualified providers and Assembly Bill 32 (AB 32) projects. It is estimated that between 2012 and 2020, 2.5 billion allowances will be made available within the state (Legislative Analyst's Office 2012). The national and international carbon markets are likely greater. Potential offset programs could include the following.
 - AB 32 U.S. Forest and Urban Forest Project Resources
 - AB 32 Livestock Projects
 - AB 32 Ozone Depleting Substances Projects
 - AB 32 Urban Forest Projects
 - Other-California Based Offsets
 - United States Based Offsets
 - International Offsets (e.g., clean development mechanisms)

⁵ Calculated by dividing the net annual electricity emissions (185 MT CO₂e) by the Renewables Portfolio Standard-adjusted emission factor for CO₂e.

This measure is inherently scalable based on the volume of offsets purchased and could potentially offset 100 percent of the required emissions reduction (227.17 percent of operational emissions, equating to 6,066 metric tons CO₂e). The project applicant shall coordinate with the SJVAPCD to determine the total carbon offsets that would need to be purchased annually throughout the project lifetime.

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

Less-than-Significant Impact. Merced County has not yet adopted a qualified plan, policy, or regulation to reduce GHG emissions. Therefore, the most applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is AB 32.

CARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. Some reductions will need to come in the form of changes pertaining to vehicle emissions and mileage standards. Some will come from changes pertaining to sources of electricity and increased energy efficiency at existing facilities. The remainder will need to come from plans, policies, or regulations that will require new facilities to have lower carbon intensities than they have under business as usual conditions.

Implementation of the project would enhance environmentally positive features on the site by increasing the efficiency of existing equipment and reduce the intensity of water and energy consumption. Accordingly, the project is consistent with strategies identified in the AB 32 Scoping Plan to conserve energy and natural resources. The analysis of long-term operational GHG emissions indicates that with implementation of Mitigation Measure GHG-1, the project would reduce GHG emissions by 29 percent, relative to BAU conditions. This is consistent with AB 32's overall goal to reduce statewide GHG emissions to 1990 levels by year 2020.

Based on the review of project design features and estimated operational GHG emissions, implementation of the project is not expected to conflict with AB 32 with implementation of Mitigation Measures GHG-1 and GHG-2.

Mitigation Measure GHG-1: Implement GHG Best Management Practices for construction.

(Refer to the text of the measure above)

Mitigation Measure GHG-2: Implement GHG reduction measures to reduce operation-related GHG emissions by 6,000 metric tons of CO₂e per year.

(Refer to the text of the measure above)

Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
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 checked="" type="checkbox"/>	<input type="checkbox"/>

Hazards and Hazardous Materials	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
b. Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Emit hazardous emissions or involve handling 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 that 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 checked="" type="checkbox"/>	<input type="checkbox"/>
e. Be located within an airport land use plan area or, where such a plan has not been adopted, be within two miles of a public airport or public use airport, and result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g. Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h. Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.10 Hazards and Hazardous Materials

2.10.1 Environmental Setting

Records Search Results

The California Environmental Protection Agency (CalEPA) maintains the “Cortese List Data References” website that provides links to the online databases of the Department of Toxic Substances Control (EnviroStor) and State Water Resources Control Board (GeoTracker). These websites identify sites throughout California that are currently or have in the past had hazardous

substances or leaking underground storage tanks. Nothing was reported for the project site on the EnviroStor website. The GeoTracker website states that a diesel spill from an on-site storage tank was reported at the Liberty Packing facility in 2008 (State Water Resources Control Board 2013). Although the website reports that the file on this spill is still open, the spill has been resolved. Soil tests conducted at the site found that the soil was within acceptable control limits for contaminants.

Hazardous Materials Business Plan and Emergency Response Plan

Collectively, federal, state, and local regulations require preparation of an HMBP (which includes the emergency response plan and is referenced as the HMBP in this document) for hazardous waste generators. The Merced County Health Department, Environmental Health Division is responsible for approval and regulation of hazardous materials. The HMBP is an inventory of all chemicals used at the existing tomato processing facility. A partial list of the primary hazardous materials used and stored at the facility includes ammonia, gasoline, kerosene, diesel, oil, and paint. These chemicals are located in designated storage areas and vessels.

As part of the HMBP, all production operations are subject to preparation and implementation of site-specific emergency response plan. The emergency response plan is the facility's plan for responding to potential accidental releases of hazardous materials. The emergency response plan addresses emergency fire, explosive or other release of hazardous materials that could threaten human health and/or the environment. Liberty Packing's existing emergency response plan includes an inventory of equipment and first aid for personal protection, evacuation procedures, evacuation map, spill control and decontamination procedures, and incident reporting and recording requirements.

2.10.2 Regulatory Setting

Hazardous materials, defined in Section 25501(h) of the California Health and Safety Code (HSC), are materials that, because of their quantity, concentration, or physical or chemical characteristics, pose a substantial present or potential hazard to human health and safety or to the environment if released to the workplace or environment. Hazardous materials have been and are commonly used in commercial, agricultural, and industrial applications, as well as in residential areas to a limited extent.

In accordance with 22 CCR 4.5, Chapter 11, a waste is considered hazardous if it is toxic (causes adverse human health effects), ignitable (has the ability to burn), corrosive (causes severe burns or damage to materials), or reactive (causes explosions or generates toxic gases), in accordance with the criteria established in Article 3. Article 4 lists specific hazardous wastes, and Article 5 identifies specific waste categories, including hazardous wastes as defined by the Resource Conservation and Recovery Act of 1974 (RCRA) (see below), non-RCRA hazardous wastes, extremely hazardous wastes, and special wastes.

Hazardous materials and hazardous wastes are subject to numerous federal, state, and local laws and regulations intended to protect health and safety and the environment. The major federal, state, regional, and local agencies enforcing these regulations are EPA, the state Department of Toxic Substances Control (DTSC), the Regional Water Quality Control Boards (RWQCBs) of CalEPA; SJVAPCD, and the local Merced County Health Department, Environmental Health Division (MCHD/EHD). The federal, state, regional, and local regulatory framework is described below.

Federal

General Hazardous Materials

EPA is the lead agency responsible for enforcing federal regulations that affect public health or the environment. The primary federal laws and regulations include the RCRA; the Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA); and the Superfund Amendments and Reauthorization Act of 1986 (SARA). Federal statutes pertaining to hazardous materials and wastes are contained in Title 40 of the Code of Federal Regulations (CFR).

The RCRA was enacted to provide a general framework for the national hazardous waste management system, including the determination of whether hazardous wastes are being generated, techniques for tracking wastes to eventual disposal, and the design and permitting of hazardous waste management facilities. In 1984, the Hazardous and Solid Waste Amendment was enacted to better address hazardous waste; this amendment began the process of eliminating land disposal as the principal hazardous waste disposal method. Other specific areas covered by the amendment include the regulation of carcinogens, listing and delisting of hazardous wastes, permitting for hazardous waste facilities, and leaking underground storage tanks. CERCLA, also known as the Superfund, was enacted to ensure that a source of funds was available to clean up abandoned hazardous waste sites, compensate victims, address releases of hazardous materials, and establish liability standards for responsible parties. SARA amended CERCLA in 1986 to increase the Superfund budget, modify contaminated site clean-up criteria and schedules, and revise settlement procedures. SARA also provides a regulatory program and fund for underground storage tank clean-ups and the Emergency Planning and Community Right-to-Know Program.

In 1976, Congress passed the Toxic Substances Control Act (TSCA), which was implemented in 1979. This act governs the manufacture, processing, distribution in commerce, use, clean-up, storage, and disposal of polychlorinated biphenyls (PCBs). Since 1978, EPA has promulgated numerous rules further addressing all aspects of the life cycle of PCBs. The most recent rule was the *Final Rule: Amendments to the TSCA PCB Disposal Regulations, Including Amendments to the PCB Notification and Manifesting Rule*, promulgated on June 24, 1999. This rule is deregulatory in nature and provides individuals with more flexibility in their PCB disposal practices while continuing to provide protection from unreasonable risk.

Hazardous Materials Worker Safety Requirements

The federal Occupational Safety and Health Administration and the California Occupational Safety and Health Administration (Cal/OSHA) are the agencies responsible for ensuring worker safety in the handling and use of chemicals in the workplace. The federal regulations pertaining to worker safety are contained in CFR Title 29 (Section 1910.146 for work in pipelines or other confined spaces), as authorized in the Occupational Safety and Health Act of 1970. The regulations provide standards for safe workplaces and work practices, including standards relating to hazardous materials handling. In California, Cal/OSHA assumes primary responsibility for developing and enforcing workplace safety regulations; Cal/OSHA standards are generally more stringent than federal regulations.

State and Local Regulations

General Hazardous Materials

The DTSC and the nine RWQCBs are the primary state agencies under the CalEPA regulating hazardous materials in California. The RWQCB is authorized by the SWRCB to enforce provisions of the Porter-Cologne Water Quality Control Act of 1969. This act gives the RWQCBs authority to require groundwater investigations when the quality of groundwater or surface waters of the state is threatened, and to require remediation of the site if necessary. The DTSC is authorized by the CalEPA to regulate the management of hazardous substances, including the remediation of sites contaminated by hazardous substances. California hazardous materials laws incorporate federal standards but are often stricter than federal laws. The primary state laws include the California Hazardous Waste Control Law (HWCL), which is the state analog of the RCRA, and the Carpenter-Presley-Tanner Hazardous Substances Account Act (HSAA), which is the state analog of CERCLA. State hazardous materials and waste laws are contained in CCR Titles 22 and 26.

- The HWCL, enacted in 1972 and administered by the DTSC, is the basic hazardous waste statute in California and has been amended several times to address evolving needs, including bringing the state law and regulations into conformance with federal laws. This act implements the RCRA “cradle-to-grave” waste management system in California, but it is more stringent in its regulation of non-RCRA wastes, spent lubricating oil, small-quantity generators, transportation, and permitting requirements, as well as in its penalties for violations. The HWCL also exceeds federal requirements by mandating the recycling of certain wastes, requiring certain generators to document a hazardous waste source reduction plan, requiring permitting for federally exempt treatment of hazardous wastes by generators, and implementing stricter regulation of hazardous waste facilities.
- The HSAA, enacted in 1981, addresses similar concerns as CERCLA. The primary difference is in how liability is assigned for a site with more than one responsible party. This is important for petroleum clean-up sites because federal law is usually used to force responsible-party clean-ups; state law is used for petroleum clean-up sites that are exempt from CERCLA.
- The Aboveground Petroleum Storage Act of 1989 requires the owner or operator of aboveground petroleum storage tanks to file a storage statement with the RWQCB if tank storage exceeds 10,000 gallons and holds petroleum or petroleum product that is liquid at ambient temperatures. In addition, the tank or tanks must be registered if they are subject to federal requirements; this potentially expands the requirement for a storage statement to any tank more than 660 gallons or aggregate storage of 1,320 gallons.
- The Hazardous Waste Source Reduction and Management Act, beginning in 1991, required large-quantity generators to document the hazardous wastes being generated and to prepare a documented waste reduction plan.
- The Hazardous Waste Management Reform Act of 1995 required the DTSC to revise its regulations to more closely conform to federal hazardous waste identification criteria and essentially eliminate land disposal restrictions for California-only hazardous wastes, among other major changes. However, many of these changes have been deferred to a DTSC advisory committee for further study and are not expected to be implemented for several years, and in certain cases, not at all.

Use and Storage of Hazardous Materials

The DTSC has granted the MCHD/EHD responsibility for implementing and enforcing most hazardous materials regulations in Merced County under the Certified Unified Program Agency Program (HSC, Chapter 6.11). The Certified Unified Program Agency Program consolidates, coordinates, and makes consistent portions of the following hazardous materials programs:

- Hazardous materials business plans (Chapter 6.95 of the HSC, Section 25501 et seq.).
- The California accidental release prevention program for acutely hazardous materials (Chapter 6.95 of the HSC, Section 25531 et seq.).
- State Uniform Fire Code requirements (Section 80.103 of the Uniform Fire Code, as adopted by the state fire marshal pursuant to the HSC, Section 13143.9).
- Aboveground storage tanks (HSC, Section 25270.5[c]).
- Underground storage tanks (Chapter 6.7 of the HSC, Section 25280 et seq.).
- Hazardous waste generator requirements (Chapter 6.5 of the HSC, Section 25100 et seq.).

The MCHD/EHD may also act as an oversight agency for investigation and remediation of leaking underground storage tank sites and other hazardous materials release sites.

Hazardous Materials Business Plans

Businesses that handle specified quantities of chemicals are required to submit a HMBP in accordance with federal and state community right-to-know laws. This plan allows local agencies to plan appropriately for a chemical release, fire, or other incident. The HMBP must include the following.

- An inventory of hazardous materials with specific quantity data, storage or containment descriptions, ingredients of mixtures, and physical and health hazard information.
- Site and facility layouts that must be coded for chemical storage areas and other facility safety information.
- Emergency response procedures for a release or threatened release of hazardous materials.
- Procedures for immediate notification of releases to the administering agency.
- Evacuation plans and procedures for the facility.
- Descriptions of employee training in evacuation and safety procedures in the event of a release or threatened release of hazardous materials consistent with employee responsibilities, and proof of implementing such training on an annual basis.
- Identification of local emergency medical assistance appropriate for potential hazardous materials incidents.
- The HMBP is filed with and administered by the MCHD/EHD, which ensures review by and distribution to other potentially affected agencies.

Emergency response plans/evacuation plans within Merced County are provided by Merced County Office of Emergency Services (OES). OES provides preparedness before and coordination during large-scale emergencies and disasters. OES coordinates with partner agencies, including the six incorporated cities within the county (Merced, Atwater, Livingston, Gustine, Los Banos, and Dos

Palos), special districts, and key private agencies in providing planning, response, recovery, and mitigation activities for disaster-related incidents. OES has Emergency Operations Plans (EOP), guidance documents for handling and managing incidents, greater than day-to-day scale, including large or complex emergency events and disasters. The EOPs are written from an “all risk” perspective, addressing traditional threat areas, including fire, law enforcement, and the Emergency Medical System, but also including agricultural terrorism, public health threats, and cyber-terrorism. The EOP defines the roles and responsibilities for agencies and departments in terms of emergency management, preparedness, response, recovery, and mitigation. Mitigation efforts occur both before and after emergencies or disasters and partially include eliminating or reducing the impact of hazards that exist within the county.

Liberty Packing has an existing HMBP for the tomato processing facility, which includes an emergency response plan. The existing HMBP is required to be updated prior to the County’s approval of the major modification to the CUP.

Hazardous Materials Worker Safety Requirements

The state regulations concerning the use of hazardous materials in the workplace are included in CCR Title 8 (Sections 5156–5158 for work in pipelines or other confined spaces), which contains requirements for safety training, availability of safety equipment, accident and illness prevention programs, hazardous substance exposure warnings, and emergency action and fire prevention plan preparation. Cal/OSHA also enforces hazard communication program regulations, which contain worker safety training and hazard information requirements, such as procedures for identifying and labeling hazardous substances, communicating hazard information relating to hazardous substances and their handling, and preparation of health and safety plans to protect workers and employees.

Wildfire Hazards

Implementation of the proposed project would also require adherence to Chapter 9.24, Fire Prevention, of the County Code, including Chapter 9.24.055, which requires water supply capable of supplying the required fire flow for fire protection.

2.10.3 Impact Discussion

Would the project:

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

Less-than-Significant Impact. The proposed project construction activities would involve routine transport, use, and disposal of potentially hazardous materials such as solvents, paints, oils, grease, and caulking. Such transport, use, and disposal must be compliant with applicable regulations as described in the *Regulatory Setting* above. Because compliance with existing regulations is mandatory, the proposed project is not expected to create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials.

The existing facility uses potentially hazardous materials for processing operations. The majority of chemicals are used, stored, and contained on the site in various locations and are subject to MCHD/EHD requirements. Procedures for handling all hazards materials are contained in the existing and approved HMBP, and all activities are monitored by the MCHD/EHD. The proposed

project would not result in the use of additional hazardous materials or in substantial changes to how hazardous materials are handled. Impacts related to the routine transport, use or disposal of hazardous materials due to proposed project implementation would be less than significant.

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

Less-than-Significant Impact. As described under Impact a, typical construction-related hazardous materials would be used during construction of the proposed project, including gasoline, oil, other vehicle-related fluids, paints, solvents, and metals. It is possible that any of these substances could be accidentally released during construction activities. As described previously, compliance with federal, state, and local regulations would ensure that all hazardous materials are used, stored, and disposed properly, thereby minimizing potential impacts related to a hazardous materials release during construction activities.

As further described under Impact a, proposed project activities would result in the use of additional potentially hazardous materials. The existing HMBP includes an emergency response plan to respond to accidental releases of hazardous materials. Liberty Packing's existing emergency response plan includes an inventory of equipment and first aid for personal protection, evacuation procedures, evacuation map, spill control and decontamination procedures, and incident reporting and recording requirements. Furthermore, Liberty Packing would be required to comply with Cal/OSHA and federal standards for the storage and handling of fuels, flammable materials, and fire prevention. The treatment and disposal of wash water is regulated under the processing facility's existing WDR. With adherence to the above plans, procedures and regulations, the proposed project would have a less than significant impact related to accidental releases of hazardous materials.

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

No Impact. The tomato processing facility is located in a rural agricultural area approximately 1 mile from the small community of Volta, which is the closest community where schools are located. There are no schools within 0.25 mile of the proposed project site. No impact would occur.

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

Less-than-Significant Impact. The project site is located on a site that is included on a list of hazardous materials sites complied pursuant to Government Code Section 65962.5.

As described above, a search of the regulatory databases identified a diesel and kerosene leak that was reported at the facility in 2008. Soil tests conducted at the site found that the soil was within acceptable control limits for contaminants. No remediation was needed.

Therefore, the proposed project would not create a significant hazard to the public of the environment and the impact is considered less than significant.

e. For a project within an airport land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?

and

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

No Impact. The closest public use airport is Los Banos Municipal Airport, located approximately 7 miles southeast of the proposed project site. There is no private airport within that radius of the project site. Due to these distances from the proposed project site aircraft overflights would not pose a safety hazard to people working at the facility. There would be no impact.

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

Less-than-Significant Impact. Construction and operation of the proposed project would not require modifications of South Ingomar Grade Road. As a result, the proposed project would not result in a significant impact related to implementation of an emergency response/evacuation plan.

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

No Impact. The Liberty Packing facility is not located in a wildland area and is not located in an area zoned for susceptibility to fire risk.

Although there are no wildlands in the project area, potential risks associated with fire hazards due to construction activities exist; construction contractors are required to comply with state regulations regulating use of combustible substances described above under *Regulatory Setting*. Additionally, potential fire risks resulting from project activities are also regulated by the MCHD/EHD through the existing HMBP, which is required to be updated prior to approval of the proposed project. Therefore, there would be no impact.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Hydrology and Water Quality				
Would the project:				
a. Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Hydrology and Water Quality		Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	Create or contribute runoff water that would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
f.	Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
j.	Contribute to inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.11 Hydrology and Water Quality

2.11.1 Environmental Setting

Surface Water

The major surface water features next to the proposed project are the San Luis Wasteway, an agricultural drainage canal that runs along the south side of the project site, and the Volta State Wildlife Area is east of the project site and across South Ingomar Grade Road (see Figure 1, Vicinity Map). The State Wildlife Area encompasses approximately 2,891 acres of managed marsh and valley alkali shrub. It is open for waterfowl hunting, in season.

Groundwater

The proposed project is located in the San Joaquin Valley Groundwater Basin, Merced Subbasin (Basin #5-22.04). The Merced Subbasin is approximately 491,000 acres or 767 square miles. Estimations of total storage capacity of the subbasin and the amount of water in storage as of 1995 were calculated using an estimated specific yield of 9.0 percent and water levels collected by the Department of Water Resources (DWR) Cooperators. According to these calculations, the total storage capacity of the subbasin is estimated to be 21,100,000 acre-feet (California Department of Water Resources 2004).

The groundwater quality in the subbasin is characterized by a calcium-magnesium bicarbonate at the basin interior, sodium bicarbonate to the west, and calcium-sodium bicarbonate to the south. Total Dissolved Solids range from 100 to 3,600 milligrams per liter (mg/L), with a typical range of 200 to 400 mg/L. In addition, there are localized impairments of high hardness values, iron, nitrate, and chloride (California Department of Water Resources 2004).

Flooding

The Federal Emergency Management Agency (FEMA) delineates 100-year floodplains and publishes the information on Flood Insurance Rate Maps (FIRMs). DWR has used the FIRMs to provide online information about flood potential in the Central Valley. According to the DWR “best available map” information, the eastern portion of the proposed project is located within Zone A, defined by FEMA as an area determined to have a 1 percent annual chance of flooding (California Department of Water Resources 2013). Construction of new facilities at the processing plant, the proposed outdoor warehouse area, and the proposed septic leachfield mounding area would occur within the identified floodplain (see Figure 5, 100-year Floodplain).

2.11.2 Regulatory Setting

Federal

Clean Water Act

Important applicable sections of the federal Clean Water Act (33 USC 1251–1376) include:

- Sections 303 and 304 which provide water quality standards, criteria, and guidelines.
- Section 401 which requires an applicant for any federal permit that proposes an activity that may result in a discharge to waters of the United States to obtain certification from the state that the discharge will comply with other provisions of the Clean Water Act. Certification is provided by the RWQCB.
- Section 402 which establishes the National Pollutant Discharge Elimination System (NPDES), a permitting system for the discharge of any pollutant (except for dredged or fill material) into waters of the United States. This permit program is locally administered by the Central Valley RWQCB. The proposed project would have a footprint greater than one acre. As a result, an NPDES General Construction Permit will need to be obtained prior to any construction activities.
- Section 404 which establishes permit programs for the discharge of dredged or fill material into waters of the United States. This permit program is administered by the U.S. Army Corps of Engineers.

State

Porter-Cologne Water Quality Act

The State of California's Porter-Cologne Water Quality Control Act (California Water Code, Section 13000 et seq.) provides the basis for water quality regulation in California. The act requires a Report of Waste Discharge for any discharge of waste (liquid, solid, or otherwise) to land or surface waters that may impair a beneficial use of surface or groundwater of the state. Based on the report, the Central Valley RWQCB issue WDRs to minimize the effect of the discharge.

Report of Waste Discharge

California Water Code Section 13260 states that persons discharging or proposing to discharge waste that could affect the quality of the waters of the State, other than into a community sewer system, will file a Report of Waste Discharge containing information which may be required by the Central Valley RWQCB. The WDR for Liberty Packing (Order No. 90-223) requires effluent monitoring prior to land application. In addition, soil and groundwater testing is required in order to ensure there are no impacts on groundwater quality during land application of process water. The WDR allows Liberty Packing to apply a 30-day average daily dry weather discharge flow of 4 million gallons of process wastewater to approximately adjacent agricultural lands. Although the processing facility improvements will increase the plant's production, the project's cooling and settling pond expansions would allow Liberty Packing to use condensate and process water in place of well water. As a result, discharges would continue to meet the requirements of the WDR, and would not require a change to the existing WDR.

Local

Merced County has adopted a floodplain management ordinance which requires applicants for building permits within floodplains to elevate all structures above the base flood elevation. Similarly, any new septic system would be required to be built to ensure that it will not release sewage in the event of a flood.

2.11.3 Impact Discussion

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

and

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

And

f. Otherwise substantially degrade water quality?

Less-than-Significant Impact. Process water from the tomato processing facility is currently treated and land applied pursuant to Liberty Packing's existing WDR (Order No. 90-223). The WDR permits discharge of up to 4 million gallons daily of process water; current volumes in July and August 2013 totaled approximately 2.6 and 3.3 million gallons daily, respectively. The proposed project would reclaim a portion of the process water, therefore offsetting the volume of water needed by the expanded capacity of the plant.

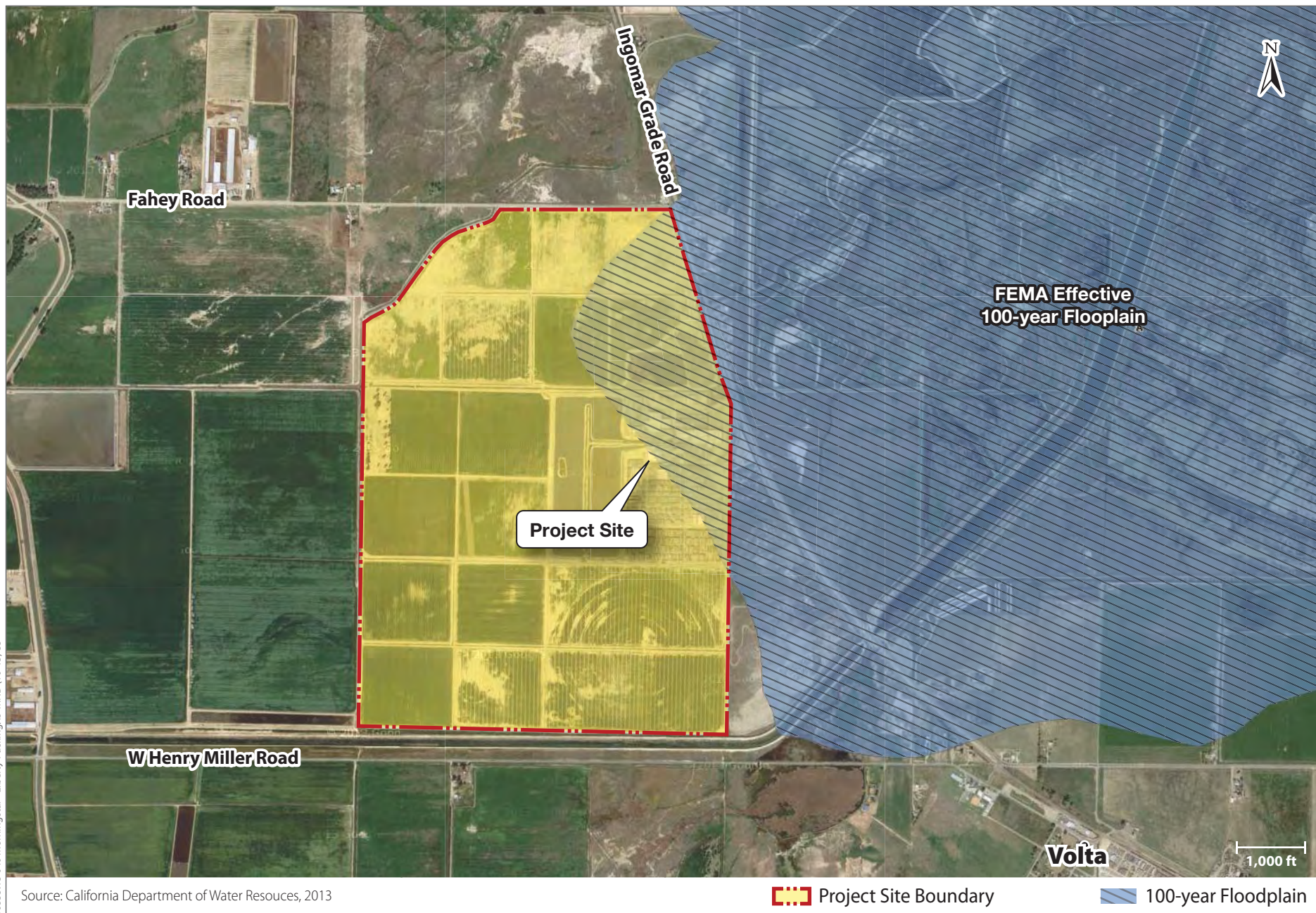


Figure 5
100-year Floodplain

As with the existing condition, the WDRs would continue to be enforced, effluent process water would continue to be monitored for water quality, and soil and groundwater would also continue to be tested for constituents of concern. If water quality monitoring determines that the process wastewater being applied to land is impacting soil and ultimately groundwater quality, then the applicant is required to implement provisions required in the WDRs to mitigate the issue. In addition, temporary construction-related water quality impacts would be mitigated by adhering to the NPDES Construction General Permit and required SWPPP. The proposed project would increase the amount of impervious surface on site from construction of the outside warehousing and truck parking area. Impervious surface can concentrate and redirect storm water along with contaminants and may impact water quality. If necessary, storm drainage improvements would be designed to County Standards. Because stormwater would not leave the site, there would be no impacts to water quality.

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

No Impact. The project does not involve any additional groundwater pumping. Reuse of water from the expanded cooling and settling ponds will allow the applicant to reduce their reliance on well water. As a result, there would be no impact.

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

and

d. Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on site or off site?

Less-than-Significant Impact. The existing drainage pattern in the project area is from southwest to northeast draining toward the Volta State Wildlife Refuge and, beyond that, the San Joaquin River.

Surface runoff from the project area would continue to be retained on site. Storm drainage improvements, if any are necessary, would be designed in accordance with Merced County requirements.

This impact is therefore considered less than significant.

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

and

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

and

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

Less-than-Significant Impact. As stated above, the eastern portion of the property is located within the 100-year floodplain. Although the proposed project would place structures within the 100-year floodplain (e.g., packaging building, utility sheds, and production equipment), those structures would be adjacent to the existing processing facility and therefore would not impede or redirect flood flows to any substantially greater extent than the existing facility. No housing is proposed as part of this project. Impacts would be less than significant.

j. Contribute to inundation by seiche, tsunami, or mudflow?

No Impact. The project site is not subject to inundation by any of these actions. No impact would occur.

Land Use and Planning	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b. Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to, a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.12 Land Use and Planning

2.12.1 Setting

The project site is located in a rural agricultural setting. The existing land use on the project site includes the existing tomato processing facility and agricultural land (sites of proposed truck parking, cooling pond expansion, and outdoor warehouse expansion). No residential uses or associated housing units exist on the proposed project site. The nearest community is the town of Volta, approximately 1 mile southeast of the project site.

The proposed project site is located in an unincorporated area of Merced County and is under the jurisdiction of the County's General Plan and zoning regulations. The General Plan Land Use designation for the proposed project site is Agricultural (Merced County 2013a). Other land uses permitted on lands designated as Agricultural include livestock facilities, waste water lagoons, and agricultural industrial/commercial facilities.

Land Use Element Policy LU-2.10 encourages projects such as this expansion of the Liberty Packing facility: "Allow employment-generating industrial uses in Agricultural areas that are not suitable in

urban areas due to their size, buffer requirements, or specific use, where the use will not conflict with agricultural and environmental resources. ”

The proposed project is subject to General Plan Policy LU-2.5 of the Land Use Element, which requires a review of 10 factors for the location of an agricultural commercial use by CUP in rural areas. The ten criteria are as follows.

1. The use requires location in a rural area because of one or more of the following characteristics: unusual site area requirements, natural resource production purposes, the use is directly agricultural related, or because of specific operational characteristics which pose a health or safety problem to urban populations.
2. The use is located near or readily accessible to a probable work force.
3. The use is consistent with the intent and policies of the Agricultural, Natural Resources, and Health and Safety Elements.
4. The use will not significantly impact adjacent agricultural, recreational, natural, cultural, wildlife or other identified Natural Resources Element.
5. The use is protected from hazards identified in the Health and Safety Element.
6. The use is not located on productive agricultural land when nonproductive agricultural land is available in the vicinity of the proposed project.
7. The use is limited in size, time of operation or length of permit authority where necessary to ensure compatibility with adjacent land uses.
8. The use shall not have a detrimental effect on surface or groundwater resources.
9. The use shall provide adequate infrastructure and improvements to reduce impacts on county services.
10. The use shall have access to adequate transportation facilities without creating abnormally high traffic volumes and shall provide road improvements to mitigate impacts generated by the project.

According to the County's Standards of Building Intensity (Land Use Element Table LU-2), agricultural commercial facilities and appropriate nonagricultural structures may not exceed a 0.10 Floor Area Ratio (i.e., 10 percent building coverage) in areas designated "Agricultural." (Merced County 2013a)

Zoning in the proposed project area is General Agricultural (A-1) per the County's zoning regulations. The General Agricultural designation allows agricultural processing plants and crop, orchard or vineyard production, and agricultural manufacturing and storage uses (Chapter 18.02.020). The existing tomato processing facility is a permitted operation under Conditional Use Permit (CUP 02-001). No general plan or zoning changes are proposed.

Merced County General Plan Update

Merced County adopted the 2030 General Plan on December 10, 2013. Review of the 2030 General Plan Land Use Element has determined that the proposed project would be consistent with the applicable goals (LU-2) and policies (LU-2.4, LU-2.5, and LU-2.10) governing land use development under the County's 2030 General Plan (Merced County 2013a).

2.12.2 Impact Discussion

Would the project:

a. Physically divide an established community?

No Impact. The proposed project would involve a major modification of the existing tomato processing facility. The nearest community is the unincorporated community of Volta, which is about 1 mile southeast of the project. The proposed project would not result in the division of a community, and no impact would occur.

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

Less-than-Significant Impact. Liberty Packing Company has submitted an application for a major modification to Conditional Use Permit CUP 02-001 for the construction and operation of the proposed project. The proposed project would be consistent with the current Agricultural land use designation and would meet all of the criteria listed in the County General Plan for its proposed land uses. Upon completion of proposed project construction, approximately 90 acres of the 840-acre would be developed with structures and other impervious surfaces. This corresponds to approximately 11 percent lot coverage. The project also complies with the 0.10 Floor Area Ratio standard specified in the County's General Plan for non-residential land uses. Approximately 30 acres of the site incorporates the tomato processing facility, including the 240,000 square feet of existing buildings and the approximately two acres of new buildings. Outdoor storage, truck parking, and the cooling ponds are not included in calculating Floor Area Ratios. Therefore, the project would not conflict with any applicable land use plan, policy, or regulation, and potential project impacts are considered less than significant.

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

No Impact. There is no existing or proposed habitat conservation plan or natural community conservation plan that applies to the proposed project site. Therefore, the proposed project would not conflict with any such plan, and there would be no impact.

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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"/>

2.13 Mineral Resources

2.13.1 Setting

According to the Merced County General Plan Open Space and Conservation Element, current mineral extraction within the County is mainly limited to sand and gravel. Approximately one million tons are mined annually, primarily from streambeds and flood plain deposits. The Natural Resources Conservation Service soil survey identifies the site soils as loamy soils (USDA 2013). These are unlikely to support sand and gravel deposits, meaning there are no known resources present. The project site has been historically developed as agricultural land and there are no existing mining operations in the immediate vicinity of the project site.

2.13.2 Impact Discussion

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?

and

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?

No Impact. As discussed above, the proposed project site is not currently used for mining, and there is no significant mineral extraction required for construction or operation of the proposed project such that mineral resources of regional or statewide value would be reduced. The proposed project site is also not within a mineral resource area as defined by the Mineral Resource Zone Map. Therefore, the proposed project has no impact on mineral resources.

Noise	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Expose persons to or generate noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Noise	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
e. Be located within an airport land use plan area, or, where such a plan has not been adopted, within two miles of a public airport or public use airport and 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"/>
f. Be located in the vicinity of a private airstrip and 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"/>

2.14 Noise

2.14.1 Environmental Setting

Noise Terminology

Below are brief definitions of noise terminology used in this section.

- **Noise.** Noise is defined as unwanted sound that adversely affects any given receiver location. In general, sound waves travel away from a ground level noise source in a hemispherical pattern. As a result, the energy contained in a sound wave is spread over an increasing area as it travels away from the source. This results in a decrease in loudness at greater distances from the noise source.
- **Decibel (dB).** Sound level meters measure the air pressure fluctuations caused by sound waves, with separate measurements made for different sound frequency ranges. The dB scale used to describe sound is a logarithmic scale, which accounts for the large range of audible sound intensities.
- **A-Weighted Decibel (dBA).** Most sounds consist of a broad range of sound frequencies. The dBA scale is a measure of sound intensity that is weighted to take into account the human perception of different frequencies of sound.
- **Equivalent Sound Level (L_{eq}).** L_{eq} represents an average of the sound energy occurring over a specified period. In effect, L_{eq} is the steady-state sound level that would contain the same acoustical energy as the time-varying sound that actually occurs during the monitoring period. The 1-hour A-weighted equivalent sound level (L_{eq} 1h) is the energy average of A-weighted sound levels occurring during a 1-hour period.
- **Maximum and Minimum Sound Levels (L_{max} , L_{min}).** The maximum (L_{max}) and minimum (L_{min}) sound levels measured during a monitoring period.
- **Day-Night Level (L_{dn}).** The energy average of the A-weighted sound levels occurring during a 24-hour period, with a 10-dB penalty added to sound levels between 10:00 p.m. and 7:00 a.m.

In general, human sound perception is such that a change in sound level of 3 dB is just noticeable; a change of 5 dB is clearly noticeable; and a change of 10 dB is perceived as doubling or halving the sound level. A doubling of actual sound energy is required to result in a 3 dB (i.e., barely noticeable) increase in noise; in practice, for example, this means that the volume of traffic on a roadway typically needs to double to result in a noticeable increase in noise.

When distance is the only factor considered, sound levels from isolated point sources of noise typically decrease by about 6 dBA for every doubling of distance from the noise source. When the noise source is a continuous line (e.g., vehicle traffic on a highway), sound levels decrease by about 3 dBA for every doubling of distance. Noise levels can also be affected by several factors other than the distance from the noise source. Topographic features and structural barriers that absorb, reflect, or scatter sound waves can affect the reduction of noise levels. Atmospheric conditions (wind speed and direction, humidity levels, and temperatures) and the presence of dense vegetation can also affect the degree of sound attenuation.

Existing Ambient Noise

Sources of ambient⁶ noise in the project vicinity are associated with operations at the existing Liberty Packing tomato processing facility, associated truck traffic along the local roadway network, train traffic along the Union Pacific Railroad spur line that parallels South Ingomar Grade Road, and agricultural operations in the vicinity. The Background Report on noise prepared for the Merced County General Plan update estimates that existing noise along South Ingomar Grade Road is approximately 65 dBA L_{dn} at 36 feet from the road and 60 dBA L_{dn} at 78 feet from the road. This report found that the railroad spur line supports approximately 2 train trips per day (Mintier & Associates 2012).

On-site Noise Sources

Existing noise sources from on-site operations at Liberty Packing include boilers, cooling towers, electric motors for conveyor systems, on-site vehicle traffic at the outdoor warehouse area, and on-site truck traffic. The boilers and cooling towers are located on the west side of the facility. Truck traffic occurs along the northern perimeter of the facility.

Existing Noise-Sensitive Land Uses

Noise-sensitive land uses are generally defined as locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Noise-sensitive land uses typically include residences, hospitals, schools, guest lodgings, libraries, and certain types of passive recreational uses, such as parks, to be used for reading, conversation, and meditation (Federal Transit Administration 2006).

Sensitivity is a function of noise exposure (in terms of both exposure duration and insulation from noise) and the types of activities involved. In the vicinity of the existing winery, the land uses are primarily agricultural with some single family residences. There are three residences located on the west side of South Ingomar Road that are directly east of either the existing facility or the proposed

⁶ *Ambient* describes an existing or pre-project background noise level.

expansion of the outdoor warehouse area. The nearest residence is located approximately 800 feet east of the project site; the furthest is approximately 1,500 feet east of the project site.

2.14.2 Regulatory Setting

Noise Standards

Chapter 10.60 Noise Control and Chapter 18.41.070 Noise of the Merced County Code establishes sound level limits for any property within the unincorporated area of the county. These sound level limits are shown in Table 13 below.

Table 13. Merced County Code Sound Level Limits

Residential Property	Non-Residential Property
Daytime (7 a.m. to 6 p.m.): Not to exceed background sound level by 10 dBA	
Nighttime (6 p.m. to 7 a.m.): Not to exceed background sound level by 5 dBA	
If the background sound level cannot be determined:	
65 dBA L_{dn} or 75 dBA L_{max}	70 dBA L_{dn} or 80 dBA L_{max}

Noise from construction activity is exempt from the sound level limits listed in Table 13 above, provided that all construction is limited to the daytime hours between 7 a.m. and 6 p.m., and all construction equipment is properly muffled and maintained. Nighttime construction is prohibited between 6 p.m. and 7 a.m., except for emergency work, or when the sound level does not exceed any applicable relative or absolute limit specified in Table 13.

The noise element of the Merced County General Plan (Merced County 2013a) establishes land use compatibility standards for residential land uses. The acceptable exterior and interior residential noise levels from various noise sources are listed in Table 14.

Table 14. Land Use Compatibility Standards for Residential Land Use

Noise Source	Exterior Standard		Interior Standard
Existing General Plan			
Transportation Sources	65 dBA L_{dn}^a		45 dBA L_{dn}^a
Non-Transportation Sources	Daytime (7 a.m. to 6 p.m.) 55 dBA L_{eq} and 75 dBA L_{max}^b	Nighttime (6 p.m. to 7 a.m.) 45 dBA L_{eq} and 65 dBA L_{max}^b	No Standard
General Plan Update			
Transportation Sources at receiving residential land use	65 dBA L_{dn}		45 dBA L_{dn}
Non-Transportation Sources receiving residential land use	Daytime (7 a.m. to 6 p.m.) 55 dBA L_{eq} and 75 dBA L_{max}^c	Nighttime (6 p.m. to 7 a.m.) 50 dBA L_{eq} and 70 dBA L_{max}^c	35 L_{eq} and 55 dBA L_{max}^c

Notes for Table 14

Notes

- a. Apply to the proposed new noise-sensitive land uses which may be impacted by preempted transportation noise sources such as traffic on public roadways, railroad operations, and aircraft operations.
- b. Apply to existing and proposed noise-sensitive land uses which may be impacted by proposed industrial and commercial land uses and other land uses involving new locally-regulated noise sources
- c. These standards shall be reduced by 5 dB for sounds consisting primarily of speech or music, and for recurring impulsive sounds. If the existing ambient noise level exceeds the standards, the noise level standards shall be increased at 5 dB increments to encompass the ambient.

Source: Merced County 2013b

Noise Impact Criteria

In accordance with CEQA, Merced County plans and policies, and professional standards, a project noise impact would be considered significant if the project would:

- Result in an increase in noise from construction greater than 10 dBA, according to Table 13, over the existing background sound level during nighttime hours (6 p.m. to 7 a.m.) at noise-sensitive land uses.
- Generate site operation noise in excess of 55 dBA L_{eq} in daytime hours (7 a.m. to 6 p.m.) and 45 dBA L_{eq} during nighttime hours (6:00 p.m. to 7:00 a.m.) at noise-sensitive land uses. If the existing background sound level exceeds the noise standards, the standards are increased at 5 dB increments to encompass the ambient noise level.
- Generate traffic noise in excess of 65 dBA L_{dn} at noise-sensitive land uses *and* result in a noise increase of greater than 3 dBA over the noise levels without the project at noise-sensitive land uses.

2.14.3 Impact Discussion

Would the project:

a. Expose persons to or generate noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?

Construction Noise

Less-than-Significant Impact. All construction activities would be limited to daytime hours between 7 a.m. and 6 p.m., as required by the County noise ordinance or be less than the limits described in Table 13. Therefore, construction noise would not result in noise that exceeds local noise standards and this impact would be less than significant.

Operation Noise

On-site Equipment Operation Noise

Less-than-Significant Impact. Noise generation that would affect the nearby residences is anticipated to come from operation of the expanded outdoor warehouse and extended railroad spur. Both will result in new sources of noise affecting the nearby residences.

Noise from the outdoor warehouse area will consist of machinery used to move the storage containers about the storage yard. This will be intermittent during operating hours, and based on seasonal demand for storage. Although the existing storage area will be expanded to the south, it will not be any closer than the current distance from the closest residence. As a result, the impact will not be substantially greater than existing noise exposure from the facility. The impact will be less than significant.

The extension of the rail spur will bring a new source of noise to the nearby residences. The tomato processing facility currently hosts approximate 350 locomotive trips per year, or about 1 per day on average (see Appendix A, Air Quality and Greenhouse Gas Calculations, Section 6.1.1.2). This will not change as a result of the project. Therefore, activity along the proposed new spur can be expected to be of similar frequency. The Background Report prepared for the Merced County General Plan update (Chapter 11, Noise – refer to Table 11-2) found that the noise level along active railroad tracks with up to 20 trains per day was 71 dBA L_{dn} within 100 feet of the tracks, dropping to 65 dBA L_{dn} within 263 feet of the tracks and to 60 dBA L_{dn} within 567 feet of the tracks (Mintier & Associates 2012). These noise levels would be less along tracks that receive less frequent use, such as the proposed spur extension. Because the closest residence is approximately 800 feet from the proposed spur extension, the project will not result in noise levels exceeding the County standard at the residence. The impact will be less than significant.

Traffic Noise

Less-than-Significant Impact. Truck traffic along South Ingomar Grade Road will increase by 120 trucks per day as a result of the project. While this will result in an incremental increase in noise levels along South Ingomar Grade Road, the existing residences are set back approximately 600 feet from the road. As a result, this minor increase in noise level is not expected to exceed allowable levels under the County noise ordinance. The impact is less than significant.

Except for the minor increase in workers' vehicles during construction, there would be no change in employee vehicle traffic. The temporary increase in vehicle trips during construction (approximately 52 roundtrips per day) is not expected to result in a substantial increase in traffic noise levels on South Ingomar Grade Road, which currently carries approximately 3,000 vehicles per day. Therefore, the traffic noise impact as a result of the project would be less than significant.

b. Expose persons to or generate excessive groundborne vibration or groundborne noise levels?

Less-than-Significant Impact. The operation of heavy equipment may generate localized groundborne vibration. Construction activities associated with the proposed project would not involve high-impact activities such as pile driving. Vibration from nonimpact construction activity and truck traffic is typically below the threshold of perception when the activity is more than about 50 feet from the receiver. Because the project would not involve high-impact equipment and the construction sites are more than about 50 feet from the noise-sensitive land uses, this impact is expected to be less than significant, and no mitigation is required.

c. Result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?

Operation Noise—Proposed Project

Less-than-Significant Impact. As discussed under item (a), the proposed project would result in an incremental increase in noise levels at nearest residents. However, these noise levels will not exceed allowable noise levels under the County noise ordinance. Therefore, the proposed project would not result in a substantial permanent increase in ambient noise levels in the project vicinity. The noise impact of proposed project operation would be less than significant.

d. Result in a substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?

Less-than-Significant Impact. Construction of the outdoor warehouse area will result in a temporary increase in noise. However, as discussed above, construction will occur during the hours permitted under County ordinance and therefore noise will not exceed the County standards. The impact would be less than significant.

Ambient noise levels will also increase periodically as a result of locomotives moving along the extension of the railroad spur. However, as discussed above, the distance of existing residences from this new noise source makes an exceedance of County noise standards unlikely. The impact would be less than significant.

e. For a project located within an airport land use land use plan or, where such a plan has not been adopted, within 2 miles of a public airport or public use airport, expose people residing or working in the project area to excessive noise levels?

and

f. For a project within the vicinity of a private airstrip, expose people residing or working in the project area to excessive noise levels?

No Impact. The closest public use airport is Los Banos Municipal Airport, located approximately 7 miles southeast of the project site. There would be no impact related to exposure of employees to excessive noise from airport uses.

Population and Housing	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Population and Housing	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
c. Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.15 Population and Housing

2.15.1 Setting

The nearest community to the proposed project site is the community of Volta, located approximately 1 mile to the southeast. The City of Los Banos is located approximately 7 miles southeast of the site. The proposed project is the modification of an agricultural processing plant and does not include any residential development.

Construction of the proposed project would require approximately 32 workers during construction.

The proposed project would not result in an increase in permanent and seasonal employees at the processing facility.

2.15.2 Impact Discussion

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

Less-than-Significant Impact. The proposed project involves the expansion of the existing tomato processing facility and does not include the construction of any residential units. Construction of the proposed project would result in a temporary increase in construction-related job opportunities in the local area. However, it is not likely that construction workers would relocate their place of residency as a consequence of temporarily working on the proposed project. Additionally, construction workers can be expected to be drawn from the construction labor force already existing in the surrounding communities.

The proposed project would not result in substantial indirect population growth. Additionally, the proposed project does not include any new roads or off-site infrastructure that would result in indirect population growth.

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

and

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

No Impact. There are no existing residential housing units on the project site. Therefore, the proposed project would not displace any existing housing or result in people being displaced from

their housing, and would not require the construction of replacement housing elsewhere. No impact would occur.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Public Services				
Would the project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input 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"/>

2.16 Public Services

2.16.1 Setting

Fire Protection

The Merced County Fire Department (MCFD) is responsible for providing fire suppression services throughout the county. There are 19 fire stations located throughout the county. Los Banos Fire Station 71 (approximately 7 miles southeast of the project site) and Santa Nella Fire Station 72 (approximately 5 miles west of the site) are the closest stations to project site in the event that fire protection services are requested. The MCFD has contracted with the California Department of Forestry and Fire Protection (CAL FIRE) to provide additional fire protection services. There is a CAL FIRE station on Highway 152 south of Santa Nella (approximately 7 miles south of the project site). The County Fire Code (Section 10.301(c)) requires all projects to provide approved water supplies capable of delivering adequate fire flow for fire protection to all premises upon which buildings or portions of buildings are constructed. According to the General Plan, for larger developments two access points are required to ensure escape and emergency service options.

Police Services

Police services for the project area are provided by the Merced County Sheriff's Department.

Schools

The project will not result in an increase in employees at the tomato processing facility. Therefore, it will not affect schools.

Parks

Refer to Section 2.17, *Recreation*, for a discussion of park and recreational facilities.

2.16.2 Impact Discussion

Would the project:

a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a 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 following public services:

Fire protection

Less-than-Significant Impact. The MCFD has established requirements for on-site water storage for fire protection and adequate fire department access. The Liberty Packing facility will continue to meet these requirements and will provide the access points required to comply with all applicable fire safety regulations. The County has established that new developments shall pay their fair share of costs for fire protection facilities and services, and thus the County would require Liberty Packing to contribute fees for the development of the proposed project to ensure that the County is able to maintain adequate fire protection services. Furthermore, the proposed project would be required to comply with all applicable fire safety regulations. In compliance with these regulations, the proposed project would not create additional demand for fire protection that would result in environmental impacts. Impacts would be less than significant.

Police Protection

No Impact. The proposed project would not increase the number of employees operating at the facility at any one time. Because there would be no change in demand for police protection, the project would have no impact.

Schools

No Impact. The proposed project does not include any residential development nor any increase in the number of permanent and seasonal employees. Therefore, the proposed project would have no impact on schools.

Parks

No Impact. Refer to Section 2.17, *Recreation*, for a discussion of impacts on park and recreational facilities. This impact is less than significant.

Other Public Facilities

No Impact. The proposed project would not affect the demand for any other public services. No impact would occur.

	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
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"/>

2.17 Recreation

2.17.1 Setting

Parks and recreation services in unincorporated Merced County are provided by the County's Parks and Recreation Department. No parks or recreational facilities are located on the proposed project site.

2.17.2 Impact Discussion

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?

and

b. Include recreational facilities or require the construction of or expansion of recreational facilities that might have an adverse physical effect on the environment?

No Impact. Open space and parks are typically provided to serve residential populations. The proposed project does not propose residential units, would not increase the current number of plant employees, and would therefore not increase demand on parks through an increase in population either directly or indirectly. No change in the usage of recreational facilities would result from proposed project implementation. Therefore, the proposed project would not increase the use of existing park and recreational facilities, would not result in the substantial deterioration of existing parks, and would not require the construction or expansion of new recreational facilities. There would be no impact.

Transportation/Traffic	Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Would the project:				
a. Conflict with an applicable plan, ordinance, or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation, including mass transit and non-motorized travel and relevant components of the circulation system, including, but not limited to, intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Conflict with an applicable congestion management program, including, but not limited to, level-of-service standards and travel demand measures or other standards established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d. Substantially increase hazards because of a 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"/>
e. Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f. Conflict with adopted policies, plans, or programs regarding public transit, bicycle or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.18 Transportation and Traffic

2.18.1 Environmental Setting

The Liberty Packing facility is located in a rural agricultural area that is characterized by a system of rural roads. The nearest urbanized area is the City of Los Banos located approximately 7 miles to the southeast. Primary regional access to the project area is from I-5. The facility adjoins South Ingomar Grade Road, which intersects Henry Miller Road south of the facility. South Ingomar Grade Road, a two-lane paved County road that runs from northwest to southeast.

South Ingomar Grade Road is designated as a “major collector” by the County General Plan. In 2006, South Ingomar Grade Road carried approximately 3,022 average daily trips (ADT) for an LOS rating of C (Mintier & Associates 2012). LOS C represents free-flowing traffic.

The main entrance to the facility is a paved, two-lane private driveway from South Ingomar Grade Road. A left turn pocket is provided for northbound vehicles exiting South Ingomar Grade Road at the facility and a northbound merging lane is provided for vehicles exiting the facility and turning north onto South Ingomar Grade Road. Southbound on South Ingomar Grade Road there is a right turn pocket for vehicles entering the facility and a merging lane for vehicles leaving the facility and turning south. The Liberty Packing driveway crosses the Union Pacific Railroad tracks near its intersection with South Ingomar Grade Road (which parallels the tracks here). There are lights and crossing arms controlling the track crossing.

Currently, a total of 110 full-time and 550 part-time employees work at the facility each day during the peak-season (July through October). Full-time employees continue to work at the facility during the off-peak season (November through June) on a compressed schedule (4 days per week). The facility currently receives 53,412 (5-year average) tomato truckloads each year, and generates 14,000 trucks of finished bag and box product (Oliveira pers. comm.).

2.18.2 Regulatory Setting

South Ingomar Grade Road is a county road and subject to county policies. The Merced County General Plan’s circulation element states that: “The acceptable level-of-service for roadways located within rural areas of the County shall be LOS ‘C’ or better” (General Plan Circulation Element Policy CIR-1.5).

Chapter 5.68 of the Merced County Code establishes the County’s Regional Transportation Impact Fee. This fee applies to new development, including agricultural industry, and is levied for the purpose of funding road improvements that are necessary to maintain major roads throughout the County. As its name implies, this is a regional fee administered by the Merced County Association of Governments. The roads funded by this fee do not include South Ingomar Grade Road.

Heavy trucks can damage rural roads that are not designed for heavy loads. The Merced County Public Works Department has determined that a project that would add at least 10 semi-truck trips to county roads per week can potentially result in structural damage to those roads. Merced County has established a Road Impact Agreement through which it collects roadway impact fees from development projects that will introduce heavy trucks onto the County road system. The purpose of the fee is to fund the road improvements necessary to keep roads in good structural condition.

2.18.3 Impact Discussion

Would the project:

a. Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?

and

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

Construction

Less-than-Significant Impact. Construction-related traffic would be temporary. Primary traffic to and from the site during construction would include trucks for equipment and materials deliveries and construction workers.

No significant import or export of fill material would be required for construction, and it is expected that most construction equipment would remain on site for the duration of activities under each phase, thereby minimizing vehicular trips to and from the project area. For these reasons, no significant impacts would result from the transport of heavy construction vehicles to and from the project site during construction.

Construction workers are expected to add only minimal traffic to South Ingomar Grade Road. The number of estimated daily trips is described in Table 15. No work is proposed within the right of way of South Ingomar Grade Road.

Table 15. On-Road Vehicles

Construction Phase	Workers (Trips) per Day	Total Haul Trips
Cooling Pond A	5 (10)	0
Settling Pond B	6 (12)	0
Utility Buildings	4 (8)	0
Warehouses	5 (1)	0
Trailer Storage Yard	4 (8)	2
Pole Shed	4 (8)	0
Septic System	4 (8)	1
Total:	32 (55)	3
Source: Oliveira pers. comm.		

Operation

Less-than-Significant Impact. Implementation of the project would not change the number of individuals employed by the facility, but would increase the number tomato haul trucks during the peak season by 120 truckloads per day (12,336 annually). In 2013, an average of 502 trucks visited the facility daily. Operation of the project will increase the number of annual truck trips to 65,748 trips, while annual bag and box truckloads would increase by 800 to a total of 14,800 (Oliveira pers. comm.).

An additional 120 trips per day during peak season will increase traffic on South Ingomar Grade Road by approximately 4 percent. The Program EIR for the 2030 Merced County General Plan estimates that a rural, two-lane road with isolated stops or uninterrupted flow, such as South Ingomar Grade Road, can support up to 8,000 to 8,600 ADT while maintaining LOS C (refer to Table 19-1 of that document). Therefore, this project will not increase congestion beyond the existing LOS C and is consistent with county plans and standards. Its impact is less than significant.

The applicant has revised its existing Road Impact Agreement with Merced County to increase the road impact fees to be paid the County. The increase will be commensurate with the project's increase in its existing volume of truck traffic. This will avoid structural damage to county roads. The applicant entered into this agreement with the Public Works Department on August 19, 2013.

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

No Impact. The project area is not located within an airport land use plan or within the vicinity of a public use airport or private airstrip. Los Banos Municipal Airport, the closest public airport to the project area, is located approximately 7 miles to the southeast at a distance where the proposed project would not impact air traffic patterns. No impact would occur.

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

No Impact. The proposed project does not include construction or expansion of new roads and would not introduce incompatible uses as they would remain agricultural. No impact would occur.

e. Result in inadequate emergency access?

No Impact. Emergency access to the facility is provided via South Ingomar Grade Road and would remain unchanged as a result of the proposed project.

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

No Impact. The Liberty Packing facility is not located within the County's bus transit service area, and South Ingomar Grade Road is a two-lane road that does not include accommodations for bicycles or pedestrians, nor is it identified as a bicycle route on the County General Plan. This area is rural, with low population densities and long distances between residences and work places. As a result, pedestrian and bicycle traffic is rare. No impact would occur.

Utilities and Service Systems	Potentially Significant Impact	Less-than-Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the project:				
a. Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
c. Require or result in the construction of new stormwater drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

		Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
Utilities and Service Systems					
d.	Have sufficient water supplies available to serve the project from existing entitlements and resources, or would new or expanded entitlements be needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
e.	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"/>
f.	Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

2.19 Utilities and Service Systems

2.19.1 Setting

Solid waste services and facilities and operations in Merced County are governed by the Merced County Association of Governments. Modesto/Winton Disposal in Atwater provides solid waste collection, recycling, transportation, and disposal services to the project site. The project area is served by the Highway 59 Disposal Site in Merced. According to the California Department of Resources Recycling and Recovery (CalRecycle), the Highway 59 Disposal Site is permitted to accept up to 1,500 tons per day and has a total permitted capacity of over 30 million cubic yards and an estimated remaining capacity of 93.4 percent. The existing facility disposes of its solid waste as animal feed and has minimal solid waste going to landfills.

The facility's water is supplied by three on-site, deep wells. This includes water used in the production process, as well as water stored for firefighting purposes.

2.19.2 Impact Discussion

Would the project:

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

Less-than-Significant Impact. All process wastewater is currently treated and land applied pursuant to Liberty Farm's existing WDRs. The existing WDRs would continue to be followed and effluent process water would continue to be monitored for water quality. In addition, soil and groundwater would also continue to be tested for constituents of concern. If water quality monitoring determines that the process wastewater being applied to land is impacting soil and

ultimately groundwater quality, then the applicant is required to implement provisions required in the WDRs to mitigate the issue. Therefore, the proposed project would not hinder Liberty Farm's ability to maintain conformance with their existing WDRs and the proposed project would not exceed the wastewater treatment requirements of the Central Valley RWQCB. Impacts would be less than significant.

b. Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?

Less-than-Significant Impact. The project includes an expansion of the existing settling pond and installation of a mounded septic system. Both of these would be built to county standards. No expansion of the on-site water supply system is being proposed.

The locations of these improvements have been selected to avoid biologically sensitive lands. This impact is considered less than significant.

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

Less-than-Significant Impact. Stormwater runoff is currently retained on site. The project does not propose to change this or construct substantial new stormwater management facilities. This impact is considered less than significant.

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

Less-than-Significant Impact. The proposed project would not require the use of substantial amounts of additional water, and would not require the project applicant to seek additional entitlements for water supply. The expansions of the cooling and settling ponds will allow Liberty Packing to reuse process condensate and recycle more of its washwater, thereby extending its water supplies. Liberty Packing's water supply is provided by existing on-site wells. There would be a temporary increase in water demand during project construction due to the application of water for dust control. However, existing water supply capacity is sufficient and would not require construction of new facilities for this purpose. This impact would be less than significant.

e. 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?

No Impact. There is no wastewater treatment provider. The existing facility disposes of its own wastewater on site per County code requirements and Central Valley RWQCB WDRs. Therefore, there would be no impact.

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

Less-than-Significant Impact. Most of the project's solid waste is a byproduct of tomato processing. It is used for cattle feed and does not go into landfills. Therefore, the existing solid waste facility would have sufficient capacity to serve the proposed project's other solid waste disposal needs and impacts would be less than significant.

g. Comply with federal, state, and local statutes and regulations related to solid waste?

No Impact. The State of California requires that all jurisdictions achieve compliance with AB 939, a state mandate that required jurisdictions to achieve 50 percent diversion of solid waste from landfills by 2000. AB 939 further required each city to conduct a Solid Waste Generation Study and to prepare an annual Source Reduction and Recycling Element to describe how it will reach its goals. AB 939 was designed to focus on source reduction, recycling and composting, and environmentally safe landfilling and transformation activities. CalRecycle has set the following targets for the Merced County Solid Waste Regional Agency:

- Per Resident Disposal Rate Target: 10.7 pounds per person per day (PPD)
- Per Employee Disposal Rate Target: 38.8 PPD

In 2009, Merced County Solid Waste Regional Agency reported an annual per capita disposal rate per resident of 4.6 PPD and a per employee rate of 17.6 PPD (CalRecycle 2011). The Merced County Solid Waste Regional Agency has 40 waste diversion programs including composting, recycling, source reduction, and public education to help the community reach the target goals set by CalRecycle.

As described above, the major source of solid waste generated by tomato processing is diverted from landfills. Therefore, the project would not contribute to a significant amount of new solid waste that would result in noncompliance with federal, state, or local regulations related to solid waste.

Mandatory Findings of Significance		Potentially Significant Impact	Less-than- Significant with Mitigation Incorporated	Less-than- Significant Impact	No Impact
a.	Does the project have the potential to 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 a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input 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 checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

2.20 Mandatory Findings of Significance

a. Does the project have the potential to 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, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?

Less-than-Significant Impact with Mitigation Incorporated. As discussed throughout this document, the proposed project would not substantially degrade the quality of the environment. As described above under Section 2.6, the mitigation measures will be required in order to reduce potential impacts to special-status animal species. Implementation of Mitigation Measures BIO-1, BIO-2, BIO-3, BIO-4, and BIO-5 would reduce potential impacts to special-status animal species to a less-than-significant level. Additionally, the proposed project could potentially adversely affect cultural resources during construction activities if the presence of buried artifacts or remains were discovered. However, implementation of Mitigation Measures CUL-1 through CUL-3, which require the cessation of construction activities if culturally or paleontologically significant resources were discovered, would reduce these impacts to a less-than-significant level.

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.)

Less-than-Significant Impact with Mitigation Incorporated. Cumulative impacts are evaluated on a regional and local basis. According to Section 15130(b)(1)3 of the CEQA Guidelines, the lead agency must "define the geographic scope of the area affected by the cumulative effects and provide a reasonable explanation for the geographic limitation used."

As described in the sections above, the proposed project would result in direct impacts on air quality, biological resources, greenhouse gas emissions, risk of seismic upset, and cultural resources, however, all of the direct impacts would be mitigated to a level below significance with incorporation of the mitigation measures described throughout this document. While the proposed project would result in less-than-significant impacts with mitigation, cumulative impacts could occur if the project would make a cumulatively considerable contribution to impacts on a resource.

SJVAPCD's CEQA Guidelines indicate that a violation of SJVAPCD's construction or operational thresholds of significance would result in a project-level and cumulative impact. In addition, SJVAPCD has determined that compliance with the dust control requirements of SJVAPCD Regulation VIII is sufficient to mitigate cumulative fugitive dust impacts to a less-than significant level (San Joaquin Valley Air Pollution Control District 2002). As indicated in Table 4 and Table 5 in Section 2.5, construction and operational emissions would not exceed SJVAPCD's significance thresholds of 10 tons per year ROG or NO_x and 15 tons per year PM₁₀ or PM_{2.5} with implementation of Mitigation Measure AQ-1. Consequently, a cumulatively considerable net increase of any nonattainment criteria pollutant resulting from construction of the proposed project is not anticipated after implementation of Mitigation Measure AQ-1, and this impact is considered less than significant after mitigation.

Biological resources can result in a cumulative impact if past, present, and reasonably foreseeable future projects have the potential to impact biological resources. As provided in Section 2.6, the

proposed project will implement mitigation measures that would require pre-construction surveys for nesting raptors. Although cumulative development could result in significant biological resources impacts, with the implementation of Mitigation Measures BIO-1 through BIO-10 the proposed project is not expected to make a considerable contribution to significant cumulative impacts related to biological resources.

Cumulative impacts related to cultural resources could occur during excavation or construction activities. This includes activities that could result in uncovering buried historical, archaeological, or paleontological resources. As discussed in Section 2.7, implementation of Mitigation Measures CUL-1 through CUL-3 would reduce potential impacts related to accidental discovery during construction of archaeological/paleontological resources or human remains. Therefore, the proposed project is not expected to make a considerable contribution to significant cultural resources cumulative impacts.

Greenhouse gas emissions is a cumulative impact resulting from small actions worldwide. The project would generate greenhouse gases, however Mitigation Measures GHG-1 and GHG-2 will reduce the project's contribution to a less than considerable level.

Cumulative impacts related to geology and soils could occur where regional development places structures and people in areas susceptible to geologic hazards. Strict building code regulations are in place to ensure that structures properly account for seismic shaking and other seismically related hazards. Additionally, the project is located in a seismically low-risk area, thereby reducing the potential for cumulative impacts. Adherence to mandatory building code regulations and measures identified by the geotechnical report required by Mitigation Measure GEO-1 from Section 2.8 would prevent a significant cumulative impact associated with placing new structures or people on land susceptible to geologic hazards. Therefore, because the proposed project would comply with the requirements of the site-specific geotechnical study and the established building code regulations of the County, the proposed project is not expected to make a considerable contribution to significant geology and soils cumulative impacts.

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

Less-than-Significant Impact with Mitigation Incorporated. Construction of the proposed project could have potentially significant environmental effects on air quality and geology and soils that could cause substantial adverse effects on human beings, either directly or indirectly. However, implementation of Mitigation Measures AQ-1 and GEO-1 would reduce these impacts to a less-than-significant level. No other direct or indirect adverse effects on human beings have been identified.

2.21 Mitigation Measures

Mitigation Measure AQ-1: Prepare and implement a dust control plan.

To control the generation of construction-related PM10 emissions, the County will require construction contractors to prepare a dust control plan and submit it to the SJVAPCD at least 48 hours before any earthmoving or construction activities. Potential measures that might be included in the dust control plan could include, but are not limited to:

- Pre-activity.

- Pre-water the work site and phase work to reduce the amount of disturbed surface area at any one time.
- Active operations.
 - Apply water to dry areas during leveling, grading, trenching, and earthmoving activities.
 - Construct and maintain wind barriers and apply water or dust suppressants to the disturbed surface areas.
- Inactive operations, including after work hours, weekends, and holidays.
 - Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.
- Temporary stabilization of areas that remain unused for 7 days or more.
 - Restrict vehicular access and apply and maintain water or dust suppressants on all un-vegetated areas.
 - Establish vegetation on all previously disturbed areas.
 - Apply gravel and maintain gravel at all previously disturbed areas.
 - Pave previously disturbed areas.
- Unpaved access and haul roads, traffic and equipment storage areas.
 - Apply water or dust suppressants to unpaved haul and access roads.
 - Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.
 - Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.
- Wind events.
 - Water application equipment will apply water to control fugitive dust during wind events, unless unsafe to do so.
 - Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- Outdoor handling of bulk materials.
 - Water or dust suppressants will be applied when handling bulk materials.
 - Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
- Outdoor storage of bulk materials.
 - Water or dust suppressants will be applied to storage piles.
 - Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.

- A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.
- On-site transporting of bulk materials.
 - Vehicle speed will be limited on the work site.
 - All haul trucks will be loaded such that the freeboard is not less than six inches when transported across any paved public access road.
 - A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - Haul trucks will be covered with a tarp or other suitable cover.
- Off-site transporting of bulk materials.
 - The following practices will be performed:
- The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
- Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- Outdoor transport using a chute or conveyor.
 - No open chutes or conveyors will be used.
 - Chutes or conveyors will be fully enclosed.
 - Water spray equipment will be used to sufficiently wet the materials.

Transported materials will be washed or screened to remove fines (PM10 or smaller).

Mitigation Measure BIO-1: Develop a Worker Awareness Program.

Prior to construction, a Worker Awareness Program must be conducted to inform construction project workers of their responsibilities regarding sensitive environmental resources. Such a program shall include environmental education about the giant garter snake, western pond turtle, burrowing owl, Swainson's hawk, American badger, San Joaquin kit fox, and nesting birds.

Mitigation Measure BIO-2: Avoid effects on giant garter snake.

The following measures will be implemented to avoid effects on giant garter snake.

- Disturbance to suitable aquatic and upland sites in or near the project footprint will be avoided to the extent feasible, and the loss of aquatic habitat and associated upland vegetation will be minimized through adjustments to project design, as practicable.
- To the extent practicable, construction activities will be avoided within 200 feet of the banks of giant garter snake aquatic habitat, which would include the irrigation ditch and perennial marsh in the northern part of the project area. Ground disturbance will be confined to the minimal area necessary to facilitate construction activities. Giant garter snake habitat will be clearly designated with construction fencing and signage identifying these areas as sensitive.
- Twenty-four hours prior to construction activities, suitable habitat in the project area should be surveyed for giant garter snakes. Survey of the project area should be repeated if

a lapse in construction activity of two weeks or greater has occurred. If a snake is encountered during construction, activities shall cease until appropriate corrective measures have been completed or it has been determined that the snake will not be harmed. Any sightings will be reported to the USFWS and CDFW within 24 hours.

- A USFWS- and CDFW-approved biologist will determine where exclusion fencing will be installed to protect giant garter snake habitat adjacent to the defined project footprint and to minimize the potential for giant garter snakes to enter the construction work area. The perimeter of construction sites will be fenced with giant garter snake exclusion fencing between May 1 and September 1 (well in advance of snakes seeking overwintering refugia). The giant garter snake exclusion fencing will be shown on the final construction plans. Where construction access is necessary, gates will be installed with the exclusion fence.
- A biological monitor and construction foreman will be responsible for checking the exclusion fencing around the work areas daily to ensure that they are intact and upright. This will be especially critical during rain events, when flowing water can easily dislodge the fencing. Any necessary repairs will be immediately addressed. The giant garter snake exclusion fencing will remain in place for the duration of construction.
- If exclusion fencing is found to be compromised, a survey will be conducted immediately preceding construction activity that occurs in designated giant garter snake habitat or in advance of any activity that may result in take of the species. The biologist will search along exclusion fences and in pipes and beneath vehicles before they are moved. Any giant garter snake found will be captured and relocated to suitable habitat a minimum of 200 feet outside of the work area in a location that is identified by a qualified biologist and approved by USFWS and CDFW prior to commencement of construction.
- The ditches associated with the cultivated lands in the expansion areas will be dewatered and remain dry for at least 15 consecutive days after April 15 and prior to excavating or filling of the dewatered habitat.
- After completion of construction activities, remove any temporary fill and construction debris and, wherever feasible, restore disturbed areas to pre-project conditions.
- Restoration work may include such activities as replanting species removed from banks or replanting emergent vegetation in the active channel.

Mitigation Measure BIO-3: Avoid and minimize effects on western pond turtle.

Effects on western pond turtle will be avoided and minimized by many of the same measures listed above in Mitigation Measure BIO-2. In addition to these measures, the cooling pond should be dewatered prior to commencing any construction activities in the pond to allow pond turtle to relocate to nearby suitable habitat, which would include the perennial marsh and irrigation ditch to the north, and the Volta Wildlife Area to the east. The Volta Wildlife Area is accessible from the project site via the irrigation ditch in the northern portion of the project site.

Mitigation Measure BIO-4: Avoid and minimize effects on Swainson's hawk.

- A protocol-level survey will be conducted in conformance with the "Recommended Timing and Methodology for Swainson's Hawk Nesting Surveys in California's Central Valley," Swainson's Hawk Technical Advisory Committee (May 31, 2000). This protocol prescribes

minimum standards for survey equipment, mode of survey, angle and distance to tree, speed, visual and audible clues, distractions, notes and observations, and timing of surveys.

- Nesting surveys can only be performed between January 1 and July 30 and will vary depending on seasonal conditions and the actual nesting period.
- Surveys must be performed by a biologist with experience in identifying Swainson's hawks and their nests.
- A written report with the pre-construction survey results will be provided to CDFW within 30 days prior to commencement of construction-related activities. The report shall include: the date of the report, authors and affiliations, contact information, introduction, methods, study location, including map, results, discussion, and literature cited.
- If active nests are documented during the surveys, within the CNDDDB or other source, the following measures should be implemented:
 - **No intensive new disturbances** (for example, heavy equipment operation associated with construction, use of cranes or draglines, new rock crushing activities), habitat conversions, or other project-related activities that may cause nest abandonment or forced fledging, should be initiated within 0.5 mile of an active nest between March 1 and September 15, or sooner if authorized by CDFW.
 - **Nest trees shall not be removed** unless there is no feasible way of avoiding it. If a nest tree must be removed it should be done between October 1 and February 1.
 - **If disturbances, habitat conversions, or other project-related activities**, that may cause nest abandonment or forced fledging, are necessary, within the nest protection buffer zone, monitoring of the nest site by a biologist with Swainson's hawk experience, would be done to determine if the nest is abandoned. If the nest is abandoned, but the nestlings are still alive, the project proponent is required to fund the recovery and hacking that is the controlled release of captive reared young of the nestling.
 - **Routine disturbances** such as agricultural activities, commuter traffic, and routine maintenance activities within 0.25 mile of an active nest are not prohibited.

Mitigation Measure BIO-5: Compensate for loss of Swainson's hawk foraging habitat.

As described above, known nesting trees are located within one mile of the project site, and therefore the project site qualifies as foraging habitat. The Merced County Planning and Economic Development Department has developed a standard Swainson's hawk mitigation measure that, when implemented, will mitigate for the loss of suitable foraging habitat. Compensation for loss of foraging habitat is based on the distance from the nearest nest, as described on the table below. The specific compensation ratio will be based on the results of the preconstruction survey described in Mitigation Measure BIO-4.

Distance from Project Boundary Mitigation Acreage Ratio^a	
Within 1 mile	1.00:1 ^b
Between 1 and 5 miles	0.75:1
Notes	
a. Ratio means [acres of mitigation land] to [acres of foraging habitat impacted].	
b. This ratio shall be 0.5:1 if the acquired lands can be actively managed for prey production.	

Compensation can be provided through fee title acquisition or conservation easement acquisition of comparable foraging habitat with implementation of a County-approved habitat management plan. Alternatively, mitigation credits may be purchased from a County-approved mitigation bank for Swainson's hawk foraging habitat in Merced County. An offsite habitat mitigation plan describing the method of compensation must be submitted to the Merced County Planning and Economic Development Department within 30 days of its execution or prior to the start of construction-related activities, whichever is earlier.

Mitigation Measure BIO-6: Avoid and minimize effects on western burrowing owl.

The methods described below are consistent with the current accepted survey protocol for western burrowing owl (California Burrowing Owl Consortium 1993).

Prior to any ground disturbance related to project activities, a qualified biologist will conduct preconstruction surveys within the project area. The purpose of the preconstruction survey is to document the presence or absence of western burrowing owls on the project site.

Preconstruction surveys should be conducted no less than 14 days prior to ground disturbing activities with an additional survey within 24 hours of ground disturbance. Occupied burrows will be considered fully avoided if construction activity is more than 500 meters from an active nest. However, this distance may be reduced after consultation with CDFW.

If occupied burrows can't be avoided, an exclusion plan must be developed in consultation with CDFW to passively relocate owls. Passive relocation will not be allowed while owls are actively nesting.

Mitigation Measure BIO-7: Avoid and minimize effects on nesting tricolored blackbird, yellow-headed blackbird, northern harrier, white-tailed kite and other nesting migratory birds and raptors.

To avoid and minimize impacts on nesting special-status birds and migratory birds and raptors, which are protected under the Migratory Bird Treaty Act (MBTA) and California Fish and Game Codes, the following surveys and restrictions will be implemented.

- If construction activities are scheduled to occur during the breeding season for migratory birds and raptors (generally between January 1 and August 31), a wildlife biologist will conduct nesting surveys before the start of construction. Because only a minimal amount of natural vegetation will be removed (the seasonal wetland) and the other areas consist of cultivated and developed lands, a single survey should be conducted in the 5 days prior to the start of construction. This survey will occur in the project area and include any trees and shrubs immediately adjacent to the project area. Surveys for nesting raptors will occur in the project area and a 500 foot area around the project site. Surveys should occur during the height of the breeding season (March 1 to June 1).
- If no active nests are detected during these surveys, no additional mitigation is required.

- If active nests are found in the survey area, a no-disturbance buffer will be established around the site to avoid disturbance or destruction of the nest site until the end of the breeding season (August 31) or until after a qualified wildlife biologist determines that the young have fledged and moved out of the project area (this date varies by species). The extent of these buffers will be determined by the biologist in coordination with California Department of Fish and Wildlife and will depend on the level of noise or construction disturbance, line-of-sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers. These factors will be analyzed to make an appropriate decision on buffer distances. Suitable buffer distances may vary between species.

Mitigation Measure BIO-8: Avoid and minimize effects on American badger and San Joaquin kit fox.

Because American badger and San Joaquin kit fox use similar habitats, the measures developed for avoiding effects on San Joaquin kit fox are considered sufficient to avoid and minimize effects on badgers.

The following measures are based on the USFWS's Standardized Recommendations for Protection of the Endangered San Joaquin Kit Fox prior to or during Ground Disturbance (U.S. Fish and Wildlife Service 2011).

Within 14 to 30 days prior to ground disturbance related to the project, a qualified biologist with experience surveying for and observing the species will conduct a preconstruction survey in the undeveloped portions of the project site. The biologist will survey the project footprint and the area within 250 feet beyond the footprint to identify known or potential San Joaquin kit fox dens. Adjacent parcels under different land ownership will not be surveyed unless access is granted within the 250-foot radius. The biologists will conduct these searches by systematically walking 30- to 100-foot-wide transects throughout the survey area; transect width will be adjusted based on vegetation height and topography. The biologist will conduct walking transects such that 100 percent visual coverage of the project footprint is achieved. Dens will be classified in one of the following four den status categories.

- **Potential den.** Any subterranean hole within the species' range that has entrances of appropriate dimensions for which available evidence is sufficient to conclude that it is being used or has been used by a kit fox. Potential dens comprise any suitable subterranean hole or any den or burrow of another species (e.g., coyote, badger, red fox, or ground squirrel) that otherwise has appropriate characteristics for kit fox use. If a potential den is found, the biologist will establish a 50-foot buffer using flagging.
- **Known den.** Any existing natural den or artificial structure that is used or has been used at any time in the past by a San Joaquin kit fox. Evidence of use may include historical records; past or current radiotelemetry or spotlighting data; kit fox sign such as tracks, scat, and/or prey remains; or other reasonable proof that a given den is being or has been used by a kit fox.
- **Natal or pupping den.** Any den used by kit foxes to whelp and/or rear their pups. Natal/pupping dens may be larger with more numerous entrances than dens occupied exclusively by adults. These dens typically have more kit fox tracks, scat, and prey remains in the vicinity of the den and may have a broader apron of matted dirt and/or vegetation at one or more entrances. A natal den, defined as a den in which kit fox pups are actually

whelped but not necessarily reared, is a more restrictive version of the pupping den. In practice, however, it is difficult to distinguish between the two; therefore, for purposes of this definition, either term applies. If a natal den is discovered, a buffer of at least 200 feet will be established using fencing.

- **Atypical den.** Any artificial structure that has been or is being occupied by a San Joaquin kit fox. Atypical dens may include pipes, culverts, and diggings beneath concrete slabs and buildings. If an atypical den is discovered, the biologist will establish a 50-foot buffer using flagging.

Disturbance to all San Joaquin kit fox dens will be avoided, to the extent possible. Limited destruction may be allowed, if avoidance is not a reasonable alternative, provided the following procedures are observed.

- If a suitable San Joaquin kit fox den is discovered in the project footprint, the den will be monitored for 4 days by a USFWS- and CDFW-approved biologist using a tracking medium or an infrared beam camera to determine if the den is currently being used.
- Unoccupied dens will be destroyed immediately to prevent subsequent use. The den will be fully excavated by hand, filled with dirt, and compacted to ensure that San Joaquin kit foxes cannot reenter or use the den during the construction period.
- If an active or natal or pupping den is found, USFWS and CDFW will be notified immediately. The den will not be destroyed until the pups and adults have vacated and then only after further coordination with USFWS and CDFW.
- If kit fox activity is observed at the den during the initial monitoring period, den use will be actively discouraged, as described below, and monitoring will continue for an additional 5 consecutive days from the time of the first observation to allow any resident animals to move to another den. For dens other than natal or pupping dens, use of the den can be discouraged by partially plugging the entrance with soil such that any resident animal can easily escape. Once the den is determined to be unoccupied it may be excavated under the direction of the biologist. Alternatively, if the animal is still present after 5 or more consecutive days of plugging and monitoring, the den may have to be excavated by hand when, in the judgment of a biologist, it is temporarily vacant (i.e., during the animal's normal foraging activities). If at any point during excavation a kit fox is discovered inside the den, the excavation activity will cease immediately and monitoring of the den, as described above, will be resumed. Destruction of the den may be completed when, in the judgment of the biologist, the animal has escaped from the partially destroyed den.
- Construction and operational requirements from *Standardized Recommendations for Protection of the San Joaquin Kit Fox prior to or during Ground Disturbance* (U.S. Fish and Wildlife Service 2011) or the latest guidelines will be implemented.
- If suitable dens are identified in the project footprint or within a 250-foot buffer, exclusion zones around each den entrance or cluster of entrances will be demarcated. The configuration of exclusion zones will be circular, with a radius measured outward from the den entrance(s). No covered activities will occur within the exclusion zones. Exclusion zone radii for atypical dens and suitable dens will be at least 50 feet and will be demarcated with four to five flagged stakes. Exclusion zone radii for known dens will be at least 100 feet and will be demarcated with staking and flagging that encircle each den or cluster of dens but do not prevent access to the den by the foxes.

- Written results of the surveys will be submitted to USFWS within 5 calendar days of the completion of surveys and prior to the beginning of ground disturbance and/or construction activities likely to affect San Joaquin kit foxes.

Mitigation Measure CUL-1: Stop work if buried cultural deposits are encountered during construction activities.

If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.

Mitigation Measure CUL-2: Stop work if buried paleontological resources are encountered during construction activities.

If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.

Mitigation Measure CUL-3: Stop work if human remains are encountered during construction activities.

If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).

- If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed.
- If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per PRC 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement.

If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or

more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PORC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S sec. 7050.5, 7052.

Mitigation Measure GEO-1: Prepare a design-level geotechnical investigation report.

Prior to the issuance of any site-specific building permits, a design-level geotechnical investigation will be prepared by the project applicant and submitted to the Merced County Building and Safety Division for review and confirmation that the proposed development fully complies with the California Building Code. The report will address potential seismic hazards such as groundshaking, liquefaction, and expansive soils. The report will identify building techniques appropriate to minimize seismic damage. The project applicant shall ensure that the seismic safety recommendations of this report are included as conditions of building permit issuance.

Mitigation Measure GHG-1: Implement GHG Best Management Practices for construction.

The project applicant will require all construction contractors to implement the Best Management Practices to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures.

- Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.
- Recycle at least 50 percent of construction waste.
- Use at least 10 percent local building materials (from within 100 miles of the project site).

Mitigation Measure GHG-2: Implement GHG reduction measures to reduce operation-related GHG emissions by 6,000 metric tons of CO₂e per year.

The project applicant will identify and implement feasible strategies to reduce GHG emissions generated by operation of the proposed project. When taken together, the strategies shall reduce operation-related GHG emissions by 6,066 metric tons CO₂e, or by 27.17 percent, relative to BAU conditions. The project applicant will determine the nature and form of the strategies in consultation with the SJVAPCD. Specific strategies that could be incorporated into the project design are summarized below. Quantitative information on the potential capacity of each strategy is provided when available.

- **Strategy-1: Renewable Energy Purchase Agreement:** Enter into a power purchase agreement with PG&E to purchase electricity from renewable sources. Renewable sources must be zero emissions energy sources (e.g., wind, solar, hydro) and may not be accounted to utility RPS goals. Sufficient renewable resources exist within the state (currently 30,005 gigawatt-hours per year) to offset 100 percent of net emissions generated by operational electricity (185 MT CO₂e from Table 6-11 in Appendix A).
- **Strategy-2: On-site Renewable Energy:** Develop an on-site renewable energy system (rooftop solar, ground-mounted photovoltaic) capable of supplying a portion or all of the required electrical demand for the proposed project (10,060 MWh). In order to offset net electricity emissions generated by the project (185 MT CO₂e from Table 6-11 in Appendix A), a 902-MWh system would need to be installed. Larger systems could potential achieve greater reductions.

- **Strategy-3: Energy Efficiency Upgrades:** Develop and implement an energy efficiency upgrade to improve facility wide energy efficiency by 15 percent, relative to current energy consumption levels. Measures should target existing boilers and other equipment that utilize natural gas. Other options could include cool or green roofs, as well as solar orientation and shading.
- **Purchase Carbon Offsets:** In partnership with offset providers, purchase carbon offsets. Offset protocols and validation could tier off existing standards (e.g., Climate Registry Programs) or could be developed independently, provided such protocols satisfy basic criteria of additionally (i.e., the reductions would not happen without the financial support of purchased offset credits). CARB is currently in the process of establishing a Cap and Trade registry that will identify qualified providers and Assembly Bill 32 (AB 32) projects. It is estimated that between 2012 and 2020, 2.5 billion allowances will be made available within the state (Legislative Analyst's Office 2012).

The national and international carbon markets are likely greater. Potential offset programs could include the following.

- AB 32 U.S. Forest and Urban Forest Project Resources
- AB 32 Livestock Projects
- AB 32 Ozone Depleting Substances Projects
- AB 32 Urban Forest Projects
- Other-California Based Offsets
- United States Based Offsets
- International Offsets (e.g., clean development mechanisms)

By the signature below, the project applicant agrees to implement and incorporate the Mitigation Measures outlined above as part of the Liberty Packing project that is the subject of this Initial Study.

Signature

Date

Printed name

Title

3.1 Printed References

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3.2 Personal Communication

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Siong, Patia. Air Quality Planner. San Joaquin Valley Unified Air Pollution Control District, Modesto, CA. May 7, 2012—email with Laura Yoon regarding the Voluntary Emission Reduction Agreement.

Appendix A

Air Quality and Greenhouse Gas Technical Report

AIR QUALITY AND GREENHOUSE GAS TECHNICAL REPORT FOR THE LIBERTY PACKING EXPANSION PROJECT

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ICF International. 2013. *Air Quality and Greenhouse Gas Technical Report for the Liberty Packing Expansion Project*. Final. September. (ICF 00835.11.) Sacramento, California.
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Contents

Tables and Figures	iii
Acronyms and Abbreviations	iv
Chapter 1 Introduction	1-1
Chapter 2 Project Description	2-1
2.1 Project Site Location	2-1
2.2 Proposed Modifications	2-1
2.2.1 Expanded Cooling Pond	2-1
2.2.2 Expanded Settling Pond	2-1
2.2.3 Utility Buildings	2-1
2.2.4 Production Equipment	2-2
2.2.5 Truck Trips and Tomato Storage Yard	2-2
2.2.6 Warehouse Space	2-2
2.2.7 Railroad Spur and Loading Docks	2-2
2.2.8 Pole Shed	2-2
2.2.9 Septic System	2-3
Chapter 3 Air Pollutants and Health Effects	3-1
3.1 Introduction	3-1
3.2 Criteria and other Air Pollutants	3-1
3.2.1 Ozone	3-1
3.2.2 Particulate Matter	3-2
3.2.3 Carbon Monoxide	3-3
3.2.4 Sulfur Dioxide	3-3
3.2.5 Lead	3-3
3.3 Toxic Air Contaminants	3-4
3.4 Valley Fever	3-4
3.5 Greenhouse Gases	3-5
3.5.1 Carbon Dioxide	3-6
3.5.2 Methane	3-6
3.5.3 Nitrous Oxide	3-7
3.5.4 Hydrofluorocarbons	3-7
3.5.5 Sulfur Hexafluoride	3-7
Chapter 4 Regulatory Setting	4-1
4.1 Criteria Air Pollutants and TACs	4-1
4.1.1 Federal Regulations	4-1

4.1.2	State Regulations	4-3
4.1.3	Local Regulations	4-4
4.2	Greenhouse Gases	4-6
4.2.1	Federal Regulations	4-6
4.2.2	State Regulations	4-7
Chapter 5	Environmental Setting	5-1
5.1	Climate and Atmospheric Conditions	5-1
5.2	Local Air Quality Conditions.....	5-1
5.2.1	Local Air Quality Conditions.....	5-1
5.3	Sensitive Receptors.....	5-3
5.4	Climate Change and Global Warming.....	5-4
5.5	Greenhouse Gas Emissions Inventories.....	5-5
Chapter 6	Impact Analysis	6-1
6.1	Methodology.....	6-1
6.1.1	Project Construction	6-1
6.1.2	Project Operations	6-4
6.2	Significance Thresholds.....	6-9
6.2.1	Air Quality	6-9
6.2.2	Greenhouse Gases	6-11
6.3	Project Impacts and Mitigation	6-12
6.4	Cumulative Impacts	6-19
Chapter 7	References	7-1
7.1	Printed	7-1
7.2	Personal Communication.....	7-3
Chapter 8	List of Preparers	8-1
Appendix A	Detailed Modeling Calculations	
Appendix B	SJVAPCD GHG BPS	

Tables and Figures

Tables	On Page
2-1 Additional Production Equipment	2-2
3-1 Lifetimes and Global Warming Potentials of Several Greenhouse Gases	3-6
4-1 Federal and State Ambient Air Quality Standards	4-2
5-1 Ambient Air Quality Monitoring Data from Madera Monitoring Station	5-2
5-2 Federal and State Attainment Status for Merced County	5-3
5-3 Global, National, State, and Local GHG Emissions Inventories.....	5-5
6-1 Construction Schedule and Activities	6-1
6-2 Off-Road Equipment Modeling Assumptions	6-2
6-3 On-Road Vehicle Modeling Assumptions	6-4
6-4 GHG Emission Factors for Diesel Fuel Combustion in Locomotives	6-6
6-5 GHG Emission Factors for Natural Gas Combustion	6-7
6-6 GHG Emission Factors for Electricity Generation and Transmission	6-8
6-7 RPS Adjusted GHG Emission Factors for Electricity Generation and Transmission (2014)	6-9
6-8 Estimated Construction Emissions (tons per year)	6-13
6-9 Estimated Operational Emissions (tons per year)	6-16
6-10 Summary of Construction Emissions (Metric Tons).....	6-20
6-11 Summary of Operational Emissions without State Mandates (Metric Tons per Year).....	6-21
6-12 Summary of Operational Emissions with State Mandates (Metric Tons per Year)	6-22
6-13 Potential SJVAPCD BPS Available to Reduce Operational-Related Project Emissions.....	6-24
 Figure	 Follows Page
2-1 Plot Plan	2-2

Acronyms and Abbreviations

$\mu\text{g}/\text{m}^3$	micrograms per cubic meter
AB 1807	Toxic Air Contaminant Identification and Control Act
AB 2588	Air Toxics Hot Spots Information and Assessment Act of 1987
AB 32	Assembly Bill 32
ARB	California Air Resources Board
BPS	best performance standards
CAAA	Clean Air Act amendments
CAAQS	California ambient air quality standards
CAAQS	California Ambient Air Quality Standards
CAFE	Corporate Average Fuel Economy
Cal/EPA	California Environmental Protection Agency
CalEEMod	California Emissions Estimator Model
CalEPA	California Environmental Protection Agency
CARB	California Air Resources Board
CCAA	California Clean Air Act
CCAs	Community Choice Aggregations
CEC	California Energy Commission
CEC	California Energy Commission
CEQA	California Environmental Quality Act
CEQA Guidelines	State California Environmental Quality Act guidelines
CFCs	chlorofluorocarbons
CH_4	methane
CO	carbon monoxide
CO_2	carbon dioxide
CO_2e	CO_2 equivalent
CPUC	California Public Utilities Commission
EIR	environmental impact report
ESPs	energy service providers
GAMAQI	Guide for Assessing and Mitigating Air Quality Impacts
GHG	greenhouse gas
GWh	Gigawatt-hour
GWP	global warming potential
GWR	gross vehicle weight rating
HCFs	hydrofluorocarbons
HRA	Health Risk Assessment
IOUs	investor-owned utilities
LCFS	low carbon fuel standard
LDA	light-duty automobiles
LDT	light-duty trucks
LOS	Level-of-Service
mg/m^3	milligrams per cubic meter
MWh	megawatt-hours
N_2O	nitrous oxide
NAAQS	national ambient air quality standards
NAAQS	National Ambient Air Quality Standards
NGOs	nongovernmental organizations

NHTSA	National Highway Traffic Safety Administration
NO	nitric oxide
NO ₂	nitrogen dioxide
NO _x	oxides of nitrogen
ODS	ozone-depleting substances
OEHHA	Office of Environmental Health Hazard Assessment
Pb	lead
Pb	Lead
PFC	perfluorinated carbons
PG&E	Pacific Gas & Electric Company
PM10	PM 10 microns in diameter or less
PM2.5	PM 2.5 microns in diameter or less
ppb	parts per billion
pphm	parts per hundred million
ppm	parts per million
ppt	parts per trillion
PSD	Prevention of Significant Deterioration
ROG	ctive organic gases
RPS	Renewable Portfolio Standard
SB	Senate Bills
SF ₆	sulfur hexafluoride
SIP	state implementation plan
SJCOG	San Joaquin Council of Governments
SJVAB	San Joaquin Valley Air Basin
SJVAPCD	San Joaquin Valley Air Pollution Control District's
SO ₂	sulfur dioxide
TACs	Toxic air contaminants
TCMs	traffic control measures
U.S.	United States
VERA	Voluntary Emission Reduction Agreement
VOC	volatile organic compounds

Chapter 1

Introduction

The Liberty Packing Company proposes to apply to Merced County for a permit to construct and operate an expansion of the existing tomato packing facility. Pursuant to the California Environmental Quality Act (CEQA), Merced County must consider the potential impacts associated with the project, and identify feasible mitigation for identified impacts.

As a part of the application submittal, Liberty Packing is preparing an Initial Study to be used by the County to support the environmental document for the project - anticipated to be a Mitigated Negative Declaration. The purpose of this technical report is to support the air quality and greenhouse gas (GHG) sections of the Initial Study. Specifically, the analysis performed for this technical report includes a discussion of applicable significance criteria and analysis methodologies outlined in San Joaquin Valley Air Pollution Control District's (SJVAPCD) *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI).¹ Based on this guidance document, the report evaluates both short-term construction and long-term operational emissions associated with the project. All analyses have been conducted to comply with the California Air Resources Board (ARB) and SJVAPCD's CEQA requirements.

Because it is anticipated that the environmental document for this project will be a Mitigated Negative Declaration, mitigation has been identified in this study to ensure that a no significant effect on the environment would exist that cannot be mitigated or avoided. These mitigation measures include the payment of fees and offsets to reduce criteria pollutant (Mitigation Measure AQ-2) and GHG emissions (Mitigation Measure CUM-2) to a less-than-significant level. If the CEQA environmental document prepared for the project were to be an Environmental Impact Report, impacts could result from the project that are not mitigated, if the County were to choose to adopt a Statement of Overriding Considerations for such impacts. In that case, these mitigation measures (Mitigation Measure AQ-2 and Mitigation Measure CUM-2) would not be required to satisfy CEQA requirements.

¹ The SJVAPCD has issued an update to their GAMAQI in May 2012. However, this update is considered draft and has not been approved by the SJVAPCD's Governing Board. Consequently, the evaluation of impacts associated with the project will be done using the current GAMAQI, which was adopted on January 10, 2002.

2.1 Project Site Location

The proposed project is located at 12045 Ingomar Grade Road, which is about seven miles northwest of Los Banos, California. The project site is completely within Merced County, which is within the San Joaquin Valley Air Basin (SJVAB).

2.2 Proposed Modifications

The proposed modifications are part of ongoing developments at the existing tomato packing facility. The purpose of the modifications is not only to expand production, but also to enhance environmentally positive features relative to current operations and production capacity. Specific modifications included in the project are described below. Please refer to Figure 2-1 for the plot plan.

2.2.1 Expanded Cooling Pond

Cooling pond expansion enables the recirculation of water used to condense steam from the evaporation process. This replaces the energy and chemical intensive cooling towers utilized in all other similar factories. The evaporated water (steam) is condensed into the recirculating cooling pond water, which then heats that water by approximately 20 degrees. The cooling pond naturally cools this water, enabling its reuse for cooling in the evaporation equipment. Since this steam is pure water, this results in very high quality water in the cooling pond. By enlarging the pond, the water will cool quicker, resulting in less water to condense the steam and, thus, less electricity used for pumping. Negating the requirement for cooling towers, this reduces construction cost, electricity consumption, and chemical usage. The cooling pond expansion is shown as item “A” in Figure 2-1.

2.2.2 Expanded Settling Pond

Settling pond expansion would enhance the current environmentally positive features of the packing facility. Processed tomatoes are harvested from farmers’ fields into containers. In the process of washing the tomatoes, the washwater accumulates soil and tomato juice. The settling pond holds the washwater long enough to settle out the sand particles from the soil, enabling the facility to recycle used washwater. This reduces water and energy consumption. The settling pond expansion proposed as part of the project is relatively small (1 to 2 acres) (item “B” in Figure 2-1).

2.2.3 Utility Buildings

The project includes the construction of five (5) small utility sheds of less than 1,000 square feet (item “H” in Figure 2-1).

2.2.4 Production Equipment

The project will provide for an increase in tomato processing capacity of approximately 23%, with the addition of evaporation equipment (item “C” in Figure 2-1) and steam capacity (item “D” in Figure 2-1). This will require the following additional equipment, all of which are driven by steam, electric, or natural gas (Oliveira pers. comm.).

Table 2-1. Additional Production Equipment

Equipment Type	Horsepower	Number	Daily Hours	Total operating days per year
Boiler	-	1	24	100
El Dorado Hot Break	120	1	24	92
T-5 Evaporator	140	1	24	92
Aseptic Fillers	29	2	24	92

Source: Oliveira pers. comm.

2.2.5 Truck Trips and Tomato Storage Yard

An additional 120 tomato trucks per day will be received and unloaded as part of the project. The increase in truck traffic is provided for under a Roadway Agreement with Merced County, which requires increased fees for any road impacts commensurate to the volume of truck traffic. The project will also increase the existing tomato truck and trailer storage space from 3.7 acres to 4.6 acres. The proposed location of the storage yard is directly north of our settling pond (item “J” in Figure 2-1).

2.2.6 Warehouse Space

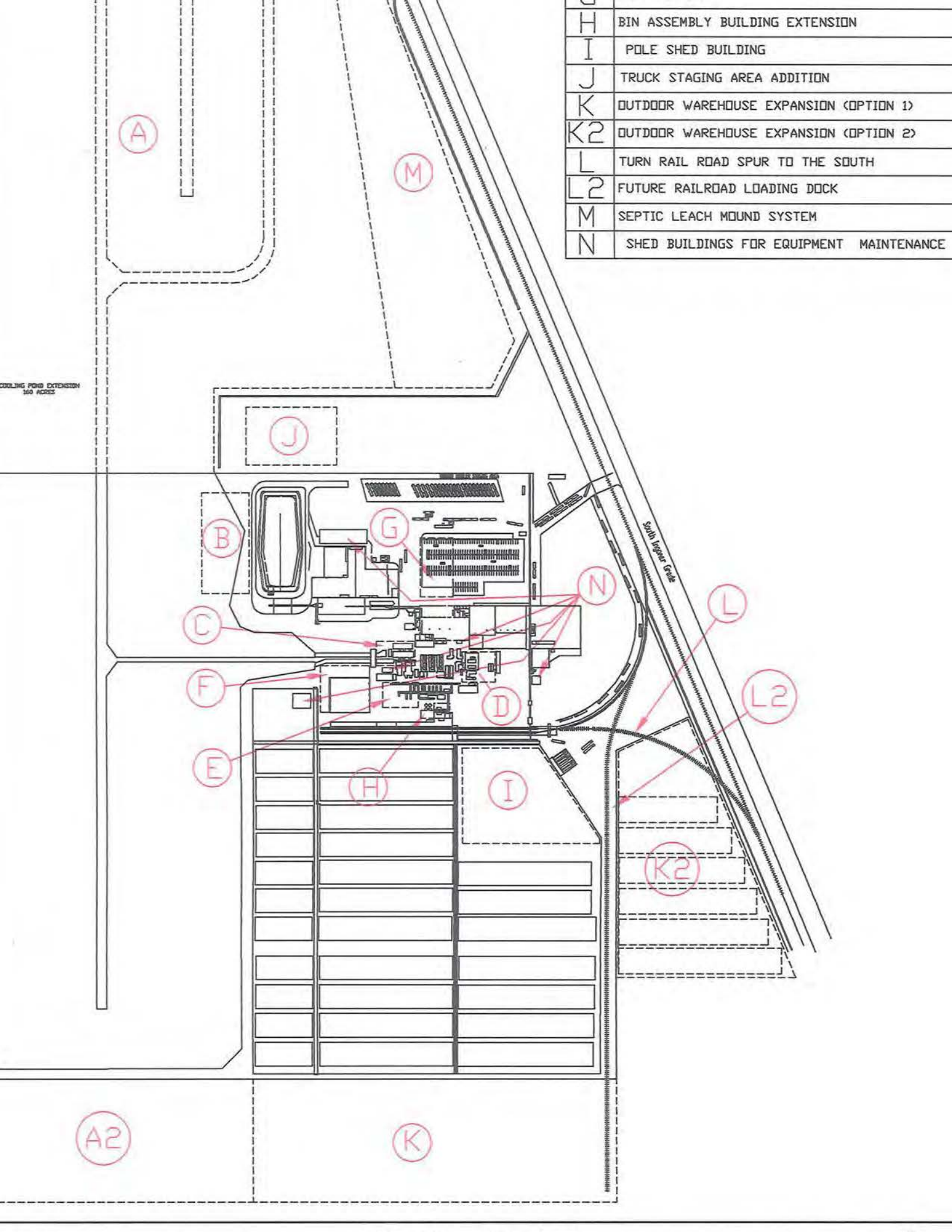
Increased production associated with the project will require an additional 12 acres (approximately a 25% increase) of open product storage space. Two additional warehouse locations have been identified (items “K” and “K(2)” in Figure 2-1).

2.2.7 Railroad Spur and Loading Docks

Increased production associated with the project will result in corresponding increases in outbound logistics. Two additional railroad spurs are proposed as part of the project. The alternative spur locations are all associated with respective warehouses and loading docks (items “L” and “L(2)” in Figure 2-1).

2.2.8 Pole Shed

The project will install product shipping equipment to optimize existing shipping activities, which would benefit from a pole shed of approximately 65,000 square feet. The new pole shed will provide shelter from sun, heat, and rain for greater safety and efficiency.



2.2.9 Septic System

Improvements to the existing septic systems to satisfy the Merced County Environmental Health Department will be made as part of the proposed project.

3.1 Introduction

The federal and state governments have established national ambient air quality standards (NAAQS) and California ambient air quality standards (CAAQS), respectively, for six criteria pollutants: ozone, carbon monoxide (CO), lead (Pb), nitrogen dioxide (NO₂), sulfur dioxide (SO₂), and particulate matter (PM), which consists of PM that is 10 microns in diameter or less (PM₁₀) and PM that is 2.5 microns in diameter or less (PM_{2.5}).

Ozone and NO₂ are considered regional pollutants because they (or their precursors) affect air quality on a regional scale; NO₂ reacts photochemically with reactive organic gases (ROGs) to form ozone, and this reaction occurs at some distance downwind of the source of pollutants. Pollutants such as CO, SO₂, and Pb are considered to be local pollutants that tend to accumulate in the air locally. Particulate matter is considered to be a local, as well as a regional pollutant.

The primary pollutants of concern in the study area are ozone, CO, and PM. Principle characteristics surrounding these pollutants and other criteria air pollutants are discussed below. Valley fever, toxic air contaminants (TACs), and GHG are also discussed, although no air quality standards exist for these pollutants. Regulations related to these pollutants are provided in Chapter 4, *Regulations*.

3.2 Criteria and other Air Pollutants

3.2.1 Ozone

Ozone is a respiratory irritant that can cause severe ear, nose, and throat irritation and increases susceptibility to respiratory infections. It is also an oxidant that causes extensive damage to plants through leaf discoloration and cell damage. It can cause substantial damage to other materials as well, such as synthetic rubber and textiles.

Ozone is not emitted directly into the air but is formed by a photochemical reaction in the atmosphere. Ozone precursors—ROG and nitrogen oxides (NO_x)—react in the atmosphere in the presence of sunlight to form ozone. Because photochemical reaction rates depend on the intensity of ultraviolet light and air temperature, ozone is primarily a summer air pollution problem. The ozone precursors, ROG and NO_x, are mainly emitted by mobile sources and by stationary combustion equipment.

3.2.1.1 Organic Gases (Precursors to Ozone)

Hydrocarbons are organic gases that are made up of hydrogen and carbon atoms. There are several subsets of organic gases, including ROGs and volatile organic compounds (VOCs). ROGs are defined by state rules and regulations; VOCs are defined by federal rules and regulations. For the purposes of this assessment, hydrocarbons are classified and referred to as ROGs. Both ROGs and VOCs are emitted from the incomplete combustion of hydrocarbons or other carbon-based fuels, or as a

product of chemical processes. The major sources of hydrocarbons are combustion engine exhaust, oil refineries, and oil-fueled power plants; other common sources are petroleum fuels, solvents, dry-cleaning solutions, and paint (through evaporation).

The health effects of hydrocarbons result from the formation of ozone. High levels of hydrocarbons in the atmosphere can interfere with oxygen intake by reducing the amount of available oxygen through displacement. Carcinogenic forms of hydrocarbons are considered TACs. There are no separate health standards for ROG, although some are also toxic; an example is benzene, which is both a ROG and a carcinogen.

3.2.1.2 Nitrogen Oxides (Precursors to Ozone)

Nitrogen oxides are a family of highly reactive gases that are a primary precursor to the formation of ground-level ozone, and react in the atmosphere to form acid rain. Nitrogen dioxide, often used interchangeably with NO_x , is a brownish, highly reactive gas that is present in all urban environments. The major human sources of NO_2 are combustion devices, such as boilers, gas turbines, and mobile and stationary reciprocating internal combustion engines. Combustion devices emit primarily nitric oxide (NO), which reacts through oxidation in the atmosphere to form NO_2 (U.S. Environmental Protection Agency 2012a). The combined emissions of NO and NO_2 are referred to as NO_x and reported as equivalent NO_2 . Because NO_2 is formed and depleted by reactions associated with ozone, the NO_2 concentration in a particular geographical area may not be representative of local NO_x emission sources.

Inhalation is the most common route of exposure to NO_2 . Because NO_2 has relatively low solubility in water, the principal site of toxicity is in the lower respiratory tract. The severity of the adverse health effects primarily depends on the concentration inhaled rather than the duration of exposure. At atmospheric concentration, NO_2 is only potentially irritating. In high concentrations, the result is a brownish-red cast to the atmosphere and reduced visibility. An individual may experience a variety of acute symptoms, such as coughing, difficulty breathing, vomiting, headache, and eye irritation during or shortly after exposure. After a period of approximately 4–12 hours, an exposed individual may experience chemical pneumonitis or pulmonary edema with breathing abnormalities, cough, cyanosis, chest pain, and rapid heartbeat. Severe symptomatic NO_2 intoxication after acute exposure has been linked to prolonged respiratory impairment, with such symptoms as chronic bronchitis and decreased lung function (U.S. Environmental Protection Agency 2012a). There is some indication of a relationship between NO_2 and chronic pulmonary fibrosis. Some increase in bronchitis in children (2 and 3 years old) has also been observed at concentrations below 0.3 parts per million (ppm).

3.2.2 Particulate Matter

Particulate matter pollution consists of very small liquid and solid particles floating in the air, which can include smoke, soot, dust, salts, acids, and metals. Particulate matter also forms when gases emitted from industries and motor vehicles undergo chemical reactions in the atmosphere. Particulate matter less than 10 microns in diameter, about $1/7^{\text{th}}$ the thickness of a human hair, is referred to as PM10. Particulate matter that is 2.5 microns or less in diameter, roughly $1/28^{\text{th}}$ the diameter of a human hair, is referred to as PM2.5. Major sources of PM10 include motor vehicles; wood burning stoves and fireplaces; dust from construction, landfills, and agriculture; wildfires and brush/waste burning; industrial sources; windblown dust from open lands; and atmospheric chemical and photochemical reactions. PM2.5 results from fuel combustion (from motor vehicles,

power generation, and industrial facilities), residential fireplaces, and wood stoves. In addition, PM10 and PM2.5 can be formed in the atmosphere from gases such as SO₂, NO_x, and VOCs.

PM10 and PM2.5 pose a greater health risk than larger-size particles. When inhaled, these tiny particles can penetrate the human respiratory system's natural defenses and damage the respiratory tract. PM10 and PM2.5 can increase the number and severity of asthma attacks, cause or aggravate bronchitis and other lung diseases, and reduce the body's ability to fight infections. Very small particles of substances, such as lead, sulfates, and nitrates, can cause lung damage directly. These substances can be absorbed into the blood stream and cause damage elsewhere in the body; they can also transport absorbed gases such as chlorides or ammonium into the lungs and cause injury. Whereas particles 2.5 to 10 microns in diameter tend to collect in the upper portion of the respiratory system, particles 2.5 microns or less are so tiny that they can penetrate deeper into the lungs and damage lung tissues. Suspended particulates also damage and discolor surfaces on which they settle, and contribute to haze and reduce regional visibility.

3.2.3 Carbon Monoxide

CO has little effect on plants and materials, but it can have significant effects on human health. CO is a public health concern because it combines readily with hemoglobin and thus reduces the amount of oxygen transported in the bloodstream. Effects range from slight headaches to nausea to death.

Motor vehicles are the primary source of CO emissions in most areas. In the Project area, high CO levels are of greatest concern during the winter, when periods of light winds combine with the formation of ground-level temperature inversions from evening through early morning. These conditions trap pollutants near the ground, reducing the dispersion of vehicle emissions. Moreover, motor vehicles exhibit increased CO emission rates at low air temperatures. Dramatic reductions in CO levels across California, including a 50% decrease in statewide peak CO levels between 1980 and 2004, have been witnessed during the past several decades. These reductions are primarily a result of ARB requirements for cleaner vehicles, equipment, and fuels (California Air Resources Board 2004:1).

3.2.4 Sulfur Dioxide

SO₂ is a product of high-sulfur fuel combustion. Main sources of SO₂ are coal and oil used in power stations, in industries, and for domestic heating. Industrial chemical manufacturing is another source of SO₂, which is an irritant gas that attacks the throat and lungs. It can cause acute respiratory symptoms and diminished ventilator function in children. SO₂ also can cause plant leaves to turn yellow and can erode iron and steel. In recent years, SO₂ concentrations have been reduced by the increasingly stringent controls placed on stationary-source emissions of SO₂ and limits on the sulfur content of fuels. SO₂ concentrations have been reduced to levels well below the state and federal standards, but further reductions in emissions are needed to attain compliance with standards for sulfates and PM10, of which SO₂ is a contributor.

3.2.5 Lead

Pb is a metal that is a natural constituent of air, water, and the biosphere. Lead is neither created nor destroyed in the environment, so it essentially persists forever. Lead was used several decades ago to increase the octane rating in automotive fuel. Since gasoline-powered automobile engines were a

major source of airborne lead through the use of leaded fuels and the use of leaded fuel has been mostly phased out, the ambient concentrations of lead have dropped dramatically.

Short-term exposure to high levels of lead can cause vomiting, diarrhea, convulsions, coma, or even death. However, even small amounts of lead can be harmful, especially to infants, young children, and pregnant women. Symptoms of long-term exposure to lower lead levels may be less noticeable but are still serious. Anemia is common, and damage to the nervous system may cause impaired mental function. Other symptoms are appetite loss, abdominal pain, constipation, fatigue, sleeplessness, irritability, and headache. Continued excessive exposure, as in an industrial setting, can affect the kidneys.

Lead exposure is most serious for young children because they absorb lead more easily than adults and are more susceptible to its harmful effects. Even low-level exposure may harm the intellectual development, behavior, size, and hearing of infants. During pregnancy and especially in the last trimester, lead tends to cross the placenta and affect the fetus. Female workers exposed to high levels of lead have more miscarriages and stillbirths.

3.3 Toxic Air Contaminants

Although NAAQS and CAAQS exist for criteria pollutants, no ambient standards exist for TACs. Many pollutants are identified as TACs because of their potential to increase the risk of developing cancer or because of their acute or chronic health risks. For TACs that are known or suspected carcinogens, the ARB has consistently found that there are no levels or thresholds below which exposure is risk-free. Individual TACs vary greatly in the risks they present. At a given level of exposure, one TAC may pose a hazard that is many times greater than another. TACs are identified and their toxicity is studied by the California Office of Environmental Health Hazard Assessment (OEHHA). TACs include air pollutants that can produce adverse human health effects, including carcinogenic effects, after short-term (acute) or long-term (chronic) exposure. Examples of TAC sources within the SDAB include industrial processes, dry cleaners, gasoline stations, paint and solvent operations, and fossil fuel combustion sources. For certain TACs, a unit risk factor can be developed to evaluate cancer risk. For acute and chronic health risks, a similar factor, called a Hazard Index, is used to evaluate risk.

3.4 Valley Fever

Coccidioidomycosis, more commonly known as “Valley Fever,” is primarily a disease of the lungs caused by inhalation of spores of the *Coccidioides immitis* fungus. The spores are found in the soil, become airborne when the soil is disturbed, and are subsequently inhaled into the lungs. After the fungal spores have settled in the lungs, they change into a multicellular structure called a spherule. Fungal growth in the lungs occurs as the spherule grows and bursts, releasing endospores, which then develop into more spherules.

Valley Fever symptoms generally occur within 2 to 3 weeks of exposure. Approximately 60 percent of Valley Fever cases are mild and display flu-like symptoms or no symptoms at all. Of those who are exposed and seek medical treatment, the most common symptoms are fatigue, cough, chest pain, fever, rash, headache, and joint aches. In some cases, painful red bumps may develop. It is important to note these symptoms are not unique to Valley Fever and may be caused by other illnesses as well.

Identifying and confirming this disease requires specific laboratory tests such as (1) microscopic identification of the fungal spherules in the infected tissue, sputum, or body fluid sample, (2) growing a culture of *Coccidioides immitis* from a tissue specimen, sputum, or body fluid, (3) detection of antibodies (serological tests specifically for Valley Fever) against the fungus in blood serum or other body fluids, and (4) administering the Valley Fever skin test (called coccidioidin or spherulin), which indicates prior exposure to the fungus (Valley Fever Center for Excellence 2002).

Valley Fever is not contagious and therefore cannot be passed from person to person. Most of those who are infected will recover without treatment within 6 months and will have a lifelong immunity to the fungal spores. In severe cases, such as patients with rapid and extensive primary illness, those who are at risk for dissemination of disease, and those who have disseminated disease, antifungal drug therapy is used. Only 1 to 2 percent of those exposed who seek medical attention will develop a disease that disseminates (spreads) to other parts of the body other than the lungs.

Factors that affect the susceptibility to coccidioidal dissemination are race, sex, pregnancy, age, and immunosuppression. In addition, residents new to the San Joaquin Valley are at a higher risk of infection, due primarily to low immunity to this particular fungus. Many longtime residents exposed to Valley Fever have recovered and therefore developed a life-long immunity to the disease.

The *Coccidioides immitis* fungal spores are often found in the soil around rodent burrows, Indian ruins, and burial grounds. The spores become airborne when the soil is disturbed by winds, construction, farming, or other activities.

3.5 Greenhouse Gases

According to Assembly Bill 32 (AB 32), California's Global Warming Solutions Act, GHGs include the following gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), perfluorinated carbons (PFCs), sulfur hexafluoride (SF₆), and hydrofluorocarbons (HFCs). State CEQA Guidelines (§15364.5) also identify these six gases as GHGs. Primary GHGs by the project include CO₂, CH₄, N₂O, HFCs, and SF₆. Each of these gases is discussed in detail below. Note that PFCs are not discussed as these gases are primarily generated by industrial processes, which are not anticipated as part of the project.

To simplify reporting and analysis, methods have been set forth to describe emissions of GHGs in terms of a single gas. The most commonly accepted method to compare GHG emissions is the global warming potential (GWP) methodology defined in the IPCC reference documents (Intergovernmental Panel on Climate Change 1996, 2001:241–280). The IPCC defines the GWP of various GHG emissions on a normalized scale that recasts all GHG emissions in terms of CO₂ equivalent (CO₂e), which compares the gas in question to that of the same mass of CO₂ (CO₂ has a global warming potential of 1 by definition).

Table 3-1 lists the global warming potential of CO₂, CH₄, N₂O, HCFs, and SF₆, their lifetimes, and abundances in the atmosphere.

Table 3-1. Lifetimes and Global Warming Potentials of Several Greenhouse Gases

Greenhouse Gases	Global Warming Potential (100 years)	Lifetime (years)	Current Atmospheric Abundance
CO ₂ (ppm)	1	50–200	391
CH ₄ (ppb)	21	9–15	1,871
N ₂ O (ppb)	310	120	323
HFC-23 (ppt)	11,700	264	18
HFC-134a (ppt)	1,300	14.6	64
HFC-152a (ppt)	140	1.5	3.9
SF ₆ (ppt) ^a	23,900	3,200	7.4

Notes

CF	=	hydrofluorocarbons
CH ₄	=	methane
CO ₂	=	carbon dioxide
N ₂ O	=	nitrous oxide
ppb	=	parts per billion
ppm	=	parts per million
ppt	=	parts per trillion
SF ₆	=	sulfur hexafluoride

Sources: Intergovernmental Panel on Climate Change 1996, 2001:388–390; Carbon Dioxide Information Analysis Center 2012.

3.5.1 Carbon Dioxide

CO₂ is the most important anthropogenic GHG and accounts for more than 75 percent of all GHG emissions caused by humans. Its atmospheric lifetime of 50–200 years ensures that atmospheric concentrations of CO₂ will remain elevated for decades even after mitigation efforts to reduce GHG concentrations are promulgated (Intergovernmental Panel on Climate Change 2007a). The primary sources of anthropogenic CO₂ in the atmosphere include the burning of fossil fuels (including motor vehicles), gas flaring, cement production, and land use changes (e.g., deforestation, oxidation of elemental carbon). CO₂ can also be removed from the atmosphere by photosynthetic organisms.

Atmospheric CO₂ has increased from a pre-industrial concentration of 280 parts per billion (ppb) to 391 parts per million (ppm) (Intergovernmental Panel on Climate Change 2007; Carbon Dioxide Information Analysis Center 2012).

3.5.2 Methane

CH₄, the main component of natural gas, is the second most abundant GHG and has a GWP of 21 (Intergovernmental Panel on Climate Change 1996). Sources of anthropogenic emissions of CH₄ include growing rice, raising cattle, using natural gas, landfill outgassing, and mining coal (National Oceanic and Atmospheric Administration 2005). Certain land uses also function as both a source and sink for CH₄. For example, the primary terrestrial source of CH₄ are wetlands, whereas undisturbed, aerobic soils act as a CH₄ sink (i.e., they remove CH₄ from the atmosphere).

Atmospheric CH₄ has increased from a pre-industrial concentration of 715 ppb to 1,871 ppb (Intergovernmental Panel on Climate Change 2007; Carbon Dioxide Information Analysis Center 2012).

3.5.3 Nitrous Oxide

N₂O is a powerful GHG, with a GWP of 310 (Intergovernmental Panel on Climate Change 1996). Anthropogenic sources of N₂O include agricultural processes (e.g., fertilizer application), nylon production, fuel-fired power plants, nitric acid production, and vehicle emissions. N₂O also is used in rocket engines, racecars, and as an aerosol spray propellant. Natural processes, such as nitrification and denitrification, can also produce N₂O, which can be released to the atmosphere by diffusion. In the United States (U.S.) more than 70 percent of N₂O emissions are related to agricultural soil management practices, particularly fertilizer application.

N₂O concentrations in the atmosphere have increased 18 percent from pre-industrial levels of 270 ppb to 323 ppb (Intergovernmental Panel on Climate Change 2007; Carbon Dioxide Information Analysis Center 2012).

3.5.4 Hydrofluorocarbons

HFCs are anthropogenic chemicals used in commercial, industrial, and consumer products and have high GWPs (U.S. Environmental Protection Agency 2011a). HFCs are generally used as substitutes for ozone-depleting substances (ODS) in automobile air conditioners and refrigerants. As seen in Table 3.6-1, the most abundant HFCs, in descending order, are HFC-134a, HFC-23, and HFC-152a.

HFC concentrations in the atmosphere have risen from 0 to more than 64 (HFC-134a) parts per trillion (ppt) since pre-industrial times (Intergovernmental Panel on Climate Change 2007; Carbon Dioxide Information Analysis Center 2012).

3.5.5 Sulfur Hexafluoride

SF₆, a human-made chemical, is used as an electrical insulating fluid for power distribution equipment, in the magnesium industry, in semiconductor manufacturing, and also as a tracer chemical for the study of oceanic and atmospheric processes. Atmospheric concentrations of SF₆ are currently 7.4 ppt and steadily increasing in the atmosphere. SF₆ is the most powerful of all GHGs listed in IPCC studies, with a GWP of 23,900 (Intergovernmental Panel on Climate Change 1996). SF₆ concentrations in the atmosphere have risen from 0 to more than 7.4 ppt since pre-industrial times.

This chapter summarizes federal, state, and local regulations that apply to air quality and GHG emissions. The air quality management agencies of direct importance in Merced County are EPA, ARB, and the SJVAPCD. EPA has established federal air quality standards for which ARB and SJVAPCD have primary implementation responsibility. ARB and SJVAPCD are also responsible for ensuring that state air quality standards are met.

4.1 Criteria Air Pollutants and TACs

4.1.1 Federal Regulations

4.1.1.1 Federal Clean Air Act

The federal Clean Air Act (CAA), promulgated in 1963 and amended several times thereafter, including the 1990 Clean Air Act amendments (CAAA), establishes the framework for modern air pollution control. The act directs the EPA to establish NAAQS for the six criteria pollutants (discussed in Section 3.2). The NAAQS are divided into primary and secondary standards; the former are set to protect human health within an adequate margin of safety, and the latter to protect environmental values, such as plant and animal life. Table 4-1 summarizes the NAAQS.

The CAA requires states to submit a state implementation plan (SIP) for areas in nonattainment for federal standards. The SIP, which is reviewed and approved by EPA, must demonstrate how the federal standards would be achieved. Failing to submit a plan or secure approval can lead to denial of federal funding and permits. In cases where the SIP is submitted by the state but fails to demonstrate achievement of the standards, EPA is directed to prepare a federal implementation plan.

4.1.1.2 Clean Air Nonroad Diesel Rule

To reduce emissions from offroad diesel equipment, the EPA established a series of increasingly strict emission standards for new engines. Locomotives and marine vessels are exempt from this rule. Manufacturers of offroad diesel engines would be required to produce engines meeting certain emission standards based on the model year the engine was manufactured based on the following compliance schedule:

- Tier 1 standards were phased in from 1996 to 2000 (year of manufacture), depending on the engine horsepower category.
- Tier 2 standards were phased in from 2001 to 2006.
- Tier 3 standards were phased in from 2006 to 2008.
- Tier 4 standards, which likely will require add-on emissions control equipment to attain them, will be phased in from 2008 to 2015.

Table 4-1. Federal and State Ambient Air Quality Standards

Criteria Pollutant	Average Time	California Standards	National Standards ^a	
			Primary	Secondary
Ozone	1-hour	0.09 ppm	None	None
	8-hour	0.070 ppm	0.075 ppm	0.075 ppm
Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³	150 µg/m ³
	Annual mean	20 µg/m ³	None	None
Fine Particulate Matter (PM _{2.5})	24-hour	None	35 µg/m ³	35 µg/m ³
	Annual mean	12 µg/m ³	15.0 µg/m ³	15.0 µg/m ³
Carbon Monoxide	8-hour	9.0 ppm	9 ppm	None
	1-hour	20 ppm	35 ppm	None
Nitrogen Dioxide	Annual mean	0.030 ppm	0.053 ppm	0.053 ppm
	1-hour	0.18 ppm	0.100 ppm	None
Sulfur Dioxide ^e	Annual mean	None	0.030 ppm	None
	24-hour	0.04 ppm	0.014 ppm	None
	3-hour	None	None	0.5 ppm
	1-hour	0.25 ppm	0.075 ppm	None
Lead	30-day Average	1.5 µg/m ³	None	None
	Calendar quarter	None	1.5 µg/m ³	1.5 µg/m ³
	3-month average	None	0.15 µg/m ³	0.15 µg/m ³
Sulfates	24-hour	25 µg/m ³	None	None
Hydrogen Sulfide	1-hour	0.03 ppm	None	None
Vinyl Chloride	24-hour	0.01 ppm	None	None

Notes:µg/m³ = micrograms per cubic meter

ppm = parts per million

National standards are divided into primary and secondary standards. Primary standards are intended to protect public health, whereas secondary standards are intended to protect public welfare and the environment.

Source: California Air Resources Board 2012a.

4.1.1.3 On-Road Diesel Engine Rule

In December 2000, the EPA signed the Heavy-Duty Highway Rule, which reduces emissions from on-road, heavy-duty diesel trucks by establishing a series of increasingly strict emission standards for new engines. Manufacturers are required to produce new diesel vehicles that meet PM and NO_x emission standards beginning with model year 2007 and phased-in between 2007 and 2010. The phase-in is based on a percent-of-sales basis: 50% from 2007 to 2009 and 100% in 2010 (U.S. Environmental Protection Agency 2010).

4.1.2 State Regulations

4.1.2.1 California Clean Air Act

In 1988, the state legislature adopted the California Clean Air Act (CCAA), which established a statewide air pollution control program. CCAA requires all air districts in the state to endeavor to meet the CAAQS by the earliest practical date. Unlike the federal CAA, the CCAA does not set precise attainment deadlines. Instead, the CCAA establishes increasingly stringent requirements for areas that will require more time to achieve the standards. CAAQS are generally more stringent than the NAAQS and incorporate additional standards for SO₄, H₂S, and C₂H₃Cl, and visibility-reducing particles. The CAAQS and NAAQS are listed together in Table 4-1.

ARB and local air districts bear responsibility for achieving California's air quality standards, which are to be achieved through district-level air quality management plans that would be incorporated into the SIP. In California, EPA has delegated authority to prepare SIPs to ARB, which, in turn, has delegated that authority to individual air districts. ARB traditionally has established state air quality standards, maintaining oversight authority in air quality planning, developing programs for reducing emissions from motor vehicles, developing air emission inventories, collecting air quality and meteorological data, and approving SIPs.

The CCAA substantially adds to the authority and responsibilities of air districts. The CCAA designates air districts as lead air quality planning agencies, requires air districts to prepare air quality plans, and grants air districts authority to implement transportation control measures. The CCAA also emphasizes the control of "indirect and area-wide sources" of air pollutant emissions. The CCAA gives local air pollution control districts explicit authority to regulate indirect sources of air pollution and to establish traffic control measures (TCMs).

4.1.2.2 Statewide Truck and Bus Regulation

Originally adopted in 2005, the on-road truck and bus regulation requires heavy trucks to be retrofitted with PM filters. The regulation applies to privately and federally owned diesel fueled trucks with a gross vehicle weight rating (GWR) greater than 14,000 pounds. Compliance with the regulation can be reached through one of two paths: (1) vehicle retrofits according to engine year or (2) phase-in schedule. Compliance paths ensure that by January 2023, nearly all trucks and buses will have 2010 model year engines or newer.

4.1.2.3 State Tailpipe Emission Standards

To reduce emissions from off-road diesel equipment, on-road diesel trucks, and harbor craft, ARB established a series of increasingly strict emission standards for new engines. New construction equipment used for the Project, including heavy duty trucks and off-road construction equipment will be required to comply with the standards.

4.1.2.4 Toxic Air Containment Regulation

California regulates TACs primarily through the Tanner Air Toxics Act (AB 1807) and the Air Toxics Hot Spots Information and Assessment Act of 1987 (AB 2588). In the early 1980s, the ARB established a statewide comprehensive air toxics program to reduce exposure to air toxics. The Toxic Air Contaminant Identification and Control Act (AB 1807) created California's program to

reduce exposure to air toxics. The Air Toxics “Hot Spots” Information and Assessment Act (AB 2588) supplements the AB 1807 program by requiring a statewide air toxics inventory, notification of people exposed to a significant health risk, and facility plans to reduce these risks.

In August 1998, ARB identified particulate emissions from diesel-fueled engines as TACs. In September 2000, ARB approved a comprehensive diesel risk reduction plan to reduce emissions from both new and existing diesel-fueled engines and vehicles (California Air Resources Board 2000). The goal of the plan is to reduce diesel PM10 (respirable particulate matter) emissions and the associated health risk by 75 percent in 2010 and by 85 percent by 2020. The plan identifies 14 measures that target new and existing on-road vehicles (e.g., heavy-duty trucks and buses), off-road equipment (e.g., graders, tractors, forklifts, sweepers, and boats), portable equipment (e.g., pumps), and stationary engines (e.g., stand-by power generators). ARB will implement over the plan next several years. Because the ARB measures are enacted before any phase of construction, the Project would be required to comply with applicable diesel control measures.

The Tanner Act sets forth a formal procedure for ARB to designate substances as TACs. This includes research, public participation, and scientific peer review before ARB designates a substance as a TAC. To date, ARB has identified 21 TACs, and has also adopted the EPA’s list of HAPs as TACs. In August 1998, DPM was added to the ARB list of TACs (California Air Resources Board 1998).

The Hot Spots Act requires that existing facilities that emit toxic substances above specified levels complete the following.

- Prepare a toxic emission inventory.
- Prepare a risk assessment if emissions are significant (i.e., 10 tons per year or on District’s Health Risk Assessment [HRA] list).
- Notify the public of significant risk levels.
- Prepare and implement risk reduction measures.

ARB has adopted several regulations that will reduce diesel emissions from in-use vehicles and engines throughout California. For example, ARB adopted an idling regulation for on-road diesel-fueled commercial vehicles in July 2004 and updated in October 2005. The regulation applies to public and privately owned trucks with a GWR greater than 10,000 pounds. Vehicles subject to the regulation are prohibited from idling for more than five minutes in any one location. ARB also adopted a regulation for diesel-powered construction and mining vehicles operating. Fleet owners are subject to retrofit or accelerated replacement/repower requirements for which ARB must obtain authorization from EPA prior to enforcement. The regulation also imposes a five-minute idling limitation on owners, operators, and renters or lessees of off-road diesel vehicles. In some cases, the particulate matter reduction strategies also reduce smog-forming emissions such as NO_x. As an ongoing process, ARB reviews air contaminants and identifies those that are classified as TACs. ARB also continues to establish new programs and regulations for the control of TACs, including DPMs, as appropriate.

4.1.3 Local Regulations

SJVAPCD has local air quality jurisdiction over projects in Merced County. Pursuant to the CCAA, SJVAPCD has adopted attainment plans to address ozone, PM, and CO. The 2007 Ozone Plan contains a comprehensive list of regulatory and incentive-based measures to reduce VOC and NO_x emissions

within the SJVAB. In particular, plan purposes a 75% reduction in NO_x and 25% reduction in VOC by 2023. SJVAPCD's 2007 PM₁₀ Maintenance Plan and 2008 PM_{2.5} Plan likewise include strategies to reduce PM emissions throughout the air basin. Finally, the 2004 California State Implementation Plan for Carbon Monoxide addresses CO emissions throughout the state.

The project may be subject to the following district rules. This list of rules may not be all encompassing, as additional SJVAPCD rules may apply to the action alternatives as specific components are identified. These are rules that have been adopted by SJVAPCD to reduce emissions throughout the San Joaquin Valley.

- Rule 2201 (New and Modified Stationary-Source Review Rule). This rule applies to all new stationary sources and all modifications to existing stationary sources subject to SJVAPCD permit requirements that, after construction, emit or may emit one or more pollutants regulated by the rule. Because the facility is subject to SJVAPCD Rule 2201, it is not subject to the SJVAPCD's Indirect Source Review Guidelines (SJVAPCD Rule 9510), per Section 4.4.3 of Rule 9510.
- Rule 3135 (Dust Control Plan Fees). This rule requires the applicant to submit a fee in addition to a dust control plan. The purpose of this rule is to recover SJVAPCD's cost for reviewing these plans and conducting compliance inspections.
- Rule 4101 (Visible Emissions). This rule prohibits emissions of visible air contaminants to the atmosphere and applies to any source operation that emits or may emit air contaminants.
- Rule 4102 (Nuisance). This rule applies to any source operation that emits or may emit air contaminants or other materials. In the event that the project or construction of the project creates a public nuisance, it could be in violation and subject to SJVAPCD enforcement action.
- Rule 4701 (Internal Combustion Engines—Phase 1). This rule limits the emissions of NO_x, CO, and VOC from internal combustion engines. These limits are not applicable to standby engines as long as they are used fewer than 200 hours per year (e.g., for testing during non-emergencies).
- Rule 4702 (Internal Combustion Engines—Phase 2). This rule limits the emissions of NO_x, CO, and VOC from spark-ignited internal combustion engines.
- Regulation VIII (Fugitive PM₁₀ Prohibitions). This is a series of rules (Rules 8011–8081) designed to reduce PM₁₀ emissions (predominantly dust/dirt) generated by human activity, including construction, road construction, bulk materials storage, landfill operations, and other activities.

SJVAPCD has developed an off-site mitigation program to reduce ROG and NO_x emissions in the SJVAB. SJVAPCD's Voluntary Emission Reduction Agreement (VERA) is a means of generating revenue to fund the district's Emissions Reduction Incentive Program (ERIP). The Emissions Reduction Incentive Program funds grants and projects to achieve emissions reductions in the SJVAB. The SJVAPCD has operated the incentive program since 1992, resulting in considerable criteria pollutant reductions throughout the region. Project applicants relying on the VERA to reduce adverse air quality impacts must 1) calculate the off-site mitigation fee required to reduce project-level emissions to below applicable thresholds, and 2) include the mitigation fee in the environmental document, project approval conditions, and in the Mitigation Monitoring and Reporting Protocol (MMRP). Example programs funded through the VERA include the following.

- On-Road Truck Voucher Program

- Burn Clean Program
- Heavy Duty Engine Program
- Cordless Zero-Emission Commercial Lawn & Garden Equipment Demonstration Program
- Statewide School Bus Retrofit Program

4.2 Greenhouse Gases

4.2.1 Federal Regulations

Although there is currently no federal overarching law specifically related to climate change or the reduction of GHGs, the EPA is developing regulations under the CAA that may be adopted pursuant to the EPA's authority under the CAA in the next 2 years. Foremost among recent developments have been the settlement agreements between the EPA, several states, and nongovernmental organizations (NGOs) to address GHG emissions from electric generating units and refineries; the U.S. Supreme Court's decision in *Massachusetts v. EPA*; and the EPA's "Endangerment Finding," "Cause or Contribute Finding," and Mandatory Reporting Rule. Although periodically debated in Congress, no federal legislation concerning greenhouse gas limitations is likely until at least 2013. In *Coalition for Responsible Regulation, Inc., et al. v. EPA*, the United States Court of Appeals upheld the EPA's authority to regulate GHG emissions under the CAA. Legislation applicable to the project is described below.

4.2.1.1 Update to Corporate Average Fuel Economy Standards (2009)

The new Corporate Average Fuel Economy (CAFE) standards incorporate stricter fuel economy standards promulgated by the State of California into one uniform standard. Additionally, automakers are required to cut GHG emissions in new vehicles by roughly 25% by 2016.

The EPA, National Highway Traffic Safety Administration (NHTSA), and ARB are currently working together to on a joint rulemaking to establish GHG emissions standards for 2017 to 2025 model year passenger vehicles, which require an industry-wide average of 54.5 miles per gallon. The Interim Joint Technical Assessment Report for the standards evaluated four potential future standards ranging from 47 to 62 miles per gallon in 2025 (U.S. Environmental Protection Agency et al. 2010). The official proposal was released by both the EPA and NHTSA on December 1, 2011. The Final environmental document for the new CAFE standards was released by the NHTSA and EPA on July 9, 2012. On August 28, 2012, NHTSA issued the Final Rule for CAFE Standards for Model Years 2017 and Beyond (National Highway Traffic Safety Administration 2012).

4.2.1.2 Environmental Protection Agency Endangerment and Cause and Contribute Findings (2009)

On December 7, 2009, EPA signed the Endangerment and Cause or Contribute Findings for Greenhouse Gases under Section 202(a) of the CAA. Under the Endangerment Finding, EPA finds that the current and projected concentrations of the six key well-mixed GHGs—CO₂, CH₄, N₂O, PFCs, SF₆, and HFCs—in the atmosphere threaten the public health and welfare of current and future generations. Under the Cause or Contribute Finding, EPA finds that the combined emissions of these

well-mixed GHGs from new motor vehicles and new motor vehicle engines contribute to the GHG pollution that threatens public health and welfare.

These findings do not themselves impose any requirements on industry or other entities. However, this action is a prerequisite to finalizing EPA's proposed new corporate average fuel economy standards for light-duty vehicles, which EPA proposed in a joint proposal including the Department of Transportation's proposed corporate average fuel-economy standards. The EPA is still currently in its rule development process for the updated light-duty standards, and the comment period for the updated light-duty standards was recently extended to February 13, 2012.

4.2.1.3 United States Environmental Protection Agency Regulation of GHG Emissions under the Clean Air Act (2010–2012, ongoing)

Under the authority of the Clean Air Act, the EPA is beginning to regulate GHG emissions starting with large stationary sources. In 2010, EPA set GHG thresholds to define when permits under the New Source Review Prevention of Significant Deterioration (PSD) and Title V Operating Permit programs are required for new and existing industrial facilities. In 2012, EPA proposed a carbon pollution standard for new power plants.

4.2.2 State Regulations

California has adopted statewide legislation addressing various aspects of climate change and GHG emissions mitigation. Much of this establishes a broad framework for the state's long-term GHG reduction and climate change adaptation program. The Governor of California has also issued several executive orders related to the state's evolving climate change policy. Legislation applicable to the project is described below.

4.2.2.1 Executive Order S-3-05 (2005)

Signed by Governor Arnold Schwarzenegger on June 1, 2005, Executive Order (EO) S-3-05 asserts that California is vulnerable to the effects of climate change. To combat this concern, EO S-3-05 established the following GHG emissions reduction targets for state agencies.

- By 2010, reduce GHG emissions to 2000 levels.
- By 2020, reduce GHG emissions to 1990 levels.
- By 2050, reduce GHG emissions to 80 percent below 1990 levels.

EOs are binding only on state agencies. Accordingly, EO S-03-05 will guide state agencies' efforts to control and regulate GHG emissions but will have no direct binding effect on local government or private actions. The Secretary of the California Environmental Protection Agency (CalEPA) is required to report to the Governor and state legislature biannually on the impacts of global warming on California, mitigation and adaptation plans, and progress made toward reducing GHG emissions to meet the targets established in this EO.

4.2.2.2 Senate Bills 1078/107/X 1-2 and Executive Order S-14-08—Renewable Portfolio Standard and Renewable Energy Resources Act (2002, 2006, 2011)

Senate Bills (SBs) 1078 and 107, California's Renewable Portfolio Standard (RPS), obligated investor-owned utilities (IOUs), energy service providers (ESPs), and Community Choice Aggregations (CCAs) to procure an additional 1 percent of retail sales per year from eligible renewable sources until 20% is reached by no later than 2010. The California Public Utilities Commission (CPUC) and California Energy Commission (CEC) are jointly responsible for implementing the program. EO S-14-08 set forth a longer range target of procuring 33% of retail sales by 2020. SB X 1-2, called the California Renewable Energy Resources Act, obligates all California electricity providers to obtain at least 33% of their energy from renewable resources by the year 2020.

4.2.2.3 Assembly Bill 1493—Pavley Rules (2002, Amendments 2009)

Known as "Pavley I," AB 1493 standards are the nation's first GHG standards for automobiles. AB 1493 requires ARB to adopt vehicle standards that will lower GHG emissions from new light duty autos to the maximum extent feasible beginning in 2009. Additional strengthening of the Pavley standards (referred to previously as "Pavley II", now referred to as the "Advanced Clean Cars" measure) has been proposed for vehicle model years 2017–2020. Together, the two standards are expected to increase average fuel economy to roughly 43 miles per gallon by 2020 and reduce GHG emissions from the transportation sector in California by approximately 14%. In June 2009, the EPA granted California's waiver request enabling the state to enforce its GHG emissions standards for new motor vehicles beginning with the current model year.

The EPA and ARB are currently working together to on a joint rulemaking to establish GHG emissions standards for 2017 to 2025 model-year passenger vehicles. The Interim Joint Technical Assessment Report for the standards evaluated four potential future standards ranging from 47 and 62 miles per gallon in 2025. The official proposal was released by both the EPA and ARB on December 7, 2011, and was unanimously approved by the ARB on January 26, 2012 (California Air Resources Board 2012b)

4.2.2.4 Assembly Bill 32, California Global Warming Solutions Act (2006)

AB 32 codified the state's GHG emissions target by requiring that the state's global warming emissions be reduced to 1990 levels by 2020. Since being adopted, ARB, CEC, CPUC, and the Building Standards Commission have been developing regulations that will help meet the goals of AB 32 and EO S-03-05. The Scoping Plan for AB 32 identifies specific measures to reduce GHG emissions to 1990 levels by 2020, and requires ARB and other state agencies to develop and enforce regulations and other initiatives for reducing GHGs. Specifically, the Scoping Plan articulates a key role for local governments, recommending they establish GHG reduction goals for both their municipal operations and the community consistent with those of the state.

4.2.2.5 Executive Order S-01-07, Low Carbon Fuel Standard (2007)

EO S-01-07 mandates (1) that a statewide goal be established to reduce the carbon intensity of California's transportation fuels by at least 10% by 2020, and (2) that a low carbon fuel standard (LCFS) for transportation fuels be established in California. The EO initiates a research and

regulatory process at ARB. Based on an implementation plan developed by CEC, ARB will be responsible for implementing the LCFS. On December 29, 2011, a federal judge issued a preliminary injunction blocking enforcement of the LCFS, ruling that the LCFS violates the interstate commerce clause (Georgetown Climate Center 2012). On April 13, 2012, a stay on the injunction was granted while the court considers ARB's appeal, allowing the ARB to continue to implement and resume enforcement of LCFS (California Air Resources Board 2012c).

4.2.2.6 Climate Change Scoping Plan (2008)

On December 11, 2008, pursuant to AB 32, ARB adopted the Climate Change Scoping Plan. This plan outlines how emissions reductions from significant sources of GHGs will be achieved via regulations, market mechanisms, and other actions. The Climate Change Scoping Plan also describes recommended measures that were developed to reduce GHG emissions from key sources and activities while improving public health, promoting a cleaner environment, preserving our natural resources, and ensuring that the impacts of the reductions are equitable and do not disproportionately affect low-income and minority communities. These measures put the state on a path to meet the long-term 2050 goal of reducing California's GHG emissions to 80% below 1990 levels.

4.2.2.7 State CEQA Guidelines (2010)

The State CEQA Guidelines require lead agencies to describe, calculate, or estimate the amount of GHG emissions that would result from a project. Moreover, the State CEQA Guidelines emphasize the necessity to determine potential climate change effects of the project and propose mitigation as necessary. The State CEQA Guidelines confirm the discretion of lead agencies to determine appropriate significance thresholds, but require the preparation of an environmental impact report (EIR) if "there is substantial evidence that the possible effects of a particular project are still cumulatively considerable notwithstanding compliance with adopted regulations or requirements" (§15064.4).

State CEQA Guidelines §15126.4 includes considerations for lead agencies related to feasible mitigation measures to reduce GHG emissions, which may include, among others, measures in an existing plan or mitigation program for the reduction of emissions that are required as part of the lead agency's decision; implementation of project features, project design, or other measures which are incorporated into the project to substantially reduce energy consumption or GHG emissions; offsite measures, including offsets that are not otherwise required, to mitigate a project's emissions; and, measures that sequester carbon or carbon-equivalent emissions.

4.2.2.8 Greenhouse Gas Cap-and-Trade Program (2010/2011)

On October 20, 2011, ARB adopted the final cap-and-trade program for California. The California cap-and-trade program will create a market-based system with an overall emissions limit for affected sectors. The program is currently proposed to regulate more than 85% of California's emissions and will stagger compliance requirements according to the following schedule: (1) electricity generation and large industrial sources (2012) and (2) fuel combustion and transportation (2015).

This section provides a discussion of the existing conditions related to air quality and climate change in the study area. Information below is drawn from the relevant oversight agencies: EPA, ARB, and SJVAPCD.

5.1 Climate and Atmospheric Conditions

The SJVAB is bounded by the Sierra Nevada to the east, the Coast Ranges to the west, and the Tehachapi Mountains to the south. The SJVAB contains all of San Joaquin, Stanislaus, Merced, Madera, Fresno, Kings, and Tulare Counties, as well as a portion of Kern County (CCR § 60107).

The area has an inland Mediterranean climate that is characterized by warm, dry summers and cool winters. Summer high temperatures often exceed 100°F, averaging in the low 90s in the northern valley and high 90s in the southern portion.

Although marine air generally flows into the basin from the Delta, the surrounding mountain ranges restrict air movement through and out of the valley. Wind speed and direction influence the dispersion and transportation of pollutants—the more wind flow, the less accumulation.

The vertical dispersion of air pollutants in the SJVAB is limited by the presence of persistent temperature inversion. Due to differences in air density, the air above and below the inversion do not mix. Air pollutants tend to collect under an inversion, leading to higher concentrations of emitted pollutants.

Precipitation and fog tend to reduce pollutant concentrations. Ozone needs sunlight for its formation, and clouds and fog block the required radiation. Precipitation in the San Joaquin Valley decreases from north to south, with approximately 20 inches in the north, 10 inches in the middle, and less than 6 inches in the south (San Joaquin Valley Air Pollution Control District 2002).

5.2 Local Air Quality Conditions

5.2.1 Local Air Quality Conditions

Existing air quality conditions in the study area can be characterized by monitoring data collected in the region. The air quality monitoring station closest to the project site is the Madera 28261 Avenue 14 station, which is located approximately 7.3 miles to the south of the project site. Recent air quality monitoring results from the Madera station are summarized in Table 5-1. The data represent air quality monitoring for the last three years for which a complete dataset is available (2009–2011). As indicated in Table 5-1, the Madera monitoring station has experienced frequent violations of state and federal ozone standards during this time period.

Table 5-1. Ambient Air Quality Monitoring Data from Madera Monitoring Station

Pollutant Standards	2009	2010	2011
<i>Ozone (O₃)</i>			
Maximum 1-hour concentration (ppm)	-	0.120	0.095
Maximum 8-hour concentration (ppm)	-	0.107	0.085
Number of days standard exceeded ^a			
CAAQS 1-hour (>0.09 ppm)	-	9	1
CAAQS 8-hour (>0.070 ppm)	-	11	15
NAAQS 8-hour (>0.075 ppm)	-	18	28
<i>Carbon Monoxide (CO)</i>			
Maximum 8-hour concentration (ppm)	-	-	-
Maximum 1-hour concentration (ppm)	-	-	-
Number of days standard exceeded ^a			
NAAQS 8-hour (≥9 ppm)	-	-	-
CAAQS 8-hour (≥9.0 ppm)	-	-	-
NAAQS 1-hour (≥35 ppm)	-	-	-
CAAQS 1-hour (≥20 ppm)	-	-	-
<i>Particulate Matter (PM₁₀)^b</i>			
National ^d maximum 24-hour concentration (µg/m ³)	-	111.9	118.8
National ^d second-highest 24-hour concentration (µg/m ³)	-	111.8	106.5
State ^e maximum 24-hour concentration (µg/m ³)	-	-	-
State ^e second-highest 24-hour concentration (µg/m ³)	-	-	-
National annual average concentration (µg/m ³)	-	26.9	31.2
State annual average concentration (µg/m ³)	-	-	-
Number of days standard exceeded ^a			
NAAQS 24-hour (>150 µg/m ³)	0	0	0
CAAQS 24-hour (>50 µg/m ³)	-	-	-
<i>Particulate Matter (PM_{2.5})</i>			
National ^d maximum 24-hour concentration (µg/m ³)	-	62.7	71.2
National ^d second-highest 24-hour concentration (µg/m ³)	-	58.4	70.1
State ^e maximum 24-hour concentration (µg/m ³)	-	-	-
State ^e second-highest 24-hour concentration (µg/m ³)	-	-	-
National annual average concentration (µg/m ³)	-	-	-
State annual average concentration (µg/m ³)	-	-	-
Number of days standard exceeded ^a			
NAAQS 24-hour (>35 µg/m ³)	-	-	34
Notes			
ppm	= parts per million		
NAAQS	= National Ambient Air Quality Standards		
CAAQS	= California Ambient Air Quality Standards		
µg/m ³	= micrograms per cubic meter		
mg/m ³	= milligrams per cubic meter		
-	= data not available		

a. An exceedance is not necessarily a violation.

b. National statistics are based on standard conditions data. In addition, national statistics are based on samplers using federal reference or equivalent methods.

Source: California Air Resources Board 2012d

Local monitoring data (Table 5-1) are used to designate areas as nonattainment, maintenance, attainment, or unclassified for the NAAQS and CAAQS. The four designations are defined as follows:

- Nonattainment—assigned to areas where monitored pollutant concentrations consistently violate the standard in question.
- Maintenance—assigned to areas where monitored pollutant concentrations exceeded the standard in question in the past but are no longer in violation of that standard.
- Attainment—assigned to areas where pollutant concentrations meet the standard in question over a designated period of time.
- Unclassified—assigned to areas where data are insufficient to determine whether a pollutant is violating the standard in question.

Table 5-2 summarizes the attainment status of the Merced County with regard to the NAAQS and CAAQS.

Table 5-2. Federal and State Attainment Status for Merced County

Criteria Pollutant	Federal Designation	State Designation
O ₃ (1-hour)	-- ^a	Extreme Nonattainment
O ₃ (8-hour)	Extreme Nonattainment	Nonattainment
CO	Attainment	Unclassified
PM ₁₀	Serious Maintenance	Nonattainment
PM _{2.5}	Nonattainment	Nonattainment
NO ₂	Attainment	Attainment
SO ₂	Attainment	Attainment
Lead	Attainment	Attainment
Sulfates	(No Federal Standard)	Attainment
Hydrogen Sulfide	(No Federal Standard)	Unclassified
Visibility	(No Federal Standard)	Unclassified
Notes:		
CO	= carbon monoxide	
PM ₁₀	= particulate matter less than or equal to 10 microns	
PM _{2.5}	= particulate matter less than or equal to 2.5 microns	
NO ₂	= nitrogen dioxide	
SO ₂	= sulfur dioxide	

^a The federal 1-hour standard of 12 parts per hundred million (pphm) was in effect from 1979 through June 15, 2005. The revoked standard is referenced here because it was employed for such a long period and because this benchmark is addressed in the state implementation plans.

Source: California Air Resources Board 2012e; U.S. Environmental Protection Agency 2012b

5.3 Sensitive Receptors

The SJVAPCD generally defines a *sensitive receptor* as a facility or land use that houses or attracts members of the population who are particularly sensitive to the effects of air pollutants, such as

children, the elderly, and people with illnesses. Examples of sensitive receptors include residential areas, schools and hospitals. There are no sensitive receptors within the immediate vicinity (i.e., within 0.50 mile) of the project site. The closest receptors include a few scattered rural single family residences located approximately 0.7 mile north of the project. Volta Elementary School is also located about 1 mile south of the project.

5.4 Climate Change and Global Warming

The phenomenon known as the *greenhouse effect* keeps the atmosphere near the Earth's surface warm enough for the successful habitation of humans and other life forms. Present in the Earth's lower atmosphere, GHGs play a critical role in maintaining the Earth's temperature; GHGs trap some of the long-wave infrared radiation emitted from the Earth's surface that would otherwise escape to space.

Visible sunlight passes through the atmosphere without being absorbed. Some of the sunlight striking the earth is absorbed and converted to heat, which warms the surface. The surface emits infrared radiation to the atmosphere, where some of it is absorbed by GHGs and re-emitted toward the surface; some of the heat is not trapped by GHGs and escapes into space. Human activities that emit additional GHGs to the atmosphere increase the amount of infrared radiation that gets absorbed before escaping into space, thus enhancing the greenhouse effect and amplifying the warming of the earth (Center for Climate and Energy Solutions 2011).

Increases in fossil fuel combustion and deforestation have exponentially increased concentrations of GHGs in the atmosphere since the Industrial Revolution. Rising atmospheric concentrations of GHGs in excess of natural levels enhance the greenhouse effect, which contributes to global warming of the earth's lower atmosphere induces large-scale changes in ocean circulation patterns, precipitation patterns, global ice cover, biological distributions, and other changes to the earth system that are collectively referred to as climate change.

5.4.1.1 Impacts of Climate Change

Climate change is a complex phenomenon that has the potential to alter local climatic patterns and meteorology. Although modeling indicates that climate change will result globally and regionally in sea level rise as well as changes in climate and rainfall, among other effects, there remains uncertainty with regard to characterizing the precise *local* climate characteristics and predicting precisely how various ecological and social systems will react to any changes in the existing climate at the local level. Regardless of this uncertainty in precise predictions, it is widely understood that substantial climate change is expected to occur in the future, although the precise extent will take further research to define.

Consequently, the Merced County, including the project site, will be impacted by changing climatic conditions. Research efforts coordinated through the ARB, CEC, CalEPA, the University of California system, and others are examining the specific changes to California's climate that will occur as the Earth's surface warms. Climate change could impact the natural environment in California in the following ways, among others.

- Rising sea levels along the California coastline, particularly in San Francisco and the San Joaquin Delta due to ocean expansion.

- Extreme-heat conditions, such as heat waves and very high temperatures, which could last longer and become more frequent.
- An increase in heat-related human deaths, infection diseases and a higher risk of respiratory problems caused by deteriorating air quality.
- Reduced snow pack and stream flow in the Sierra Nevada Mountains, affecting winter recreation and water supplies.
- Potential increase in the severity of winter storms, affecting peak stream flows and flooding.
- Changes in growing season conditions that could affect California agriculture, causing variations in crop quality and yield.
- Changes in distribution of plant and wildlife species due to changes in temperature, competition from colonizing species, changes in hydrologic cycles, changes in sea levels, and other climate-related effects.

5.5 Greenhouse Gas Emissions Inventories

A GHG inventory is a quantification of all GHG emissions and sinks within a selected physical and/or economic boundary. GHG inventories can be performed on a large scale (i.e., for global and national entities) or on a small scale (i.e., for a particular building or person). Although many processes are difficult to evaluate, several agencies have developed tools to quantify emissions from certain sources.

Table 5-3 outlines the most recent global, national, and statewide² GHG inventories to help contextualize the magnitude of potential Project-related emissions.

Table 5-3. Global, National, State, and Local GHG Emissions Inventories

Emissions Inventory	CO ₂ e (metric tons)
2004 IPCC Global GHG Emissions Inventory	49,000,000,000
2010 EPA National GHG Emissions Inventory	6,821,800,000
2009 ARB State GHG Emissions Inventory	452,970,000
Notes	
CO ₂ e = carbon dioxide equivalent	
Sources: Intergovernmental Panel on Climate Change 2007b; U.S. Environmental Protection Agency 2012d; California Air Resources Board 2010	

² At the time of this analysis, there are neither published GHG inventory data for Merced County nor the SJVAPCD.

Chapter 6

Impact Analysis

This chapter discusses the approach and methodology used to assess construction and operational emissions associated with the project. The analysis evaluates yearly emissions to comply with SJVAPCD CEQA guidelines. Emissions analyzed include criteria pollutants and GHGs (CO₂, CH₄, N₂O, SF₆, and HCFs). A summary of impacts and mitigation measures is presented at the conclusion of this chapter.

6.1 Methodology

6.1.1 Project Construction

Construction of the proposed project would generate emissions of ROG, NO_x, CO, PM₁₀, PM_{2.5}, SO₂ and GHGs (CO₂, CH₄, and N₂O) that would result in short-term impacts on ambient air quality. Emissions would originate from mobile and stationary construction equipment exhaust, employee and haul truck vehicle exhaust, and dust from earthmoving activities. Construction-related emissions vary substantially depending on the level of activity, length of the construction period, specific construction operations, types of equipment, number of personnel, wind and precipitation conditions, and soil moisture content.

6.1.1.1 Schedule and Phasing

Based on information provided by the project applicant, it was assumed that construction will require nine phases beginning in November 2013 (Oliveira pers. comm.). Table 6-1 outlines the expected construction schedule, phases, and associated tasks assumed in the emissions modeling.

Table 6-1. Construction Schedule and Activities

Phase	Start Date	Days	Task(s)
Cooling Pond A	March 2014	18	Expansion of cooling pond A
Settling Pond B	March 2014	14	Expansion of settling pond B
Utility Buildings ^a	April 2014	4	Construction of five small utility sheds
Warehouses	March 2014	25	Construction of warehouse storage space
Trailer Storage Yard	March 2014	4	Construction of trailer storage space
Pole Shed	October 2014	15	Construction of a pole shed
Septic System ^b	n/a	3	Installation of area septic

Notes

Depending on market conditions, construction could occur any time between November 2013 and July 2023. For the purposes of emissions modeling, it was conservatively assumed that all construction would be completed in 2014. This assumption represents a worst-case scenario, as construction-related emissions in 2014 would be higher than in future years (e.g., 2023) due to improvements in engine technology and turnover of older, more polluting equipment.

Construction start date is currently unknown. For the purposes of emissions modeling, it was conservatively assumed that all construction would be completed in 2014.

Source: Oliveira pers. comm.

6.1.1.2 Heavy-Duty Off-road Equipment

Exhaust emissions from heavy-duty equipment were calculated using spreadsheets based on the methodology and default emission factors from the California Emissions Estimator Model (CalEEMod). Equipment horsepower and operating hours were provided by the project applicant (Oliveira pers. comm.). Equipment load factors are based on the latest Carl Moyer Program Guidelines (California Air Resources Board 2011:236-237).³ Table 6-2 summarizes the off-road equipment assumed in the emissions modeling.

Table 6-2. Off-Road Equipment Modeling Assumptions

Phase	Type	Horsepower	Load	Number/day	Hours/day	Days
Cooling Pond A	Bulldozer	200	0.40	1	8	18
	Scraper	350	0.48	4	8	18
	Grader	175	0.41	1	8	12
	Water truck	300	0.38	1	8	18
Settling Pond B	Bulldozer	200	0.40	1	8	8
	Scraper	350	0.48	2	8	14
	Grader	175	0.41	1	8	10
	Water truck	300	0.38	1	8	14
	Compacter	225	0.78	1	8	14
Utility Buildings	Backhoe	58	0.37	1	1	4
	Loader	150	0.37	1	1	4
Warehouses	Bulldozer	200	0.40	1	8	15
	Scraper	350	0.48	2	8	20
	Grader	175	0.41	1	8	25
	Water truck	300	0.38	1	8	25
	Compacter	225	0.78	1	8	25
Trailer Storage Yard	Scraper	350	0.48	1	8	4
	Grader	175	0.41	1	8	4
	Water truck	300	0.38	1	8	4
	Compacter	225	0.78	1	8	4
Pole Shed	Backhoe	58	0.41	1	4	15
	Manlift	65	0.42	1	8	15
Septic System	Boring tool	75	0.50	1	8	3
	Backhoe	58	0.41	1	4	3

Source: Oliveira pers. comm.; California Air Resources Board 2011

Criteria pollutant, CO₂, and CH₄ emissions for each phase were calculated using the information summarized in Table 6-2 and Equation 1. Calculation spreadsheets are provided in Appendix A1.

Equation 1
$$E_{\text{phase}} = \sum (\text{Activity}_i \times EF_i \times \text{Number}_i \times LF_i \times HP_i) \times \text{Conv}$$

Where:

E_{phase} = Total exhaust emissions for the phase, metric tons and tons

³ Default load factors within CalEEMod have been superseded by the default load factors within the revised Carl Moyer Program Guidelines, which were approved by the ARB on April 28, 2011.

Activity = Equipment activity, hours per day

EF = Engine emissions factor, grams/horsepower-hour (CalEEMod)

Number = Number of equipment, unitless (Table 6-2)

LF = Engine load factor, unitless (Carl Moyer Program)

HP = Engine horsepower, unitless (Table 6-2)

Conv = Conversion from grams to metric tons (10^{-6}) and tons (11^{-6})

i = Equipment type (Table 6-2)

CalEEMod does not include emission factors for N₂O for off-road equipment. Emissions of N₂O were determined by scaling the CO₂ emissions quantified by Equation 1 by the ratio of N₂O/CO₂ (0.000026) emissions expected per gallon of diesel fuel according to the Climate Registry (Climate Registry 2012).

6.1.1.3 On-Road Vehicles

Project construction would require on-road vehicles for employee commute trips and hauling. Emissions from these sources were estimated using the ARB's EMFAC2011 emissions model. Emissions factors associated with tomato trucks were based on the age characteristics of the Liberty Packing fleet, while emission factors were based on Merced County fleet averages (Oliveira pers. comm.). Table 6-3 summarizes number of employees and vehicles assumed in the emissions modeling. Additional assumptions include the following.

- Employee vehicle trips would be 16.8 miles, based on CalEEMod default trips lengths for "home based work" trips in Merced County.
- Employees would make 1 round trip to the project site per day.
- Passenger vehicles were assumed to be used for employee commute trips. Based on CalEEMod defaults, 82% of passenger vehicles were assumed to be light-duty automobiles (LDA) and 18% were assumed to be light-duty trucks (LDT).
- Haul truck trips would be 40 miles, based on data provided by the project applicant.

Table 6-3. On-Road Vehicle Modeling Assumptions

Phase	Workers (Trips) per Day	Total Haul Trips
Cooling Pond A	5 (10)	0
Settling Pond B	6 (12)	0
Utility Buildings	4 (8)	0
Warehouses	5 (1)	0
Trailer Storage Yard	4 (8)	2
Pole Shed	4 (8)	0
Septic System	4 (8)	1
Source: Oliveira pers. comm.		

Criteria pollutant and CO₂ emissions for each phase were calculated using the information summarized in Table 6-3 and Equation 2. Calculation spreadsheets are provided in Appendix A2.

Equation 2
$$E_{\text{phase}} = \sum (EF_i \times \text{Trips}_i \times \text{Trip Distance}_i) \times \text{Conv}$$

Where:

E_{phase}	= Total exhaust emissions for the phase, metric tons and tons
EF	= Engine emissions factor, grams/mile (EMFAC2011)
Trips	= Vehicle trips per day (Table 3)
Trip Distance	= Default trip length, miles (CalEEMod)
Conv	= Conversion from grams to metric tons (10 ⁻⁶) and tons (11 ⁻⁶)
i	= Vehicle type (passenger or haul truck)

EMFAC2011 does not include emission factors for CH₄ or N₂O. Emissions of CH₄ and N₂O from diesel-powered vehicles were determined by scaling the CO₂ emissions quantified by Equation 2 by the ratio of CH₄/CO₂ and N₂O/CO₂ (0.000026) emissions expected per gallon of diesel fuel according to the Climate Registry (Climate Registry 2012). Emissions of CH₄ and N₂O from gasoline-powered vehicles were determined by dividing the CO₂ emissions quantified by Equation 2 by 0.95. This statistic is based on EPA's recommendation that CH₄, N₂O, and other GHG emissions account for approximately 5% of on-road emissions (U.S. Environmental Protection Agency 2011).

6.1.1.4 Fugitive Dust from Land Disturbance

Fugitive dust emissions from land disturbance were quantified using spreadsheets based on the methodology and default emission factors from CalEEMod. It was conservatively assumed that the total site area for each phase would be disturbed during construction. A maximum of one-quarter the total project area was assumed to be disturbed daily, based on conservative CalEEMod defaults.

6.1.2 Project Operations

Operational criteria pollutant and GHG emissions are associated with both the project and the existing facilities currently operating on the project site. The difference or delta in operational emissions between existing conditions and the project represents the net new impact of the project analyzed in this analysis. It is assumed that the project will operate for 50 years, with the first full operational year beginning in 2014.

Primary sources of operational emissions include vehicle and locomotive exhaust, energy usage, and air conditioning appliances. Criteria pollutants, CO₂, CH₄, and N₂O would be generated by vehicle and locomotive exhaust and onsite natural gas and diesel combustion. GHG emissions would likewise be generated by electricity generation and transmission, as well as from air conditioning equipment. All emissions sources associated with the project likewise occur under existing conditions, but in different intensities (as described below).

6.1.2.1 On-Road Vehicles

On-road mobile sources include employee vehicles and tomato haul trucks. Currently, a total of 110 full-time and 550 part-time employees are required each day during the peak-season (July through October). Full-time employees continue to work at the facility during the off-peak season (November through June) on a compressed schedule (4 days per week). Implementation of the project would not affect the number of individuals employed by the facility, but would increase the number tomato haul trucks. The facility currently receives 53,412 (5 yr average) tomato truckloads each year, and generates 14,000 trucks of finished bag and box product. Based on information provided by the project applicant, implementation of the project will expand this number by 120 truckloads per day (12,336 annually) during the peak season to 65,748 annual trips, while annual bag and box truckloads would increase by 800 to a total of 14,800. (Oliveira pers. comm.)

Criteria pollutant and CO₂ emissions under existing and project conditions were calculated using the above trip information and Equation 2. CH₄ and N₂O emissions from diesel-powered haul trucks were calculated by scaling CO₂ emissions by the CH₄/CO₂ and N₂O/CO₂ ratios identified under the construction inventory methodology (see above). Emissions of CH₄ and N₂O from gasoline-powered vehicles were determined by dividing the CO₂ emissions quantified by Equation 2 by 0.95. Consistent with the construction analysis, employees were assumed to make two, 16.8 mile trips to facility per day, based on CalEEMod default trips lengths for “home based work” trips in Merced County. Based on information provided by the project applicant, a roundtrip length of 120 miles was assumed for the tomato haul trucks (Oliveira pers. comm.).

6.1.2.2 Locomotives

In addition to haul trucks, tomatoes are also delivered to the facility by diesel-powered locomotives. A total of 350 locomotive trips are currently made each year; implementation of the project would not affect this number (Oliveira pers. comm.). Annual fuel consumption by the diesel-powered locomotives was estimated using Equation 3.

Equation 3 **$C = (\text{Trips} \times \text{Distance} \times \text{Fuel Use}) \times \text{Conv}$**

Where:

C	= Annual fuel consumption, gallons of diesel per year
Trips	= Locomotive trips per year, 350
Trip Distance	= Locomotive trip length, 2,500 miles (Oliveira pers. comm.)
Fuel Use	= Locomotive fuel efficiency, 1.25 gallons/mile (Oliveira pers. comm.)
Conv	= Conversion from grams to metric tons, 10 ⁻⁶

Criteria pollutants and GHG (CO₂, CH₄, and N₂O) emissions generated by operation of the diesel locomotives were quantified by multiplying the expected annual fuel consumption by the emission factors shown in Table 6-4. For the purposes of this analysis, it was assumed all locomotives were tier 2+ diesel engines.

Table 6-4. GHG Emission Factors for Diesel Fuel Combustion in Locomotives

Pollutant	Value	Unit
ROG	2.36	Grams per gallon
NO _x	90.09	Grams per gallon
CO	23.27	Grams per gallon
SO ₂	0.09	Grams per gallon
PM10	1.46	Grams per gallon
PM2.5	1.41	Grams per gallon
CO ₂	10.21	Kilograms per gallon
CH ₄	0.80	Grams per gallon
N ₂ O	0.26	Grams per gallon

Source: U.S. Environmental Protection Agency 2009; Climate Registry 2012

6.1.2.3 Onsite Natural Gas and Diesel Combustion

Operation of the existing facility and the project would require natural gas for onsite heating and steam production. The following annual natural gas demands were provided by project applicant for existing and project conditions (Oliveira pers. comm.). Combustion of this gas will result in direct criteria pollutant and GHG emissions at the project site.

- Existing natural gas demand (therms per year): 17,400,000
- Project therms per year (therms per year): 21,000,000

Criteria pollutant and GHG (CO₂, CH₄, and N₂O) emissions generated by natural gas combustion under both existing and project conditions were estimated by multiplying the annual natural gas usage (see above) by the emission factors shown in Table 6-5.

Table 6-5. GHG Emission Factors for Natural Gas Combustion

Pollutant	Value	Unit
ROG	0.01	Pounds per Million British Thermal Units
NO _x	0.09	Pounds per Million British Thermal Units
CO	0.08	Pounds per Million British Thermal Units
SO ₂	0.0005	Pounds per Million British Thermal Units
PM10	0.007	Pounds per Million British Thermal Units
PM2.5	0.007	Pounds per Million British Thermal Units
CO ₂	53.02	Kilograms per Million British Thermal Units
CH ₄	0.037	Grams per cubic meter
N ₂ O	0.035	Grams per cubic meter

Source: CalEEMod; Climate Registry 2012

The project site currently includes a 553 horsepower emergency diesel generator. The generator is tested for no more than 8 hours per year. Criteria pollutant and GHG (CO₂, CH₄, and N₂O) emissions generated during equipment testing were estimated using emission factors from CalEEMod and Equation 1 (see above). Implementation of the project would not affect testing procedures for the generator. Potential emissions generated through emergency use of the generator were not

quantified as this analysis would be speculative and dependent on emergency conditions, which are impossible to predict.

6.1.2.4 Electricity Consumption

Operation of the existing facility and the project would require the use of electricity for lighting, water pumping and conveyance, and to power certain types of equipment. The following annual electric demands were provided by project applicant for existing and project conditions (Oliveira pers. comm.). Generation of this electricity will result in GHG emissions at regional power plants.

- Existing electric demand (megawatt-hours [MWh] per year): 9,160
- Project electric demand (MWh per year): 10,060

Pacific Gas & Electric Company (PG&E) is the utility provider for the project site. PG&E has developed a CO₂ emission factor for the current generation of electricity within their service area. Statewide emission factors for CH₄ and N₂O have been developed by the EPA (2012d). Although not generated by electricity production, SF₆ emissions are released during electrical transmission. An SF₆ emission factor was calculated based on statewide electrical deliveries and annual SF₆ emissions (California Air Resources Board 2010; California Energy Commission 2012). Table 6-6 summarizes the GHG emission factors used in the analysis. Emissions associated with the generation and transmission of electricity were estimated by multiplying the expected annual electricity usage (see above) by the emission factors shown in Table 6-6.

Table 6-6. GHG Emission Factors for Electricity Generation and Transmission

Pollutant	Value	Unit
CO ₂	444.640	Pounds per MWh
CH ₄	29	Pounds per Gigawatt-hour (GWh)
N ₂ O	6	Pounds per GWh
SF ₆	0.00031	Pounds per MWh

Sources: Pacific Gas & Electric Company 2012; U.S. Environmental Protection Agency 2012d; California Air Resources Board 2010; California Energy Commission 2012

6.1.2.5 Air Conditioning Units

Air conditioning units are sources of HFCs, which are used as substitute refrigerants for chlorofluorocarbons (CFCs). Fugitive emissions from HFC leakage were calculated for the project and existing facility using recent studies of HFC sources, documented refrigerant types, and leak rates (United Nations Environment Programme 2006). Based on information from the project applicant, it was assumed that 43 centralized air conditioning units would operate under both existing and project conditions (Oliveira pers. comm.). These units have an average charge size of 3,402 kilograms. Equation 4 was used to estimate annual HFC emissions associated with air conditioning units.

Equation 4 **$E = CS * LR * Conv * Units$**

Where

- E = Equipment emissions, metric tons per year
- CS = Charge size, 3,402 kilograms (Oliveira pers. comm.)

LR	= Leak rate, 4% (United Nations Environment Programme 2006)
Conv	= Kilograms to metric tons, 1,000
Units	= Number of units, 43 (Oliveira pers. comm.)

6.1.2.6 State Mandates to Reduce GHG Emissions

Actions undertaken by the state will contribute to project-level GHG reductions. For example, the state requires electric utility companies to increase their procurement of renewable resources by 2020. Renewable resources, such as wind and solar power, produce the same amount of energy as natural gas and other traditional sources, but do not emit any GHGs. By generating a greater amount of energy through renewable resources, electricity provided to the facility will be cleaner and less GHG intensive than if the state hadn't required the renewable standard.

GHG emissions associated with construction and operation of the existing facility and proposed project were estimated under two scenarios to account for the potential impact of statewide mandates to reduce GHG emissions. As described above, emissions were first quantified assuming existing carbon intensities (i.e., no state mandates, or business-as-usual [BAU] conditions). The second scenario accounts for project-level emissions reductions achieved by the following state mandates: LCFS, Pavley Rules, and the RPS (refer to Section 4.2.2 for a description of these rules)

To account for reductions achieved by Pavley, GHG emissions generated by on-road vehicles were calculated using adjusted emission factors from EMFAC2011. To account for reductions achieved by the LCFS, GHG emissions generated by locomotives and the emergency generators were adjusted downward by 1% (assumed penetration of the LCFS in the full operational year [2014]) (California Air Resources Board n.d.). Because Pavley and LCFS requirements will continue to strengthen, onroad operational emissions will continue to decrease with time.

The RPS will increase the proportion of renewable energy supplied to the electrical grid. The CO₂ emission factor summarized in Table 6-6 is based on the PG&E renewable energy mix in 2010 (15.9%) whereas the CH₄ and N₂O emission factors are based on the statewide renewable mix in 2009 (11.6%). Implementation of the RPS will increase the proportion of renewable energy within the state to 33% by 2020. To account for emissions reductions achieved by increases in renewable energy, annual electricity emission factors were calculated assuming a linear increase in statewide renewables between 2009/2010 and 2014 (first full implementation year) (see Table 6-7). Electricity emissions with implementation of RPS were estimated by multiplying the expected annual electricity usage by the emission factors shown in Table 6-7. Because RPS requirements will continue through 2020, annual electricity emissions will continue to decrease with time.

Table 6-7. RPS Adjusted GHG Emission Factors for Electricity Generation and Transmission (2014)

Pollutant	Value	Unit
CO ₂	415	Pounds per MWh
CH ₄	26	Pounds per Gigawatt-hour (GWh)
N ₂ O	5.6	Pounds per GWh
SF ₆	0.00031	Pounds per MWh

6.1.2.7 Screening Level Health Risk Assessment

Long-term project operations would result in an increase 13,136 annual truck trips during the peak season (July to November), with 12,336 associated with the increase in tomato trucks and 800 associated with bag and box trucks. Potential health risks associated with these vehicles were estimated using the SJVAPCD's diesel truck travel health risk assessment screening tool. Trucks exiting the facility either go north on Ingomar Grade to Fahey Road or south on Ingomar to Henry Miller Road (Oliveira pers. comm.). Accordingly, it was assumed that the roadway travel route would be oriented north-south, with one 50-meter roadway segment. Haul truck emission factors were obtained from EMFAC2011 assuming a vehicle speed of 35 miles per hour. Receptors were conservatively placed 25 meters to the traveled way. The screening tool inputs and calculations are provided in Appendix A3.

6.2 Significance Thresholds

6.2.1 Air Quality

The State CEQA Guidelines Appendix G (14 CCR 15000 et seq.) has identified significance criteria to be considered for determining whether a project could have significant impacts on existing air quality. According to these Guidelines, a project impact would be considered significant if construction or operation of the project would:

- Conflict with or obstruct implementation of the applicable air quality plan.
- Violate any air quality standard or contribute substantially to an existing or projected air quality violation.
- Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors).
- Expose sensitive receptors to substantial pollutant concentrations.
- Create objectionable odors affecting a substantial number of people.

6.2.1.1 SJVAPCD Guidance

According to the State CEQA Guidelines, the significance criteria established by the applicable air quality management or air pollution control district may be relied on to make significance determinations for potential impacts on environmental resources. As discussed above, the SJVAPCD is responsible for ensuring that state and federal ambient air quality standards are not violated within the SJVAB. Analysis requirements for construction- and operational-related pollutant emissions are contained in the SJVAPCD's (2002) GAMAQI. A review of the GAMAQI indicates that the district considers PM₁₀ to be the primary pollutant of concern from construction activities and that compliance with SJVAPCD Regulation VIII will constitute sufficient mitigation to reduce PM₁₀ emissions to less-than-significant levels. The amount of PM₁₀ emitted during construction activities varies greatly depending on the level of activity, the specific operations taking place, the equipment being operated, soil characteristics, and weather conditions.

Despite this variability in emissions, experience has shown that several feasible control measures can be reasonably implemented to reduce PM₁₀ emissions during construction. The SJVAPCD has determined that compliance with its Regulation VIII, “Fugitive PM₁₀ Prohibitions,” including implementation of all feasible control measures specified in its 2002 guide (San Joaquin Valley Air Pollution Control District 2002), is sufficient mitigation to minimize adverse air quality effects from construction.

All construction projects must abide by Regulation VIII. Since the publication of the district’s guidance manual, the SJVAPCD has revised some of the rules comprising Regulation VIII. Guidance from the SJVAPCD staff indicates that implementation of a dust control plan would satisfy all of the requirements of SJVAPCD Regulation VIII (Siong pers. comm. September 2011). Further consultation with the SJVAPCD staff indicates that although no explicit thresholds for construction-related emissions of O₃ precursors are found in the GAMAQI, the SJVAPCD considers a significant impact to occur when construction emissions of ROG or NO_x exceed 10 tons per year or PM₁₀ or PM_{2.5} exceed 15 tons per year (Siong pers. comm. September 2011).

The SJVAPCD’s thresholds of significance, as indicated in their guidance documents (San Joaquin Valley Air Pollution Control District 2002) and through consultation with SJVAPCD staff, are summarized below.

- The project would expose sensitive receptors to substantial pollutant concentrations.
- Project operations or construction would generate more than 10 tons/year of ROG or NO_x.
- Project operations or construction would generate more than 15 tons/year of PM₁₀ or PM_{2.5}.
- Project-related emissions of CO would exceed NAAQS or CAAQS.
- The project would not comply with the SJVAPCD’s Regulation VIII regarding particulate matter emissions from construction activities. Compliance with SJVAPCD Regulation VIII and the local zoning code will reduce particulate emission impacts to levels that are considered less than significant by the SJVAPCD.
- The project would result in more than 10 cases of cancer in 1 million.

6.2.2 Greenhouse Gases

According to State CEQA Guidelines, a project impact would be considered significant if construction or operation of the project would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment.
- Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases.

The State CEQA Guidelines are currently silent on whether CEQA evaluations should address the potential impacts of climate change on a project. However, §15126.2 (a) does note that the lead agency should “evaluate any potentially significant impacts of locating development in other areas susceptible to hazardous conditions.” Accordingly, a lead agency should consider whether construction and operation of a project would be affected by climate change. In conducting such an evaluation, the agency should focus on the long-term impacts of the project that are more likely to experience the effects of climate change in the future. Foreseeable shifts in regional climate will

likely spur changes in local patterns of flooding, wildfire potential, water availability, energy demand, environmental health, and heat-wave events (California Energy Commission 2009). The project could place persons and property at higher levels of risk to climate change effects if it does not anticipate reasonably foreseeable changes in environmental conditions.

The Court of Appeals recently found that while an EIR must analyze environmental effects that may result from a project, it is not required to examine the effects of the environment on the project (see *Ballona Wetland Foundation v. City of Los Angeles*, 201 Cal. App. 4th 455). The *Ballona* decision potentially eliminates the need for lead agencies in the second appellate district to consider impacts of climate change on proposed projects. Unless binding legislation that overturns the *Ballona* decision is adopted,⁴ courts throughout the state will be presented with the case as precedent. Nonetheless, courts outside the second district will have the discretion to differ in their interpretation of the CEQA Guidelines and may find that an analysis of climate change effects on proposed projects is required. Accordingly, a discussion of the issue has been included in this technical report for informational purposes.

6.2.2.1 SJVAPCD Guidance

SJVAPCD has adopted GHG guidance to assist lead agencies in determining the level of significance of operational-related GHG emissions, pursuant to CEQA. SJVAPCD's GHG guidance is intended to streamline CEQA review by pre-quantifying emissions reductions that would be achieved through the implementation of best performance standards (BPS). Projects are considered to have a less-than-significant cumulative impact on climate change if any of the following conditions are met.

- Comply with an approved GHG reduction plan.
- Achieve a score of at least 29⁵ using any combination of approved operational BPS.
- Reduce operational GHG emissions by at least 29% over BAU conditions (demonstrated quantitatively).

SJVAPCD guidance recommends quantification of GHG emissions for all projects in which an EIR is required, regardless of whether BPS achieve a score of 29 (San Joaquin Valley Air Pollution Control District 2009). The guidance document does not establish an emissions threshold for construction-related emissions

There is currently no adopted GHG reduction plan for Merced County. Accordingly, option 1 from the SJVAPCD GHG guidance—comply with an approved GHG reduction plan—cannot be used to evaluate project significance. Accordingly, an assessment as to whether the project can achieve a score of 29 through the implementation of BPS (option 2) or reduce operational GHG emissions by 29% relative to BAU conditions (option 3) is performed in this technical report.

In accordance with scientific consensus regarding the cumulative nature of GHGs, the analysis provides a cumulative evaluation of GHG emissions. Unlike traditional cumulative impact assessments, this analysis is still project-specific in that it only evaluates direct emissions generated by the project; given the global nature of climate change, the analysis does not include emissions from past, present, and reasonably foreseeable projects in the Plan Area. Consequently, impacts

⁴ On March 21, 2012, the California Supreme Court denied case review and depublication requests submitted by several environmental organizations.

⁵ A score of 29 represents a 29% reduction in GHG emissions relative to unmitigated conditions (1 point = 1%). This goal is consistent with the reduction targets established by Assembly Bill 32.

associated with GHG emissions analyzed in this report are cumulative in nature and presented in Section 6.4, *Cumulative Impacts*.

6.3 Project Impacts and Mitigation

Impact AQ-1. Conflict with or obstruct implementation of an applicable air quality plan. *Less than Significant*

Merced County is currently designated an extreme nonattainment area for the federal 8-hour ozone standard and a nonattainment area for the federal PM_{2.5} standard (Table 5-2). The most recent SJVAPCD air quality attainment plans are the 2007 Ozone Plan, 2007 PM₁₀ Maintenance Plan, and the 2008 PM_{2.5} Plan. The SJVAPCD plans estimate future emissions in the SVJAB and determine strategies necessary for emissions reductions through regulatory controls. Emissions projections are based on population, vehicle, and land use trends typically developed by the SJVAPCD and San Joaquin Council of Governments (SJCOCG).

A project is deemed inconsistent with air quality plans if it would result in population and/or employment growth that exceeds estimates used to develop applicable air quality plans. Projects that propose development that is consistent with the growth anticipated by the relevant land use plans would be consistent with the current SJVAPCD air quality plans. Likewise, projects that propose development that is less dense than anticipated within a general plan (or other governing land use document) would be consistent with the air quality plans because emissions would be less than estimated for the region. If a project proposes development that is greater than that anticipated growth projections, the project would be in conflict with the SJVAPCD air quality plans, and might have a potentially significant impact on air quality because emissions would exceed those estimated for the region. This situation would warrant further analysis to determine if a proposed project and surrounding projects would exceed the growth projections used in the SJVAPCD air quality plans for a specific subregional area.

The purpose of the proposed project is to expand operational capacity at an existing tomato packing facility. As noted in Section 6.1.2.1, the project would not increase employment or growth within the region. Moreover, the project would enhance environmentally positive features on the site. The modifications proposed as part of the project will increase the efficiency of existing equipment and reduce the intensity of water and energy consumption. Accordingly, the project contributes to the region's long term goals of increasing energy efficiency and reducing air pollution. Because the project does not result in changes to employment, it is also consistent with recent growth projections for the region and would not conflict with the current SJVAPCD air quality plans. As discussed further below, the project will also comply with all SJVAPCD rules and regulations. Based on the above analysis, the project would not conflict with or obstruct implementation of any applicable land use plan or policy. Therefore, the impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

No mitigation is required, as impacts would be less than significant.

Impact AQ-2. Violate any air quality standard or contribute substantially to an existing or projected air quality violation during project construction. *Less than Significant after Mitigation*

Construction of the project has the potential to create air quality impacts through the use of heavy-duty construction equipment, worker vehicle trips, and haul truck trips. In addition, earthmoving activities would result in minor fugitive dust emissions. Mass criteria pollutant emissions generated by these sources were quantified using standard air quality models and information provided by the project applicant, as described in Section 6.1.1. Emissions associated with construction of the project are presented in Table 6-8. As indicated in Table 6-8, emissions are well below SJVAPCD's numeric significance thresholds for criteria pollutants.

Table 6-8. Estimated Construction Emissions (tons per year)

Year	ROG	NO _x	CO	SO ₂	PM ₁₀	PM _{2.5}
2013	0.0	0.0	0.1	0.0	0.0	0.0
2014	0.3	2.4	1.2	0.0	0.2	0.1
<i>SJVAPCD Numeric Thresholds</i>	<i>10</i>	<i>10</i>	<i>-</i>	<i>-</i>	<i>15</i>	<i>15</i>

Source: CalEEMod (see Section 6.1.1)

For fugitive dust, as previously indicated, SJVAPCD requires all construction activities to comply with fugitive dust control requirements under Regulation VIII. Guidance from SJVAPCD staff indicates that implementation of a Dust Control Plan would satisfy all of the requirements of SJVAPCD Regulation VIII (Siong pers. comm. September 2011). Implementation of Mitigation Measure AQ-2a would ensure that fugitive dust emissions from construction activities are less-than-significant. Pursuant to Regulation VIII, the project-specific Dust Control Plan will be required to be prepared and submitted to SJVAPCD at least 30 days prior to the start of construction (as indicated in Mitigation Measure AQ-2a).

Mitigation Measures

Mitigation Measure AQ-2a: Prepare and Implement a Dust Control Plan to Comply with SJVAPCD Regulation VIII Requirements to Control Construction Emissions of PM 10

To control the generation of construction-related PM 10 emissions, construction contractors will prepare and submit for approval a dust control plan to the SJVAPCD at least 30 days prior to any earthmoving or construction activities. Potential measures that might be included in the dust control plan could include, but are not limited to:

- Pre-activity.
 - Pre-water the work site and phase work to reduce the amount of disturbed surface area at any one time.
- Active operations.
 - Apply water to dry areas during leveling, grading, trenching, and earthmoving activities.
 - Construct and maintain wind barriers and apply water or dust suppressants to the disturbed surface areas.

- Inactive operations, including after work hours, weekends, and holidays.
 - Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.
- Temporary stabilization of areas that remain unused for seven or more days.
 - Restrict vehicular access and apply and maintain water or dust suppressants on all un-vegetated areas.
 - Establish vegetation on all previously disturbed areas.
 - Apply and maintain gravel at all previously disturbed areas.
 - Pave previously disturbed areas.
- Unpaved Access and haul roads, traffic and equipment storage areas.
 - Apply water or dust suppressants to unpaved haul and access roads.
 - Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.
 - Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.
- Wind events.
 - Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.
 - Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- Outdoor handling of bulk materials.
 - Water or dust suppressants will be applied when handling bulk materials.
 - Wind barriers with less than 50% porosity will be installed and maintained, and water or dust suppressants will be applied.
- Outdoor storage of bulk materials.
 - Water or dust suppressants will be applied to storage piles.
 - Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - Wind barriers with less than 50% porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - A three-sided structure with less than 50% porosity that is at least as high as the storage piles will be used.
- On-site transporting of bulk materials.
 - Vehicle speed will be limited on the work site.
 - All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.

- A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
- Haul trucks will be covered with a tarp or other suitable cover.
- Off-site transporting of bulk materials.
 - The following practices will be performed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- Outdoor transport using a chute or conveyor.
 - No open chutes or conveyors will be used.
 - Chutes or conveyors will be fully enclosed.
 - Water spray equipment will be used to sufficiently wet the materials.
 - Transported materials will be washed or screened to remove fines (PM 10 or smaller).

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-3. Violate any air quality standard or contribute substantially to an existing or projected air quality violation during project operation. *Less than Significant after Mitigation*

Project operation has the potential to create air quality impacts primarily associated with mobile sources. Mobile sources would include haul trucks, employee vehicles, and locomotives. Natural gas combustion by onsite boilers would generate criteria pollutants, but these emissions are subject to SJVAPCD Rule 2201 (see Section 4.2). Pursuant to Rule 2201, permitted emissions in excess of regulatory thresholds must be offset to net zero. Accordingly, criteria pollutants associated with onsite natural gas combustion are not included in the impact determination.

The existing packing facility currently operating on the project site represents a source of emissions. Emissions generated by these uses represent existing conditions, against which the project must be evaluated. Estimated operational emissions under both existing and project conditions are summarized in Table 6-9. The difference in operational emissions between the project and the existing facility represents the net new impact of the project.

Table 6-9. Estimated Operational Emissions (tons per year)

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
<i>No Project (Existing Conditions) ^a</i>						
Employee Trips	1	1	15	0	0	0
Haul Trucks ^b	3	54	14	0	4	2
Locomotives	3	109	28	0	2	2
Back-up Generator	0	0	0	0	0	0
<i>Total Emissions</i>	<i>6</i>	<i>164</i>	<i>57</i>	<i>0</i>	<i>6</i>	<i>3</i>

Source	ROG	NO _x	CO	SO ₂	PM10	PM2.5
<i>Project Conditions (2014) ^c</i>						
Employee Trips	0	1	13	0	0	0
Haul Trucks ^b	3	61	14	0	4	2
Locomotives	3	109	28	0	2	2
Back-up Generator	0	0	0	0	0	0
<i>Total Emissions</i>	6	171	55	0	5	3
<i>Net Annual Emissions ^{d, e}</i>						
<i>Project Conditions minus No Project (Existing Conditions) ^f</i>	0	6	-3	0	0	0
SJVAPCD Thresholds	10	10	-	-	15	15

Notes

- a. Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.
- b. Includes both tomato and bag and box trucks.
- c. Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.
- d. Represents the net project impact, or the change in emissions relative to existing conditions.
- e. Natural gas combustion by onsite boilers would generate criteria pollutants. However, these emissions are subject to SJVAPCD Rule 2201 and are therefore not included in the impact determination. Nevertheless, emissions associated with existing and project natural gas combustion are provided below for informational purposes.
Existing conditions (tons/year): ROG, 9; NO_x, 84; CO, 71; SO₂, 1; PM10, 6; PM2.5, 6
Project conditions (tons/year): ROG, 11; NO_x, 104; CO, 87; SO₂, 1; PM10, 8; PM2.5, 8
Net project impact (tons/year): ROG, 2; NO_x, 20; CO, 16; SO₂, 0; PM10, 1; PM2.5, 1
- f. Emissions may not total due to rounding.

As indicated in Table 6-9, net annual NO_x emissions during operations would not exceed the SJVAPCD significance thresholds in the assumed first full build out year (2014). Therefore, the impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AQ-4. Expose sensitive receptors to substantial concentrations of diesel particulate matter. *Less than Significant*

Diesel-fueled engines, which generate DPM, would be used during project construction. However, due to the short-term nature of construction activities, the SJVAPCD does not consider cancer risks associated with construction to be a significant issue (Siong pers. comm. May 2012). Cancer health risks associated with exposure to diesel exhaust are typically associated with chronic exposure, in which a 70-year exposure period is assumed. Although elevated cancer rates can result from exposure periods of less than 70 years, acute exposure (i.e., exposure periods of 2 to 3 years) is not anticipated to result in an increased health risk.

Construction activities would occur in nine phases, requiring no more than 160 days (see Table 6-1). Accordingly, health impacts associated with exposure to diesel exhaust from project construction

are not anticipated to be significant because construction activities are expected to be well below the 70-year exposure period used in HRAs. Moreover, there are no sensitive receptors within one mile of the construction site. Because DPM concentrations dissipate as a function of distance, potential exposure to the nearest receptors would be substantially reduced. Therefore, construction of the project is not anticipated to result in an elevated cancer risk to exposed persons.

Long-term project operations would result in an increase of 120 daily truck trips during the peak season (July to November). Potential health risks associated with these vehicles were estimated using the SJVAPCD's diesel truck travel health risk assessment screening tool (see Section 6.1.2.7). Based on the conservative screening analysis, potential health risks associated with increased truck traffic were estimated to result in 3.11 additional cases of cancer per one million, which is well below the accepted threshold of 10 cases per million (see Section 6.2.1). Consequently, this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AQ-5. Expose sensitive receptors to substantial concentrations of carbon monoxide. *Less than Significant*

Elevated CO concentrations are typically found in areas with significant traffic congestion. CO is a public health concern because it combines readily with hemoglobin and reduces the amount of oxygen transported in the bloodstream. The SJVAPCD requires an analysis of localized CO concentrations associated with traffic congestion to ensure concentrations remain below CAAQS and NAAQS. The air district has developed a set of preliminary screening criteria that can be used to determine whether a project would cause or contribute to an existing or future violation of the ambient air quality standards. According to the guidelines, projects that meet either of the following criteria would likely result in a localized CO "hotspot" and should be evaluated further, while projects that do not affect intersections meeting either of the following criteria are assumed to not result in any potential violations of the CO NAAQS or CAAQS.

- Level-of-Service (LOS) on one or more streets or intersections will be reduced to LOS E or F.
- Congestion and/or traffic on LOS F streets or intersections would be substantially increased.

According to Merced County General Plan Background Report, Ingomar Grade Road and surrounding intersections operate at LOS C or better (Mintier & Associates 2007). Therefore, the proposed project would not cause or contribute to an existing or future violation of the NAAQS or CAAQS. This impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

Impact AQ-6. Expose sensitive receptors to valley fever. *Less than Significant after Mitigation*

Although not a direct air pollutant, valley fever (*coccidioidomycosis*) fungal spore infections develop through inhalation of airborne fungal spores contained in windblown dust, and is recognized to be endemic in the San Joaquin Valley due to the dry, alkaline soil conditions. The project site is surrounded by agricultural fields that are frequently tilled, so baseline windblown dust concentrations are likely elevated. In order to prevent exacerbating the existing windblown dust issues at the project site, all construction activity for the proposed project will be conducted under a rigorous Dust Control Plan prepared in accordance with SJVAPCD Regulation VIII (Mitigation Measure AQ-2a). Adherence to the Dust Control Plan would prevent the proposed project from substantially increasing windblown dust concentrations compared to background levels. Therefore, with implementation of Mitigation Measure AQ-2a, this impact would be less than significant.

Mitigation Measures

Implementation of Mitigation Measure AQ-2a will reduce this impact to a less than significant level.

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-7. Create objectionable odors affecting a substantial number of people. *Less than Significant*

While offensive odors rarely cause any physical harm, they can be very unpleasant, leading to considerable distress among the public and often generating citizen complaints to local governments and air districts. Any project with the potential to frequently expose the public to objectionable odors would be deemed as one having a significant impact. According to ARB's (2005) *Air Quality and Land Use Handbook*, land uses associated with odor complaints typically include sewage treatment plants, landfills, recycling facilities, and manufacturing. Odor impacts on residential areas and other sensitive receptors, such as hospitals, daycare centers, schools, etc., warrant the closest scrutiny; but consideration should also be given to other land uses where people may congregate, such as recreational facilities, work sites, and commercial areas.

The project may cause temporary odors resulting from diesel exhaust during construction equipment operation and truck activity, as well as from truck deliveries during long-term operations. Although these emissions may be noticeable from time to time, they would be localized and are not likely to adversely affect people off-site resulting in confirmed odor complaints. Operation of the project is not expected to result in substantial odors, relative to existing conditions. Moreover, as previously discussed, there are no sensitive receptors within one mile of the project. Any odors generated during operations would dissipate as a function of distance. Accordingly, this impact would be less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

6.4 Cumulative Impacts

Impact AQ-8. Result in a cumulatively considerable net increase of any criteria pollutant for which the region is nonattainment under an applicable federal or state ambient air quality standard. *Less than Significant after Mitigation*

The SJVAPCD has identified project-level thresholds to evaluate impacts to air quality (see Section 6.2.1). In developing these thresholds, the air district considered levels at which project emissions would be cumulatively considerable. For example, as noted in the SJVAPCD's (2002) GAMAQI, "any proposed project that would individually have a significant air quality impact...would also be considered to have a significant cumulative air quality impact."

The criteria pollutant thresholds presented in Section 6.2.1 therefore represent the maximum emissions the project may generate before contributing to a cumulative impact on regional air quality as determined by the SJVAPCD. Therefore, exceedances of the project-level thresholds would be cumulatively considerable. As discussed in Impact AQ-2, construction emissions associated with the project are not expected to exceed the SJVAPCD's quantitative thresholds. Pursuant to air district regulations, Mitigation Measure AQ-2a is required to reduce construction-related fugitive dust emissions to less than significant.

Mitigation Measures

Mitigation Measure AQ-2a.

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-9. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment during construction. *Less than Significant after Mitigation*

Project construction would generate direct emissions of CO₂, CH₄, and N₂O from mobile and stationary construction equipment exhaust, as well as employee haul truck vehicle exhaust. Estimated construction emissions resulting from construction of the project are summarized in Table 6-10. Emissions are presented with and without implementation of state mandates to reduce GHG emissions. These mandates do not require additional action on the part of the project applicant, but will contribute to GHG emissions reductions. For example, Pavley and LCFS will improve the fuel efficiency of vehicles and reduce the carbon content of transportation fuels, respectively. Equipment used to construct the project will therefore be cleaner and less GHG intensive than if the state mandates had not been established.

Table 6-10. Summary of Construction Emissions (Metric Tons)

Year	Construction Equipment			Onroad Vehicles		CO ₂ e
	CO ₂	CH ₄	N ₂ O	CO ₂	Other ^a	
Emissions without State Mandates						
2013	0.00	0.00	0.00	0.00	0.00	0.00
2014	228	0.02	0.01	11	0.51	242
<i>Total</i>	<i>228</i>	<i>0.02</i>	<i>0.01</i>	<i>11</i>	<i>0.51</i>	<i>242</i>

	Construction Equipment			Onroad Vehicles		
Year	CO ₂	CH ₄	N ₂ O	CO ₂	Other ^a	CO ₂ e
Emissions with State Mandates ^b						
2013	0.00	0.00	0.00	0.00	0.00	0.00
2014	225	0.02	0.01	10	0.46	238
Total	225	0.02	0.01	10	0.46	238
Notes						
a.	Includes CH ₄ and N ₂ O emissions.					
b.	Assumes implementation of Pavley and LCFS.					

SJVAPCD does not have an adopted significance threshold for construction-related GHG emissions. However, lead agencies should quantify and disclose GHG emissions that would occur during construction, and make a determination on the significance of these construction-generated GHG emission impacts in relation to meeting AB 32 GHG reduction goals.

As shown in Table 6-10, construction of the Project would generate a total of 238 metric tons of CO₂e after implementation of state mandates. This is equivalent to adding 44 single-occupancy vehicles to the road during the construction period (U.S. Environmental Protection Agency 2011). Construction-related emissions associated with the project are therefore less than 0.00006% of the 2009 statewide inventory and 0.000004% of the 2010 national inventory. Accordingly, based on the magnitude of emissions relative to the various inventories, as well as the emissions sources associated with the project, construction of the project is not expected to impede California's ability to implement AB 32 or other GHG reduction programs. However, given the severity of potential impacts associated with global climate change, as well as the lack of an established threshold, Mitigation Measure AQ-9a is required to further reduce construction-related GHG emissions to the maximum extent practical.

Mitigation Measures

Mitigation Measure AQ-9a: Implement GHG Best Management Practices for Construction

The project applicant will require all construction contractors to implement the BMPs to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures.

- Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.
- Recycle at least 50% of construction waste.
- Use at least 10 percent local building materials (from within 100 miles of the project site).

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-10. Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment during operation (Already regulated under AB32)

Project operation would generate direct and indirect GHG emissions. Sources of direct emissions include mobile vehicle trips and natural gas and diesel combustion. Indirect emissions would be

emitted by electricity generation and consumption, as well as through use of air conditioning units. Estimated operational emissions under both existing and project conditions are summarized in Tables 6-11 and 6-12. The difference in operational emissions between the project and the existing facility represents the net new impact of the project. Note that Table 6-11 presents emissions without implementation of state mandates to reduce GHGs (RPS, Pavley, and LCFS), whereas Table 6-12 assumes implementation of these measures.

Table 6-11. Summary of Operational Emissions without State Mandates (Metric Tons per Year)

Source	CO ₂	CH ₄	N ₂ O	SF ₆	R-410A	CO ₂ e
<i>No Project (Existing Conditions) ^a</i>						
Electricity	1,847	0.12	0.03	0.00	-	1,889
Natural Gas	91,194	1.75	1.66	-	-	91,745
Employee Trips	1,808	85.86 ^b	-	-	-	1,893
Haul Trucks ^c	8,953	0.68	0.30	-	-	9,061
Locomotives	11,167	0.88	0.28	-	-	11,274
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
<i>Total Emissions</i>	<i>114,970</i>	<i>89</i>	<i>2</i>	<i>0</i>	<i>6</i>	<i>128,077</i>
<i>Project Conditions (2014) ^d</i>						
Electricity	2,029	0.13	0.03	0.00	-	2,074
Natural Gas	112,169	2.15	2.04	-	-	112,846
Employee Trips	1,680	84.02 ^b	-	-	-	1,764
Haul Trucks	10,536	0.69	0.31	-	-	10,646
Locomotives	11,167	0.88	0.28	-	-	11,274
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
<i>Total Emissions</i>	<i>137,583</i>	<i>88</i>	<i>3</i>	<i>0</i>	<i>6</i>	<i>150,820</i>
<i>Net Annual Emissions ^e</i>						
<i>Project Conditions minus No Project (Existing Conditions)</i>	<i>22,612</i>	<i>-1</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>22,743</i>

Notes

- No emissions are associated with the source.

- a. Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.
- b. Includes emissions from both CH₄ and N₂O (values could not be separated due to calculation methodology. See Section 6.1.2).
- c. Includes both tomato and bag and box trucks.
- d. Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.
- e. Represents the net project impact, or the change in emissions relative to existing conditions.

Table 6-12. Summary of Operational Emissions with State Mandates (Metric Tons per Year) ^a

Source	CO ₂	CH ₄	N ₂ O	SF ₆	R-410A	CO ₂ e
<i>No Project (Existing Conditions) ^b</i>						
Electricity	1,764	0.11	0.02	0.00	-	1,804
Natural Gas	91,194	1.75	1.66	-	-	91,745
Employee Trips	1,695	80.51 ^c	-	-	-	1,776
Haul Trucks ^d	5,954	0.50	0.23	-	-	6,034
Locomotives	11,056	0.88	0.28	-	-	11,162
Back-up Generator	1	0.00	0.00	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
<i>Total Emissions</i>	<i>111,664</i>	<i>84</i>	<i>2</i>	<i>0</i>	<i>6</i>	<i>124,737</i>
<i>Project Conditions (2014) ^e</i>						
Electricity	1,891	0.12	0.03	0.00	-	1,936
Natural Gas	112,169	2.15	2.04	-	-	112,846
Employee Trips	1,471	73.57 ^c	-	-	-	1,545
Haul Trucks ^d	7,280	0.56	0.22	-	-	7,360
Locomotives	11,056	0.88	0.28	-	-	11,162
Back-up Generator	1	0	0	-	-	1
Air Conditioning	-	-	-	-	5.85	12,215
<i>Total Emissions</i>	<i>133,868</i>	<i>77</i>	<i>3</i>	<i>0</i>	<i>6</i>	<i>147,064</i>
<i>Net Annual Emissions ^e</i>						
<i>Project Conditions minus No Project (Existing Conditions)</i>	<i>22,204</i>	<i>-7</i>	<i>0</i>	<i>0</i>	<i>0</i>	<i>22,327</i>

Notes

- No emissions are associated with the source.

- a. State mandates include RPS, LCFS, and Pavley.
- b. Represents emissions associated with the existing facility (2012). Emissions would be effectively replaced through with implementation of the project.
- c. Includes emissions from both CH₄ and N₂O (values could not be separated due to calculation methodology. See Section 6.1.2).
- d. Includes both tomato and bag and box trucks.
- e. Represents emissions associated with the project. Emissions are modeled for the first full operational year of 2014.
- f. Represents the net project impact, or the change in emissions relative to existing conditions.

As shown in Table 6-12, operation of the project would result in a net increase of 22,327 metric tons of CO₂e per year, relative to existing conditions (assuming implementation of state mandates to reduce GHGs). This increase is primarily due to increased electricity and natural gas consumption associated with expanded facility operations. There is also a slight increase in on-road haul truck emissions. Although Table 6-12 accounts for state mandates to reduce GHG emissions, the analysis is based on emission factors for 2014. Emissions rates will continue to decrease in the future due to additional requirements for renewable energy production and fuel efficiency. This analysis thus provides a worst-case scenario annual GHG emissions associated with the project.

As noted in Section 6.2.2, there is currently no adopted GHG reduction plan for Merced County. Accordingly, option 1 from the SJVAPCD GHG guidance—comply with an approved GHG reduction plan—cannot be used to evaluate project significance. An assessment as to whether the project can achieve a score of 29 through the implementation of BPS (option 2) or reduce operational GHG emissions by 29% relative to BAU conditions (option 3) was therefore conducted.

The majority of BPS identified in the SJVAPCD's GHG guidance are designed for mixed-used or residential projects, and therefore do not directly apply to the proposed project (see Appendix B). Based on a review the air district's GHG guidance, Table 6-13 identifies BPS could potentially be implemented by the project to reduce operational GHG emissions. Estimated CO₂e point reductions for each BPS are also provided.

Table 6-13. Potential SJVAPCD BPS Available to Reduce Operational-Related Project Emissions

BPS Name	Description	CO ₂ e point reduction
Energy Star Roof	Install Energy Star labeled roof materials. Energy star qualified roof products reflect more of the sun's rays, decreasing the amount of heat transferred into a building	0.5
Onsite renewable energy system	Project provides onsite renewable energy system(s).	1
Exceed title 24	Project Exceeds title 24 requirements by 20%	1
Non-Roof Surfaces	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's non-roof impervious surfaces	1
Green Roof	Install a vegetated roof that covers at least 50% of roof area. Project should demonstrate detailed graphics depicting the planned roof, detailed information on maintenance requirements for the roof, and the facilities plan for maintaining the roof post construction	0.5
Tree Planting	Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.	n/a
Total		4

Based on Table 6-13, applicable BPS identified in the SJVAPCD's GHG guidance could potentially achieve a GHG reduction score of 4. This would not be sufficient to reduce operational GHG emissions to a less-than-significant level (score of 29). Accordingly, a quantitative analysis (option 3) of emissions reductions must be performed.

Operational emissions associated with the project under BAU conditions equate to 22,743 MT CO₂e per year (see Table 6-11). Implementation of state mandates will reduce operational emissions by 416 metric tons from 22,743 MT CO₂e (see Table 6-12) to 22,327 MT CO₂e, or by approximately 1.83%, relative to BAU conditions. Consistent with the SJVAPCD GHG guidance, the project must therefore reduce operational GHG emissions by an additional 27.17% (6,066 metric tons) to achieve a less than significant CEQA finding. Mitigation Measure AQ-10a outlines additional strategies that

could be incorporated into the project design to achieve these reductions. Accordingly, operation of the project would not contribute to a cumulatively considerable GHG impact with implementation of Mitigation Measure AQ-10a.

Mitigation Measures

Mitigation Measure AQ-10a: Implement GHG Reduction Measures to Reduce Operational-Related GHG Emissions by 6,000 Metric Tons of CO₂e per Year

The project applicant will identify and implement feasible strategies to reduce GHG emissions generated by operation of the proposed project. When taken together, the strategies shall reduce operational-related GHG emissions by 6,066 metric tons CO₂e, or by 27.17%, relative to BAU conditions. The project applicant will determine the nature and form of the strategies in consultation with the SJVPACD. Specific strategies that could be incorporated into the project design are summarized below. Quantitative information on the potential capacity of each strategy is provided when available.

- **Strategy-1: Renewable Energy Purchase Agreement:** Enter into a power purchase agreement with PG&E to purchase electricity from renewable sources. Renewable sources must be zero emissions energy sources (e.g., wind, solar, hydro) and may not be accounted to utility RPS goals. Sufficient renewable resources exist within the state (currently 30,005 gigawatt-hours per year) to offset 100% of net emissions generated by operational electricity (185 MT CO₂e from Table 6-11).
- **Strategy-2: Onsite Renewable Energy:** Develop an onsite renewable energy system (rooftop solar, ground-mounted PV) capable of supplying a portion or all of the required electrical demand for the proposed project (10,060 MWh). In order to offset net electricity emissions generated by the project (185 MT CO₂e from Table 6-11), a 902-MWh system would need to be installed.⁶ Larger systems could potential achieve greater reductions.
- **Strategy-3: Energy Efficiency Upgrades:** Develop and implement an energy efficiency upgrade to improve facility wide energy efficiency by 15%, relative to current energy consumption levels. Measures should target existing boilers and other equipment that utilize natural gas. Other options could include cool or green roofs, as well as solar orientation and shading.
- **Purchase Carbon Offsets:** In partnership with offset providers, purchase carbon offsets. Offset protocols and validation could tier off existing standards (e.g., Climate Registry Programs) or could be developed independently, provided such protocols satisfy basic criteria of additionally (i.e., the reductions would not happen without the financial support of purchased offset credits). ARB is currently in the process of establishing a Cap and Trade registry that will identify qualified providers and Assembly Bill 32 (AB32) projects. It is estimated that between 2012 and 2020, 2.5 billion allowances will be made available within the state (Legislative Analyst's Office 2012). The national and international carbon markets are likely greater. Potential offset programs could include the following.
 - AB32 U.S. Forest and Urban Forest Project Resources
 - AB32 Livestock Projects

⁶ Calculated by dividing the net annual electricity emissions (185 MT CO₂e) by the RPS adjusted emission factor for CO₂e.

- AB32 Ozone Depleting Substances Projects
- AB32 Urban Forest Projects
- Other-California Based Offsets
- United States Based Offsets
- International Offsets (e.g., clean development mechanisms)

This measure is inherently scalable based on the volume of offsets purchased and could potentially offset 100% of the required emissions reduction (227.17% of operational emissions, equating to 6,066 metric tons CO₂e). The project applicant shall coordinate with the SJVAPCD to determine the total carbon offsets that would need to be purchased annually throughout the project lifetime.

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-11. Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. *Less than Significant with Mitigation*

Merced County has not yet adopted a qualified plan, policy, or regulation to reduce GHG emissions. Therefore, the most applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions is AB 32.

The ARB adopted the AB 32 Scoping Plan as a framework for achieving AB 32. The Scoping Plan outlines a series of technologically feasible and cost-effective measures to reduce statewide GHG emissions. Some reductions will need to come in the form of changes pertaining to vehicle emissions and mileage standards. Some will come from changes pertaining to sources of electricity and increased energy efficiency at existing facilities. The remainder will need to come from plans, policies, or regulations that will require new facilities to have lower carbon intensities than they have under business as usual conditions.

As discussed in Chapter 2, *Project Description*, implementation of the project would enhance environmentally positive features on the site. The modifications proposed as part of the project will increase the efficiency of existing equipment and reduce the intensity of water and energy consumption. Accordingly, the project is consistent with strategies identified in the AB 32 Scoping Plan to conserve energy and natural resources. The analysis of long-term operational GHG emissions (see Impact CUM-3) indicates that with implementation of Mitigation Measure CUM-1, the project would reduce GHG emissions by 29%, relative to BAU conditions. This is consistent with AB 32's overall goal to reduce statewide GHG emissions to 1990 levels by year 2020.

Based on the review of project design features and estimated operational GHG emissions, implementation of the project is not expected to conflict with AB 32 with implementation of Mitigation Measures AQ-9a and AQ-10a.

Mitigation Measures

Mitigation Measures AQ-9a and AQ-10a

Level of Significance after Mitigation

Impacts would be less than significant with mitigation.

Impact AQ-12. Expose property and persons to the physical effects of climate change, including but not limited to flooding, public health, wildfire risk, or other impacts resulting from climate change. *Less than Significant*

As discussed in Section 5.4.1.1, several impacts on the environment are expected throughout California as a result of global climate change. The extent of these effects is still being defined as climate modeling tools become more refined. Regardless of the uncertainty in precise predictions, it is widely understood that substantial climate change is expected to occur in the future. As discussed above, potential climate change impacts in California and the San Joaquin Valley include, but are not limited to, extreme heat events, increased energy consumption, increase in infectious diseases and respiratory illnesses, reduced snowpack and water supplies, increased water consumption, and potential increase in wildfires. Sea level rise is not a primary concern for the project area as it is approximately 100 feet above sea level in the California Valley.

While a range of potential climate change impacts may affect the project, including increased temperatures and heat stress days, the project itself would not exacerbate these issues. Rather, improvements in energy efficiency could reduce potential heat-related climate change impacts. Likewise, while regional water supplies are subject to potential future climate change effects that could impact water supplies, the proposed cooling and settling pond expansions facilitate water reuse, which could help alleviate demand for scarce statewide water resources.

As identified above, the project would not increase exposure of property or persons to the potential effects of climate change. The project site is also not anticipated to be impacted by future sea level rise. Consequently, the impact of climate change on the project is considered less than significant.

Mitigation Measures

No mitigation is required.

Level of Significance after Mitigation

Impacts would be less than significant.

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7.2 Personal Communication

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- Siong, Patia. Air Quality Planner. San Joaquin Valley Unified Air Pollution Control District, Modesto, CA. May 23 and September 13, 2011—email with Shannon Hatcher of ICF International regarding construction health risk assessment procedures for diesel exhaust from construction equipment in the San Joaquin Valley Air Basin, PM 10 and PM 2.5 construction thresholds, Dust Control Plan to satisfy Regulation VIII requirements, and use of use a Voluntary Emission Reduction Agreement to mitigate CEQA impacts to less-than-significant.

Siong, Patia. Air Quality Planner. San Joaquin Valley Unified Air Pollution Control District, Modesto, CA. May 7, 2012—email with Laura Yoon the Voluntary Emission Reduction Agreement.

Chapter 8

List of Preparers

Shannon Hatcher	ICF International—Air Quality, Climate Change, and Noise Project Manager Education: B.S., Environmental Science, B.S. Environmental Health and Safety, Oregon State University, 2000.
Laura Yoon	ICF International—Air Quality and Climate Change Specialist Education: M.S., Environmental Management, University of San Francisco, 2013 (expected); B.A., Environmental Studies, minor Resource Management, University of Washington (<i>summa cum laude</i>), 2009

Appendix A

Detailed Modeling Calculations

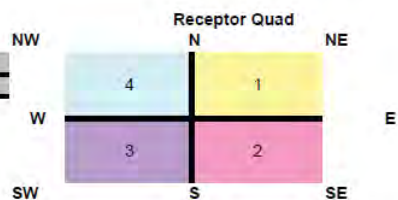
HP	Hrs	Days	Year	LF	Criteria Pollutant EFs (g/hp-hr)						Tons per day (LF*EF*HP*#*Hours*grams per ton)						GHG EFs (g/hp-hr)		MT/Day (No LCFS or Pavle				
					ROG	NO _x	CO	SO ₂	PM10	PM2.5	ROG	NO _x	CO	SO ₂	PM10	PM2.5	CO ₂	CH ₄	CO ₂	CH ₄	N ₂ O		
200	8	18	2013	0.4	0.75	6.4	2.1	0	0.3	0.3	0.0005	0.0045	0.0015	0.0000	0.0002	0.0002	568.3	0.07	0.4	0	0		
350	8	18	2013	0.48	0.56	5	2.1	0	0.2	0.2	0.0033	0.0296	0.0127	0.0000	0.0011	0.0011	568.3	0.05	3.1	0	0		
175	8	12	2013	0.41	0.67	5.1	3.4	0	0.3	0.3	0.0004	0.0032	0.0021	0.0000	0.0002	0.0002	568.3	0.06	0.3	0	0		
300	8	18	2013	0.38	0.45	3.7	1.3	0	0.1	0.1	0.0005	0.0037	0.0013	0.0000	0.0001	0.0001	568.3	0.04	0.5	0	0		
200	8	8	2013	0.4	0.75	6.4	2.1	0	0.3	0.3	0.0005	0.0045	0.0015	0.0000	0.0002	0.0002	568.3	0.07	0.4	0	0		
350	8	14	2013	0.48	0.56	5	2.1	0	0.2	0.2	0.0017	0.0148	0.0063	0.0000	0.0006	0.0006	568.3	0.05	1.5	0	0		
175	8	10	2013	0.41	0.67	5.1	3.4	0	0.3	0.3	0.0004	0.0032	0.0021	0.0000	0.0002	0.0002	568.3	0.06	0.3	0	0		
300	8	14	2013	0.38	0.45	3.7	1.3	0	0.1	0.1	0.0005	0.0037	0.0013	0.0000	0.0001	0.0001	568.3	0.04	0.5	0	0		
225	8	14	2013	0.78	0.43	4.7	1.3	0	0.1	0.1	0.0007	0.0073	0.002	0.0000	0.0002	0.0002	568.3	0.04	0.8	0	0		
58	1	4	2013	0.37	0.76	5	3.9	0	0.4	0.4	0.0000	0.0001	0.0001	0.0000	0.0000	0.0000	568.3	0.07	0	0	0		
150	1	4	2013	0.37	0.55	4.3	3.3	0	0.2	0.2	0.0000	0.0003	0.0002	0.0000	0.0000	0.0000	568.3	0.05	0	0	0		
200	8	15	2013	0.4	0.75	6.4	2.1	0	0.3	0.3	0.0005	0.0045	0.0015	0.0000	0.0002	0.0002	568.3	0.07	0.4	0	0		
350	8	20	2013	0.48	0.56	5	2.1	0	0.2	0.2	0.0017	0.0148	0.0063	0.0000	0.0006	0.0006	568.3	0.05	1.5	0	0		
175	8	25	2013	0.41	0.67	5.1	3.4	0	0.3	0.3	0.0004	0.0032	0.0021	0.0000	0.0002	0.0002	568.3	0.06	0.3	0	0		
300	8	25	2013	0.38	0.45	3.7	1.3	0	0.1	0.1	0.0005	0.0037	0.0013	0.0000	0.0001	0.0001	568.3	0.04	0.5	0	0		
225	8	25	2013	0.78	0.43	4.7	1.3	0	0.1	0.1	0.0007	0.0073	0.002	0.0000	0.0002	0.0002	568.3	0.04	0.8	0	0		
350	8	4	2013	0.48	0.56	5	2.1	0	0.2	0.2	0.0008	0.0074	0.0032	0.0000	0.0003	0.0003	568.3	0.05	0.8	0	0		
175	8	4	2013	0.41	0.67	5.1	3.4	0	0.3	0.3	0.0004	0.0032	0.0021	0.0000	0.0002	0.0002	568.3	0.06	0.3	0	0		
300	8	4	2013	0.38	0.45	3.7	1.3	0	0.1	0.1	0.0005	0.0037	0.0013	0.0000	0.0001	0.0001	568.3	0.04	0.5	0	0		
225	8	4	2013	0.78	0.43	4.7	1.3	0	0.1	0.1	0.0007	0.0073	0.002	0.0000	0.0002	0.0002	568.3	0.04	0.8	0	0		
58	4	15	2013	0.41	0.76	5	3.9	0	0.4	0.4	0.0001	0.0005	0.0004	0.0000	0.0000	0.0000	568.3	0.07	0.1	0	0		
65	8	15	2013	0.42	0.71	4.9	3.7	0	0.4	0.4	0.0002	0.0012	0.0009	0.0000	0.0001	0.0001	568.3	0.06	0.1	0	0		
75	8	3	2013	0.5	0.33	3.4	3.5	0	0.2	0.2	0.0001	0.0011	0.0011	0.0000	0.0001	0.0001	568.3	0.03	0.2	0	0		
58	4	3	2013	0.41	0.76	5	3.9	0	0.4	0.4	0.0001	0.0005	0.0004	0.0000	0.0000	0.0000	568.3	0.07	0.1	0	0		

	Mi	Days	VMT	Year	Criteria Pollutant EFs (g/mi)						Tons per phase (vmt*EF*tons per gram)						GHG EF (g/mi) No Pavley		GHG EF (g/mi) Pavley		MT/Phase (vmt*EF) No Pavley	
					ROG	NO _x	CO	SO ₂	PM10	PM2.5	ROG	NO _x	CO	SO ₂	PM10	PM2.5	CO ₂	Other	CO ₂	Other	CO ₂	C
	33.6	18	6048	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	353.35	16.78	319.26	15.16	2	
	33.6	14	5645	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	353.35	16.78	319.26	15.16	2	
	33.6	4	1075	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	353.35	16.78	319.26	15.16	0	
	33.6	25	8400	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.02	0.00	0.00	0.00	353.35	16.78	319.26	15.16	3	
	33.6	4	1075	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	353.35	16.78	319.26	15.16	0	
	40	4	160	2013	0.66	14.54	3.18	0.02	0.50	0.46	0.00	0.00	0.00	0.00	0.00	0.00	1759.19	16.08	1741.60	15.92	0	
	33.6	15	4032	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	353.35	16.78	319.26	15.16	1	
	33.6	15	4032	2013	0.07	0.22	2.30	0.00	0.00	0.00	0.00	0.00	0.01	0.00	0.00	0.00	353.35	16.78	319.26	15.16	1	
	40	3	80	2013	0.66	14.54	3.18	0.02	0.50	0.46	0.00	0.00	0.00	0.00	0.00	0.00	1759.19	16.08	1741.60	15.92	0	

Appendix A3 Health Risk Screening Inputs

Truck Travel

Date: 10/11/2012
 Facility Name: Liberty Packing Project
 Facility Location:
 Facility ID #:



Calculate Risk

Unit #	Segment Direction NS = North-South	# (50m) Segments	PM10 g/mi	Events/ Year	Receptor Distance (m)	Quad	Load %	Emissions Lb / Yr	Location U=Urban R=Rural	Segment Risk
	ns	1	0.463	13136	25	1	100	4.17E-01	r	1.73E-06
	ns	1	0.463	13136	25	2	100	4.17E-01	r	3.11E-06
	ns	1	0.463	13136	25	3	100	4.17E-01	r	1.19E-06
	ns	1	0.463	13136	25	4	100	4.17E-01	r	1.42E-06

Appendix B
SJVAPCD GHG BPS

Final Staff Report

Appendix J: GHG Emission Reduction Measures - Development Projects

GHG Emission Reduction Measures						
MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
<i>Bicycle/Pedestrian/Transit Measures</i>						
1	Bike parking	C	M	~	0.625	Non-residential projects provide plentiful short-term and long-term bicycle parking facilities to meet peak season maximum demand. Short term facilities are provided at a minimum ratio of one bike rack space per 20 vehicle spaces. Long-term facilities provide a minimum ratio of one long-term bicycle storage space per 20 employee parking spaces.
2	End of trip facilities	C	M	~	0.625	Non-residential projects provide "end-of-trip" facilities including showers, lockers, and changing space. Facilities shall be provided in the following ratio: four clothes lockers and one shower provided for every 80 employee parking spaces. For projects with 160 or more employee parking spaces, separate facilities are required for each gender.
3	Bike parking at multi-unit residential	~	~	R	0.625	Long-term bicycle parking is provided at apartment complexes or condominiums without garages. Project provides one long-term bicycle parking space for each unit without a garage. Long-term facilities shall consist of one of the following: a bicycle locker, a locked room with standard racks and access limited to bicyclists only, or a standard rack in a location that is staffed and/or monitored by video surveillance 24 hours per day.
4	Proximity to bike path/bike lanes	C	M	R	0.625	Entire project is located within 1/2 mile of an existing Class I or Class II bike lane and project design includes a comparable network that connects the project uses to the existing offsite facility. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20% of the projects occupancy permits being granted. Project design includes a designated bicycle route connecting all units, on-site bicycle parking facilities, offsite bicycle facilities, site entrances, and primary building entrances to existing Class I or Class II bike lane(s) within 1/2 mile. Bicycle route connects to all streets contiguous with project site. Bicycle route has minimum conflicts with automobile parking and circulation facilities. All streets internal to the project wider than 75 feet have class II bicycle lanes on both sides.
5	Pedestrian network	C	M	R	1	The project provides a pedestrian access network that internally links all uses and connects to existing external streets and pedestrian facilities. Existing facilities are defined as those facilities that are physically constructed and ready for use prior to the first 20% of the projects occupancy permits being granted.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
5a	Pedestrian Network	C	M	R	0.5	The project provides a pedestrian access network that internally links all uses for connecting to planned external streets and pedestrian facilities (facilities must be included pedestrian master plan or equivalent).
6	Pedestrian barriers minimized	C	M	R	1	Site design and building placement minimize barriers to pedestrian access and interconnectivity. Physical barriers such as walls, berms, landscaping, and slopes between residential and non-residential uses that impede bicycle or pedestrian circulation are eliminated. Barriers to pedestrian access of neighboring facilities and sites are minimized. This measure is not meant to prevent the limited use of barriers to ensure public safety by prohibiting access to hazardous areas, etc...
7	Bus shelter for existing transit service	C	M	R	0.5	Bus or Streetcar service provides headways of one hour or less for stops within 1/4 mile; project provides safe and convenient bicycle/pedestrian access to transit stop(s) and provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting).
8	Bus shelter for planned transit service	C	M	R	0.25	Project provides transit stops with safe and convenient bicycle/pedestrian access. Project provides essential transit stop improvements (i.e., shelters, route information, benches, and lighting) in anticipation of future transit service. If measure 7 is selected, it excludes this measure.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description																																
9	Traffic calming	C	M	R	see table in Measure Description	<p>Project design includes pedestrian/bicycle safety and traffic calming measures in excess of jurisdiction requirements. Roadways are designed to reduce motor vehicle speeds and encourage pedestrian and bicycle trips by featuring traffic calming measures. Traffic calming measures include: bike lanes, center islands, closures (cul-de-sacs), diverters, education, forced turn lanes, roundabouts, speed humps, etc... Percent of Streets with Improvements</p> <table><tr><td></td><td colspan="5">Percent of Streets with Improvements</td></tr><tr><td rowspan="5">Percent of Intersections with Improvements</td><td></td><td>25%</td><td>50%</td><td>75%</td><td>100%</td></tr><tr><td>25%</td><td>0.25</td><td>0.25</td><td>0.5</td><td>0.5</td></tr><tr><td>50%</td><td>0.25</td><td>0.5</td><td>0.5</td><td>0.75</td></tr><tr><td>75%</td><td>0.5</td><td>0.5</td><td>0.75</td><td>0.75</td></tr><tr><td>100%</td><td>0.5</td><td>0.75</td><td>0.75</td><td>1.0</td></tr></table>		Percent of Streets with Improvements					Percent of Intersections with Improvements		25%	50%	75%	100%	25%	0.25	0.25	0.5	0.5	50%	0.25	0.5	0.5	0.75	75%	0.5	0.5	0.75	0.75	100%	0.5	0.75	0.75	1.0
	Percent of Streets with Improvements																																					
Percent of Intersections with Improvements		25%	50%	75%	100%																																	
	25%	0.25	0.25	0.5	0.5																																	
	50%	0.25	0.5	0.5	0.75																																	
	75%	0.5	0.5	0.75	0.75																																	
	100%	0.5	0.75	0.75	1.0																																	

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
<u>Parking Measures</u>						
10	Paid parking	C	M	R	see below	Employee and/or customer paid parking system
10a	Paid Parking - Urban site within 1/4 mile from transit stop	C	M	R	5	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10b	Paid Parking- Urban site greater than 1/4 mile from transit stop	C	M	R	1.50	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10c	Paid Parking- Suburban site within 1/4 mile of transit stop	C	M	R	2	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10d	Paid Parking- Suburban site greater than 1/4 mile from transit stop	C	M	R	1	Employee and/or customer paid parking system. Daily charge for parking must be equal to or greater than the cost of a local transit pass + 20%. Monthly charge for parking must be equal to or greater than the cost of a local monthly transit pass, plus 20%.
10e	Parking cash out	C	M		0.6	Employer provides employees with a choice of forgoing subsidized parking for a cash payment equivalent to the cost of the parking space to the employer.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
11	Minimum parking	C	M	R	3	Provide minimum amount of parking required. Special review of parking required. If zoning codes in the San Joaquin Valley area have provisions that allow a project to build less than the typically mandated amount of parking if the development features design elements that reduce the need for automobile use. This measure recognizes the air quality benefit that results when facilities minimize parking needs, and grants mitigation value to project that implement all available parking reductions. Once land uses are determined, the trip reduction factor associated with this measure can be determined by utilizing the Institute of Transportation Engineers (ITE) Parking generation publication. The reduction in trips can be computed as shown below by the ratio of the difference of minimum parking required by code and ITE peak parking demand to ITE peak parking demand for the land uses multiplied by 50%. The maximum achievable trip reduction is 6%. For projects where retail space occupies 50% or more of the total built space, do not use December specific parking generation rates (from ITE). Percent Trip Reduction = 50*[(min parking required by code - ITE peak parking demand) / (ITE peak parking demand)].
12	Parking reduction beyond code	C	M	R	6	Provide parking reduction less than code. Special review of parking required. Recommend a Shared Parking strategy. Trip reductions associated with parking reductions beyond code shall be computed in the same manner as described under measure 11, as the same methodology applies. The maximum achievable trip reduction is 12%. This measure can be readily implemented through a Shared Parking strategy, wherein parking is utilized jointly among different land uses, buildings, and facilities in an area that experience peak parking needs at different times of day and day of the week. For example, residential uses and/or restaurant/retail uses, which experience peak parking demand during the evening/night and on the weekends, arrange to share parking facilities with office and/or educational uses, which experience peak demand during business hours and during the week.
13	Pedestrian pathway through parking	C	M	R	0.5	Provide a parking lot design that includes clearly marked and shaded pedestrian pathways between transit facilities and building entrances. Pathway must connect to all transit facilities internal or adjacent to project site. Site plan should demonstrate how the pathways are clearly marked, shaded, and are placed between transit facilities and building entrances.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
14	Off street parking	C	M	R	see below	Parking facilities are not adjacent to street frontage
14a	Off street parking	C	M	R	1.5	For 1.5% reduction, parking facilities shall not be sited adjacent to public roads contiguous with project site. Functioning pedestrian entrances to major site uses are located along street frontage. Parking facilities do not restrict pedestrian, bicycle, or transit access from adjoining uses. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a description of where parking is located relative to the buildings on the site, site plans, maps, or other graphics, which demonstrate the placement of parking facilities behind on-site buildings relative to streets contiguous with the project site. Surrounding uses should be high density or mixed-use, there shall be other adjoining pedestrian and bicycle connections, such as wide sidewalks and bike lanes, and surrounding uses shall also implement measure 15.
14b	Off street parking	C	M	R	1	For 1.0% reduction, (parking structures only) proponent must show that parking facilities that face street frontage feature ground floor retail along street frontage. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a written description of the parking facility and the amount of retail space on the ground floor, site plans, maps, or other graphics demonstrating the placement of retail/commercial space along all street fronts contiguous with parking structure.
14c	Off street parking	C	M	R	0.1	For 0.1% reduction, the project is not among high-density or mixed uses, is not connected to pedestrian or bicycle access ways, or is among uses that do not also hide parking. This point value is reflective of the importance that other pedestrian and density measures be in place in order for this measure to be effective.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
Site Design Measures						
15	Office/Mixed-Use proximate to transit	C	M	~	see below	Mitigation value is based on project density and proximity to transit. Planned transit must be in MTP or RT Master Plan. To count as "existing transit" service must be fully operational prior to the first 20% of the projects occupancy permits being granted. Project must provide safe and convenient pedestrian and bicycle access to all transit stops within 1/4 mile. Proponent shall provide information demonstrating compliance with measure requirements including, but not limited to, a written description of how the project complies with the measure, a map or graphic depicting the location of the project in relation to the transit stop. Graphic should demonstrate a 1/4 mile radius, arc, from transit and planned pathways and linkages to the transit stop. Proponent shall also provide graphics depicting the size and layout of the building as well as the calculations demonstrating the FAR (floor to area ratio).
15a	Office/Mixed-Use proximate to Planned Light Rail Transit	C	M	~	0.4	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.5	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.75	2.25 or greater FAR (Floor to Area Ratio)
15b	Office/Mixed-Use proximate to Planned Bus Rapid Transit	C	M	~	0.2	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.25	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.3	2.25 or greater FAR (Floor to Area Ratio)

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
15c	Office/Mixed-Use proximate to Existing Light Rail Transit	C	M	~	0.75	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	1	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	1.5	2.25 or greater FAR (Floor to Area Ratio)
15d	Office/Mixed-Use proximate to Existing Bus Rapid Transit	C	M	~	0.4	0.75-1.5 FAR (Floor to Area Ratio)
		C	M	~	0.5	1.5-2.25 FAR (Floor to Area Ratio)
		C	M	~	0.75	2.25 or greater FAR (Floor to Area Ratio)
16	Orientation toward existing transit, bikeway, or pedestrian corridor	C	M	R	0.5	Project is oriented towards existing transit, bicycle, or pedestrian corridor. Setback distance is minimized. Setback distance between project and adjacent uses is reduced to the minimum allowed under jurisdiction code. Setback distance between different buildings on project site is reduced to the minimum allowed under jurisdiction code. Setbacks between project buildings and sidewalks is reduced to the minimum allowed under jurisdiction code. Buildings are oriented towards street frontage. Primary entrances to buildings are located along public street frontage. Project provides bicycle access to existing bicycle corridor. Project provides access to existing pedestrian corridor. (Cannot get points for both this measure and measure 17)

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
17	Orientation toward planned transit, bikeway, or pedestrian corridor	C	M	~	0.25	Project is oriented towards planned transit, bicycle, or pedestrian corridor. Setback distance is minimized. Planned transit, bicycle or pedestrian corridor must be in the MTP, RT Master Plan, General Plan, or Community Plan. Setback distance between project and existing or planned adjacent uses is minimized or non-existent. Setback distance between different buildings on project site is minimized. Setbacks between project buildings and planned or existing sidewalks are minimized. Buildings are oriented towards existing or planned street frontage. Primary entrances to buildings are located along planned or existing public street frontage. Project provides bicycle access to any planned bicycle corridor(s). Project provides pedestrian access to any planned pedestrian corridor(s).
18	Residential Density With <u>No Transit</u>	~	~	R	see below	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	3-6 Du/acre	~	~	R	0	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	7-10 Du/acre	~	~	R	1	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
-	11-20 Du/acre	~	~	R	3	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	21-30 Du/Acre	~	~	R	5	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	31-40 Du/acre	~	~	R	6	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	41-50 Du/acre	~	~	R	8	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.
-	50+ Du/acre	~	~	R	10	Project provides high-density residential development. Mitigation value is based on project density with no transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
18a	Residential density With Planned Light Rail Transit	~	~	R	see below	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	3-6 Du/acre	~	~	R	0	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	7-10 Du/acre	~	~	R	1.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	11-20 Du/acre	~	~	R	3.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
-	21-30 Du/Acre	~	~	R	5.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	31-40 Du/acre	~	~	R	6.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	41-50 Du/acre	~	~	R	8.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	50+ Du/acre	~	~	R	10.75	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
18b	Residential Density with Planned Bus Rapid Transit	~	~	R	see below	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	3-6 Du/acre	~	~	R	0	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	7-10 Du/acre	~	~	R	1.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	11-20 Du/acre	~	~	R	3.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
-	21-30 Du/Acre	~	~	R	5.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	31-40 Du/acre	~	~	R	6.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	41-50 Du/acre	~	~	R	8.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.
-	50+ Du/acre	~	~	R	10.25	Project provides high-density residential development. Mitigation value is based on project density and proximity to planned bus rapid transit . Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border. Planned transit must be in a MTP or RT Master Plan.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
18c	Residential Density with Existing Light Rail Transit	~	~	R	see below	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	3-6 Du/acre	~	~	R	0	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	7-10 Du/acre	~	~	R	2.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	11-20 Du/acre	~	~	R	4.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	21-30 Du/Acre	~	~	R	6.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
-	31-40 Du/acre	~	~	R	7.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	41-50 Du/acre	~	~	R	9.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	50+ Du/acre	~	~	R	11.5	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing light rail transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
18d	Residential Density with Existing Bus Rapid Transit	~	~	R	see below	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	3-6 Du/acre	~	~	R	0	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	7-10 Du/acre	~	~	R	2	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
-	11-20 Du/acre	~	~	R	4	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	21-30 Du/Acre	~	~	R	6	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	31-40 Du/acre	~	~	R	7	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	41-50 Du/acre	~	~	R	9	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.
-	50+ Du/acre	~	~	R	11	Project provides high-density residential development. Mitigation value is based on project density and proximity to existing bus rapid transit. Density is calculated by determining the number of units per acre ("du/acre") within the residential portion of the project's net lot area. Existing transit facilities must be within 1/4 mile of project border. Project provides safe and convenient bicycle/pedestrian access to all transit stop(s) within 1/4 mile of project border.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
19	Street grid	C	M	R	1	Multiple and direct street routing (grid style). The measure applies to projects with an internal connectivity factor (CF) ≥ 0.80 , and average of 1/4 mile or less between external connections along perimeter of project. [CF=# of intersections / (# of cul-de-sacs + intersections)]
20	Neighborhood Electric Vehicle access	C	M	R	see below	Make physical development consistent with requirements for neighborhood electric vehicles (NEV). Current studies show that for most trips, NEVs do not replace gas,fueled vehicles as the primary vehicle. For the purpose of providing incentives for developers to promote NEV use, assume the percent reductions noted below.
20a	Neighborhood Electric Vehicle access	C	M	R	1.5	For 1.5% reduction, a neighborhood shall have internal NEV connections and connections to other existing NEV networks serving all other types of uses.
20b	Neighborhood Electric Vehicle access	C	M	R	1	For 1.0% reduction, a neighborhood shall have internal and external connections to surrounding neighborhoods.
20c	Neighborhood Electric Vehicle access	C	M	R	0.5	For 0.5% reduction, a neighborhood has internal connections only.
21	Affordable Housing Component	~	~	R	see below	Residential development projects of 5 or more dwelling units provide a deed-restricted low-income housing component on-site (as defined in Ch 22.35 of Sacramento County Ordinance Code) [Developers who pay into In-Lieu Fee Programs are not considered eligible to receive credit for this measure]. Percent reductions shall be calculated according to the following formula: % reduction=% units deed-restricted below the market rate housing *0.04
21a	Affordable Housing Component	~	~	R	0.6	Reductions apply if 15% of units are deed-restricted below the market housing rate.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
21b	Affordable Housing Component	~	~	R	0.8	Reductions apply if 20% of units are deed-restricted below the market housing rate.
21c	Affordable Housing Component	~	~	R	1.2	Reductions apply if 30% of units are deed-restricted below the market housing rate.
21d	Affordable Housing Component	~	~	R	1.6	Reductions apply if 40% of units are deed-restricted below the market housing rate.
21e	Affordable Housing Component	~	~	R	2	Reductions apply if 50% of units are deed-restricted below the market housing rate.
21f	Affordable Housing Component	~	~	R	2.4	Reductions apply if 60% of units are deed-restricted below the market housing rate.
21g	Affordable Housing Component	~	~	R	2.8	Reductions apply if 70% of units are deed-restricted below the market housing rate.
21h	Affordable Housing Component	~	~	R	3.2	Reductions apply if 80% of units are deed-restricted below the market housing rate.

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
21i	Affordable Housing Component	~	~	R	3.6	Reductions apply if 90% of units are deed-restricted below the market housing rate.
21j	Affordable Housing Component	~	~	R	4	Reductions apply if 100% of units are deed-restricted below the market housing rate.
<u>Mixed-Use Measures</u>						
22	Urban Mixed-Use Measure	~	M	~	see below	Development of projects predominantly characterized by properties on which various uses, such as office, commercial, institutional, and residential are combined in a single building or on a single site in an integrated development project with functional inter-relationships and a coherent physical design. Mitigation points for this measure depend on job to housing ratio.
22a	Urban Mixed-Use Measure	~	M	~	3	Reductions apply if the ratio (jobs:houses) is $\geq .5 < 1.0$
22b	Urban Mixed-Use Measure	~	M	~	6.6	Reductions apply if the ratio (jobs:houses) is $\geq 1 < 1.5$
22c	Urban Mixed-Use Measure	~	M	~	9	Reductions apply if the ratio (jobs:houses) is $\geq 1.5 < 2.0$
22d	Urban Mixed-Use Measure	~	M	~	7.29	Reductions apply if the ratio (jobs:houses) is $\geq 2.0 < 2.5$

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO ₂ Equivalent Point Reductions	Measure Description
22e	Urban Mixed-Use Measure	~	M	~	6	Reductions apply if the ratio (jobs:houses) is $\geq 2.5 < 3.0$
22f	Urban Mixed-Use Measure	~	M	~	5	Reductions apply if the ratio (jobs:houses) is $\geq 3.0 < 3.5$
22g	Urban Mixed-Use Measure	~	M	~	4.2	Reductions apply if the ratio (jobs:houses) is $\geq 3.5 \leq 4.0$
23	Suburban mixed-use	C	M	R	3	Have at least three of the following on site and/or offsite within ¼ mile: Residential Development, Retail Development, Park, Open Space, or Office.
24	Other mixed-use	~	M	R	1	All residential units are within ¼ mile of parks, schools or other civic uses.
<u>Building Component Measures</u>						
25	Energy Star roof	C	M	R	0.5	Install Energy Star labeled roof materials. Energy star qualified roof products reflect more of the sun's rays, decreasing the amount of heat transferred into a building.
26	Onsite renewable energy system	C	M	R	1	Project provides onsite renewable energy system(s).
27	Exceed title 24	C	M	R	1	Project Exceeds title 24 requirements by 20%

MEASURE #	Measure Name	Commercial	Mixed-Use	Residential	Estimated CO₂ Equivalent Point Reductions	Measure Description
28	Solar orientation	~	~	R	0.5	Orient 75 or more percent of homes and/or buildings to face either north or south (within 30 degrees of North or South). Building design includes roof overhangs that are sufficient to block the high summer sun, but not the lower winter sun, from penetrating south facing windows. Trees, other landscaping features and other buildings are sited in such a way as to maximize shade in the summer and maximize solar access to walls and windows in the winter.
29	Non-Roof Surfaces	C	M	R	1	Provide shade (within 5 years) and/or use light-colored/high-albedo materials (reflectance of at least 0.3) and/or open grid pavement for at least 30% of the site's non-roof impervious surfaces, including parking lots, walkways, plazas, etc.; OR place a minimum of 50% of parking spaces underground or covered by structured parking; OR use an open-grid pavement system (less than 50% impervious) for a minimum of 50% of the parking lot area. Unshaded parking lot areas, driveways, fire lanes, and other paved areas have a minimum albedo of .3 or greater
30	Green Roof	C	M	R	0.5	Install a vegetated roof that covers at least 50% of roof area. Project should demonstrate detailed graphics depicting the planned roof, detailed information on maintenance requirements for the roof, and the facilities plan for maintaining the roof post construction.
<u>TDM and Misc. Measures</u>						
31	Electric lawnmower	~	~	R	1	Provide a complimentary electric lawnmower to each residential buyer

Additional GHG Emission Reduction Measures Requiring Additional Investigation			
1	Bike Lane Street Design		Incorporate bicycle lanes and routes into street systems, new subdivisions, and large developments.
2	Bike & pedestrian design		Include pedestrian and bicycle-only streets and plazas within developments. Create travel routes that ensure that destinations may be reached conveniently by public transportation, bicycling or walking.
3	School siting		Site schools to increase the potential for students to walk and bike to school.
4	Transit street design		The project will provide for on-site road and off-site bus turnouts, passenger benches, and shelters as demand and service routes warrant subject to review and approval by local transportation planning agencies.
5	Site design measures		Site design to minimize th need for external trips by including services/facilities for day care, banking/ATM, restaurants, vehicle refueling, and shopping.
6	Other mixed-use		All residential units are within 1/4 mile of parks, schools or other civic uses.
7	Mixed-Use		Include mixed-use, infill, and higher density in development projects to support the reduction of vehicle trips, promote alternatives to individual vehicle travel, and promote efficient delivery of services and goods.
8	Open Space		Preserve and create open space and parks. Preserve existing trees, and plant replacement trees at a set ratio.
9	Natural Gas Stove		Project features only natural gas or electric stoves in residences.
10	Solar Design		Incorporate appropriate passive solar design and solar heaters.
11	Vehicle Idling		Limit idling time for commercial vehicles, including delivery and construction vehicles.
12	Ride Sharing Programs		Create car sharing programs. Accommodations for such programs include providing parking spaces for the car share vehicles at convenient locations accessible by public transportation.
13	Shuttle Service		Provide shuttle service to public transit.

14	School Bus Services		Work with the school district to restore or expand school bus services.
15	Shuttle Bus Services		Operation of a shuttle bus to shopping, health care, public services sites and other nearby trip attractors to reduce automobile use.
16	Energy efficient appliances		Install energy efficient heating and cooling systems, appliances and equipment, and control systems.
17	Renewable Energy Use		Install solar, wind, and geothermal power systems and solar hot water heaters. Educate consumers about existing incentives.
18	Solar Panels in Parking areas		Install solar panels on carports and over parking areas.
19	Photovoltaic Roofing Tiles		Install Photovoltaic roofing tiles for solar power.
20	Tree Planting		Protect existing trees and encourage the planting of new trees. Adopt a tree protection and replacement ordinance, e.g., requiring that trees larger than a specified diameter that are removed to accommodate development must be replaced at a set ratio.
21	Local Farmer's Market		Project shall dedicate space in a centralized, accessible location for a weekly farmers' market.
22	Community Gardens		Project shall dedicate space for community gardens.
23	Best management practices		Require best management practices in agriculture and animal operations to reduce emissions, conserve energy and water, and utilize alternative energy sources, including biogas, wind and solar.
24	Land Use Density		The project should provide densities of nine units per acre or greater, where allowed by the General Plan and/or Zone Plan, along bus routes and at bus stops to encourage transit use, where feasible.
25	Zero Emission Infrastructure		Provide the necessary facilities and infrastructure to encourage the use of low or zero-emission vehicles (e.g., electric vehicle charging facilities and conveniently located alternative fueling stations).
26	Low carbon fuel incentive program		Institute a low-carbon fuel vehicle incentive program.

Appendix B
November 2011 Biology Field Survey



November 14, 2011

Ross Oliveira
Morning Star Company
724 Main Street
Woodland, CA 95695

Subject: Preliminary Biological Reconnaissance-Level Survey for Three Morning Star Properties

Dear Mr. Oliveira:

This letter presents the results of reconnaissance-level surveys conducted on November 2, 2011, at three Morning Star properties in Merced County, California. The Morning Star properties comprise three separate sites: agricultural lands currently planted with Sudan grass (herein referred to as the *Sudan grass site*); a fish pond and adjacent seasonal wetland (herein referred to as the *fish pond site*), and a 20-acre site between Morning Star's existing warehouse and South Ingomar Grade Road (herein referred to as the *20-acre site*). The purpose of the reconnaissance-level survey was to determine if any of the sites contain sensitive biological resources that may be subject to state or federal regulations, and if future development on the sites would trigger the need to conduct additional studies or obtain permits. The methods and results of the surveys are described below.

Summary

Based on the current agricultural activities and the lack of suitable habitat conditions, the Sudan grass site does not support special-status plant or wildlife species, sensitive natural communities, or wetlands.

Both the fish pond site and the 20-acre project sites support suitable habitat for special-status plant and wildlife species. These habitat areas include the pond, seasonal wetland, and fresh emergent marsh communities on the fish pond site, and the annual grassland and saltbush scrub communities on the 20-acre site. The seasonal wetland and fresh emergent marsh communities found on the fish pond site are also considered sensitive natural communities by the California Department of Fish and Game (DFG). The fish pond site and the 20-acre site both have the potential to host many breeding bird species. Consultation with DFG would be required if development of the fish pond site and the 20-acre sites would disturb nesting birds. Consultation with DFG would also be required with DFG for the loss of foraging habitat if the 20-acre site is developed.

Several drainages and wetlands occur in the fish pond site and are considered "waters of the U.S.," and, therefore, are protected under the jurisdiction of the U.S. Army Corps of Engineers (USACE). Additionally, a drainage on the 20-acre site may be subject to USACE jurisdiction. Prior to any activities that may impact the on-site drainages or wetlands on the fish pond site or the 20-acre site, a jurisdictional delineation should be conducted by a qualified biologist to determine whether on-site waters are considered jurisdictional and, if so, the exact extent/boundary of agency jurisdiction.

Methods

Prior to visiting the project sites, ICF biologists queried the California Natural Diversity Database¹ (CNDDB), which lists historical and recent occurrences of special-status wildlife and plant species and sensitive natural communities, for occurrences of sensitive biological resources within 3 miles of the project area (Figure 1); and the most recent California Native Plant Society² (CNPS) database, which lists historical and recent occurrences of special-status plant species, for those occurring in the project area. We also examined aerial photographs, topographic maps, and soils surveys³ of the project sites and vicinity.

ICF wildlife biologist Will Kohn and botanist/ecologist John Holson conducted reconnaissance-level field surveys of the three sites on November 2, 2011. The surveys were conducted by driving around the perimeter of the Sudan grass site, walking around the fish pond and adjacent seasonal wetland, and walking through the 20-acre site.

Results

Overview of Site Conditions

Details on vegetation communities and plant species observed are included below. Representative photos of some of the onsite vegetation communities can be found in Figure 2. The cumulative list of wildlife and plant species observed at the project site is in Attachment 1, *Wildlife and Plant Species Observed on the Project Sites*.

Sudan Grass Site

The Sudan grass site is located at Morning Star's existing facility in Merced County, California, just north of the cooling ponds. Morning Star is proposing to utilize the site for the expansion of their cooling ponds. The topography of the site is nearly level, and is approximately 100 feet above mean sea level (msl). At the time of the November 2, 2011, survey, the site was cultivated with Sudan grass (*Sorghum bicolor*). Based on the current agricultural activities and the lack of suitable habitat conditions, this site does not support special-status plant or wildlife species, sensitive natural communities, or wetlands.

¹ California Natural Diversity Database. 2011. RareFind 2, Version 3.0.5 (updated May 2). California Department of Fish and Game: Sacramento, CA.

² California Native Plant Society Online Inventory, 2011. *Inventory of Rare and Endangered Plants* (online edition, v7-11c 10-11-2011). Available: <<http://cnps.web.aplus.net/cgi-bin/inv/inventory.cgi>>. Accessed: 11/01/2011, California Native Plant Society. Sacramento, C A.

³ Web Soil Survey, 2011. U.S. Department of Agriculture Natural Resources Conservation Service. Available: <http://websoilsurvey.nrcs.usda.gov/app/>. Accessed: 11/01/2011

Fish Pond Site

This fish pond and adjacent seasonal wetland is located just north of Morning Star's existing facility, adjacent to South Ingomar Grade Road, and east of the Sudan grass site. Morning Star is proposing to fill in the existing pond for the expansion of their loading docks. The fish pond is an artificial body of water that was created for nearby agricultural purposes. Water enters the pond through a pipe and an outflow pipe carries it from the pond to a drainage ditch. Vegetation along the edge of the pond consisted of the fresh emergent marsh community, composed of tules (*Scirpus acutus* var. *occidentalis*), bulrush (*Scirpus americanus*), common cattails (*Typha latifolia*), and other wetland plants; and a few scattered cottonwood (*Populus fremontii*) and willow (*Salix* spp.) trees.

The seasonal wetland adjacent to the eastern edge of the fish pond contained vegetation characteristic of areas that are subject to seasonal inundation in winter and spring. Dominant vegetation included species such as saltgrass (*Distichlis spicata*), curly dock (*Rumex crispus*), and baltic rush (*Juncus balticus*). The seasonal wetland contains a dry drainage ditch running south to north along the western edge. Several small red willow (*Salix laevigata*) trees occur on the edge of this ditch.

The fresh emergent marsh and seasonal wetland habitat types are considered sensitive natural communities by DFG and have the potential to support several special-status wildlife and plant species, as well as nesting birds protected under the Migratory Bird Treaty Act (MBTA). In addition, the pond and adjacent seasonal marsh are potentially waters of the United States (see *Discussion*, below), and may be under the jurisdiction of the USACE.

20-Acre Site

The 20-acre site is located between Morning Star's warehouse and South Ingomar Grade Road. Morning Star is proposing to develop the site for the expansion of their warehouses. The site consists of annual grassland and saltbush scrub, with alkali scalds occurring within the saltbush scrub. Vegetation in the annual grassland consisted of nonnative grass species such as soft chess brome (*Bromus hordeaceus*), ripgut brome (*Bromus diandrus*), and red brome (*Bromus madritensis* ssp. *rubens*). The saltbush scrub vegetation contained the same grass species within the understory, plus intermittent four-wing saltbush (*Atriplex canescens*) shrubs approximately 3 feet high. One large ditch that runs west to east across the middle of the site was dry at the time of the November 2 survey. Several dry agricultural ditches and canals run along the perimeter of the project site.

Within the alkali scalds, we observed one special-status plant species, lesser saltscale (*Atriplex minuscula*). A CNPS List 1B.1 species, lesser saltscale is considered seriously endangered in California (California Native Plant Society 2011). Habitat for lesser saltscale consists of saltbush scrub, playas, and annual grassland on sandy, alkali soils at elevations ranging from 45 to 300 feet above msl. This species is known from occurrences in Alameda, Butte, Fresno, Kern, Madera, Merced, and Stanislaus Counties and it flowers from May through October. A large population (1,000+ plants) inhabits a large alkali scald in the northern portion of the site.

The annual grassland and saltbush scrub habitat types have the potential to support several special-status wildlife and plant species, as well as nesting birds protected under the MBTA. In this case, a special-status plant species, lesser saltscale, was observed in the saltbush scrub habitat on the site at the

time of the survey. In addition, the large dry ditch running through the site could potentially be waters of the United States, and may be under the jurisdiction of USACE.

Discussion of Special-Status Biological Resources

Waters of the United States

The term *waters of the United States* is an encompassing term used by USACE to describe areas subject to regulation under Section 404 of the federal Clean Water Act (CWA). In general, waters of the United States are most surface waters, including wetlands.

USACE defines *wetlands* as areas that are inundated or saturated by surface water or groundwater at a frequency and duration sufficient to support, and under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions (33 Code of Federal Regulations [CFR] 328.3[b]; 40 CFR 230.3). For an area to qualify as a wetland, it must support a prevalence of hydrophytic vegetation, hydric soils, and wetland hydrology. Wetlands must be delineated in accordance with the 1987 *Corps of Engineers Wetlands Delineation Manual* (1987 Manual). For a wetland to be jurisdictional (i.e., subject to regulation by USACE), it must meet one of the categories of waters of the United States defined by USACE regulations (33 CFR 328.3). For instance, the wetland must be an interstate water; a tributary to another water of the United States or “adjacent” to another water of the United States; or have a demonstrable nexus to interstate or foreign commerce. Regulated wetlands are a type of special aquatic site that receives additional protections under the CWA.

Other waters of the United States typically lack one or more of the three wetland indicators listed above. Other waters of the United States include drainages (all streams, creeks, rivers, sloughs, and other surface features with defined beds and banks), reservoirs, ponds, and bays. As with wetlands, other waters of the United States must be navigable, interstate, tributary, or have a demonstrable link to interstate or foreign commerce in order to be subject to regulation by USACE under Section 404 of the CWA.

A large, unnamed ephemeral drainage occurs in the fish pond site and another unnamed drainage occurs on the 20-acre project sites. Each of these drainages is potentially hydrologically connected to the San Joaquin River by the system of agricultural canals and streams that crisscross the valley. As such, the drainages are jurisdictional waters of the United States subject to regulation by USACE under Section 404 of the CWA. Although the drainages support a narrow fringe of riverine wetlands, they would likely be regulated as other waters of the United States. The jurisdictional width of the drainages appears to range from 10 to 20 feet. Placement of fill into these canals would require a Section 404 permit from USACE.

The fish pond and the seasonal wetland on the fish pond site were found to contain hydrophytic vegetation and indicators of wetland hydrology. Based on these characteristics, the feature would likely meet the definition of a wetland as defined in the 1987 Manual. Because it is located immediately adjacent to a tributary of the San Joaquin River (i.e., the unnamed drainage running south to north through the project site), it would likely be subject to regulation by USACE. A final determination regarding extent and jurisdictional status of this potential wetland feature would require a formal wetland delineation and subsequent field verification by USACE’s Sacramento District. If it is determined

that the feature is a jurisdictional wetlands, the placement of fill into these features would require a Section 404 permit.

The numerous earthen ditches that have been constructed along the perimeter of the project sites appear to have been excavated in uplands for the purpose of conveying irrigation and drainage water. Such features are typically excluded from Section 404 regulation, but USACE has the final authority regarding the jurisdictional status of these ditches. Because some of these ditches are hydrologically connected to the San Joaquin River, USACE could conceivably assert jurisdiction over some of the ditches if they determine that the project site supported wetlands prior to cultivation, or if they suspect that some portion of the site could revert to wetland if cultivation ceased.

Recommendations

We recommend that a qualified biologist conduct a formal jurisdictional wetland delineation prior to any activities that may affect the onsite drainages or wetlands. Such a delineation would determine whether these waterways are jurisdictional and, if so, map the exact extent/boundary of USACE jurisdiction. A subsequent wetland delineation report should then be prepared from this information, after which the delineation would be submitted to and verified by USACE. If development would affect the drainages and wetlands onsite, then we recommend pre-permit consultation with the regulating agencies to identify potential permitting issues and acceptable mitigation.

Special-status Plants and Sensitive Natural Communities

Searches of the CNDDB⁴ and CNPS⁵ database identified 22 special-status plant species with the potential to occur in the region surrounding the project area. We reviewed the existing information on species distributions and habitat requirements to determine the potential for each of the species to occur at the project site. Of those 22 species, 19 have the potential to occur in the fresh emergent marsh, seasonal wetland, annual grassland, and saltbush scrub habitats observed onsite. These species are shown in Table 1.

⁴ California Natural Diversity Database 2011.

⁵ California Native Plant Society 2011.

Table 1. Special-Status Plants Species with Potential to Occur on the Project Sites

Common Name	Scientific Name	Blooming Period
Alkali milk vetch	<i>Astragalus tener</i> var. <i>tener</i>	March–June
Heartscale	<i>Atriplex cordulata</i>	April–October
Lost Hills crownscale	<i>Atriplex coronata</i> var. <i>vallicola</i>	April–August
Brittlescale	<i>Atriplex depressa</i>	April–October
San Joaquin spearscale	<i>Atriplex joaquiniana</i>	April–October
Lesser saltscale	<i>Atriplex minuscula</i>	May–October
Vernal pool saltscale	<i>Atriplex persistens</i>	June–October
Round-leaved filaree	<i>California macrophylla</i>	March–May
Lemmon’s jewelflower	<i>Caulanthus coulteri</i> var. <i>lemmonii</i>	March–May
Hispid bird’s-beak	<i>Chloropyron molle</i> ssp. <i>hispidum</i>	June–September
Recurved larkspur	<i>Delphinium recurvatum</i>	March–June
Delta button-celery	<i>Eryngium racemosum</i>	June–October
Coulter’s goldfields	<i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	February–June
Little mouseltail	<i>Myosurus minimus</i> ssp. <i>apus</i>	March–June
Shining navaretia	<i>Navarretia nigelliformis</i> ssp. <i>radians</i>	April–July
Prostrate navarretia	<i>Navarretia prostrata</i>	April–July
Sanford’s arrowhead	<i>Sagittaria sanfordii</i>	May–October
Slender-leaved pondweed	<i>Stuckenia filiformis</i>	May–July
Wright’s trichocoronis	<i>Trichocoronis wrightii</i> var. <i>wrightii</i>	May–September

Searches of the CNDDDB (2011) identified two sensitive natural communities known to occur in the region surrounding the project area (Figure 1); cismontane alkali marsh and valley sink scrub. Of these, none were observed on the project site. Fresh emergent marsh and seasonal wetlands were not one of the sensitive natural communities identified in the database as occurring nearby, but they were observed on the site and are considered sensitive natural communities by the DFG.

Although we did not conduct formal surveys for special-status plants, the reconnaissance-level surveys revealed one special-status plant species in the 20-acre site: Lesser saltscale (Figure 2, Photo 4). Attachment 1 provides a complete list of plant species observed during the surveys.

Recommendations

Focused surveys should be conducted (at the appropriate time of year) for the special-status plant species likely or known to be present on the site. It is recommended that two rounds of surveys be conducted by a qualified botanist to identify plants blooming at different times of the year; one survey should occur in the spring (April–May), and the other in the fall (September–October).

Lesser saltscale, a CNPS list 1B.1 species found onsite, is considered seriously endangered in California and impacts on this species may be considered a potential significant impact under the California Environmental Quality Act (CEQA). Buffers should be established with orange construction fencing around lesser saltscale

areas to avoid potential construction impacts on areas containing this species. A qualified biologist should approve placement of fencing, and periodically monitor construction activities to assure that no impacts occur during or after grading operations.

If development would affect the lesser saltscare plants onsite, then preconstruction consultation with the DFG is recommended to identify potential issues and acceptable mitigation. Finding a suitable mitigation area, however, may prove difficult due to the specific habitat in which this species occurs. The majority of habitat for this species (alkali scalds in saltbush scrub) has been eliminated from the Central Valley and this occurrence is most likely a remnant population. If a suitable mitigation area is located, a minimum 1:1 mitigation ratio should be utilized to offset impacts on lesser saltscare plants, although it should be noted that DFG may want a higher mitigation ratio.

Where fresh emergent marsh and seasonal wetland, sensitive natural communities, will be affected as part of project implementation, mitigation for affected acreage would likely be implemented at a 1:1 ratio. Acceptable mitigation would replace or enhance the existing fresh emergent marsh and seasonal wetland vegetation. This may be a part of any mitigation resulting from impacts on jurisdictional resources.

Special-Status Wildlife

Based on a review of the CNDDDB⁶, species distribution and habitat requirements data, and field observations, 11 special-status wildlife species were identified as occurring or having the potential to occur in the vicinity of the 3 project sites (Table 2).

Table 2. Special-Status Wildlife Species with Potential to Occur on the Project Site

Common Name	Scientific Name	Status Federal/State
Invertebrates		
Longhorn fairy shrimp	<i>Branchinecta longiantenna</i>	Endangered/-
Vernal pool fairy shrimp	<i>Branchinecta lynchi</i>	Threatened/-
Vernal pool tadpole shrimp	<i>Lepidurus packardii</i>	Threatened/-
Reptiles		
Western pond turtle	<i>Actinemys marmorata</i>	-/Species of special concern
Giant garter snake	<i>Thamnophis gigas</i>	Threatened/Threatened
Birds		
Swainson's hawk	<i>Buteo swainsoni</i>	-/Threatened
Northern harrier	<i>Circus cyaneus</i>	-/Species of special concern
Burrowing owl	<i>Athene cunicularia</i>	-/Species of special concern
Tricolored black bird	<i>Agelaius tricolor</i>	-/Species of special concern
Yellow-headed blackbird	<i>Xanthocephalus xanthocephalus</i>	-/Species of special concern
Mammals		
San Joaquin kit fox	<i>Vulpes macrotis mutica</i>	Endangered/Threatened

⁶ California Natural Diversity Database 2011.

Sudan Grass Site

Based on the current agricultural activities and the lack of suitable habitat conditions, this site does not support any of the special-status plant or wildlife species mentioned above or habitat for these species, any sensitive natural communities, or any wetlands.

Fish Pond Site

No vernal pools were identified on or adjacent to the site. Therefore, there is no suitable habitat present for longhorn fairy shrimp, vernal pool fairy shrimp, or vernal pool tadpole shrimp, and these species would not occur on the site.

The CNDDDB lists one giant garter snake occurrence approximately 2.25 miles northeast of the project site. The agricultural canals on the project sites do not provide suitable aquatic habitat for giant garter snake because of lack of vegetation. The fish pond does provide suitable aquatic habitat. However, adjacent uplands do not provide suitable habitat because of the lack of burrows suitable for hibernation. Therefore, giant garter snakes are unlikely to occur on the site. The fish pond does provide suitable habitat for western pond turtles, though none were observed during the reconnaissance survey.

The project site does not support large trees that would provide potential nesting sites for Swainson's hawk or other raptor species. However, a few large trees are present in the vicinity of residences near the project site. A total of five historical Swainson's hawk nest sites are known within a 3-mile radius of the project site.⁷ The closest nest site is located approximately 1 mile south of the 20-acre site. At the time of the reconnaissance field survey, Swainson's hawks would have migrated south to their wintering grounds in Mexico or South America. Therefore Swainson's hawk would not have been expected to be observed at the time of the survey, and none were observed. The fish pond site does not provide suitable foraging habitat. The fish pond site and the 20-acre site do not provide suitable nesting habitat for northern harrier. The seasonal wetland adjacent to the fish pond does provide suitable nesting habitat for northern harrier.

The fish pond site does not provide suitable habitat for burrowing owl because of the lack of suitable burrows. The fish pond contains large clusters of tules and cattails which provide suitable nesting habitat for tricolored blackbird, yellow-headed blackbird, and other non-special-status birds.

The fish pond site does not provide suitable habitat for San Joaquin kit fox.

20-Acre Site

No vernal pools were identified on or adjacent to the site. Therefore, there is no suitable habitat present for longhorn fairy shrimp, vernal pool fairy shrimp, or vernal pool tadpole shrimp, and these species would not occur on the site.

⁷ California Natural Diversity Database 2011.

The drainage located on the site does not provide suitable aquatic habitat for giant garter snake because the drainage was dry at the time of the survey and appears to be dry during the summer months. Additionally, adjacent uplands do not provide suitable habitat because of the lack of burrows suitable for hibernation. Therefore, giant garter snakes would not occur on the site. Western pond turtles would also not occur on the site due to the lack of aquatic habitat.

The project site does not support large trees that would provide potential nesting sites for Swainson's hawk or other raptor species. However, a few large trees are present in the vicinity of residences near the project site. Numerous small mammal burrows were observed throughout the 20-acre site, making site suitable foraging habitat.

The 20-acre site does provide suitable habitat, although no burrowing owls or suitable burrowing owl burrows were observed there. One burrowing owl pellet (Figure 2, Photo 5) was observed on the site during the field survey. This indicates that burrowing owls move through this site, but because of the lack of suitable burrows, would not nest within the site.

Tricolored and yellow-headed blackbirds would not occur on the site because of the lack of suitable wetland vegetation.

The 20-acre site does provide suitable habitat, though no suitable kit fox burrows were observed. One scat (Figure 2, Photo 6) of appropriate size for kit fox was observed on the site during the field survey. This scat could also be from non-special-status red fox (*Vulpes vulpes*) which are known to occur in the area. The two foxes are similar in size and it is difficult to distinguish their scat in the field. The presence of scat indicates that some type of fox has moved through this site, but because of the lack of suitable burrows and the small size of the site, neither species would reside on the site.

Recommendations

Sudan Grass Site

There would be no impacts to special-status wildlife species with the development of the site.

Fish Pond Site

To avoid and minimize impacts on western pond turtles, a qualified wildlife biologist should conduct a survey immediately after the pond is drained to determine if western pond turtles are present. If pond turtles are present, the biologist would collect the turtles and relocate them to a suitable location determined through coordination with the California Department of Fish and Game.

To avoid and minimize impacts on common and special-status bird species, drainage and development of the pond should not occur during the nesting season (March 15-August 1).

20-Acre Site

To avoid and minimize impacts to nesting bird species on the 20-acre site, a qualified biologist should conduct a pre-construction nesting bird survey no later than three days prior to the commencement of ground disturbing activities on the site if activities are to occur during the nesting bird breeding season (February 15-August 31). Where an active bird nest is located, DFG requires that a buffer be established

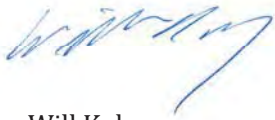
Mr. Ross Oliveira
November 14, 2011
Page 10 of 10

around an active nest until the nest is deemed inactive and there is no evidence of a second attempt of using the nest, as determined by a qualified biologist. The buffer would be determined through consultation with DFG.

Consultation with the DFG will be required to mitigate for removal of foraging habitat for the state-listed Swainson's hawk. DFG requires mitigation for the removal of suitable foraging habitat at a ratio determined by the distance of the nearest active nest. Coordination with DFG will be necessary to determine a suitable location to mitigate for the loss of foraging habitat.

If you have any questions regarding the results of our reconnaissance survey of the three sites, please contact us at (916) 737-3000.

Sincerely,



Will Kohn
Wildlife Biologist



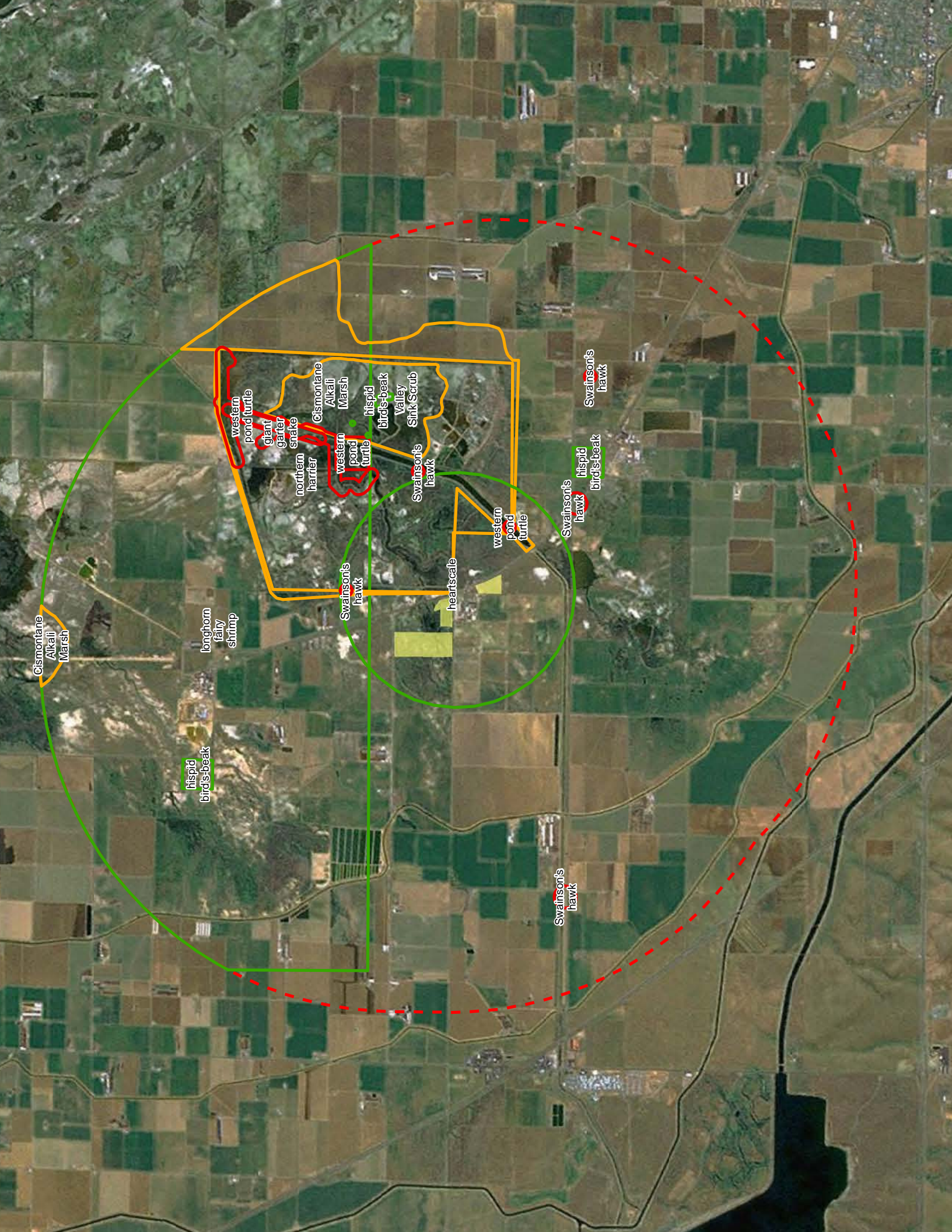
John Holson
Botanist

Attachments

Figure 1. CNDDDB Records within 3 Miles of Project Sites

Figure 2. Representative Site Photos

Attachment 1. Wildlife and Plant Species Observed on the Project Sites



Cismontane
Alkali
Marsh

hispid
bird's-beak

longhorn
fairy
shrimp

western
pond turtle

giant
garter
snake

northern
harrier

Cismontane
Alkali
Marsh

Swainson's
hawk

western
pond
turtle

hispid
bird's-beak

Valley
Sink Scrub

heart scale

Swainson's
hawk

Swainson's
hawk

hispid
bird's-beak

Swainson's
hawk

western
pond
turtle



Photo 1: Agriculture on the Sudan Grass Site.



Photo 2: Fresh emergent marsh habitat and pond on the Fish Pond Site.

Figure 2
Representative Site Photos



Photo 3: Saltbush scrub habitat on the 20-Acre Site.



Photo 4: Lesser saltscall on the 20-Acre Site.



Photo 5: Burrowing owl pellet on the 20-Acre Site.



Photo 6: Fox scat on the 20-Acre Site.

Figure 2
Representative Site Photos

Attachment 1

Wildlife and Plant Species Observed on the Project Sites

Attachment 1. Wildlife and Plant Species Observed on the Project Sites

Scientific Name	Common Name
Wildlife Species Observed	
Birds	
<i>Anas platyrhynchos</i>	Mallard duck
<i>Anthus rubescens</i>	American pipet
<i>Ardea alba</i>	Great egret
<i>Bubulcus ibis</i>	Cattle egret
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Butorides virescens</i>	Green heron
<i>Charadrius vociferous</i>	Killdeer
<i>Cistothorus palustris</i>	Marsh wren
<i>Euphagus cyanocephalus</i>	Brewer's blackbird
<i>Fulica americana</i>	American coot
<i>Gallinula chloropus</i>	Common moorhen
<i>Himantopus mexicanus</i>	Black-necked stilt
<i>Nycticorax nycticorax</i>	Black-crown night heron
<i>Passerculus sandwichensis</i>	Savannah sparrow
<i>Podilymbus podiceps</i>	Pied-billed grebe
<i>Quiscalus mexicanus</i>	Great-tailed grackle
<i>Streptopelia decaocto</i>	Eurasian collared dove
<i>Sturnella neglecta</i>	Western meadowlark
<i>Zenaida macroura</i>	Mourning dove
<i>Zonotrichia atricapilla</i>	White-crowned sparrow
<i>Zonotrichia leucophrys</i>	Gold-crowned sparrow
Mammals	
<i>Sylvilagus audubonii</i>	Cottontail Rabbit
<i>Thomomys bottae</i>	Botta's Pocket Gopher
Plant Species Observed	
<i>Asclepias fasciculatus</i>	Narrow-leaved milkweed
<i>Atriplex canescens</i>	Fourwing saltbush
<i>Atriplex minuscula</i>	Lesser saltscale
<i>Atriplex triangularis</i>	Spearscale
<i>Amsinckia menziesii</i> var. <i>intermedia</i>	Fiddleneck
<i>Avena barbata</i>	Wild oat
<i>Baccharis pilularis</i>	Coyote brush
<i>Baccharis salicifolia</i>	Mulefat
<i>Brassica nigra</i>	Black mustard
<i>Bromus diandrus</i>	Ripgut brome
<i>Bromus hordeaceus</i>	Soft chess brome
<i>Centaurea solstitialis</i>	Yellow star-thistle
<i>Cirsium vulgare</i>	Bull thistle
<i>Chenopodium album</i>	Lamb's-quarters
<i>Conium maculatum</i>	Poison hemlock

Attachment 1. Continued

Scientific Name	Common Name
<i>Convolvulus arvensis</i>	Field bindweed
<i>Conyza canadensis</i>	Horseweed
<i>Cressa truxillensis</i>	Alkali weed
<i>Cynodon dactylon</i>	Bermuda grass
<i>Cyperus eragrostis</i>	Umbrella-sedge
<i>Distichlis spicata</i>	Saltgrass
<i>Eremocarpus setigerus</i>	Turkey-mullein, dove weed
<i>Erodium botrys</i>	Filaree
<i>Erodium cicutarium</i>	Filaree
<i>Frankenia salina</i>	Akali seaheath
<i>Grindelia hirsutula</i>	Hairy gumweed
<i>Heliotropium curassavicum</i>	Common heliotrope
<i>Hemizonia parryi</i> ssp. <i>rudis</i>	Common spikeweed
<i>Hirschfeldia incana</i>	Mediterranean mustard
<i>Hordeum marinum</i> ssp. <i>gussoneanum</i>	Mediterranean barley
<i>Hordeum murinum</i> ssp. <i>leporinum</i>	Hare barley
<i>Hypochaeris glabra</i>	Smooth cat's-ear
<i>Isocoma acradenia</i> var. <i>bracteosa</i>	Alkali goldenbush
<i>Juncus balticus</i>	Baltic rush
<i>Lactuca serriola</i>	Prickly lettuce
<i>Lepidium latifolium</i>	Perennial pepperweed
<i>Lolium multiflorum</i>	Italian ryegrass
<i>Lotus corniculatus</i>	Bird's-foot trefoil
<i>Malva</i> sp.	Mallow
<i>Marrubium vulgare</i>	Horehound
<i>Medicago polymorpha</i>	Bur clover
<i>Picris echioides</i>	Bristly ox-tongue
<i>Populus fremontii</i>	Fremont's cottonwood
<i>Rumex crispus</i>	Curly dock
<i>Rumex pulcher</i>	Fiddle dock
<i>Salicornia subterminalis</i>	Parish's pickleweed
<i>Salix laevigata</i>	Red willow
<i>Salsola tragus</i>	Russian thistle
<i>Scirpus acutus</i> var. <i>occidentalis</i>	Common tule
<i>Scirpus americanus</i>	Bulrush
<i>Sonchus oleraceus</i>	Common sow thistle
<i>Suaeda moquini</i>	Mojave seablite
<i>Taeniatherum caput-medusae</i>	Medusahead
<i>Typha latifolia</i>	Broad-leaved cattail
<i>Xanthium spinosum</i>	Spiny cocklebur

APPENDIX B

Addendum #1 to the 2014 Initial Study/ Mitigated Negative Declaration

Addendum to the Initial Study/
Mitigated Negative Declaration for
the Liberty Packing Expansion
Project, Merced County, California
(SCH #2014011039; CUP02-001)

JANUARY 2024

PREPARED FOR
Merced County
Community and Economic Development Department

PREPARED BY
SWCA Environmental Consultants

**ADDENDUM TO THE
INITIAL STUDY/MITIGATED NEGATIVE DECLARATION
FOR THE
LIBERTY PACKING EXPANSION PROJECT,
MERCED COUNTY, CALIFORNIA
(SCH #2014011039; CUP02-001)**

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January 2024

CONTENTS

1	Introduction and Summary of Conclusions	1-1
1.1	Introduction	1-1
1.2	Purpose of Addendum	1-1
1.3	Summary of Conclusions	1-2
2	Project Modifications	2-1
2.1	Project Location	2-1
2.2	Summary of Original Approved Project Description	2-1
2.3	Revised Project.....	2-5
2.4	Modifications to Mitigation Measures	2-8
3	Environmental Impacts Analysis	3-1
3.1	Aesthetics	3-1
3.2	Agriculture and Forest Resources	3-2
3.3	Air Quality.....	3-3
3.4	Biological Resources	3-7
3.5	Cultural Resources	3-9
3.6	Energy	3-11
3.7	Geology and Soils	3-12
3.8	Greenhouse Gas Emissions	3-14
3.9	Hazards and Hazardous Materials.....	3-15
3.10	Hydrology and Water Quality	3-16
3.11	Land Use and Planning.....	3-18
3.12	Mineral Resources	3-18
3.13	Noise.....	3-19
3.14	Population and Housing	3-19
3.15	Public Services	3-20
3.16	Recreation.....	3-21
3.17	Transportation	3-21
3.18	Tribal Cultural Resources.....	3-22
3.19	Utilities and Service Systems	3-23
3.20	Wildfire	3-23
4	Conclusion	4-1
5	References	5-1

Appendices

Appendix A. 2014 Initial Study/Mitigated Negative Declaration	
Appendix B. Mitigation Monitoring and Reporting Program	
Appendix C. CalEEMod Results	
Appendix D. IPaC, CNDDDB, and CNPS Species Lists	
Appendix E. Encroachment Permit	

Figures

Figure 1. Project Vicinity Map.	2-3
Figure 2. Project Location Map.	2-4
Figure 3. Revised Project Site Plan.....	2-6

Tables

Table 1. Proposed Additional Wash Water Application Area	2-1
Table 2. Summary of Revised Project Components and Construction Schedule	2-7
Table 3. Annual Construction Emissions for the Revised Project	3-4
Table 4. Annual Operational Emissions for the Revised Project.....	3-4
Table 5. Annual Energy Demand for the Revised Project	3-11
Table 6. Annual Construction GHG Emissions for the Revised Project	3-14

1 INTRODUCTION AND SUMMARY OF CONCLUSIONS

1.1 INTRODUCTION

In March 2014, the County of Merced (County), as the lead agency under the California Environmental Quality Act (CEQA), adopted an Initial Study/Mitigated Negative Declaration (IS/MND) for the Liberty Packing Expansion Project (2014 IS/MND) (ICF International 2014; State Clearinghouse #2014011039; Appendix A) and approved a Major Modification (MM13-017) to Conditional Use Permit (CUP) (CUP02-001) to allow for the expansion of the Liberty Packing Company tomato processing facility located at 12045 South Ingomar Grade Road (Approved Project). The Approved Project included improvements to the existing Liberty Packing Company tomato processing facility, which, at the time of approval, encompassed approximately 290 acres of an 841-acre parcel, approximately 7 miles northwest of the city of Los Banos. The Approved Project included expansion of the existing 60-acre cooling pond, expansion of the existing 1.25-acre settling pond, expansion of the product filling and packaging building, construction of five small utility sheds and a large pole shed, installation of new production equipment, increase in truck and trailer space, expansion of product storage space, installation of an additional railroad spur with associated loading docks, and septic system improvements.

Liberty Packing Company, LLC (Applicant) is currently requesting a CUP (CUP22-014) to allow for improvements to the existing tomato processing facility to improve working conditions for employees, provide additional protected areas for equipment and material storage, improve overall operations of the facility, and increase the land application area that receives wash water for agricultural irrigation reuse purposes. This addendum to the 2014 IS/MND (IS/MND Addendum) has been prepared to address the additional proposed improvements to the tomato processing facility (Revised Project).

1.2 PURPOSE OF ADDENDUM

The purpose of this review is to evaluate potential environmental impacts associated with proposed changes to the Approved Project. Pursuant to Section 15162 of the State CEQA Guidelines, when a lead agency has adopted an IS/MND for a project, a subsequent IS/MND does not need to be prepared for the project unless the lead agency determines that one or more of the following conditions are met:

1. Substantial project changes are proposed that will require major revisions of the previous IS/MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;
2. Substantial changes would occur with respect to the circumstances under which the project is undertaken that require major revisions to the previous IS/MND due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or
3. New information of substantial importance that was not known and could not have been known with the exercise of reasonable diligence at the time the previous IS/MND was adopted shows any of the following:
 - a. The project will have one or more significant effects not discussed in the previous IS/MND;
 - b. Significant effects previously examined will be substantially more severe than identified in the previous IS/MND;

- c. Mitigation measures or alternatives previously found not to be feasible would in fact be feasible, and would substantially reduce one or more significant effects of the project, but the project proponent declines to adopt the mitigation measures or alternatives; or
- d. Mitigation measures or alternatives that are considerably different from those analyzed in the previous IS/MND would substantially reduce one or more significant effects on the environment, but the project proponent declines to adopt the mitigation measures or alternatives.

Pursuant to Section 15164 of the State CEQA Guidelines, preparation of an Addendum to an IS/MND is appropriate when none of the conditions specified in Section 15162 (above) are present and some minor technical changes to the previously adopted IS/MND are necessary.

1.3 SUMMARY OF CONCLUSIONS

This IS/MND Addendum to the 2014 IS/MND demonstrates that the environmental analysis, impacts, and mitigation requirements identified in the 2014 IS/MND remain substantively unchanged by the project modifications described herein. The analysis provided within this IS/MND Addendum supports the finding that the project does not raise any new issues and does not exceed the levels of impact significance identified in the 2014 IS/MND. Accordingly, preparation of a subsequent IS/MND is not necessary pursuant to State CEQA Guidelines Sections 15162 and 15164. This determination is based on substantial evidence, as set forth in the following discussion of the Revised Project and the environmental impacts associated with the Revised Project.

This IS/MND Addendum is not required to be circulated for public review per State CEQA Guidelines Section 15164(c); however, the IS/MND Addendum is required to be considered by the decision-making body along with the previously certified 2014 IS/MND prior to making a decision on the Revised Project (State CEQA Guidelines Section 15164(d)).

2 PROJECT MODIFICATIONS

2.1 PROJECT LOCATION

The project site is located approximately 7 miles northwest of the city of Los Banos in Merced County, California (Figure 1). The project site consists of an existing 290-acre tomato processing facility (herein referred to as the Liberty tomato processing facility) on an 841-acre parcel (Assessor's Parcel Number [APN] 070-112-038) located at 12045 South Ingomar Grade Road, and an additional 662 acres of surrounding agricultural land (Figure 2). The surrounding agricultural land would be used for the proposed additional wash water application area and consists of 12 parcels (Table 1).

Table 1. Proposed Additional Wash Water Application Area

Assessor's Parcel Number(s)	Acreage	Owner
APN: 070- 080-029-000 APN: 070-080-016-000	162 acres	Liberty Packing Company, LLC
APN: 070-080-051-000 APN: 070-080- 052-00	150 acres	John Silveira
APN: 070-080-062-000 APN: 070-080- 050-000 APN: 070-080-063-000	150 acres	Dennis Nunes
APN: 070-080-069-000	50 acres	Rick Howard
APN: 070-080-043-000 APN: 070-080-044-000 APN: 070-080-047-000 APN: 070-080-048-000	150 acres	Gary Brazil

The project site is surrounded by agricultural land uses in all directions. The Volta State Wildlife Area is located to the northeast of the project site on the eastern side of Ingomar Grade Road.

The existing area of the Liberty tomato processing facility is approximately 290 acres in area, including a 30-acre tomato processing plant (approximately 240,000 square feet of buildings, equipment, and parking lots), extensive outside storage areas and warehouses, and wash water treatment facilities. The Liberty tomato processing facility also supports a 60-acre cooling pond, which holds water from the packing plant's evaporation equipment, and a 1.25-acre settling pond, which holds wash water and allows any solids to settle out before it is recycled for use within the plant's operations. The proposed wash water land application area consists of 662 acres of agricultural land located to the north of the tomato processing plant to the east and west of Ingomar Grade Road.

2.2 SUMMARY OF ORIGINAL APPROVED PROJECT DESCRIPTION

The Approved Project included a request for a Major Modification (MM13-0017) to CUP02-001 to allow improvements to the existing tomato processing facility located at 12045 South Ingomar Grade Road approximately 7 miles northwest of Los Banos. The following includes a summary of the Approved Project components and their current status, which are described in further detail in Appendix A:

- **Expansion of the cooling pond.** The Approved Project included the expansion of the existing 60-acre cooling pond to 140 acres in size. The expanded cooling pond encompasses the western

portion of the project site. As of the date of this IS/MND Addendum, expansion of the cooling pond has not been completed.

- **Expansion of the settling pond.** The Approved Project included the expansion of the existing 1.25-acre settling pond to 2.5 acres in size. The settling pond is located in the central-northern portion of the project site. As of the date of this IS/MND Addendum, expansion of the settling pond has not been completed.
- **Expansion of the product filling and packaging building.** The Approved Project included the expansion of the existing product filling and packaging building approximately 75,000 square feet to the west and 1,500 square feet to the south. The product filling and packaging building is located in the central-southern portion of the tomato processing facility. Expansion of the product filling and packaging building has been completed.
- **Construction of five small utility sheds.** The Approved Project included the construction of five small utility sheds of less than 1,000 square feet in size at various locations throughout the tomato expansion facility. Construction of the utility sheds has been completed.
- **Construction of a pole shed.** The Approved Project included the construction of a 65,000-square-foot pole shed to the southeast of the tomato processing facility. The pole shed is intended to provide shelter from sun, heat, and rain for greater worker safety and efficiency. As of the date of this IS/MND Addendum, expansion of the pole shed has not been completed.
- **Installation of new production equipment.** The Approved Project included the installation of new processing equipment that increased the plant's processing capacity by 23%. Installation of this equipment has been completed.
- **Increase in truck and trailer space.** The Approved Project included a 4.7-acre increase in truck and trailer storage space, which would occur on low-quality farmland located to the northwest of the existing tomato processing facility. Construction of the additional truck and trailer space has been completed.
- **Expansion of product storage space.** The Approved Project expanded the existing 43-acre open product storage space to 55 acres. The open product storage space is located in the southern portion of the project site. Expansion of the product storage space has been completed.
- **Railroad spur and loading docks.** The Approved Project included the installation of an additional railroad spur with associated loading docks along the eastern edge of the existing open storage area. As of the date of this IS/MND Addendum, installation of this railroad spur has not been completed.
- **Septic system improvements.** The Approved Project included improvements to the existing septic systems to satisfy the Merced County Environmental Health Division's requirements. The Approved Project included a future mounded septic leach mound system replacement area, that would be located north of the existing tomato processing facility. Improvements to the septic system are currently in progress.



Figure 1. Project Vicinity Map.

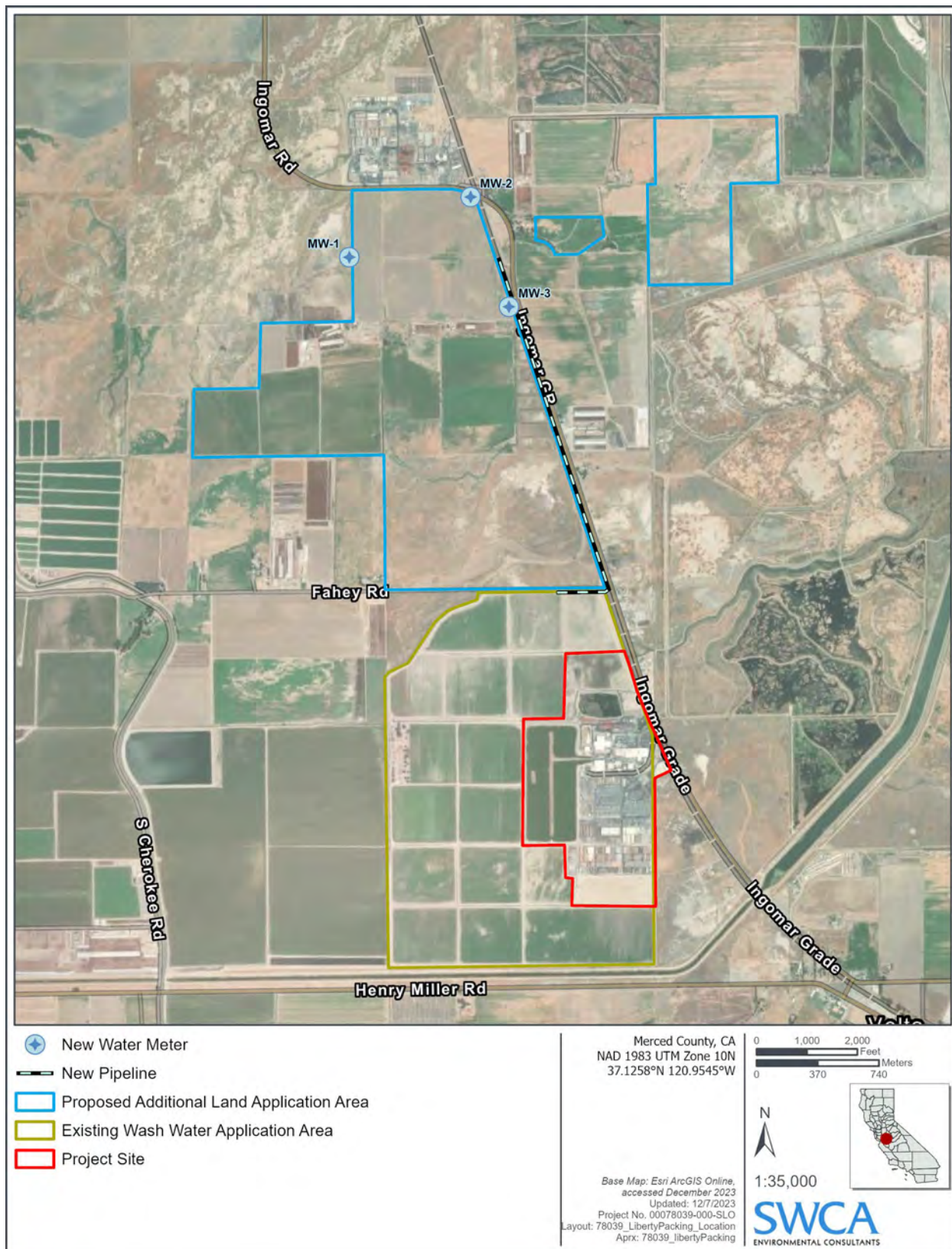


Figure 2. Project Location Map.

The Approved Project resulted in an increase in fresh tomato processing capacity of approximately 23% through the addition of evaporation equipment and steam capacity. The Approved Project resulted in an additional 120 tomato truck trips per day associated with receiving and unloading tomatoes, resulting in a total of approximately 620 truck trips per day. The increase in truck traffic was provided for under a Roadway Impact Agreement with the County, which requires increased fees for any road impacts commensurate to the volume of truck traffic. The Approved Project did not result in an increase of the number of employees per shift. Additionally, the Approved Project resulted in little to no increase in the volume of wastewater generated as a result of wash water that is applied to Liberty's farm fields. For the purposes of this analysis, it is assumed that components of the Approved Project that have not been completed at this time are no longer proposed and/or have been modified and are included in the proposed project, as described below.

2.3 REVISED PROJECT

The Revised Project includes a request for a CUP (CUP22-014) by Liberty Packing Company, LLC to allow for improvements to an existing tomato processing facility located on an 841-acre parcel (APN 070-112-038) and increase the wash water application area for the facility to include an additional 662 acres of surrounding agricultural lands in the unincorporated area of Merced County, California. The proposed facility improvements would include construction and use of a 60,000-square-foot packaging and material storage building (Building A), a 25,000-square-foot packaging and equipment storage building with potential to expand by an additional 15,000 square feet in the future (total of 40,000 square feet in total) (Building B), a 5,000-square-foot dry pomace¹ loading station and canopy over an existing rail spur (Building C), and 120,000 square feet of combined canopy covers over existing loading docks and staging areas on-site (Structures D and E) (project) (Figure 3). In addition, the Revised Project would expand the existing wash water land application area to include 662 acres of agricultural land located to the north of the facility through existing irrigation ditches and new pipelines located along an existing fence line to the west on Ingomar Grade Road. The Revised Project would not result in an increase of the facility's existing tomato processing capacity or the number of employees working on-site, and no change to operation hours would occur as a result of the Revised Project.

The purpose of the Revised Project is to improve working conditions for employees, provide additional protected areas for equipment and material storage, improve overall operations of the facility, and increase the land application area that receives wash water for agricultural irrigation reuse purposes.

¹ Pomace is the leftover residue after juice has been squeezed from fruit.

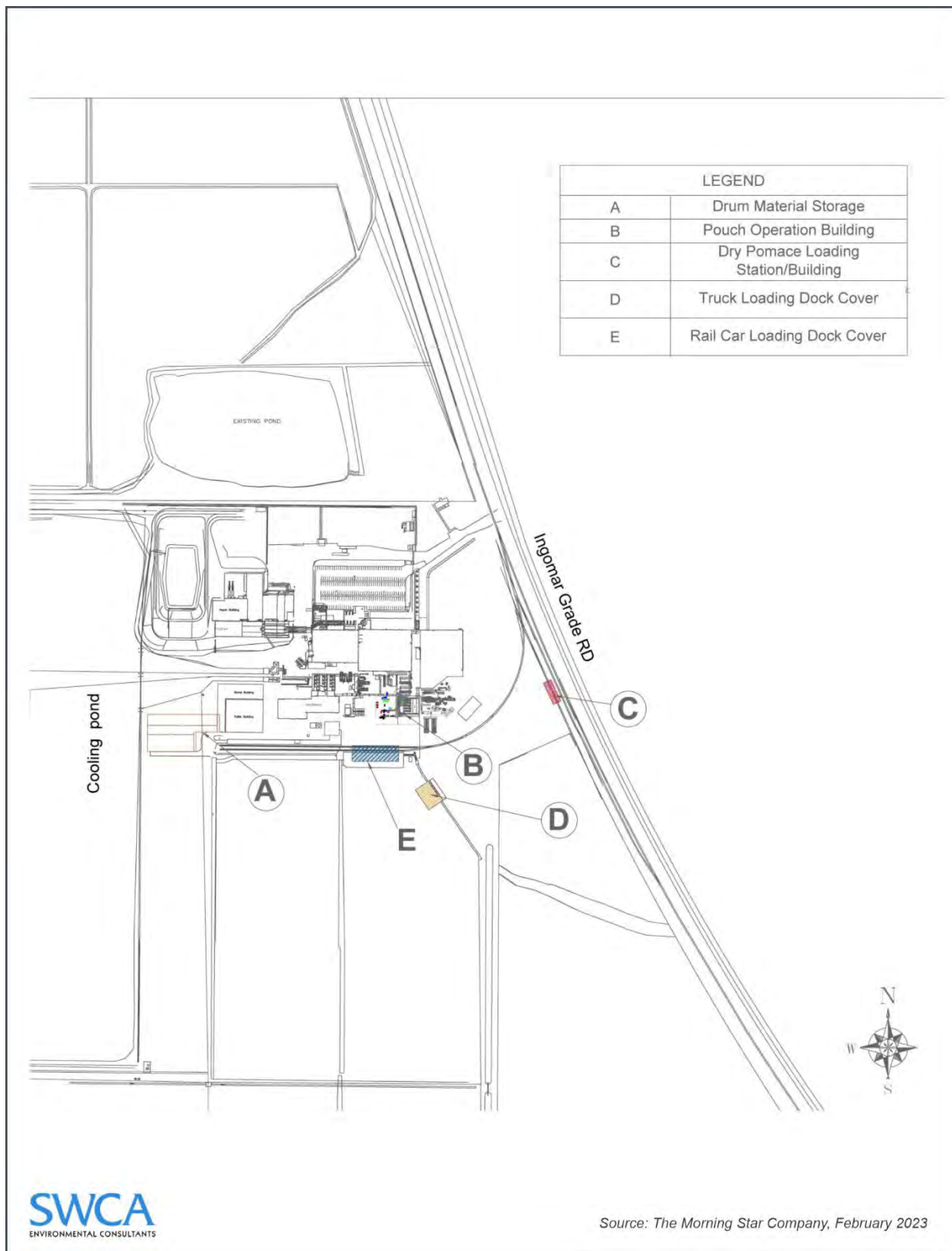


Figure 3. Revised Liberty Tomato Processing Facility Improvements Site Plan.

2.3.1 Project Components

2.3.2 Tomato Processing Plant Facility Improvements

The Revised Project would include construction and use of Buildings A, B, and C and Structures D and E. For the purposes of this assessment, it is assumed that buildout of the project would include construction and use of Building B to be 40,000 square feet in size. Each component of the proposed Liberty tomato processing plant facility upgrades, estimated construction start dates, and construction period lengths are summarized in Table 2 below and illustrated in Figure 3.

Table 2. Summary of Revised Project Components and Construction Schedule

Project Component	Proposed Use	Total Square Footage	Total Area to be Disturbed (square feet)	Estimated Construction Period Start	Estimated Construction Period Length
Building A	Packaging and material storage building	60,000	90,000	Between 2023 and 2028 ¹	7 months
Building B	Packaging and equipment storage building	40,000	60,000	Spring 2023	5 months
Building C	Dry pomace loading station and canopy over rail spur	5,000	384	Between 2023 and 2028 ¹	6 months
Structure D	Canopy	120,000	256	Between 2023 and 2028	5 months
Structure E	Canopy		768		6 months

¹ For the purposes of this analysis, it is assumed that Buildings A and C may have the potential to have overlapping construction periods and Structures D and E may have overlapping construction periods.

Construction of Revised Project components would occur beginning with Building B in 2023, and the rest of the components are anticipated to be constructed throughout the next 5 years (2024–2029). The proposed tomato processing plan facility improvements would result in a cumulative total of 3.48 acres (151,408 square feet) of site disturbance within existing disturbed areas of the tomato processing facility.

Once constructed, equipment to be stored in Building B would include both existing equipment currently in use on-site as well as new processing/packaging equipment to replace old equipment currently in use for facility operations. Use of new equipment is anticipated to result in increased packaging efficiency by automating certain tasks that are currently completed by hand by employees. While overall processing capacity would not change, this efficiency is anticipated to result in an overall reduction of current employee vehicle trips by 50 average daily trips (ADT). No other Revised Project components are expected to result in any significant operational changes.

2.3.3 Additional Wash Water Land Application Area

Wash water from existing Liberty tomato processing plant facilities is currently distributed to 19 agricultural fields totaling 574 acres for water reuse/irrigation purposes. Processed wash water or well water is piped along one side of each field, and tailwater drainage ditches on the opposite side of the field remove excess water, which is subsequently recirculated. A total of 17 shallow piezometers and groundwater monitoring wells are located on the existing Liberty tomato processing plant facility property in the current land application areas as well as upgradient and downgradient of the Liberty property to monitor the land application water quality in accordance with Central Valley Regional Water Quality Control Board (RWQCB) Waste Discharge Requirement (WDR) for the Liberty tomato processing facility (Order No. R5-2019-0012).

While the Revised Project would not result in an increase in tomato processing capacity for the Liberty tomato processing facility and the total volume of wash water produced by the facility would not be increased, Liberty Packing would like to have the ability to distribute additional water from the existing Cooling Pond to surrounding land application areas. To accommodate this, Liberty plans to apply for an increased discharge flow limit of 6 million gallons per day (mgd) during the main processing season and add approximately 662 acres of land to the existing land application area.

The Revised Project would increase the wash water land application area that receives wash water from tomato processing facility activities. The wash water would be used for agricultural irrigation reuse purposes in accordance with WDR Order No. R5-2019-0012. The wash water would be distributed to 12 additional parcels totaling 662 acres in size through a series of existing drainage ditches and a proposed pipeline. The proposed pipeline would be 16 inches in diameter and would be installed above ground along the eastern fence line of APNs 070-112-012-000, 070-112-003-000, 070-080-029-000, and 070-080-016-000 and under Fahey Road. It is important to note that the portion of the pipeline that would be located beneath Fahey Road has been approved through a County of Merced Encroachment Permit (issued on January 19, 2023, Appendix E) and this portion of the pipeline has already been installed. The Revised Project would include the construction of associated improvements, including irrigation mains and submains within previously disturbed areas of the proposed land application area. The proposed irrigation mains and submains would be similar to mains typical for irrigated agriculture. In addition, three 2-inch-diameter groundwater monitoring wells would be constructed within previously disturbed areas of the proposed land application area. Each well would be installed approximately 35 feet below ground surface.

Operational maintenance activities associated with reuse of the irrigation wash water on the additional land application area would be consistent with current maintenance activities on the existing land application area and no additional employees would be necessary.

2.4 MODIFICATIONS TO MITIGATION MEASURES

Modifications to mitigation measures identified in the 2014 IS/MND are included in Section 3, Environmental Impacts Analysis, and are proposed for the following reasons:

- To clarify the intent and applicability of the mitigation measure relative to the Revised Project and identified impact.
- To update language that may be outdated due to changes in regulations or agency-adopted mitigation measures and standards.

All modifications to previously adopted mitigation measures are shown in ~~striketrough~~ for deleted text and underlined for new text. The revised Mitigation Monitoring and Reporting Program is included in Appendix B.

3 ENVIRONMENTAL IMPACTS ANALYSIS

The 2014 IS/MND evaluated the following environmental issue areas:

- Aesthetics
- Agricultural Resources
- Air Quality
- Biological Resources
- Cultural Resources
- Geology and Soils
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality
- Land Use and Planning
- Mineral Resources
- Noise
- Population and Housing
- Public Services
- Recreation
- Transportation and Traffic
- Utilities and Service Systems
- Mandatory Findings of Significance

These issues, and all other issues areas required to be evaluated under CEQA, including, but not limited to, Energy, Tribal Cultural Resources, and Wildfire, have been evaluated in this IS/MND Addendum for the Revised Project. This evaluation determines whether the Revised Project would result in any new significant impacts or substantially more severe impacts than those identified in the 2014 IS/MND for the Approved Project. Any future development outside of the scope of this IS/MND Addendum would need to be evaluated for consistency with the 2014 IS/MND and, at that point, a CEQA determination, separate from this IS/MND Addendum, would be made.

3.1 AESTHETICS

3.1.1 Evaluation

Section 2.3, *Aesthetics*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to aesthetic resources. According to the 2014 IS/MND, the project site is not located in or near a designated scenic vista, does not provide views of designated scenic vistas, and is not located within the viewshed of a designated or eligible state scenic highway. It was determined that the Approved Project would not alter the existing visual character of the surrounding area because it is entirely located in the immediate vicinity of the existing tomato processing facility and would not result in the conversion of adjacent agricultural lands or rural residential areas to industrial uses. The 2014 IS/MND also stated that project construction activities would be limited to daytime hours (between 7:00 a.m. and 6:00 p.m.) and therefore would not create a new source of substantial lighting that would affect nighttime views in the area. Further, it was determined that based on required compliance with the County's Lighting Code (Merced County Code Section 18.41.060), which requires the use of directional lighting and minimization of glare and reflections, the Approved Project would not introduce substantial light or glare that would adversely affect daytime or nighttime views in the project area. Therefore, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to aesthetic resources and no mitigation measures were necessary.

Consistent with the Approved Project, new buildings and structures associated with the Revised Project would be entirely located within the footprint of the existing tomato processing facility and would not be located within the viewshed of a scenic vista or a designated or eligible state scenic highway or result in the conversion of adjacent agricultural lands or rural residential land uses to industrial uses. The Revised

Project would not result in any substantive visual changes to the proposed additional land application area because changes would be limited to wash water conveyance infrastructure and irrigation reuse for agricultural land. The proposed wash water conveyance infrastructure and monitoring wells would be located at- or below-grade within previously disturbed agricultural areas and would not alter the existing visual character of the project area. The Revised Project construction activities would be limited to daytime hours (between 7:00 a.m. and 6:00 p.m.) and would not create a new source of substantial lighting that would affect nighttime views in the area. The Revised Project would continue to be subject to the County's Lighting Code (Merced County Code Section 18.41.060), to minimize impacts related to lighting and glare. Therefore, the Revised Project would not create new or more severe impacts to aesthetic resources than were previously analyzed in the 2014 IS/MND, and no additional mitigation is required.

3.1.2 Conclusion

Potential impacts associated with aesthetics would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe visual impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.2 AGRICULTURE AND FOREST RESOURCES

3.2.1 Evaluation

Section 2.4, *Agricultural Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to agricultural resources. As identified in the 2014 IS/MND, the project site is not located on property subject to a Williamson Act contract, nor is it located within the Merced County Agricultural Preserve. Further, there are no areas designated for forest or timber land within the county; therefore, it was concluded that the Approved Project would not result in impacts related to those resources. According to the 2014 IS/MND, the project site is located on land designated as Grazing Land (the trailer storage yard), Farmland of Statewide Importance (a portion of the cooling pond), and Unique Farmland (a portion of the cooling pond and the outdoor warehouse expansion) by the Farmland Mapping and Monitoring Program (FMMP). It was determined that the Approved Project would be limited to the footprint of the existing tomato processing facility and would not result in expansion onto adjacent farmlands, nor would it result in the loss of crop production for Merced County. Additionally, it was determined that the tomato processing facility and related facilities are allowed under the General Agricultural (A-1) zoning designation pursuant to the existing CUP (CUP 02-001). Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than significant impacts related to agriculture and forest resources.

Consistent with the Approved Project, the proposed buildings and structures associated with the Revised Project would be constructed entirely within the footprint of the existing tomato processing facility. The Revised Project would not result in any substantive changes to the proposed additional land application area's agricultural resources because changes would be limited to installation of water conveyance and monitoring infrastructure and irrigation reuse for agricultural land. The proposed wash water conveyance infrastructure and monitoring wells would be installed at- or below-grade along an existing fence line and in other previously disturbed areas and would not interfere with existing or future agricultural use. Therefore, the Revised Project would result in similar impacts related to agricultural resources. Consistent with the Approved Project, the Revised Project would not be subject to a Williamson Act Contract and would be consistent with the allowable uses under the A-1 zoning designation. The Revised Project would not expand active operations onto adjacent farmlands or otherwise reduce the availability of cropland within the region. In addition, the Revised Project would provide additional irrigation to

surrounding agricultural land, which could contribute to an increase in agricultural production. The Revised Project would not interfere with forest or timber land or land use designations for those uses. Therefore, the Revised Project would not create new or more severe impacts to agriculture and forest resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.2.2 Conclusion

The Revised Project's potential impacts to agriculture and forestry resources would be less than significant. Therefore, the revised would not result in any new or more severe impacts associated with agriculture or forest resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.3 AIR QUALITY

3.3.1 Evaluation

Section 2.5, *Air Quality*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to air quality. The 2014 IS/MND determined that the Approved Project would not conflict with relevant San Joaquin Valley Air Pollution Control District (SJVAPCD) air quality plans, including the SJVAPCD Clean Air Plan (CAP) (SJVAPCD 2018), because the Approved Project would not increase employment or otherwise increase population growth within the region and would increase the efficiency of existing equipment and reduce the intensity of on-site water and energy consumption. Further, it was determined that the Approved Project would not result in emissions of adverse odors. However, the 2014 IS/MND determined that the Approved Project would have the potential to increase fugitive dust emissions and expose sensitive receptors to fugitive dust emissions during proposed construction activities. Mitigation Measure AQ-1 was identified in Section 2.3, *Air Quality*, of the 2014 IS/MND to reduce fugitive dust emissions through implementation of a dust control plan. Therefore, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts with mitigation related to air quality.

The Revised Project includes the phased construction of additional storage buildings and canopy covers and installation of upgraded equipment to improve working conditions for employees and overall use of the facility. Consistent with the Approved Project, the Revised Project would not increase employment or otherwise increase population growth within the region and would increase the efficiency of existing facility equipment, which would be consistent with the SJVAPCD CAP. Any odors generated by construction activities would be intermittent and temporary and would dissipate considerably before leaving the boundaries of the project site; therefore, the Revised Project would not result in emissions of objectionable odors affecting a substantial number of people.

Estimated construction and operational air pollutant emissions were calculated for the Revised Project by AMBIENT Air Quality & Noise Consulting (AMBIENT) using the California Emissions Estimator Model (CalEEMod) (Tables 3 and 4; Appendix C). For the purposes of this analysis, it was assumed that Buildings A and C may have overlapping construction periods, and Structures D and E may have overlapping construction periods.

Table 3. Annual Construction Emissions for the Revised Project

Source	Criteria Pollutant (TPY)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Building A + Building C	1.08	0.92	0.8	0.22	0.27	0.27
Building B	0.11	0.24	0.28	0.07	0.11	0.94
Structure D + Structure E	0.31	0.46	0.51	0.29	0.32	0.6
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
<i>Exceed threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: AMBIENT (2023)

Note: TPY = tons per year; ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 10 microns in diameter

Table 4. Annual Operational Emissions for the Revised Project

Source	Criteria Pollutant (TPY)					
	ROG	NO _x	CO	SO _x	PM ₁₀	PM _{2.5}
Building A	0.28	0.02	0.25	<0.005	<0.005	<0.005
Building B	0.18	0.01	0.17	<0.005	<0.005	<0.005
Building C	0.02	<0.005	0.02	<0.005	<0.005	<0.005
Structure D	0.27	0.02	0.25	<0.005	<0.005	<0.005
Structure E	0.27	0.02	0.25	<0.005	<0.005	<0.005
Total	1.02	0.07	0.94	<0.005	<0.005	<0.005
<i>SJVAPCD Threshold</i>	<i>10</i>	<i>10</i>	<i>100</i>	<i>27</i>	<i>15</i>	<i>15</i>
<i>Exceed threshold?</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>	<i>No</i>

Source: AMBIENT (2023)

Note: TPY = tons per year; ROG = reactive organic gases; NO_x = nitrogen oxides; CO = carbon monoxide; SO_x = sulfur oxides; PM₁₀ = particulate matter less than 10 microns in diameter; PM_{2.5} = particulate matter less than 10 microns in diameter

Based on estimated construction air emissions that were calculated for the Revised Project, construction of the buildings and structures associated with the Revised Project would not result in any exceedances of SJVAPCD thresholds for criteria air pollutants (AMBIENT 2023; SJVAPCD 2015). In addition, construction equipment use and ground-disturbing activities would be required during installation and construction of the proposed wash water conveyance and monitoring infrastructure, which could generate short-term criteria pollutant emissions. Construction activities would be limited in scale, short-term, and temporary and would not result in a substantial increase in air pollutant emissions in a manner that could exceed SJVAPCD thresholds for criteria air pollutants. The SJVAPCD requires all construction activities to comply with fugitive dust control requirements under Regulation VIII; therefore, the Revised Project would continue to be required to implement Mitigation Measure AQ-1 as identified in Section 2.3, *Air Quality*, of the 2014 IS/MND to reduce fugitive dust emissions during construction activities.

As shown in Table 4, the Revised Project would not result in any exceedances of SJVAPCD operational thresholds for criteria air pollutants. Further, the Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in

employees or daily truck trips in a manner that could substantially increase operational air emissions. The Revised Project would result in a reduction of approximately 50 employee vehicle trips per day through the installation of new and upgraded machinery that would increase packaging efficiency by automating certain tasks that are currently completed by hand by employees. This reduction in employee vehicle trips would ultimately reduce operational air emissions associated with vehicle trips to and from the site. Operational maintenance activities associated with reuse of the irrigation wash water on the additional land application area would be consistent with current maintenance activities on the existing land application area and no additional employees would be necessary. The Revised Project does not include the construction of new or extended dirt roads or other components that could increase long-term fugitive dust emissions. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

Mitigation Measure AQ-1: Prepare and implement a Dust Control Plan to comply with SJVAPCD Regulation VIII requirements to control construction emissions of PM10.

At the time of application for building permits, to ~~to~~ control the generation of construction-related PM10 emissions, the primary construction contractors shall ~~will~~ prepare and submit for approval a dust control plan to the San Joaquin Valley Air Control District (SJVAPCD) and submit evidence of plan approval to the County of Merced Community Development Department. No person shall perform any construction, demolition, excavation, extraction, or other earth-moving activities unless measures are sufficiently implemented to limit visible dust emissions (VDE) to 20% opacity and comply with the conditions for a stabilized surface area when applicable, at least 30 days prior to any earthmoving or construction activities. The dust control plan shall include measures, including, but not limited to: ~~Potential measures that might be included in the dust control plan could include, but are not limited to:~~

- a. *Pre-activity.*
 1. *Pre-water the work site sufficient to limit VDE to 20 percent opacity, and*
 2. *Phase work to reduce the amount of disturbed surface area at any one time.*
- b. *During Active operations.*
 1. *Apply water or chemical/organic stabilizers/suppressants to dry areas during leveling, grading, trenching, and earthmoving activities to limit VDE to 20% opacity.*
 2. *Construct and maintain wind barriers to limit VDE to 20% opacity. If utilizing wind barriers, control measure a.1 above shall also be implemented; and*
 3. *Apply water or chemical/organic stabilizers/dust suppressants to the unpaved disturbed surface areas vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.*
- c. *Inactive operations, including after work hours, weekends, and holidays.*
 1. *Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.*
- d. *Temporary stabilization of areas that remain unused for seven or more days.*
 1. *Restrict vehicular access to the area;*
 2. *Apply ~~and maintain~~ water or chemical/organic stabilizers/dust suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for 7 or more days, the area must comply with the conditions for a stabilized surface area as defined in Section 3.58 of Rule 8011. ~~on all unvegetated areas.~~*
 3. *~~Establish vegetation on all previously disturbed areas.~~*

- ~~4. Apply and maintain gravel at all previously disturbed areas.~~
- ~~5. Pave previously disturbed areas.~~
- ~~e. Unpaved Access and haul roads, traffic and equipment storage areas.~~
 - ~~1. Apply water or dust suppressants to unpaved haul and access roads.~~
 - ~~2. Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.~~
 - ~~3. Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.~~
- f. Wind events.
 - 1. Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.
 - 2. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- g. Outdoor handling of bulk materials.
 - 1. Water or dust suppressants will be applied when handling bulk materials.
 - 2. Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
- h. Outdoor storage of bulk materials.
 - 1. Water or dust suppressants will be applied to storage piles.
 - 2. Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - 3. Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - 4. A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.
- i. On-site transporting of bulk materials.
 - 1. Vehicle speed will be limited on the work site.
 - 2. All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.
 - 3. A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - 4. Haul trucks will be covered with a tarp or other suitable cover.
- j. Off-site transporting of bulk materials.
 - 1. The following practices will be performed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.
 - Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented.
- k. Outdoor transport using a chute or conveyor.
 - 1. No open chutes or conveyors will be used.
 - 2. Chutes or conveyors will be fully enclosed.

3. *Water spray equipment will be used to sufficiently wet the materials.*
4. *Transported materials will be washed or screened to remove fines (PM10 or smaller).*

3.3.2 Conclusion

With implementation of Mitigation Measure AQ-1 as revised to be consistent with current SJVAPCD requirements, the Revised Project's potential impacts associated with air quality would be reduced to less-than-significant levels. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no additional mitigation is required.

3.4 BIOLOGICAL RESOURCES

3.4.1 Evaluation

Section 2.6, *Biological Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to biological resources. The 2014 IS/MND did not identify any potential adverse impacts to special-status plant species. However, the 2014 IS/MND determined that the Approved Project would have the potential to disturb the following special-status animal species:

- giant garter snake (*Thamnophis gigas*)
- western pond turtle (*Actinemys marmorata*)
- Swainson's hawk (*Buteo swainsoni*)
- white-tailed kite (*Elanus leucurus*)
- northern harrier (*Circus cyaneus*)
- tricolored blackbird (*Agelaius tricolor*)
- yellow-headed blackbird (*Xanthocephalus xanthocephalus*)
- burrowing owl (*Athene cunicularia*)
- cackling goose (*Branta hutchinsii leucopareia*)
- San Joaquin kit fox (*Vulpes vulpes macrotis*)
- American badger (*Taxidea taxus*)

Mitigation Measures BIO-1 through BIO-8 were identified in Section 2.6, *Biological Resources*, of the 2014 IS/MND to avoid and/or minimize the Approved Project's potential impacts on special-status animal species. Further, the project site consists of an existing tomato processing facility and experiences frequent pedestrian and vehicle disturbance; therefore, it was determined that no special-status plant species, riparian habitat, or other sensitive natural communities occur on-site. Further, the 2014 IS/MND determined that the Approved Project would avoid wetland, marsh, and jurisdictional habitat located to the north of the processing facility; would not interfere with the movement of any fish species, native resident, or migratory wildlife bird species; and would not conflict with local plans or ordinances or a habitat conservation plan (HCP). With the implementation of Mitigation Measure BIO-1 through BIO-8, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to biological resources.

Based on an updated nine-quadrant query of the California Department of Fish and Wildlife (CDFW) California Natural Diversity Database (CNDDDB) (CDFW 2023), the following special-status wildlife species have been previously recorded within the project region:

- blunt-nosed leopard lizard (*Gambelia sila*)
- California red-legged frog (*Rana draytonii*)
- California tiger salamander – central California Distinct Population Segment (DPS) (*Ambystoma californiense* pop. 1)
- Conservancy fairy shrimp (*Branchinecta conservation*)
- foothill yellow-legged frog – central coast DPS (*Rana boylei* pop. 4)
- giant garter snake (*Thamnophis gigas*)
- giant kangaroo rat (*Dipodomys ingens*)
- longhorn fairy shrimp (*Branchinecta longiantenna*)
- Nelson’s antelope squirrel (*Ammospermophilus nelson*)
- San Joaquin kit fox (*Vulpes vulpes macrotis*)
- steelhead – Central Valley DPS (*Oncorhynchus mykiss irideus* pop. 11)
- tricolored blackbird (*Agelaius tricolor*)
- valley elderberry longhorn beetle (*Desmocerus californicus dimorphus*)
- vernal pool fairy shrimp (*Branchinecta lynchi*)
- vernal pool tadpole shrimp (*Lepidurus packardii*)

An updated resource list was obtained from the USFWS Information for Planning and Consultation (IPaC) system (USFWS 2023) that includes federally threatened and endangered species known to occur within the vicinity of the Revised Project. Additionally, the California Native Plant Society (CNPS) Electronic Inventory of Rare and Endangered Plants of California (CNPS 2023) was reviewed to provide additional information on rare plants that are known to occur in the area. The IPaC resource list, results of the CNDDDB query, and CNPS inventory search results are included in Appendix D.

The Revised Project includes the construction of additional storage buildings and canopy covers and installation of upgraded equipment within the footprint of the existing tomato facility. The Revised Project also includes the construction of wash water conveyance infrastructure and irrigation reuse on an additional 662 acres of surrounding agricultural land. Proposed water conveyance and monitoring infrastructure would be located in areas of active agricultural operations and would use existing irrigation ditches for water distribution. Construction activities for the Revised Project would occur entirely within previously disturbed areas and would not disturb special-status plant species, riparian habitat, or other sensitive natural communities. The proposed buildings and structures associated with the Revised Project would be located entirely within the footprint of the existing tomato processing facility and would not interfere with the movement of migratory or native species. In addition, the proposed wash water conveyance infrastructure would be installed at- or below-grade in previously disturbed and developed areas and would not include any features that could interfere with the movement of migratory or native species. The project would not result in any physical changes to the proposed additional land application area because it would be limited to irrigation reuse for agricultural land. There are no trees, cattails, or other vegetation in proximity to proposed work areas that would provide potential nesting habitat for

special-status species birds or other bird species protected under the Migratory Bird Treaty Act (MBTA). The Revised Project would not require tree removal, nor would it conflict with an adopted HCP.

The Revised Project site consists of an existing tomato processing facility and surrounding agricultural land that experiences frequent pedestrian and vehicle disturbance; therefore, the project site does not support suitable habitat for special-status animal species. The only special-status animal species not evaluated in the 2014 IS/MND is the longhorn fairy shrimp; however, the project would avoid wetland, marsh, and jurisdictional habitat located to the north of the tomato processing facility that could provide habitat for this species. Therefore, the Revised Project would not result in any potentially significant impacts to sensitive biological resources, and no mitigation is necessary. Therefore, the Revised Project would not create new or more severe impacts to biological resources than were previously analyzed in the 2014 IS/MND, and no new or additional mitigation is required.

3.4.2 Conclusion

The Revised Project would not result in any potentially significant impacts related to biological resources, and no mitigation is necessary. Therefore, the Revised Project would not result in any new or more severe impacts related to biological resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.5 CULTURAL RESOURCES

3.5.1 Evaluation

Section 2.7, *Cultural Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to historical, archaeological, and paleontological resources. The 2014 IS/MND determined that the Approved Project would not result in any impacts to historical resources because there are no historic buildings or structures within the project area. Further, it was determined that the Approved Project would not result in an adverse change to the significance of any archaeological, paleontological, or human resources through implementation of Mitigation Measures CUL-1 through CUL-3 as identified in Section 2.7, *Cultural Resources* of the 2014 IS/MND. Therefore, with implementation of Mitigation Measures CUL-1 through CUL-3, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to cultural resources.

The Revised Project does not include the removal or modification of any existing buildings or structures on-site and would not have the potential to result in the adverse change in significance of a listed or eligible historical resource. Based on a records search of the California Historical Resources Information System (CHRIS) conducted at the Central California Information Center (CCIC), located at California State University, Stanislaus, on January 23, 2023, one previous study has been conducted within the project area and no cultural resources have been previously documented within the project area. The Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility and surrounding previously disturbed agricultural land, which would further reduce the potential to encounter intact archaeological, paleontological, or human resources. Further implementation of Mitigation Measures CUL-1 and CUL-3, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would reduce the potential to disturb previously unidentified archaeological resources or human remains during proposed ground-disturbing activities. Therefore, the Revised Project would not result in any new or more severe impacts related to cultural resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required. An evaluation of the Revised Project's potential to result in impacts associated with paleontological resources is provided in Section 3.7, *Geology and Soils*.

Mitigation Measure CUL-1: Stop work if buried cultural deposits are encountered during construction activities. *If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.*

Mitigation Measure CUL-3: Stop work if human remains are encountered during construction activities. *If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).*

- *If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed.*
- *If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per Public Resources Code (PRC) 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement.*

If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PRC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S Code sec. 7050.5, 7052.

3.5.2 Conclusion

Upon implementation of Mitigation Measures CUL-1 through CUL-3 as identified above, the Revised Project's potential impacts associated with cultural resources would be reduced to less than significant. Therefore, the Revised Project would not result in any new or more severe impacts related to cultural resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.6 ENERGY

3.6.1 Evaluation

At the time the 2014 IS/MND was prepared and certified, CEQA did not yet require the evaluation of a proposed project's impacts associated with consumption of energy resources. A 2016 court case, *Ukiah Citizens for Safety First v. City of Ukiah* (248 Cal.App.4th 256), first confirmed that environmental documents must include an energy analysis. In 2019, Energy was added to the State CEQA Guidelines Appendix G, Environmental Checklist Form, as a standalone section.

According to CalEEMod calculations conducted for the Revised Project (see Appendix C), during construction of the Revised Project, fossil fuels, electricity, and natural gas would be used by construction vehicles and equipment. The energy consumed during construction would be temporary in nature and typical of other similar construction activities in the county. Federal and state regulations in place require the use of fuel-efficient equipment and vehicles and require wasteful activities, such as diesel idling, to be limited. Construction contractors, in an effort to ensure cost efficiency, would not be expected to engage in wasteful or unnecessary energy and fuel practices. Further, although not required to reduce energy consumption, Mitigation Measure GHG-1, included in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND, would further reduce the potential for wasteful, inefficient, or unnecessary energy consumption during construction activities by requiring the use of alternative fuel for construction equipment. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy consumption during construction, and no new mitigation measures would be required.

The Revised Project includes the phased construction of additional storage buildings and canopy covers and installation of upgraded equipment, which would improve working conditions for employees and overall use of the facility. The Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees or daily truck trips in a manner that could increase energy consumption through fuel use. Further, the Revised Project would result in a reduction of approximately 50 employee vehicle trips per day through the installation of new machinery that would replace existing equipment and increase packaging efficiency by automating certain tasks that are currently completed by hand by employees. This reduction in employee vehicle trips would ultimately reduce the consumption of non-renewable energy resources. Table 5 shows the Revised Project's estimated annual operational energy demand that was calculated by AMBIENT using CalEEMod (see Appendix C).

Table 5. Annual Energy Demand for the Revised Project

Source	Electricity Consumption (kWh/year) ¹	Natural Gas Consumption (kBtu/year) ²	Water Use, Treatment & Conveyance (kWh/year) ¹ / (MMBTU/year) ³
Building A	644,389	320,049	45,233 / 154
Building B	429,593	213,366	30,155 / 103
Building C	53,699	26,671	3,769 / 13
Structure D	644,389	320,049	45,233 / 154
Structure E	644,389	320,049	45,233 / 154
Total	2,416,459	1,200,184	169,623 / 578

Source: AMBIENT (2023)

¹ kWh/year = kilowatt hours per year ² kBtu/year = one thousand British thermal unit per year

³ MMBTU/year = one million British thermal unit per year

As shown in Table 5, the Revised Project would result in a marginal increase in energy consumption. New buildings would be required to be constructed in compliance with Title 24 of the California Energy Code and California Building Code (CBC) 2022 Building Energy Efficiency Standards to further reduce operational energy use through implementation of green building and energy-efficient building design. Further, although not required to reduce energy consumption, Mitigation Measure GHG-1 included in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND would further reduce the potential for wasteful, inefficient, or unnecessary energy consumption during use of the Revised Project through the implementation of SVAPCD best performance standards (BPS), which identify methods for energy efficiency. Therefore, the project would not result in wasteful, inefficient, or unnecessary energy consumption during use of the project, and no new mitigation measures would be required.

The Revised Project also includes the installation of wash water conveyance infrastructure and irrigation reuse on an additional 662 acres of surrounding agricultural land. The operation of the proposed wash water conveyance infrastructure would result in a marginal increase in energy consumption and would not represent a wasteful, inefficient, or unnecessary consumption of energy resources.

The 2030 Merced County General Plan Natural Resources Element identifies goals and policies to increase energy conservation and efficiency in the county. Based on required compliance with diesel-idling restrictions, CBC building regulations, and SJVAPCD BPS, as well as an overall reduction in operational vehicle trips to and from the project site, the Revised Project would avoid wasteful, inefficient, and unnecessary energy consumption during project activities. Therefore, the Revised Project would not conflict with a state or local plan for renewable energy, including the Natural Resources Element, and potential impacts associated with consumption of energy resources or conflict with or obstruction of a state or local plan for renewable energy or energy efficiency would be less than significant, and no new mitigation measures would be necessary.

3.6.2 Conclusion

Based on required compliance with existing regulations and reduction of overall employee vehicle trips during use of the facility, the Revised Project would result in less-than-significant impacts related to consumption of energy resources. Therefore, no new or more severe impacts related to energy consumption would occur, and no additional mitigation is necessary.

3.7 GEOLOGY AND SOILS

3.7.1 Evaluation

Section 2.8, *Geology and Soils*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to geology and soil resources. As stated in the 2014 IS/MND, according to the 2030 Merced County General Plan, the project site is not located within a mapped fault zone or located in close proximity to an active fault. Further, the project site is not located in an area at risk for liquefaction, landslide, lateral spreading, subsidence, or soil expansion. However, it was determined that the project site is located in a seismically active region and would and could be subject to seismic ground shaking. Mitigation Measure GEO-1 has been identified in Section 2.8, *Geology and Soils*, of the 2014 IS/MND, which requires the project to be constructed in accordance with the most recent CBC and project-specific building techniques to withstand the effects of seismic ground shaking. Further, it was concluded that the Approved Project would be required to comply with County building standards to minimize the susceptibility of soils to septic failure and with Central Valley Regional Water Quality Control Board (RWQCB) requirements for preparation and implementation of a Stormwater Pollution Prevention Plan (SWPPP) with best management practices (BMPs) to address erosion control at the project site. As

discussed in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, the Approved Project would not result in an adverse change to the significance of any paleontological resources through implementation of Mitigation Measures CUL-1 through CUL-3 as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND and Section 3.5, *Cultural Resources*, of this IS/MND Addendum. Based on required compliance with County building standards and implementation of Mitigation Measures GEO-1 and CUL-1 through CUL-3, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to geology and soils.

The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding agricultural land; therefore, the Revised Project would not be at risk for liquefaction, landslide, lateral spreading, subsidence, or soil expansion. Similarly, the Revised Project would result in similar risk associated with seismic ground shaking. Proposed buildings and structures associated with the Revised Project would be required to comply with current CBC and County building standards to minimize risk associated with seismic hazards and the susceptibility of soils to septic failure. Installation of the proposed wash water conveyance infrastructure would not result in new occupiable buildings or structures that could increase risk associated with seismic or other ground failure events. The Revised Project would also be subject to Central Valley RWQCB requirements for preparation and implementation of a SWPPP with BMPs to address erosion control at the project site. The Revised Project would also be required to comply with the County's Stormwater Ordinance (Merced County Code Section 9.53.010), which requires implementation of BMPs during project construction, preparation of an Erosion Control Plan (ECP), and implementation of post-construction stormwater control measures.

According to the U.S. Geological Survey (USGS), the project site is underlain by alluvial gravel, sand, and clay sediments (Qa) from the Holocene era, which has a low paleontological sensitivity due to the relatively young age of the geologic unit (USGS 2007). The Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility and surrounding previously disturbed agricultural land, which would further reduce the potential to encounter intact paleontological resources. Further, Mitigation Measure CUL-2, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would require excavation activities to halt in the event of discovery of buried paleontological resources during project construction activities. The Revised Project's impacts associated with paleontological resources would be less than significant with mitigation. Therefore, no new or more severe impacts related to geology and soils would result under the Revised Project, and no additional mitigation is necessary.

Mitigation Measure CUL-2: Stop work if buried paleontological resources are encountered during construction activities. *If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.*

3.7.2 Conclusion

The Revised Project would not result in any potentially significant impacts associated with rupture of a known earthquake fault or other seismic hazards, soil erosion, land instability, expansive soil, or inadequate soil conditions for wastewater disposal. Potential impacts associated with paleontological resources would be less than significant with implementation of Mitigation Measure CUL-2, as identified in the 2014 IS/MND. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.8 GREENHOUSE GAS EMISSIONS

3.8.1 Evaluation

Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to greenhouse gas (GHG) emissions. The 2014 IS/MND determined that the Approved Project would marginally increase GHG emissions during construction and use of the improved tomato processing facility due to direct emissions of carbon dioxide (CO₂), methane (CH₄), and nitrous oxide (N₂O). Based on the severity of potential impacts associated with global climate change and the lack of an established threshold for GHG emissions, Mitigation Measures GHG-1 and GHG-2 were identified in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND to reduce GHG emissions during construction and use of the Approved Project through implementation of BMPs during construction and SVAPCD BPS during use of the facility. With implementation of Mitigation Measures GHG-1 and GHG-2, the 2014 IS/MND determined that the Approved Project would not result in substantial GHG emissions or interfere with state or local plans to reduce GHG emissions, resulting in a less-than-significant impact related to GHG emissions.

The Revised Project would require phased construction activities that would be similar in scale to those required for construction under the Approved Project and would have similar potential to marginally increase short-term GHG-emissions. Estimated annual construction GHG emissions were calculated for the Revised Project by AMBIENT using CalEEMod (Table 6; see Appendix C).

Table 6. Annual Construction GHG Emissions for the Revised Project

Source	Emissions (MTCO ₂ e/year) ¹
Building A	99.94
Building B	51.77
Building C	15.31
Structure D	16.05
Structure E	43.60
Total	226.67

Source: AMBIENT (2023)

¹ MTCO₂e/year = metric tons of carbon dioxide equivalent per year

As shown in Table 6, the Revised Project would result in a marginal increase in GHG emissions during construction of the Revised Project. Therefore, the Revised Project would continue to be required to implement Mitigation Measure GHG-1 as identified in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND, which requires implementation of BMPs during construction to reduce GHG emissions during construction equipment and vehicle use. Further, the Revised Project would be required to comply with existing federal and state regulations that require the use of fuel-efficient equipment and vehicles and require wasteful activities, such as diesel idling, to be limited. Construction contractors, in an effort to ensure cost efficiency, would not be expected to engage in wasteful or unnecessary energy and fuel practices.

The Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees or daily truck trips in a manner that could increase operational GHG emissions. The Revised Project would result in a reduction of approximately 50 employee vehicle trips per day through the installation of new and upgraded machinery that would increase packaging efficiency by automating certain tasks that are currently

completed by hand by employees. This reduction in employee vehicle trips would ultimately reduce mobile source GHG emissions compared to existing conditions; therefore, the Revised Project would not be required to implement mitigation that was previously identified to reduce operational GHG emissions. The Revised Project also includes the installation of wash water conveyance infrastructure and irrigation reuse on an additional 662 acres of surrounding agricultural land. The operation of the proposed wash water conveyance infrastructure would not result in new vehicle trips or substantial consumption of energy resources that could substantially increase operational GHG emissions. Further, based on implementation of Mitigation Measure GHG-1 during construction activities and an overall reduction in operational GHG emissions, the Revised Project would be consistent with state and local GHG-reduction plans and policies. Therefore, no new or more severe impacts related to GHG emissions would result under the Revised Project, and no additional mitigation is necessary.

Mitigation Measure GHG-1: Implement GHG Best Management Practices for construction.
The project applicant will require all construction contractors to implement the Best Management Practices to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures.

- *Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet.*
- *Recycle at least 50 percent of construction waste.*
- *Use at least 10 percent local building materials (from within 100 miles of the project site).*

3.8.2 Conclusion

Upon implementation of Mitigation Measure GHG-1 in Section 2.9, *Greenhouse Gas Emissions*, of the 2014 IS/MND, the Revised Project's potential impacts associated with GHG emissions would be reduced to less than significant. Therefore, the Revised Project would not result in any new or more severe impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.9 HAZARDS AND HAZARDOUS MATERIALS

3.9.1 Evaluation

Section 2.10, *Hazards and Hazardous Materials*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to hazards and hazardous materials. According to the 2014 IS/MND, the project site is not located within 0.25 mile of an existing or proposed school, the vicinity of an airstrip or airport, or an area with high or very high risk for wildland fire. It was identified that the project site is located on a site included on a list of hazardous materials sites complied pursuant to California Government Code Section 65962.5; however, soil tests conducted at the site found that the soil was within acceptable control limits for listed contaminants, including diesel and kerosene. Further, it was determined that the Approved Project would have potential to result in risk associated with hazardous materials use at the project site; however, it was determined that adherence to applicable federal standards and state and local regulations, including California Division of Occupational Safety and Health of California (Cal/OSHA), for the storage and handling of hazardous materials would reduce risk associated with hazardous materials use at the project site. Based on required compliance with existing regulations, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to hazards and hazardous materials.

The nearest school facility to the project site is Volta Elementary School, located approximately 0.67 mile southeast of the project property, and the nearest airstrip or airport to the site is the Los Banos Municipal Airport, located approximately 4.5 miles southeast of the project property; therefore, the Revised Project would not be located within 0.25 mile of an existing or proposed school or within close vicinity of an airstrip or airport. Based on the 2022 Merced County State Responsibility Area Fire Hazard Severity Zones Map, the project is not located adjacent to or within a High or Very High Fire Hazard Severity Zone (California Department of Forestry and Fire Protection [CAL FIRE] 2022). Consistent with the 2014 IS/MND, the Revised Project would require ground-disturbing activities within the footprint of the existing tomato processing facility, which is located on a site included on a list of hazardous materials sites pursuant to California Government Code Section 65962.5 (California Department of Toxic Substance Control [DTSC] 2023); State Water Resources Control Board [SWRCB] 2023); however, soil tests conducted at the site found that the soil was within acceptable control limits for listed contaminants, including diesel and kerosene. In addition, there are no previously recorded hazardous materials sites located within or adjacent to the proposed wash water conveyance infrastructure alignment or additional land application area (DTSC 2023; SWRCB 2023). Therefore, the Revised Project would not disturb any contaminated soils associated with a hazardous materials site pursuant to California Government Code Section 65962.5. The Revised Project would require phased construction activities that would be similar in scale to those required for construction under the Approved Project and would result in similar risk associated with hazardous materials use as compared to the Approved Project. The Revised Project would be required to comply with existing regulations, including federal and Cal/OSHA standards for the transportation, use, and handling of hazardous materials, which would reduce risk associated with hazardous materials use at the project site. The Revised Project would not increase the facility's existing processing capacity or increase the use or storage of hazardous materials on-site. The wash water would be used for agricultural irrigation reuse purposes in accordance with Central Valley RWQCB WDR (Order No. R5-2019-0012) to ensure the water quality of the wash water and local groundwater is maintained at acceptable levels. The project site would be accessed by existing driveways that allow for adequate emergency response and evacuation to and from the project site. In addition, the Revised Project would not result in a significant increase in vehicle trips or traffic or otherwise have the potential to adversely affect local emergency evacuation plans. Therefore, no new or more severe impacts related to hazards and hazardous materials would result under the Revised Project, and no additional mitigation is necessary.

3.9.2 Conclusion

Potential impacts associated with hazards and hazardous materials would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to hazards and hazardous materials than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.10 HYDROLOGY AND WATER QUALITY

3.10.1 Evaluation

Section 2.11, *Hydrology and Water Quality*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to hydrology and water quality. The 2014 IS/MND determined that the Approved Project was consistent with Liberty Packing Company's existing Central Valley RWQCB WDR (Order No. R5-2019-0012) because it would reclaim a portion of the process water, therefore offsetting the volume of water needed by the improved capacity of the plant. During use of the Approved Project, the WDR would continue to be enforced, effluent process water would continue to be monitored for water quality, and soil and groundwater would also continue to be tested for constituents of concern;

therefore, it was determined that the Approved Project would not violate water quality standards. Further, it was determined that temporary construction-related water quality impacts would be minimized by adhering to the National Pollutant Discharge Elimination System (NPDES) Construction General Permit and required SWPPP. Stormwater would be retained at the project site. The eastern portion of the project site is located within a 100-year flood zone; however, the 2014 IS/MND concluded that placement of structures within the 100-year flood zone would not impede or redirect flood flows to any substantially greater extent than the existing facility because new structures would be placed adjacent to the existing processing facility. The project site is not located in an area at risk of inundation through dam failure, tsunami, or seiche. Based on required compliance with existing regulations and permits, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to hydrology and water quality.

The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding agricultural land; therefore, the Revised Project would not be located in an area at risk of inundation by dam failure, tsunami, or seiche. However, the Revised Project would be partially located within a 100-year flood zone. Consistent with the Approved Project, above-ground structures associated with the Revised Project would be placed adjacent to and within the existing tomato processing facility and would not impede or redirect flood flows to any substantially greater extent than the existing facility. The proposed wash water conveyance infrastructure would be installed at- or below-grade along an existing fence line and in other previously disturbed areas and would not interfere with existing drainage patterns or impede flood flows. Further, the Revised Project would be required to comply with Section 17.48.140 of the Merced County Code of Ordinances, which establishes construction standards to prevent flood damage.

The Revised Project would be required to comply with the County's Stormwater Ordinance (Merced County Code Section 9.53.010), which requires implementation of BMPs during project construction, preparation of an ECP, and implementation of post-construction stormwater control measures. The Revised Project would continue to be required to comply with the NPDES General Construction Permit for the implementation of a SWPPP with BMPs to address short- and long-term erosion and pollutant control at the project site. In addition, the Revised Project would not increase the facility's existing processing capacity; therefore, the Revised Project would not increase the generation of process water at the site in a manner that could interfere with the existing WDR (Order No. R5-2019-0012). The wash water would be used for agricultural irrigation reuse purposes in accordance with Central Valley RWQCB WDR (Order No. R5-2019-0012) to avoid the release of potential contaminants that could otherwise degrade water quality. Based on required compliance with existing regulations and permit requirements, the Revised Project would result in less-than-significant impacts related to hydrology and water quality. Therefore, no new or more severe impacts related to hydrology and water quality would result under the Revised Project, and no additional mitigation is necessary.

3.10.2 Conclusion

Based on required compliance with existing regulations, potential impacts associated with hydrology and water quality would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to hydrology and water quality than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.11 LAND USE AND PLANNING

3.11.1 Evaluation

Section 2.12, *Land Use and Planning*, of the 2014 IS/MND evaluated the Approved Project's potential impacts associated with division of an established community and inconsistency with land use plans, policies, and zoning. According to the 2014 IS/MND, the Approved Project would not physically divide an established community or conflict with an adopted HCP. In addition, the Approved Project was found to be consistent with the project site's Agricultural land use designation and applicable goals and policies set forth in the *2030 Merced County General Plan*. Therefore, the Approved Project was determined to have less-than-significant impacts related to land use and planning.

The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding agricultural land and does not include any features that could physically divide an established community. The Revised Project includes the phased construction of additional storage buildings and canopy covers, installation of upgraded equipment in order to improve working conditions for employees and overall use of the facility, and the construction of wash water conveyance and monitoring infrastructure and irrigation reuse on an additional 662 acres of surrounding agricultural land. The Revised Project does not include establishment of new activities that would be inconsistent with the project site's Agricultural land use designation or provisions of the *2030 Merced County General Plan*. Therefore, no new or more severe impacts related to land use and planning would result under the Revised Project, and no additional mitigation is necessary.

3.11.2 Conclusion

Potential impacts associated with land use and planning would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to land use and planning than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.12 MINERAL RESOURCES

3.12.1 Evaluation

Section 2.13, *Mineral Resources*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to mineral resources. The 2014 IS/MND determined that the Approved Project would not impact mineral resources because the project site has been historically developed as agricultural land and there are no known mineral resources or existing mining operations in the immediate vicinity of the project site. Therefore, the Approved Project was determined to have no impacts related to mineral resources.

The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding previously disturbed active agricultural land; therefore, the Revised Project would not result in impacts related to mineral resources because there are no known mineral resources or existing mining operations in the immediate vicinity of the project site. Therefore, no new or more severe impacts related to mineral resources would result under the Revised Project, and no additional mitigation is necessary.

3.12.2 Conclusion

No impacts related to mineral resources would occur under the Revised Project. The Revised Project would not result in any new or more severe impacts related to mineral resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.13 NOISE

3.13.1 Evaluation

Section 2.14, *Noise*, of the 2014 IS/MND evaluates the Approved Project's potential impacts related to noise. The 2014 IS/MND identified the Approved Project's potential to increase noise and short-term groundborne vibration at the project site as a result of improved operations; however, it was concluded that this increase in noise would remain below the County's noise thresholds and there are no noise sensitive land uses within the immediate vicinity of the project site that would be adversely affected by the marginal increase in noise. The project site is not located within close proximity to an airport or within an airport land use plan. Therefore, the Approved Project was determined to have less-than-significant impacts related to noise.

The Revised Project includes the phased construction of additional storage buildings and canopy covers and installation of upgraded equipment, which would improve working conditions for employees and overall use of the facility. The Revised Project also includes the construction of wash water conveyance and monitoring infrastructure and irrigation reuse on an additional 662 acres of surrounding agricultural land. The Revised Project would not result in new or incompatible land uses that could result in a noticeable increase in long-term ambient noise within the project site. In addition, proposed equipment upgrades would be enclosed within buildings and would not increase long-term ambient noise within the project area. The Revised Project would ultimately result in a reduction in employee vehicle trips and therefore would not increase noise along proximate roadways from truck or employee vehicle trips. The Revised Project would require phased construction activities that would be similar in scale to those required for construction under the Approved Project and would have similar potential to increase short-term construction-related noise and groundborne vibration. However, consistent with the Approved Project, construction-related noise associated with the Revised Project would remain below the County's noise thresholds and the Revised Project would not be in close proximity to any noise-sensitive land uses. Therefore, no new or more severe impacts related to noise would result under the Revised Project, and no additional mitigation is necessary.

3.13.2 Conclusion

Potential impacts associated with noise would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe noise impacts than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.14 POPULATION AND HOUSING

3.14.1 Evaluation

Section 4.15, *Population and Housing*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to population growth. As determined in the 2014 IS/MND, the Approved Project would not increase the number of employees, and short-term construction-related positions would be expected to

be filled by members of the local workforce. Further, the Approved Project would not require the removal of existing housing or construction of replacement housing elsewhere. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to population and housing.

Consistent with the Approved Project, the Revised Project would not increase the number of employees, and short-term construction-related positions would be expected to be filled by members of the local workforce. The Revised Project does not include the removal of existing housing or construction of replacement housing elsewhere. Therefore, no new or more severe impacts related to population and housing would result under the Revised Project, and no additional mitigation is necessary.

3.14.2 Conclusion

Potential impacts associated with population and housing would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to population and housing than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.15 PUBLIC SERVICES

3.15.1 Evaluation

Section 4.16, *Public Services*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to an increase in demand on public services, including fire protection services, police protection services, public schools, and parks. According to the 2014 IS/MND, the Approved Project would not result in an increase of the number of employees and, therefore, would not increase demand on police protection services, schools, parks, or other public facilities. The 2014 IS/MND identified that the Approved Project would be subject to County Impact Fees, which would include the payment of its fair share of costs for fire protection facilities and services to ensure that the County is able to maintain adequate fire protection services. The Approved Project would also be subject to CAL FIRE and Merced County Fire Department safety regulations to further reduce fire risk and reduce the increase in demand on fire protection services. Based on required compliance with CAL FIRE and Merced County Fire Department fire safety regulations, the 2014 IS/MND determined that the Approved Project would result in less-than-significant impacts related to public services.

Consistent with the Approved Project, the Revised Project would not increase the number of employees at the tomato processing facility; therefore, the Revised Project would not increase demand on police protection services, schools, parks, or other public facilities. Further, the Revised Project would be subject to the payment of County Impact Fees for fire protection facilities and services to offset the project's marginal increased demand on County fire protection services. The development and improvements associated with the Revised Project would also be subject to CAL FIRE and Merced County Fire Department safety regulations to further reduce fire risk and reduce the increase in demand on fire protection services. The Revised Project would not result in any new or more severe impacts related to public services than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.15.2 Conclusion

Potential impacts associated with public services would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to public services than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.16 RECREATION

3.16.1 Evaluation

Section 4.17, *Recreation*, of the 2014 IS/MND discussed the Approved Project's potential impacts related to an increase in demand on recreational facilities. No parks or recreational facilities are located on the project site. According to the 2014 IS/MND, the Approved Project would not include development of residential uses or result in an increase of the number of permanent or seasonal employees employed on the project site and, therefore, would not increase demand on nearby recreational facilities; therefore, it was determined that the Approved Project would not result in impacts related to recreation.

Consistent with the Approved Project, the Revised Project would not include development of residential uses or result in an increase of the number of permanent or seasonal employees employed at the tomato processing facility; therefore, the Revised Project would not increase demand on nearby recreational facilities. In addition, the Revised Project does not include the construction of any new or expanded recreational facilities. The Revised Project would not result in any new or more severe impacts related to recreation than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.16.2 Conclusion

No impacts related to recreation would occur under the Revised Project. The Revised Project would not result in any new or more severe impacts related to recreation than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.17 TRANSPORTATION

3.17.1 Evaluation

Section 2.18, *Traffic and Transportation*, of the 2014 IS/MND evaluates the Approved Project's potential impacts associated with traffic and transportation. It was determined that the Approved Project would result in a short-term increase in construction-related trips and an increase of approximately 120 truck trips per day. However, it was determined that South Ingomar Grade Road could support this increase while maintaining acceptable roadway operations in accordance with the *2030 Merced County General Plan Circulation Element*. Further, the 2014 IS/MND identified that the Approved Project would be subject to the payment of road impact fees to offset the incremental increase of truck trips along public roads. The Approved Project would not interfere with air traffic patterns, increase roadway hazards, interfere with emergency access, or be inconsistent with applicable plans or policies related to bicycle, transit, or pedestrian circulation. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to traffic and transportation.

The Revised Project would not increase the facility's existing processing capacity; therefore, implementation of the Revised Project would not result in an increase in employees, employee vehicle trips, or daily truck trips. The Revised Project would result in a reduction of approximately 50 employee vehicle trips per day through the installation of new and upgraded machinery that would increase packaging efficiency by automating certain tasks that are currently completed by hand by employees. Therefore, the Revised Project would ultimately reduce the overall number of vehicle trips along South Ingomar Grade Road. In addition, the installation of new wash water conveyance and monitoring infrastructure and irrigation reuse would not generate new employment opportunities or daily vehicle trips. The Revised Project would not interfere with air traffic patterns, increase roadway hazards, interfere

with emergency access, or be inconsistent with plans or policies related to bicycle, transit, or pedestrian circulation.

Merced County adopted the Merced County Association of Governments (MCAG) *VMT Thresholds and Implementation Guidelines* (2022), which identifies the CEQA VMT metric, VMT screening criteria, and VMT analysis thresholds for jurisdictions within the MCAG. According to the MCAG *VMT Thresholds and Implementation Guidelines*, a project consistent with the jurisdiction's General Plan may be screened from VMT thresholds if the project would generate fewer than 1,000 average daily trips (ADT), while a project not consistent with the jurisdiction's General Plan may be screened if the project would generate fewer than 500 ADT. The 2014 IS/MND did not evaluate the Approved Project's potential impacts related to VMT. As previously discussed, the Revised Project would not increase employee vehicle trips or daily truck trips and would result in a reduction of approximately 50 employee vehicle trips per day. Therefore, the Revised Project would not result in or exceed 1,000 trips per day and would not generate a significant increase in VMT.

Therefore, the Revised Project would not result in any new or more severe impacts related to transportation and traffic than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.17.2 Conclusion

Potential impacts associated with transportation and traffic would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to transportation and traffic than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.18 TRIBAL CULTURAL RESOURCES

3.18.1 Evaluation

Assembly Bill (AB) 52, approved by the Governor of California on September 25, 2014, requires public agencies to consult with California Native American tribes that are traditionally and culturally affiliated with the geographic area of proposed projects subject to CEQA. Because the 2014 IS/MND was certified prior to approval of AB 52, no notification specific to AB 52 requirements was conducted at that time. Further, this IS/MND Addendum does not require public circulation and would not be subject to tribal consultation pursuant to AB 52.

Based on an updated CHRIS records search conducted at the CCIC on January 23, 2023, one previous study has been conducted within the project area and no cultural resources have been previously documented within the project area. Further, ground disturbance associated with the Revised Project would occur within the footprint of the developed existing tomato processing facility and surrounding previously disturbed active agricultural land, which would further reduce the potential to encounter intact tribal cultural resources. As identified in Section 3.5, *Cultural Resources*, of this IS/MND Addendum, implementation of Mitigation Measures CUL-1 through CUL-3, as identified in Section 2.7, *Cultural Resources*, of the 2014 IS/MND, would reduce the potential to disturb unknown archaeological or human resources during proposed ground-disturbing activities. Therefore, the Revised Project would not result in any new or more severe impacts related to tribal cultural resources than were previously analyzed in the 2014 IS/MND, and no new mitigation is required.

3.18.2 Conclusion

No impacts related to tribal cultural resources would occur under the Revised Project, and no new mitigation is necessary.

3.19 UTILITIES AND SERVICE SYSTEMS

3.19.1 Evaluation

Section 2.19, *Utilities and Service Systems*, of the 2014 IS/MND evaluated the Approved Project's potential impacts related to utilities and service systems, including utility installation, water supply, wastewater generation, and solid waste generation. According to the 2014 IS/MND, the Approved Project would not impede the ability to maintain conformance with the site's existing WDR. The Approved Project would not require the use of substantial amounts of additional water, nor would it require additional entitlements for increased water supply. Further, it was concluded that the Approved Project's solid waste generation would be met by existing infrastructure and would not interfere with waste-reduction goals. Therefore, the 2014 IS/MND concluded that the Approved Project would result in less-than-significant impacts related to utilities and service systems.

The Revised Project would not increase the facility's existing processing capacity; therefore, the Revised Project would not increase the generation of process water at the site in a manner that could interfere with the existing WDR (Order No. 90-223), nor would it result in an increase in water usage, wastewater generation, or solid waste generation. The proposed wash water conveyance and monitoring infrastructure would be subject to mitigation measures identified throughout this addendum to reduce potential environmental impacts to less-than-significant levels. Therefore, the Revised Project would not result in any new or more severe impacts related to utilities and service systems than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.19.2 Conclusion

Potential impacts associated with utilities and service systems would be less than significant, and no mitigation is required. The Revised Project would not result in any new or more severe impacts related to utilities and service systems than were previously analyzed in the 2014 IS/MND, and no new mitigation is necessary.

3.20 WILDFIRE

3.20.1 Evaluation

At the time the 2014 IS/MND was prepared and certified, CEQA did not yet require the evaluation of a proposed project's impacts associated with wildfire as an independent section under State CEQA Guidelines Appendix G, Environmental Checklist Form. However, the Approved Project's potential impacts associated with exposure of people or structures to significant risk of loss, injury, or death involving wildland fires were evaluated in Section 2.10, *Hazards and Hazardous Materials*, of the 2014 IS/MND. The 2014 IS/MND stated that the project site is not located in an area with high or very high risk of wildland fire. The Approved Project site consisted of existing development, including large man-made ponds, which would reduce wildfire hazards within and adjacent to the project site. In addition, while potential fire risks may be increased during construction activities through use of equipment, fuels, and combustible materials, construction contractors would be required to comply with state regulations

pertaining to use, storage, and handling of combustible substances and the existing *Liberty Packing Company Hazardous Materials Business Plan* (HMBP) for the tomato processing facility, which also includes an emergency response plan. Based on compliance with these existing regulations, the 2014 IS/MND concluded that the Approved Project would have no impacts associated with exposure of people or structures to significant risks associated with wildland fires, and no mitigation was necessary.

Based on the 2022 Merced County State Responsibility Area Fire Hazard Severity Zones Map, the project is not located adjacent to or within a High or Very High Fire Hazard Severity Zone (CAL FIRE 2022). The Revised Project would be located within the footprint of the existing tomato processing facility and surrounding active agricultural land and would not extend into previously undeveloped areas or areas designated as having high or very high risk of wildland fire. Further, the project would be required to meet all applicable standards for fire prevention pursuant to the CBC and California Fire Code to reduce the risk of fire ignition at the project site. The Revised Project does not include the installation of new permanent features that could increase the risk of wildfire ignition at the project site. Potential fire risks may be slightly increased during construction activities through use of equipment, fuels, and combustible materials. Construction contractors would be required to comply with state regulations pertaining to use, storage, and handling of combustible substances and the existing HMBP for the tomato processing facility, which also includes an emergency response plan. The project would not result in a significant increase in vehicle trips or traffic or otherwise have the potential to adversely affect local emergency evacuation plans. Due to the developed and previously disturbed nature of the project site, the Revised Project would not increase risk associated with post-fire hazards such as downstream flooding, landslides, or slope instability. Therefore, the Revised Project would not exacerbate wildfire risk at the project site, and no new mitigation measures are necessary.

3.20.2 Conclusion

Based on required compliance with existing regulations, the Revised Project would result in less-than-significant impacts associated with wildfire. Therefore, the Revised Project would not result in any new or more severe impacts associated with wildfire, and no new mitigation is required.

4 CONCLUSION

The evaluation of all impact areas presented in Section 3 of this IS/MND Addendum indicate that the proposed modifications associated with the Revised Project would not result in any significant new information related to new significant impacts or a substantial increase in the severity of previously identified significant impacts beyond those identified in the 2014 IS/MND. An updated MMRP has been prepared for the Revised Project to clarify the applicability of mitigation measures as well as to reflect the most up to date regulatory requirements as needed (see Appendix B).

In summary, the analysis concludes that none of the conditions described in Section 15162 of the State CEQA Guidelines calling for preparation of a subsequent IS/MND have occurred, and, thus, an Addendum to the 2014 IS/MND is appropriate to satisfy CEQA requirements for the Revised Project. The evaluation presented in this IS/MND Addendum supports the finding that no circumstances or conditions requiring the preparation of a subsequent IS/MND are present in this case.

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Liberty Packing Expansion Project Mitigation Monitoring and Reporting Program

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
Air Quality				
MM AQ-1	<p>Prepare and implement a Dust Control Plan to comply with SJVAPCD Regulation VIII requirements to control construction emissions of PM10. <u>At the time of application for building permits, to control the generation of construction-related PM10 emissions, the primary construction contractors shall will-prepare and submit for approval a dust control plan to the San Joaquin Valley Air Control District (SJVAPCD) and submit evidence of plan approval to the County of Merced Community Development Department. No person shall perform any construction, demolition, excavation, extraction, or other earth-moving activities unless measures are sufficiently implemented to limit visible dust emissions (VDE) to 20% opacity and comply with the conditions for a stabilized surface area when applicable, at least 30 days prior to any earthmoving or construction activities. The dust control plan shall include measures, including, but not limited to: Potential measures that might be included in the dust control plan could include, but are not limited to:</u></p> <ul style="list-style-type: none"> a. <u>Pre-activity.</u> <ul style="list-style-type: none"> 1. <u>Pre-water the work site sufficient to limit VDE to 20 percent opacity, and</u> 2. <u>Phase work to reduce the amount of disturbed surface area at any one time.</u> b. <u>During Active operations.</u> <ul style="list-style-type: none"> 1. <u>Apply water or chemical/organic stabilizers/suppressants to dry areas during leveling, grading, trenching, and earthmoving activities to limit VDE to 20% opacity.</u> 2. <u>Construct and maintain wind barriers to limit VDE to 20% opacity. If utilizing wind barriers, control measure a.1 above shall also be implemented; and</u> 3. <u>Apply water or chemical/organic stabilizers/dust suppressants to the unpaved disturbed surface areas vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.</u> c. <u>Inactive operations, including after work hours, weekends, and holidays.</u> <ul style="list-style-type: none"> 1. <u>Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust.</u> d. <u>Temporary stabilization of areas that remain unused for seven or more days.</u> <ul style="list-style-type: none"> 1. <u>Restrict vehicular access to the area;</u> 2. <u>Apply and maintain water or chemical/organic stabilizers/dust suppressants, sufficient to comply with the conditions of a</u> 	The Construction Contractor prepare and submit for approval a dust control	At the time of application for building permits	Project Applicant, San Joaquin Valley Air Pollution Control District

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	<p><u>stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for 7 or more days, the area must comply with the conditions for a stabilized surface area as defined in Section 3.58 of Rule 8011, on all unvegetated areas.</u></p> <p>3. Establish vegetation on all previously disturbed areas.</p> <p>4. Apply and maintain gravel at all previously disturbed areas.</p> <p>5. Pave previously disturbed areas.</p> <p>e. Unpaved Access and haul roads, traffic and equipment storage areas.</p> <p>1. Apply water or dust suppressants to unpaved haul and access roads.</p> <p>2. Post a speed limit of not more than 15 miles per hour, using signs at each entrance and again every 500 feet.</p> <p>3. Water or dust suppressants will be applied to vehicle traffic and equipment storage areas.</p> <p>f. Wind events.</p> <p>1. Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.</p> <p>2. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.</p> <p>g. Outdoor handling of bulk materials.</p> <p>1. Water or dust suppressants will be applied when handling bulk materials.</p> <p>2. Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.</p> <p>h. Outdoor storage of bulk materials.</p> <p>1. Water or dust suppressants will be applied to storage piles.</p> <p>2. Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.</p> <p>3. Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.</p> <p>4. A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.</p> <p>i. On-site transporting of bulk materials.</p> <p>1. Vehicle speed will be limited on the work site.</p> <p>2. All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.</p>			

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	<ol style="list-style-type: none"> 3. A sufficient amount of water will be applied to the top of the load to limit visible dust emissions. 4. Haul trucks will be covered with a tarp or other suitable cover. <p>j. Off-site transporting of bulk materials.</p> <ol style="list-style-type: none"> 1. The following practices will be performed: <ul style="list-style-type: none"> ▪ The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site. ▪ Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented. <p>k. Outdoor transport using a chute or conveyor.</p> <ol style="list-style-type: none"> 1. No open chutes or conveyors will be used. 2. Chutes or conveyors will be fully enclosed. 3. Water spray equipment will be used to sufficiently wet the materials. 4. Transported materials will be washed or screened to remove fines (PM10 or smaller). 			
Cultural Resources				
MM CUL-1	Stop work if buried cultural deposits are encountered during construction activities. If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.	Cease ground disturbing activities and assess the find	If buried cultural resources are inadvertently discovered during ground-disturbing activities	Project Applicant
MM CUL-2	Stop work if buried paleontological resources are encountered during construction activities. If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.	Cease ground disturbing activities and assess the find	If buried paleontological resources are inadvertently discovered during ground-disturbing activities	Project Applicant
MM CUL-3	Stop work if human remains are encountered during construction activities. If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains	Cease ground disturbing activities and contact the County Coroner	If human skeletal remains are encountered; during ground disturbing	Project Applicant

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	<p>are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).</p> <ul style="list-style-type: none"> If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed. If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per Public Resources Code (PRC) 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement. <p>If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PRC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S Code sec. 7050.5, 7052.</p>		activities on the project site	
Greenhouse Gas Emissions				
MM GHG-1	<p>Implement GHG Best Management Practices for construction. The project applicant will require all construction contractors to implement the Best Management Practices to reduce GHG emissions. Emission reduction measures will include, at a minimum, the following three measures.</p> <ul style="list-style-type: none"> Use alternative-fueled (e.g., biodiesel, electric) construction vehicles/equipment for at least 15 percent of the fleet. Recycle at least 50 percent of construction waste. Use at least 10 percent local building materials (from within 100 miles of the project site). 	Implement Best Management Practices to reduce GHG emissions	During construction	Project Applicant

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APPENDIX C

Mitigation Monitoring and Reporting Program for Addendum #2 to the 2014 Initial Study/ Mitigated Negative Declaration

MITIGATION MONITORING AND REPORTING PROGRAM

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
<i>Air Quality</i>				
AQ-1	<p>Prepare and implement a Dust Control Plan to comply with SJVAPCD Regulation VIII requirements to control construction emissions of PM10. At the time of application for building permits, to control the generation of construction-related PM10 emissions, the primary construction contractor shall prepare and submit for approval a dust control plan to the San Joaquin Valley Air Control District (SJVAPCD) and submit evidence of plan approval to the County of Merced Community Development Department. No person shall perform any construction, demolition, excavation, extraction, or other earth-moving activities unless measures are sufficiently implemented to limit visible dust emissions (VDE) to 20% opacity and comply with the conditions for a stabilized surface area when applicable. The dust control plan shall include measures, including, but not limited to:</p> <ul style="list-style-type: none"> a. Pre-activity. <ul style="list-style-type: none"> 1. Pre-water the work site sufficient to limit VDE to 20 percent opacity, and 2. Phase work to reduce the amount of disturbed surface area at any one time. b. During active operations. <ul style="list-style-type: none"> 1. Apply water or chemical/organic stabilizers/suppressants to dry areas during leveling, grading, trenching, and earthmoving activities to limit VDE to 20% opacity. 2. Construct and maintain wind barriers to limit VDE to 20% opacity. If utilizing wind barriers, control measure a.1 above shall also be implemented; and 3. Apply water or chemical/organic stabilizers/dust suppressants to the unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface. c. Inactive operations, including after work hours, weekends, and holidays. <ul style="list-style-type: none"> 1. Apply water or dust suppressants on disturbed surface areas to form a visible crust, and vehicle access will be restricted to maintain the visible crust. 	Prepare and implement a Dust Control Plan	At the time of application for building permits, throughout project construction activities	County, Contractor, SJVAPCD

- d. Temporary stabilization of areas that remain unused for seven or more days.
 - 1. Restrict vehicular access to the area; Apply water or chemical/organic stabilizers/dust suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acre or more of disturbed surface area remains unused for 7 or more days, the area must comply with the conditions for a stabilized surface area as defined in Section 3.58 of Rule 8011.
- e. Wind events.
 - 1. Water application equipment will be used to apply water to control fugitive dust during wind events, unless unsafe to do so.
 - 2. Outdoor construction activities that disturb the soil will cease whenever visible dust emissions cannot be effectively controlled.
- f. Outdoor handling of bulk materials.
 - 1. Water or dust suppressants will be applied when handling bulk materials.
 - 2. Wind barriers with less than 50 percent porosity will be installed and maintained, and water or dust suppressants will be applied.
- g. Outdoor storage of bulk materials.
 - 1. Water or dust suppressants will be applied to storage piles.
 - 2. Storage piles will be covered with tarps, plastic, or other suitable material and anchored in such a manner that prevents the cover from being removed by wind action.
 - 3. Wind barriers with less than 50 percent porosity will be installed and maintained around the storage piles, and water or dust suppressants will be applied.
 - 4. A three-sided structure with less than 50 percent porosity that is at least as high as the storage piles will be used.
- h. On-site transporting of bulk materials.
 - 1. Vehicle speed will be limited on the work site.
 - 2. All haul trucks will be loaded such that the freeboard is not less than 6 inches when transported across any paved public access road.
 - 3. A sufficient amount of water will be applied to the top of the load to limit visible dust emissions.
 - 4. Haul trucks will be covered with a tarp or other suitable cover.
- i. Off-site transporting of bulk materials.
 - 1. The following practices will be performed:
 - The interior of emptied truck cargo compartments will be cleaned or covered before leaving the site.

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
	<ul style="list-style-type: none"> ▪ Spillage or loss of bulk materials from holes or other openings in the cargo compartment's floor, sides, and tailgates will be prevented. <p>j. Outdoor transport using a chute or conveyor.</p> <ol style="list-style-type: none"> 1. No open chutes or conveyors will be used. 2. Chutes or conveyors will be fully enclosed. 3. Water spray equipment will be used to sufficiently wet the materials. 4. Transported materials will be washed or screened to remove fines (PM10 or smaller). 			
Cultural and Tribal Cultural Resources				
CUL-1	<p>Stop work if buried cultural deposits are encountered during construction activities. If buried cultural resources such as chipped or ground stone, historic debris, or building foundations, are inadvertently discovered during ground-disturbing activities, work will stop in that area and within a 100-foot radius of the find until a qualified archaeologist can assess the significance of the find and, if necessary, develop a Response Plan, with appropriate treatment measures, in consultation with the County, the State Historic Preservation Officer (SHPO), and other appropriate agencies. Preservation in place shall be the preferred treatment method per CEQA Guidelines Section 15126.4(b) (avoidance, open space, capping, easement). Data recovery of important information about the resource, research, or other actions determined during consultation, is allowed if it is the only feasible treatment method.</p>	Stop work if buried cultural deposits are encountered	During construction activities	County, Contractor

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
CUL-3	<p>Stop work if human remains are encountered during construction activities. If human skeletal remains are encountered, ground disturbing activities stop within a 100 foot radius of the discovery. The County Coroner must be contacted immediately and is required to examine the discovery within 48 hours. If the County Coroner determines that the remains are Native American, the Coroner is required to contact the Native American Heritage Commission (NAHC) within 24 hours. A qualified archaeologist (QA) should also be contacted immediately. The Coroner is required to notify and seek out a treatment recommendation of the NAHC-designated Most Likely Descendant (MLD).</p> <ul style="list-style-type: none"> If the NAHC identifies an MLD, and the MLD makes a recommendation, and the landowner accepts the recommendation, then ground-disturbing activities may resume after the QA verifies and notifies the County that the recommendations have been completed. If the NAHC is unable to identify the MLD, or the MLD makes no recommendation, or the landowner rejects the recommendation, and mediation per Public Resources Code (PRC) 5094.98(k) fails, then ground disturbing activities may resume, but only after the QA verifies and notifies the County that the landowner has completely reinterred the human remains and items associated with Native American burials with appropriate dignity on the property, and ensures no further disturbance of the site per PRC 5097.98(e) by county recording, open space designation, or a conservation easement. If the coroner determines that no investigation of the cause of death is required and that the human remains are not Native American, then ground-disturbing activities may resume, after the Coroner informs the County of Merced of such determination. According to state law, six or more human burials at one location constitute a cemetery and disturbance of Native American cemeteries is a felony. Refs: PRC secs. 21083.2, 5094.98, 5097.5, 5097.9; H&S Code sec. 7050.5, 7052. 	Stop work if human remains are encountered	During construction activities	County, Contractor
Geology and Soils				

Mitigation Measure	Requirements of Measure	Compliance Method	Verification Timing	Responsible Party
CUL-2	Stop work if buried paleontological resources are encountered during construction activities. If buried paleontological resources are inadvertently discovered during ground-disturbing activities, work will stop in that area and within 100 feet of the find until a qualified paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies.	Stop work if buried paleontological resources are encountered	During construction activities	County, Contractor

APPENDIX D

CalEEMod Results

Liberty Packing Company Warehouse Detailed Report

Table of Contents

- 1. Basic Project Information
 - 1.1. Basic Project Information
 - 1.2. Land Use Types
 - 1.3. User-Selected Emission Reduction Measures by Emissions Sector
- 2. Emissions Summary
 - 2.1. Construction Emissions Compared Against Thresholds
 - 2.2. Construction Emissions by Year, Unmitigated
 - 2.4. Operations Emissions Compared Against Thresholds
 - 2.5. Operations Emissions by Sector, Unmitigated
- 3. Construction Emissions Details
 - 3.1. Demolition (2025) - Unmitigated
 - 3.3. Site Preparation (2025) - Unmitigated
 - 3.5. Grading (2025) - Unmitigated
 - 3.7. Building Construction (2025) - Unmitigated
 - 3.9. Building Construction (2026) - Unmitigated

3.11. Paving (2026) - Unmitigated

3.13. Architectural Coating (2026) - Unmitigated

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

4.3. Area Emissions by Source

4.3.1. Unmitigated

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

5. Activity Data

5.1. Construction Schedule

5.2. Off-Road Equipment

5.2.1. Unmitigated

5.3. Construction Vehicles

5.3.1. Unmitigated

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

5.5. Architectural Coatings

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

5.6.2. Construction Earthmoving Control Strategies

5.7. Construction Paving

5.8. Construction Electricity Consumption and Emissions Factors

5.9. Operational Mobile Sources

5.9.1. Unmitigated

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

5.10.3. Landscape Equipment

5.11. Operational Energy Consumption

5.11.1. Unmitigated

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

5.13. Operational Waste Generation

5.13.1. Unmitigated

5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

5.16.2. Process Boilers

5.17. User Defined

5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

5.18.2. Sequestration

5.18.2.1. Unmitigated

6. Climate Risk Detailed Report

6.1. Climate Risk Summary

6.2. Initial Climate Risk Scores

6.3. Adjusted Climate Risk Scores

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

7.2. Healthy Places Index Scores

7.3. Overall Health & Equity Scores

7.4. Health & Equity Measures

7.5. Evaluation Scorecard

7.6. Health & Equity Custom Measures

8. User Changes to Default Data

1. Basic Project Information

1.1. Basic Project Information

Data Field	Value
Project Name	Liberty Packing Company Warehouse
Construction Start Date	10/1/2025
Operational Year	2026
Lead Agency	—
Land Use Scale	Project/site
Analysis Level for Defaults	County
Windspeed (m/s)	2.80
Precipitation (days)	25.0
Location	37.110440373980396, -120.9465167300184
County	Merced
City	Unincorporated
Air District	San Joaquin Valley APCD
Air Basin	San Joaquin Valley
TAZ	2312
EDFZ	5
Electric Utility	Pacific Gas & Electric Company
Gas Utility	Pacific Gas & Electric
App Version	2022.1.1.28

1.2. Land Use Types

Land Use Subtype	Size	Unit	Lot Acreage	Building Area (sq ft)	Landscape Area (sq ft)	Special Landscape Area (sq ft)	Population	Description
Unrefrigerated Warehouse-Rail	400	1000sqft	9.18	400,000	0.00	0.00	—	—

1.3. User-Selected Emission Reduction Measures by Emissions Sector

No measures selected

2. Emissions Summary

2.1. Construction Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	155	12.0	14.5	0.04	0.40	0.55	0.95	0.37	0.15	0.52	—	4,169	4,169	0.12	0.26	4.65	4,255
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	3.37	31.7	30.8	0.08	1.37	7.76	9.12	1.26	3.96	5.22	—	11,342	11,342	0.22	1.33	0.54	11,746
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	5.46	3.78	4.55	0.01	0.13	0.35	0.48	0.12	0.14	0.26	—	1,266	1,266	0.04	0.08	0.59	1,290
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	1.00	0.69	0.83	< 0.005	0.02	0.06	0.09	0.02	0.03	0.05	—	210	210	0.01	0.01	0.10	214

2.2. Construction Emissions by Year, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Year	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily - Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2026	155	12.0	14.5	0.04	0.40	0.55	0.95	0.37	0.15	0.52	—	4,169	4,169	0.12	0.26	4.65	4,255

Daily - Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	3.37	31.7	30.8	0.08	1.37	7.76	9.12	1.26	3.96	5.22	—	11,342	11,342	0.22	1.33	0.54	11,746
2026	1.18	12.2	14.3	0.04	0.40	0.55	0.95	0.37	0.15	0.52	—	4,160	4,160	0.12	0.26	0.12	4,241
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.32	3.38	3.28	0.01	0.13	0.35	0.48	0.12	0.14	0.26	—	988	988	0.03	0.07	0.52	1,010
2026	5.46	3.78	4.55	0.01	0.13	0.16	0.29	0.12	0.04	0.16	—	1,266	1,266	0.04	0.08	0.59	1,290
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
2025	0.06	0.62	0.60	< 0.005	0.02	0.06	0.09	0.02	0.03	0.05	—	164	164	< 0.005	0.01	0.09	167
2026	1.00	0.69	0.83	< 0.005	0.02	0.03	0.05	0.02	0.01	0.03	—	210	210	0.01	0.01	0.10	214

2.4. Operations Emissions Compared Against Thresholds

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Un/Mit.	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	14.9	4.40	41.5	0.06	0.13	4.22	4.35	0.12	1.07	1.19	380	9,058	9,437	39.1	0.83	20.1	10,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	11.8	4.73	20.6	0.05	0.10	4.22	4.32	0.10	1.07	1.17	380	8,589	8,969	39.2	0.85	0.52	10,202
Average Daily (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	13.2	4.58	29.2	0.06	0.11	4.15	4.27	0.11	1.06	1.17	380	8,695	9,075	39.1	0.84	8.70	10,312
Annual (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unmit.	2.41	0.84	5.33	0.01	0.02	0.76	0.78	0.02	0.19	0.21	62.9	1,440	1,503	6.48	0.14	1.44	1,707

2.5. Operations Emissions by Sector, Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Sector	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.99	3.68	23.6	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,623	5,623	0.21	0.34	20.1	5,751
Area	11.9	0.15	17.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	71.5	71.5	< 0.005	< 0.005	—	71.8
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	3,194	3,194	0.47	0.05	—	3,221
Water	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Waste	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Off-Road	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	14.9	4.40	41.5	0.06	0.13	4.22	4.35	0.12	1.07	1.19	380	9,058	9,437	39.1	0.83	20.1	10,683
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.69	4.15	20.1	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,227	5,227	0.25	0.36	0.52	5,341
Area	9.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	3,194	3,194	0.47	0.05	—	3,221
Water	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Waste	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Off-Road	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	11.8	4.73	20.6	0.05	0.10	4.22	4.32	0.10	1.07	1.17	380	8,589	8,969	39.2	0.85	0.52	10,202
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	2.72	3.93	20.2	0.05	0.06	4.15	4.21	0.05	1.06	1.11	—	5,329	5,329	0.23	0.35	8.70	5,448
Area	10.5	0.07	8.58	< 0.005	0.02	—	0.02	0.01	—	0.01	—	35.3	35.3	< 0.005	< 0.005	—	35.4
Energy	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	3,163	3,163	0.46	0.05	—	3,189
Water	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Waste	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709

Off-Road	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	13.2	4.58	29.2	0.06	0.11	4.15	4.27	0.11	1.06	1.17	380	8,695	9,075	39.1	0.84	8.70	10,312
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Mobile	0.50	0.72	3.68	0.01	0.01	0.76	0.77	0.01	0.19	0.20	—	882	882	0.04	0.06	1.44	902
Area	1.91	0.01	1.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.84	5.84	< 0.005	< 0.005	—	5.86
Energy	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	524	524	0.08	0.01	—	528
Water	—	—	—	—	—	—	—	—	—	—	29.3	27.9	57.2	3.01	0.07	—	154
Waste	—	—	—	—	—	—	—	—	—	—	33.5	0.00	33.5	3.35	0.00	—	117
Off-Road	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	2.41	0.84	5.33	0.01	0.02	0.76	0.78	0.02	0.19	0.21	62.9	1,440	1,503	6.48	0.14	1.44	1,707

3. Construction Emissions Details

3.1. Demolition (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	2.40	22.2	19.9	0.03	0.92	—	0.92	0.84	—	0.84	—	3,425	3,425	0.14	0.03	—	3,437
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.08	0.73	0.66	< 0.005	0.03	—	0.03	0.03	—	0.03	—	113	113	< 0.005	< 0.005	—	113
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.13	0.12	< 0.005	0.01	—	0.01	0.01	—	0.01	—	18.6	18.6	< 0.005	< 0.005	—	18.7
Demolition	—	—	—	—	—	0.00	0.00	—	0.00	0.00	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.58	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.3	91.3	0.01	< 0.005	0.01	92.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	0.01	3.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.3. Site Preparation (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	3.31	31.6	30.2	0.05	1.37	—	1.37	1.26	—	1.26	—	5,295	5,295	0.21	0.04	—	5,314
Dust From Material Movement	—	—	—	—	—	7.67	7.67	—	3.94	3.94	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.05	0.52	0.50	< 0.005	0.02	—	0.02	0.02	—	0.02	—	87.0	87.0	< 0.005	< 0.005	—	87.3
Dust From Material Movement	—	—	—	—	—	0.13	0.13	—	0.06	0.06	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.09	0.09	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	14.4	14.4	< 0.005	< 0.005	—	14.5
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.58	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.3	91.3	0.01	< 0.005	0.01	92.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.55	1.55	< 0.005	< 0.005	< 0.005	1.57
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.26	0.26	< 0.005	< 0.005	< 0.005	0.26
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.5. Grading (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.74	16.3	17.9	0.03	0.72	—	0.72	0.66	—	0.66	—	2,959	2,959	0.12	0.02	—	2,970
Dust From Material Movement	—	—	—	—	—	2.78	2.78	—	1.34	1.34	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.54	0.59	< 0.005	0.02	—	0.02	0.02	—	0.02	—	97.3	97.3	< 0.005	< 0.005	—	97.6
Dust From Material Movement	—	—	—	—	—	0.09	0.09	—	0.04	0.04	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.01	0.10	0.11	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	16.1	16.1	< 0.005	< 0.005	—	16.2
Dust From Material Movement	—	—	—	—	—	0.02	0.02	—	0.01	0.01	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.58	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.3	91.3	0.01	< 0.005	0.01	92.6
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

Hauling	0.14	10.5	2.18	0.06	0.16	2.22	2.38	0.16	0.61	0.77	—	8,292	8,292	0.07	1.31	0.53	8,684
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.09	3.09	< 0.005	< 0.005	0.01	3.14
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.34	0.07	< 0.005	0.01	0.07	0.08	0.01	0.02	0.03	—	272	272	< 0.005	0.04	0.29	286
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.51	0.51	< 0.005	< 0.005	< 0.005	0.52
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	< 0.005	0.06	0.01	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	45.1	45.1	< 0.005	0.01	0.05	47.3

3.7. Building Construction (2025) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.13	10.4	13.0	0.02	0.43	—	0.43	0.40	—	0.40	—	2,398	2,398	0.10	0.02	—	2,406
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.11	1.02	1.28	< 0.005	0.04	—	0.04	0.04	—	0.04	—	235	235	0.01	< 0.005	—	235
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	0.02	0.19	0.23	< 0.005	0.01	—	0.01	0.01	—	0.01	—	38.8	38.8	< 0.005	< 0.005	—	39.0
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.06	0.58	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	91.3	91.3	0.01	< 0.005	0.01	92.6
Vendor	0.07	2.40	0.88	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,704	1,704	0.02	0.25	0.12	1,780
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.01	0.01	0.06	0.00	0.00	0.01	0.01	0.00	< 0.005	< 0.005	—	9.21	9.21	< 0.005	< 0.005	0.02	9.36
Vendor	0.01	0.23	0.08	< 0.005	< 0.005	0.04	0.05	< 0.005	0.01	0.01	—	167	167	< 0.005	0.02	0.20	174
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.01	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	1.52	1.52	< 0.005	< 0.005	< 0.005	1.55
Vendor	< 0.005	0.04	0.02	< 0.005	< 0.005	0.01	0.01	< 0.005	< 0.005	< 0.005	—	27.6	27.6	< 0.005	< 0.005	0.03	28.8
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.9. Building Construction (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	1.07	9.85	13.0	0.02	0.38	—	0.38	0.35	—	0.35	—	2,397	2,397	0.10	0.02	—	2,405
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.31	2.85	3.76	0.01	0.11	—	0.11	0.10	—	0.10	—	694	694	0.03	0.01	—	697
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.06	0.52	0.69	< 0.005	0.02	—	0.02	0.02	—	0.02	—	115	115	< 0.005	< 0.005	—	115
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.70	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	100	100	0.01	< 0.005	0.38	102
Vendor	0.06	2.15	0.80	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,672	1,672	0.02	0.24	4.27	1,748
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.05	0.05	0.53	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	89.4	89.4	0.01	< 0.005	0.01	90.7
Vendor	0.06	2.29	0.82	0.01	0.02	0.45	0.48	0.02	0.13	0.15	—	1,673	1,673	0.02	0.24	0.11	1,745

Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.02	0.01	0.16	0.00	0.00	0.03	0.03	0.00	0.01	0.01	—	26.7	26.7	< 0.005	< 0.005	0.05	27.1
Vendor	0.02	0.65	0.23	< 0.005	0.01	0.13	0.14	0.01	0.04	0.04	—	484	484	0.01	0.07	0.53	506
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.03	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	4.42	4.42	< 0.005	< 0.005	0.01	4.49
Vendor	< 0.005	0.12	0.04	< 0.005	< 0.005	0.02	0.02	< 0.005	0.01	0.01	—	80.2	80.2	< 0.005	0.01	0.09	83.7
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.11. Paving (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.76	7.12	9.94	0.01	0.32	—	0.32	0.29	—	0.29	—	1,511	1,511	0.06	0.01	—	1,516
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.03	0.23	0.33	< 0.005	0.01	—	0.01	0.01	—	0.01	—	49.7	49.7	< 0.005	< 0.005	—	49.8
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.04	0.06	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	8.22	8.22	< 0.005	< 0.005	—	8.25
Paving	0.00	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	0.06	0.04	0.70	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	100	100	0.01	< 0.005	0.38	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	0.01	3.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

3.13. Architectural Coating (2026) - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Location	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
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Onsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	0.12	0.86	1.13	< 0.005	0.02	—	0.02	0.02	—	0.02	—	134	134	0.01	< 0.005	—	134
Architectural Coatings	155	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.03	0.04	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	4.39	4.39	< 0.005	< 0.005	—	4.40
Architectural Coatings	5.08	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Off-Road Equipment	< 0.005	0.01	0.01	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	0.73	0.73	< 0.005	< 0.005	—	0.73
Architectural Coatings	0.93	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Onsite truck	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Offsite	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Worker	0.06	0.04	0.70	0.00	0.00	0.09	0.09	0.00	0.02	0.02	—	100	100	0.01	< 0.005	0.38	102
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Average Daily	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	0.02	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	3.03	3.03	< 0.005	< 0.005	0.01	3.08
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Worker	< 0.005	< 0.005	< 0.005	0.00	0.00	< 0.005	< 0.005	0.00	< 0.005	< 0.005	—	0.50	0.50	< 0.005	< 0.005	< 0.005	0.51
Vendor	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00
Hauling	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	0.00	0.00	0.00	0.00

4. Operations Emissions Details

4.1. Mobile Emissions by Land Use

4.1.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	2.99	3.68	23.6	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,623	5,623	0.21	0.34	20.1	5,751
Total	2.99	3.68	23.6	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,623	5,623	0.21	0.34	20.1	5,751

Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	2.69	4.15	20.1	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,227	5,227	0.25	0.36	0.52	5,341
Total	2.69	4.15	20.1	0.05	0.06	4.22	4.27	0.05	1.07	1.13	—	5,227	5,227	0.25	0.36	0.52	5,341
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	0.50	0.72	3.68	0.01	0.01	0.76	0.77	0.01	0.19	0.20	—	882	882	0.04	0.06	1.44	902
Total	0.50	0.72	3.68	0.01	0.01	0.76	0.77	0.01	0.19	0.20	—	882	882	0.04	0.06	1.44	902

4.2. Energy

4.2.1. Electricity Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	2,401	2,401	0.39	0.05	—	2,425
undefined	—	—	—	—	—	—	—	—	—	—	—	110	110	0.02	< 0.005	—	111
Total	—	—	—	—	—	—	—	—	—	—	—	2,510	2,510	0.41	0.05	—	2,535
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Unrefrigerated	—	—	—	—	—	—	—	—	—	—	—	2,401	2,401	0.39	0.05	—	2,425
undefined	—	—	—	—	—	—	—	—	—	—	—	110	110	0.02	< 0.005	—	111
Total	—	—	—	—	—	—	—	—	—	—	—	2,510	2,510	0.41	0.05	—	2,535
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	—	397	397	0.06	0.01	—	401
undefined	—	—	—	—	—	—	—	—	—	—	—	12.9	12.9	< 0.005	< 0.005	—	13.0
Total	—	—	—	—	—	—	—	—	—	—	—	410	410	0.07	0.01	—	414

4.2.3. Natural Gas Emissions By Land Use - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Total	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686
Total	0.03	0.57	0.48	< 0.005	0.04	—	0.04	0.04	—	0.04	—	684	684	0.06	< 0.005	—	686

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	113	113	0.01	< 0.005	—	114
Total	0.01	0.10	0.09	< 0.005	0.01	—	0.01	0.01	—	0.01	—	113	113	0.01	< 0.005	—	114

4.3. Area Emissions by Source

4.3.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Source	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	8.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	2.86	0.15	17.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	71.5	71.5	< 0.005	< 0.005	—	71.8
Total	11.9	0.15	17.4	< 0.005	0.03	—	0.03	0.02	—	0.02	—	71.5	71.5	< 0.005	< 0.005	—	71.8
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	8.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.51	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Total	9.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Consumer Products	1.56	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Architectural Coatings	0.09	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Landscape Equipment	0.26	0.01	1.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.84	5.84	< 0.005	< 0.005	—	5.86
Total	1.91	0.01	1.57	< 0.005	< 0.005	—	< 0.005	< 0.005	—	< 0.005	—	5.84	5.84	< 0.005	< 0.005	—	5.86

4.4. Water Emissions by Land Use

4.4.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Total	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931

Total	—	—	—	—	—	—	—	—	—	—	177	169	346	18.2	0.44	—	931
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	29.3	27.9	57.2	3.01	0.07	—	154
Total	—	—	—	—	—	—	—	—	—	—	29.3	27.9	57.2	3.01	0.07	—	154

4.5. Waste Emissions by Land Use

4.5.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Total	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Total	—	—	—	—	—	—	—	—	—	—	203	0.00	203	20.3	0.00	—	709
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Unrefrigerated Warehouse-Rail	—	—	—	—	—	—	—	—	—	—	33.5	0.00	33.5	3.35	0.00	—	117

Total	—	—	—	—	—	—	—	—	—	—	33.5	0.00	33.5	3.35	0.00	—	117
-------	---	---	---	---	---	---	---	---	---	---	------	------	------	------	------	---	-----

4.6. Refrigerant Emissions by Land Use

4.6.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.7. Offroad Emissions By Equipment Type

4.7.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Aerial Lifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Aerial Lifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Forklifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Aerial Lifts	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00
Total	0.00	0.00	0.00	0.00	0.00	—	0.00	0.00	—	0.00	—	0.00	0.00	0.00	0.00	—	0.00

4.8. Stationary Emissions By Equipment Type

4.8.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.9. User Defined Emissions By Equipment Type

4.9.1. Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Equipment Type	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10. Soil Carbon Accumulation By Vegetation Type

4.10.1. Soil Carbon Accumulation By Vegetation Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Vegetation	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.2. Above and Belowground Carbon Accumulation by Land Use Type - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Land Use	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

4.10.3. Avoided and Sequestered Emissions by Species - Unmitigated

Criteria Pollutants (lb/day for daily, ton/yr for annual) and GHGs (lb/day for daily, MT/yr for annual)

Species	ROG	NOx	CO	SO2	PM10E	PM10D	PM10T	PM2.5E	PM2.5D	PM2.5T	BCO2	NBCO2	CO2T	CH4	N2O	R	CO2e
Daily, Summer (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequestered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Removed	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Daily, Winter (Max)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Annual	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Avoided	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Sequest ered	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Remove d	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Subtotal	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

5. Activity Data

5.1. Construction Schedule

Phase Name	Phase Type	Start Date	End Date	Days Per Week	Work Days per Phase	Phase Description
Demolition	Demolition	10/1/2025	10/16/2025	5.00	12.0	—

Site Preparation	Site Preparation	10/17/2025	10/24/2025	5.00	6.00	—
Grading	Grading	10/25/2025	11/11/2025	5.00	12.0	—
Building Construction	Building Construction	11/12/2025	5/28/2026	5.00	142	—
Paving	Paving	5/29/2026	6/15/2026	5.00	12.0	—
Architectural Coating	Architectural Coating	6/16/2026	7/1/2026	5.00	12.0	—

5.2. Off-Road Equipment

5.2.1. Unmitigated

Phase Name	Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Demolition	Rubber Tired Dozers	Diesel	Average	2.00	8.00	367	0.40
Demolition	Excavators	Diesel	Average	3.00	8.00	36.0	0.38
Demolition	Concrete/Industrial Saws	Diesel	Average	1.00	8.00	33.0	0.73
Site Preparation	Rubber Tired Dozers	Diesel	Average	3.00	8.00	367	0.40
Site Preparation	Tractors/Loaders/Back hoes	Diesel	Average	4.00	8.00	84.0	0.37
Grading	Graders	Diesel	Average	1.00	8.00	148	0.41
Grading	Excavators	Diesel	Average	1.00	8.00	36.0	0.38
Grading	Tractors/Loaders/Back hoes	Diesel	Average	3.00	8.00	84.0	0.37
Grading	Rubber Tired Dozers	Diesel	Average	1.00	8.00	367	0.40
Building Construction	Forklifts	Diesel	Average	3.00	8.00	82.0	0.20
Building Construction	Generator Sets	Diesel	Average	1.00	8.00	14.0	0.74
Building Construction	Cranes	Diesel	Average	1.00	7.00	367	0.29
Building Construction	Welders	Diesel	Average	1.00	8.00	46.0	0.45
Building Construction	Tractors/Loaders/Back hoes	Diesel	Average	3.00	7.00	84.0	0.37
Paving	Pavers	Diesel	Average	2.00	8.00	81.0	0.42
Paving	Paving Equipment	Diesel	Average	2.00	8.00	89.0	0.36

Paving	Rollers	Diesel	Average	2.00	8.00	36.0	0.38
Architectural Coating	Air Compressors	Diesel	Average	1.00	6.00	37.0	0.48

5.3. Construction Vehicles

5.3.1. Unmitigated

Phase Name	Trip Type	One-Way Trips per Day	Miles per Trip	Vehicle Mix
Demolition	—	—	—	—
Demolition	Worker	12.0	10.9	LDA,LDT1,LDT2
Demolition	Vendor	—	8.27	HHDT,MHDT
Demolition	Hauling	0.00	20.0	HHDT
Demolition	Onsite truck	—	—	HHDT
Site Preparation	—	—	—	—
Site Preparation	Worker	12.0	10.9	LDA,LDT1,LDT2
Site Preparation	Vendor	—	8.27	HHDT,MHDT
Site Preparation	Hauling	0.00	20.0	HHDT
Site Preparation	Onsite truck	—	—	HHDT
Grading	—	—	—	—
Grading	Worker	12.0	10.9	LDA,LDT1,LDT2
Grading	Vendor	—	8.27	HHDT,MHDT
Grading	Hauling	120	20.0	HHDT
Grading	Onsite truck	—	—	HHDT
Building Construction	—	—	—	—
Building Construction	Worker	12.0	10.9	LDA,LDT1,LDT2
Building Construction	Vendor	65.6	8.27	HHDT,MHDT
Building Construction	Hauling	0.00	20.0	HHDT
Building Construction	Onsite truck	—	—	HHDT
Paving	—	—	—	—

Paving	Worker	12.0	10.9	LDA,LDT1,LDT2
Paving	Vendor	—	8.27	HHDT,MHDT
Paving	Hauling	0.00	20.0	HHDT
Paving	Onsite truck	—	—	HHDT
Architectural Coating	—	—	—	—
Architectural Coating	Worker	12.0	10.9	LDA,LDT1,LDT2
Architectural Coating	Vendor	—	8.27	HHDT,MHDT
Architectural Coating	Hauling	0.00	20.0	HHDT
Architectural Coating	Onsite truck	—	—	HHDT

5.4. Vehicles

5.4.1. Construction Vehicle Control Strategies

Control Strategies Applied	PM10 Reduction	PM2.5 Reduction
Limit vehicle speeds on unpaved roads to 25 mph	44%	44%

5.5. Architectural Coatings

Phase Name	Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
Architectural Coating	0.00	0.00	600,000	200,000	—

5.6. Dust Mitigation

5.6.1. Construction Earthmoving Activities

Phase Name	Material Imported (cy)	Material Exported (cy)	Acres Graded (acres)	Material Demolished (sq. ft.)	Acres Paved (acres)
Demolition	0.00	0.00	0.00	—	—
Site Preparation	—	—	9.00	0.00	—
Grading	10,000	—	12.0	0.00	—

Paving	0.00	0.00	0.00	0.00	0.00
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5.6.2. Construction Earthmoving Control Strategies

Control Strategies Applied	Frequency (per day)	PM10 Reduction	PM2.5 Reduction
Water Exposed Area	2	61%	61%

5.7. Construction Paving

Land Use	Area Paved (acres)	% Asphalt
Unrefrigerated Warehouse-Rail	0.00	0%

5.8. Construction Electricity Consumption and Emissions Factors

kWh per Year and Emission Factor (lb/MWh)

Year	kWh per Year	CO2	CH4	N2O
2025	0.00	204	0.03	< 0.005
2026	0.00	204	0.03	< 0.005

5.9. Operational Mobile Sources

5.9.1. Unmitigated

Land Use Type	Trips/Weekday	Trips/Saturday	Trips/Sunday	Trips/Year	VMt/Weekday	VMt/Saturday	VMt/Sunday	VMt/Year
Unrefrigerated Warehouse-Rail	696	696	696	254,040	5,891	5,891	5,891	2,150,182

5.10. Operational Area Sources

5.10.1. Hearths

5.10.1.1. Unmitigated

5.10.2. Architectural Coatings

Residential Interior Area Coated (sq ft)	Residential Exterior Area Coated (sq ft)	Non-Residential Interior Area Coated (sq ft)	Non-Residential Exterior Area Coated (sq ft)	Parking Area Coated (sq ft)
0	0.00	600,000	200,000	—

5.10.3. Landscape Equipment

Season	Unit	Value
Snow Days	day/yr	0.00
Summer Days	day/yr	180

5.11. Operational Energy Consumption

5.11.1. Unmitigated

Electricity (kWh/yr) and CO2 and CH4 and N2O and Natural Gas (kBTU/yr)

Land Use	Electricity (kWh/yr)	CO2	CH4	N2O	Natural Gas (kBTU/yr)
Unrefrigerated Warehouse-Rail	4,295,926	204	0.0330	0.0040	2,133,660

5.12. Operational Water and Wastewater Consumption

5.12.1. Unmitigated

Land Use	Indoor Water (gal/year)	Outdoor Water (gal/year)
Unrefrigerated Warehouse-Rail	92,500,000	0.00

5.13. Operational Waste Generation

5.13.1. Unmitigated

Land Use	Waste (ton/year)	Cogeneration (kWh/year)
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Unrefrigerated Warehouse-Rail	376	—
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5.14. Operational Refrigeration and Air Conditioning Equipment

5.14.1. Unmitigated

Land Use Type	Equipment Type	Refrigerant	GWP	Quantity (kg)	Operations Leak Rate	Service Leak Rate	Times Serviced
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5.15. Operational Off-Road Equipment

5.15.1. Unmitigated

Equipment Type	Fuel Type	Engine Tier	Number per Day	Hours Per Day	Horsepower	Load Factor
Forklifts	Electric	Average	3.00	10.0	82.0	0.20
Aerial Lifts	Electric	Average	2.00	8.00	46.0	0.31

5.16. Stationary Sources

5.16.1. Emergency Generators and Fire Pumps

Equipment Type	Fuel Type	Number per Day	Hours per Day	Hours per Year	Horsepower	Load Factor
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5.16.2. Process Boilers

Equipment Type	Fuel Type	Number	Boiler Rating (MMBtu/hr)	Daily Heat Input (MMBtu/day)	Annual Heat Input (MMBtu/yr)
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5.17. User Defined

Equipment Type	Fuel Type
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5.18. Vegetation

5.18.1. Land Use Change

5.18.1.1. Unmitigated

Vegetation Land Use Type	Vegetation Soil Type	Initial Acres	Final Acres
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5.18.1. Biomass Cover Type

5.18.1.1. Unmitigated

Biomass Cover Type	Initial Acres	Final Acres
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5.18.2. Sequestration

5.18.2.1. Unmitigated

Tree Type	Number	Electricity Saved (kWh/year)	Natural Gas Saved (btu/year)
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6. Climate Risk Detailed Report

6.1. Climate Risk Summary

Cal-Adapt midcentury 2040–2059 average projections for four hazards are reported below for your project location. These are under Representation Concentration Pathway (RCP) 8.5 which assumes GHG emissions will continue to rise strongly through 2050 and then plateau around 2100.

Climate Hazard	Result for Project Location	Unit
Temperature and Extreme Heat	31.1	annual days of extreme heat
Extreme Precipitation	1.00	annual days with precipitation above 20 mm
Sea Level Rise	—	meters of inundation depth
Wildfire	17.6	annual hectares burned

Temperature and Extreme Heat data are for grid cell in which your project are located. The projection is based on the 98th historical percentile of daily maximum/minimum temperatures from observed historical data (32 climate model ensemble from Cal-Adapt, 2040–2059 average under RCP 8.5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi. Extreme Precipitation data are for the grid cell in which your project are located. The threshold of 20 mm is equivalent to about ¾ an inch of rain, which would be light to moderate rainfall if received over a full day or heavy rain if received over a period of 2 to 4 hours. Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

Sea Level Rise data are for the grid cell in which your project are located. The projections are from Radke et al. (2017), as reported in Cal-Adapt (Radke et al., 2017, CEC-500-2017-008), and consider inundation location and depth for the San Francisco Bay, the Sacramento-San Joaquin River Delta and California coast resulting different increments of sea level rise coupled with extreme storm events. Users may select from four scenarios to view the range in potential inundation depth for the grid cell. The four scenarios are: No rise, 0.5 meter, 1.0 meter, 1.41 meters

Wildfire data are for the grid cell in which your project are located. The projections are from UC Davis, as reported in Cal-Adapt (2040–2059 average under RCP 8.5), and consider historical data of climate, vegetation, population density, and large (> 400 ha) fire history. Users may select from four model simulations to view the range in potential wildfire probabilities for the grid cell. The four simulations make different assumptions about expected rainfall and temperature are: Warmer/drier (HadGEM2-ES), Cooler/wetter (CNRM-CM5), Average conditions (CanESM2), Range of different rainfall and temperature possibilities (MIROC5). Each grid cell is 6 kilometers (km) by 6 km, or 3.7 miles (mi) by 3.7 mi.

6.2. Initial Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A
Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores do not include implementation of climate risk reduction measures.

6.3. Adjusted Climate Risk Scores

Climate Hazard	Exposure Score	Sensitivity Score	Adaptive Capacity Score	Vulnerability Score
Temperature and Extreme Heat	N/A	N/A	N/A	N/A
Extreme Precipitation	N/A	N/A	N/A	N/A
Sea Level Rise	N/A	N/A	N/A	N/A
Wildfire	N/A	N/A	N/A	N/A
Flooding	N/A	N/A	N/A	N/A
Drought	N/A	N/A	N/A	N/A

Snowpack Reduction	N/A	N/A	N/A	N/A
Air Quality Degradation	N/A	N/A	N/A	N/A

The sensitivity score reflects the extent to which a project would be adversely affected by exposure to a climate hazard. Exposure is rated on a scale of 1 to 5, with a score of 5 representing the greatest exposure.

The adaptive capacity of a project refers to its ability to manage and reduce vulnerabilities from projected climate hazards. Adaptive capacity is rated on a scale of 1 to 5, with a score of 5 representing the greatest ability to adapt.

The overall vulnerability scores are calculated based on the potential impacts and adaptive capacity assessments for each hazard. Scores include implementation of climate risk reduction measures.

6.4. Climate Risk Reduction Measures

7. Health and Equity Details

7.1. CalEnviroScreen 4.0 Scores

The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Exposure Indicators	—
AQ-Ozone	55.4
AQ-PM	12.0
AQ-DPM	19.2
Drinking Water	99.0
Lead Risk Housing	48.2
Pesticides	80.8
Toxic Releases	5.71
Traffic	54.8
Effect Indicators	—
CleanUp Sites	59.0
Groundwater	97.3
Haz Waste Facilities/Generators	7.35
Impaired Water Bodies	96.3
Solid Waste	93.2

Sensitive Population	—
Asthma	93.0
Cardio-vascular	67.6
Low Birth Weights	23.7
Socioeconomic Factor Indicators	—
Education	85.2
Housing	46.5
Linguistic	84.5
Poverty	69.3
Unemployment	95.7

7.2. Healthy Places Index Scores

The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

Indicator	Result for Project Census Tract
Economic	—
Above Poverty	18.76042602
Employed	36.78942641
Median HI	22.76401899
Education	—
Bachelor's or higher	6.236365969
High school enrollment	12.44706788
Preschool enrollment	26.60079559
Transportation	—
Auto Access	36.01950468
Active commuting	66.59822918
Social	—
2-parent households	2.55357372
Voting	40.85717952

Neighborhood	—
Alcohol availability	69.80623637
Park access	6.13370974
Retail density	0.384960862
Supermarket access	15.46259464
Tree canopy	6.608494803
Housing	—
Homeownership	38.3036058
Housing habitability	67.2783267
Low-inc homeowner severe housing cost burden	45.47670987
Low-inc renter severe housing cost burden	89.54189657
Uncrowded housing	37.31553959
Health Outcomes	—
Insured adults	31.25882202
Arthritis	0.0
Asthma ER Admissions	15.6
High Blood Pressure	0.0
Cancer (excluding skin)	0.0
Asthma	0.0
Coronary Heart Disease	0.0
Chronic Obstructive Pulmonary Disease	0.0
Diagnosed Diabetes	0.0
Life Expectancy at Birth	19.6
Cognitively Disabled	52.2
Physically Disabled	42.3
Heart Attack ER Admissions	12.0
Mental Health Not Good	0.0
Chronic Kidney Disease	0.0

Obesity	0.0
Pedestrian Injuries	96.5
Physical Health Not Good	0.0
Stroke	0.0
Health Risk Behaviors	—
Binge Drinking	0.0
Current Smoker	0.0
No Leisure Time for Physical Activity	0.0
Climate Change Exposures	—
Wildfire Risk	0.0
SLR Inundation Area	0.0
Children	16.3
Elderly	81.3
English Speaking	12.7
Foreign-born	56.9
Outdoor Workers	2.7
Climate Change Adaptive Capacity	—
Impervious Surface Cover	91.3
Traffic Density	26.9
Traffic Access	0.0
Other Indices	—
Hardship	81.4
Other Decision Support	—
2016 Voting	63.6

7.3. Overall Health & Equity Scores

Metric	Result for Project Census Tract
CalEnviroScreen 4.0 Score for Project Location (a)	85.0

Healthy Places Index Score for Project Location (b)	16.0
Project Located in a Designated Disadvantaged Community (Senate Bill 535)	Yes
Project Located in a Low-Income Community (Assembly Bill 1550)	Yes
Project Located in a Community Air Protection Program Community (Assembly Bill 617)	No

a: The maximum CalEnviroScreen score is 100. A high score (i.e., greater than 50) reflects a higher pollution burden compared to other census tracts in the state.
 b: The maximum Health Places Index score is 100. A high score (i.e., greater than 50) reflects healthier community conditions compared to other census tracts in the state.

7.4. Health & Equity Measures

No Health & Equity Measures selected.

7.5. Evaluation Scorecard

Health & Equity Evaluation Scorecard not completed.

7.6. Health & Equity Custom Measures

No Health & Equity Custom Measures created.

8. User Changes to Default Data

Screen	Justification
Construction: Construction Phases	Construction schedule of October 2025 through June 2026
Construction: Trips and VMT	Per construction RFI - 12 workers on average and 120 truck trips
Operations: Off-Road Equipment	Per operations RFI - three forklift-electric- 10hrs a day, two lifts- electric- 10 hrs a day

APPENDIX E

IPaC, CNDDDB, and CNPS Species Lists

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Merced County, California



Local office

Sacramento Fish And Wildlife Office

☎ (916) 414-6600

📅 (916) 414-6713

Federal Building
2800 Cottage Way, Room W-2605
Sacramento, CA 95825-1846

NOT FOR CONSULTATION

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact [NOAA Fisheries](#) for [species under their jurisdiction](#).

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1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).

2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
<p>Fresno Kangaroo Rat <i>Dipodomys nitratoides exilis</i></p> <p>Wherever found</p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/5150</p>	Endangered
<p>San Joaquin Kit Fox <i>Vulpes macrotis mutica</i></p> <p>Wherever found</p> <p>No critical habitat has been designated for this species.</p> <p>https://ecos.fws.gov/ecp/species/2873</p>	Endangered

Birds

NAME	STATUS
<p>California Condor <i>Gymnogyps californianus</i></p> <p>There is final critical habitat for this species. Your location does not overlap the critical habitat.</p> <p>https://ecos.fws.gov/ecp/species/8193</p>	Endangered

Reptiles

NAME	STATUS
<p>Blunt-nosed Leopard Lizard <i>Gambelia silus</i></p> <p>Wherever found</p> <p>No critical habitat has been designated for this species.</p> <p>https://ecos.fws.gov/ecp/species/625</p>	Endangered
<p>Giant Garter Snake <i>Thamnophis gigas</i></p> <p>Wherever found</p> <p>No critical habitat has been designated for this species.</p> <p>https://ecos.fws.gov/ecp/species/4482</p>	Threatened

Northwestern Pond Turtle *Actinemys marmorata*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/1111>

Amphibians

NAME

STATUS

California Tiger Salamander *Ambystoma californiense*

Threatened

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<https://ecos.fws.gov/ecp/species/2076>Western Spadefoot *Spea hammondi*

Proposed Threatened

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/5425>

Insects

NAME

STATUS

Monarch Butterfly *Danaus plexippus*

Candidate

Wherever found

No critical habitat has been designated for this species.

<https://ecos.fws.gov/ecp/species/9743>Valley Elderberry Longhorn Beetle *Desmocerus californicus dimorphus*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<https://ecos.fws.gov/ecp/species/7850>

Crustaceans

NAME

STATUS

Vernal Pool Fairy Shrimp *Branchinecta lynchi*

Threatened

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.<https://ecos.fws.gov/ecp/species/498>

Vernal Pool Tadpole Shrimp *Lepidurus packardii*

Endangered

Wherever found

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.

<https://ecos.fws.gov/ecp/species/2246>

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>
- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds
<https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

There are likely bald eagles present in your project area. For additional information on bald eagles, refer to [Bald Eagle Nesting and Sensitivity to Human Activity](#)

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Golden Eagle *Aquila chrysaetos*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1680>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted

- Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
 - The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (🟡)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

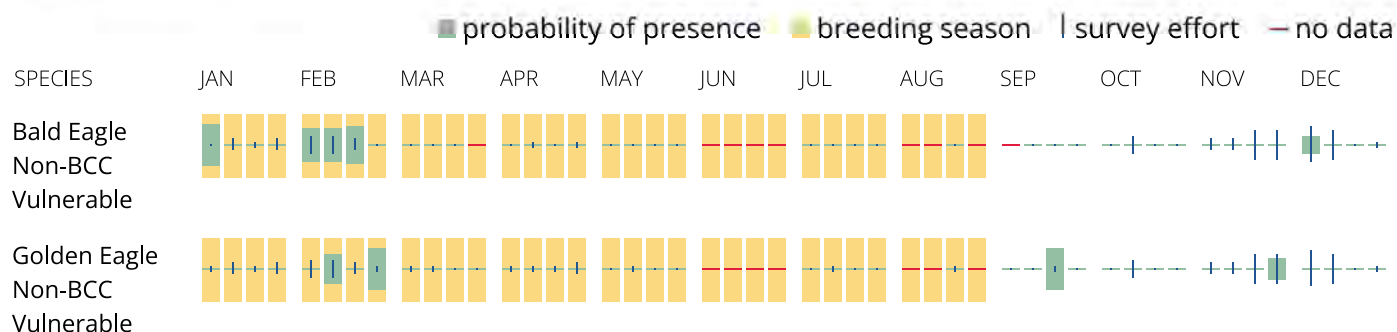
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply). To see a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the [Eagle Act](#) should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the ["Supplemental Information on Migratory Birds and Eagles"](#).

1. The [Migratory Birds Treaty Act](#) of 1918.
2. The [Bald and Golden Eagle Protection Act](#) of 1940.

Additional information can be found using the following links:

- Eagle Management <https://www.fws.gov/program/eagle-management>

- Measures for avoiding and minimizing impacts to birds
<https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds>
- Nationwide conservation measures for birds <https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME

BREEDING SEASON

Bald Eagle *Haliaeetus leucocephalus*

Breeds Jan 1 to Aug 31

This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.

<https://ecos.fws.gov/ecp/species/1626>

Belding's Savannah Sparrow *Passerculus sandwichensis beldingi*

Breeds Apr 1 to Aug 15

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

<https://ecos.fws.gov/ecp/species/8>

Bullock's Oriole *Icterus bullockii*

Breeds Mar 21 to Jul 25

This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

California Gull <i>Larus californicus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 1 to Jul 31
Clark's Grebe <i>Aechmophorus clarkii</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Jun 1 to Aug 31
Common Yellowthroat <i>Geothlypis trichas sinuosa</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/2084	Breeds May 20 to Jul 31
Golden Eagle <i>Aquila chrysaetos</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Jan 1 to Aug 31
Northern Harrier <i>Circus hudsonius</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/8350	Breeds Apr 1 to Sep 15
Nuttall's Woodpecker <i>Dryobates nuttallii</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9410	Breeds Apr 1 to Jul 20
Oak Titmouse <i>Baeolophus inornatus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9656	Breeds Mar 15 to Jul 15
Santa Barbara Song Sparrow <i>Melospiza melodia graminea</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/5513	Breeds Mar 1 to Sep 5

Tricolored Blackbird *Agelaius tricolor*

Breeds Mar 15 to Aug 10

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/3910>

Western Grebe *aechmophorus occidentalis*

Breeds Jun 1 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/6743>

Western Gull *Larus occidentalis*

Breeds Apr 21 to Aug 25

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Willet *Tringa semipalmata*

Breeds elsewhere

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Yellow-billed Magpie *Pica nuttalli*

Breeds Apr 1 to Jul 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

<https://ecos.fws.gov/ecp/species/9726>

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read ["Supplemental Information on Migratory Birds and Eagles"](#), specifically the FAQ section titled "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events

- for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
- To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.
 - The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

Breeding Season (🟡)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

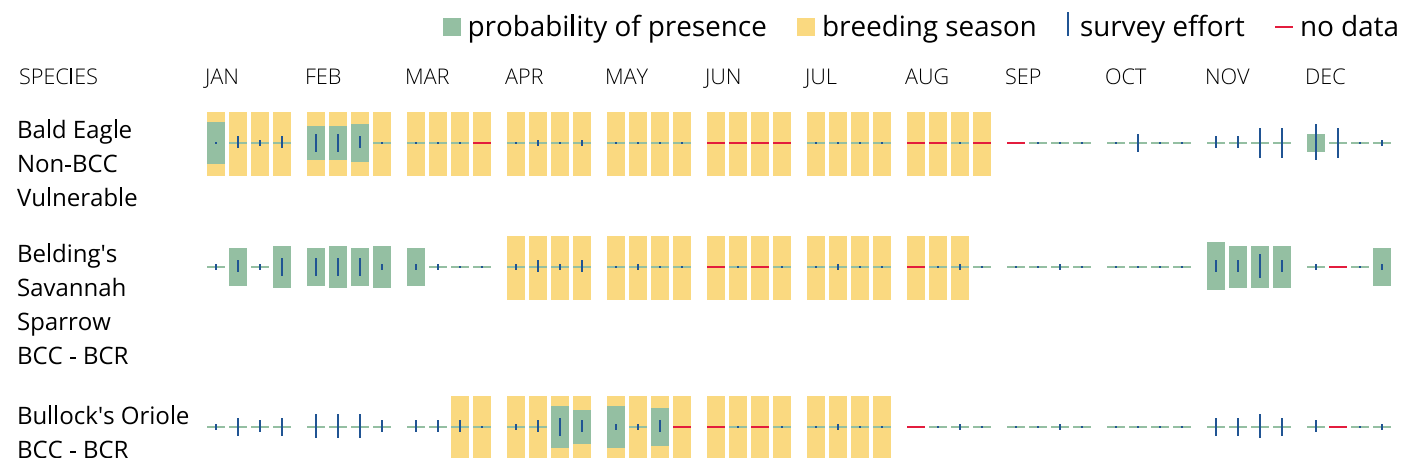
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

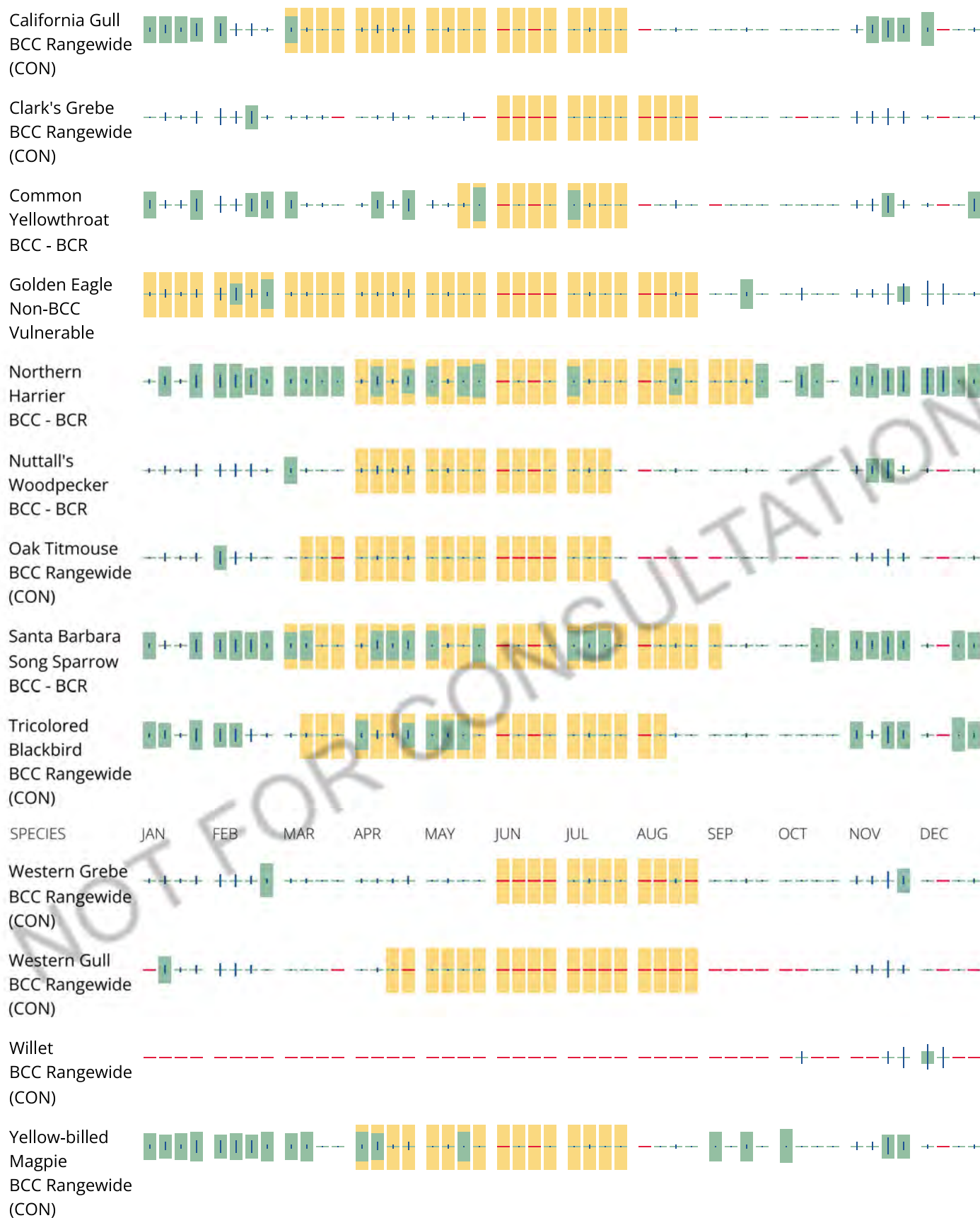
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.





Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [Rapid Avian Information Locator \(RAIL\) Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);

2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER EMERGENT WETLAND

[PEM1K](#)

[PEM1C](#)

RIVERINE

[R4SBC](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tubercid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Query Criteria: Quad< IS (Volta (3712018) OR San Luis Dam (3712111) OR Howard Ranch (3712121) OR Ingomar (3712028) OR San Luis Ranch (3712027) OR Los Banos (3712017) OR Los Banos Valley (3612181) OR Charleston School (3612087) OR Ortogonalita Peak NW (3612088))

Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
alkali milk-vetch <i>Astragalus tener</i> var. <i>tener</i>	PDFAB0F8R1	None	None	G2T1	S1	1B.2
Alkali Seep <i>Alkali Seep</i>	CTT45320CA	None	None	G3	S2.1	
alkali-sink goldfields <i>Lasthenia chrysantha</i>	PDAST5L030	None	None	G2	S2	1B.1
American badger <i>Taxidea taxus</i>	AMAJF04010	None	None	G5	S3	SSC
American bumble bee <i>Bombus pensylvanicus</i>	IIHYM24260	None	None	G3G4	S2	
Arburua Ranch jewelflower <i>Streptanthus insignis</i> ssp. <i>lyonii</i>	PDBRA2G0Q1	None	None	G3G4T2	S2	1B.2
blunt-nosed leopard lizard <i>Gambelia sila</i>	ARACF07010	Endangered	Endangered	G1	S2	FP
burrowing owl <i>Athene cunicularia</i>	ABNSB10010	None	None	G4	S2	SSC
cackling (=Aleutian Canada) goose <i>Branta hutchinsii leucopareia</i>	ABNJB05035	Delisted	None	G5T3	S3	WL
California alkali grass <i>Puccinellia simplex</i>	PMPOA53110	None	None	G2	S2	1B.2
California horned lark <i>Eremophila alpestris actia</i>	ABPAT02011	None	None	G5T4Q	S4	WL
California linderiella <i>Linderiella occidentalis</i>	ICBRA06010	None	None	G2G3	S2S3	
California red-legged frog <i>Rana draytonii</i>	AAABH01022	Threatened	None	G2G3	S2S3	SSC
California tiger salamander - central California DPS <i>Ambystoma californiense</i> pop. 1	AAAAA01181	Threatened	Threatened	G2G3T3	S3	WL
chaparral ragwort <i>Senecio aphanactis</i>	PDAST8H060	None	None	G3	S2	2B.2
Cismontane Alkali Marsh <i>Cismontane Alkali Marsh</i>	CTT52310CA	None	None	G1	S1.1	
Coastal and Valley Freshwater Marsh <i>Coastal and Valley Freshwater Marsh</i>	CTT52410CA	None	None	G3	S2.1	
Conservancy fairy shrimp <i>Branchinecta conservatio</i>	ICBRA03010	Endangered	None	G2	S2	



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
Coulter's goldfields <i>Lasthenia glabrata</i> ssp. <i>coulteri</i>	PDAST5L0A1	None	None	G4T2	S2	1B.1
Delta button-celery <i>Eryngium racemosum</i>	PDAP10Z0S0	None	Endangered	G1	S1	1B.1
ferruginous hawk <i>Buteo regalis</i>	ABNKC19120	None	None	G4	S3S4	WL
foothill yellow-legged frog - central coast DPS <i>Rana boylei</i> pop. 4	AAABH01054	Threatened	Endangered	G3T2	S2	
giant gartersnake <i>Thamnophis gigas</i>	ARADB36150	Threatened	Threatened	G2	S2	
giant kangaroo rat <i>Dipodomys ingens</i>	AMAFD03080	Endangered	Endangered	G1G2	S2	
golden eagle <i>Aquila chrysaetos</i>	ABNKC22010	None	None	G5	S3	FP
Great Valley Cottonwood Riparian Forest <i>Great Valley Cottonwood Riparian Forest</i>	CTT61410CA	None	None	G2	S2.1	
Hall's bushmallow <i>Malacothamnus hallii</i>	PDMAL0Q0F0	None	None	G2	S2	1B.2
heartscale <i>Atriplex cordulata</i> var. <i>cordulata</i>	PDCHE040B0	None	None	G3T2	S2	1B.2
hispid salty bird's-beak <i>Chloropyron molle</i> ssp. <i>hispidum</i>	PDSCR0J0D1	None	None	G2T1	S1	1B.1
Lemmon's jewelflower <i>Caulanthus lemmonii</i>	PDBRA0M0E0	None	None	G3	S3	1B.2
lesser saltscale <i>Atriplex minuscula</i>	PDCHE042M0	None	None	G2	S2	1B.1
loggerhead shrike <i>Lanius ludovicianus</i>	ABPBR01030	None	None	G4	S4	SSC
longhorn fairy shrimp <i>Branchinecta longiantenna</i>	ICBRA03020	Endangered	None	G2	S2	
Lost Hills crownscale <i>Atriplex coronata</i> var. <i>vallicola</i>	PDCHE04371	None	None	G4T3	S3	1B.2
Nelson's (=San Joaquin) antelope squirrel <i>Ammospermophilus nelsoni</i>	AMAFB04040	None	Threatened	G2G3	S3	
Northern California legless lizard <i>Anniella pulchra</i>	ARACC01020	None	None	G3	S2S3	SSC
northern harrier <i>Circus hudsonius</i>	ABNKC11011	None	None	G5	S3	SSC
northern slender pondweed <i>Stuckenia filiformis</i> ssp. <i>alpina</i>	PMPOT03091	None	None	G5T5	S2S3	2B.2
northwestern pond turtle <i>Actinemys marmorata</i>	ARAAD02031	Proposed Threatened	None	G2	SNR	SSC



Selected Elements by Common Name

California Department of Fish and Wildlife

California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
prairie falcon <i>Falco mexicanus</i>	ABNKD06090	None	None	G5	S4	WL
prostrate vernal pool navarretia <i>Navarretia prostrata</i>	PDPLM0C0Q0	None	None	G2	S2	1B.2
recurved larkspur <i>Delphinium recurvatum</i>	PDRAN0B1J0	None	None	G2?	S2	1B.2
San Joaquin coachwhip <i>Masticophis flagellum ruddocki</i>	ARADB21021	None	None	G5T2T3	S3	SSC
San Joaquin kit fox <i>Vulpes macrotis mutica</i>	AMAJA03041	Endangered	Threatened	G4T2	S3	
San Joaquin pocket mouse <i>Perognathus inornatus</i>	AMAFD01060	None	None	G2G3	S2S3	
Sanford's arrowhead <i>Sagittaria sanfordii</i>	PMALI040Q0	None	None	G3	S3	1B.2
shining navarretia <i>Navarretia nigelliformis</i> ssp. <i>radians</i>	PDPLM0C0J2	None	None	G4T2T3	S2S3	1B.2
spiny-sepaled button-celery <i>Eryngium spinosepalum</i>	PDAP10Z0Y0	None	None	G2	S2	1B.2
steelhead - Central Valley DPS <i>Oncorhynchus mykiss irideus</i> pop. 11	AFCHA0209K	Threatened	None	G5T2Q	S2	SSC
Swainson's hawk <i>Buteo swainsoni</i>	ABNKC19070	None	Threatened	G5	S4	
Sycamore Alluvial Woodland <i>Sycamore Alluvial Woodland</i>	CTT62100CA	None	None	G1	S1.1	
tricolored blackbird <i>Agelaius tricolor</i>	ABPBXB0020	None	Threatened	G1G2	S2	SSC
valley elderberry longhorn beetle <i>Desmocerus californicus dimorphus</i>	IICOL48011	Threatened	None	G3T3	S3	
Valley Sacaton Grassland <i>Valley Sacaton Grassland</i>	CTT42120CA	None	None	G1	S1.1	
Valley Sink Scrub <i>Valley Sink Scrub</i>	CTT36210CA	None	None	G1	S1.1	
vernal pool fairy shrimp <i>Branchinecta lynchi</i>	ICBRA03030	Threatened	None	G3	S3	
vernal pool smallscale <i>Atriplex persistens</i>	PDCHE042P0	None	None	G2	S2	1B.2
vernal pool tadpole shrimp <i>Lepidurus packardii</i>	ICBRA10010	Endangered	None	G3	S3	
western mastiff bat <i>Eumops perotis californicus</i>	AMACD02011	None	None	G4G5T4	S3S4	SSC
western ridged mussel <i>Gonidea angulata</i>	IMBIV19010	None	None	G3	S2	



Selected Elements by Common Name
California Department of Fish and Wildlife
California Natural Diversity Database



Species	Element Code	Federal Status	State Status	Global Rank	State Rank	Rare Plant Rank/CDFW SSC or FP
western spadefoot <i>Spea hammondi</i>	AAABF02020	Proposed Threatened	None	G2G3	S3S4	SSC
Wright's trichocoronis <i>Trichocoronis wrightii</i> var. <i>wrightii</i>	PDAST9F031	None	None	G4T3	S1	2B.1
yellow rail <i>Coturnicops noveboracensis</i>	ABNME01010	None	None	G4	S2	SSC
Yuma myotis <i>Myotis yumanensis</i>	AMACC01020	None	None	G5	S4	

Record Count: 64




CNPS Rare Plant Inventory.


Search Results

35 matches found. Click on scientific name for details

Search Criteria: 9-Quad include [3712111:3612181:3712017:3612088:3612087:3712018:3712121:3712028:3712027]

▲ SCIENTIFIC NAME	COMMON NAME	FAMILY	LIFEFORM	BLOOMING PERIOD	FED LIST	STATE LIST	GLOBAL RANK	STATE RANK	CA RARE PLANT RANK	CA ENDEMIC	DATE ADDED	PHOTO
<u><i>Acanthomintha lanceolata</i></u>	Santa Clara thorn-mint	Lamiaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	1974- 01-01	 © 2005 Barry Breckling
<u><i>Amsinckia furcata</i></u>	forked fiddleneck	Boraginaceae	annual herb	Feb-May	None	None	G4	S4	4.2	Yes	1974- 01-01	 © 2017 Keir Morse
<u><i>Androsace elongata</i> ssp. <i>acuta</i></u>	California androsace	Primulaceae	annual herb	Mar-Jun	None	None	G5?T3T4	S3S4	4.2		1994- 01-01	 © 2008 Aaron Schusteff
<u><i>Astragalus tener</i> var. <i>tener</i></u>	alkali milk- vetch	Fabaceae	annual herb	Mar-Jun	None	None	G2T1	S1	1B.2	Yes	1994- 01-01	No Photo Available
<u><i>Atriplex cordulata</i> var. <i>cordulata</i></u>	heartscale	Chenopodiaceae	annual herb	Apr-Oct	None	None	G3T2	S2	1B.2	Yes	1988- 01-01	 © 1994 Robert E. Preston, Ph.D.
<u><i>Atriplex coronata</i> var. <i>coronata</i></u>	crownscale	Chenopodiaceae	annual herb	Mar-Oct	None	None	G4T3	S3	4.2	Yes	1994- 01-01	 © 1994 Robert E. Preston, Ph.D.
<u><i>Atriplex coronata</i> var. <i>vallicola</i></u>	Lost Hills crownscale	Chenopodiaceae	annual herb	Apr-Sep	None	None	G4T3	S3	1B.2	Yes	1974- 01-01	No Photo Available

<u><i>Atriplex minuscula</i></u>	lesser saltscale	Chenopodiaceae	annual herb	May-Oct	None	None	G2	S2	1B.1	Yes	1994-01-01	 © 2000 Robert E. Preston, Ph.D.
<u><i>Atriplex persistens</i></u>	vernal pool smallscale	Chenopodiaceae	annual herb	Jun-Oct	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
<u><i>Caulanthus lemmonii</i></u>	Lemmon's jewelflower	Brassicaceae	annual herb	Feb-May	None	None	G3	S3	1B.2	Yes	2001-01-01	No Photo Available
<u><i>Centromadia parryi</i> ssp. <i>rudis</i></u>	Parry's rough tarplant	Asteraceae	annual herb	May-Oct	None	None	G3T3	S3	4.2	Yes	2007-05-22	 © 2019 John Doyen
<u><i>Chloropyron molle</i> ssp. <i>hispidum</i></u>	hispid salty bird's-beak	Orobanchaceae	annual herb (hemiparasitic)	Jun-Sep	None	None	G2T1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Clarkia breweri</i></u>	Brewer's clarkia	Onagraceae	annual herb	Apr-Jun	None	None	G4	S4	4.2	Yes	1974-01-01	No Photo Available
<u><i>Cryptantha rattanii</i></u>	Rattan's cryptantha	Boraginaceae	annual herb	Apr-Jul	None	None	G4	S4	4.3	Yes	1974-01-01	No Photo Available
<u><i>Delphinium recurvatum</i></u>	recurved larkspur	Ranunculaceae	perennial herb	Mar-Jun	None	None	G2?	S2	1B.2	Yes	1988-01-01	No Photo Available
<u><i>Eriogonum nudum</i> var. <i>indictum</i></u>	protruding buckwheat	Polygonaceae	perennial herb	(Apr)May-Oct(Dec)	None	None	G5T4	S4	4.2	Yes	1994-01-01	No Photo Available
<u><i>Eriogonum vestitum</i></u>	Idria buckwheat	Polygonaceae	annual herb	Apr-Aug	None	None	G3	S3	4.3	Yes	1974-01-01	No Photo Available
<u><i>Eryngium racemosum</i></u>	Delta button-celery	Apiaceae	annual/perennial herb	(May)Jun-Oct	None	CE	G1	S1	1B.1	Yes	1974-01-01	No Photo Available
<u><i>Eryngium spinosepalum</i></u>	spiny-sepaled button-celery	Apiaceae	annual/perennial herb	Apr-Jun	None	None	G2	S2	1B.2	Yes	1980-01-01	No Photo Available
<u><i>Hesperevax caulescens</i></u>	hogwallow starfish	Asteraceae	annual herb	Mar-Jun	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2017 John Doyen

<u><i>Lasthenia chrysantha</i></u>	alkali-sink goldfields	Asteraceae	annual herb	Feb-Apr	None	None	G2	S2	1B.1	Yes	2019-09-30	 © 2009 California State University, Stanislaus
<u><i>Lasthenia ferrisiae</i></u>	Ferris' goldfields	Asteraceae	annual herb	Feb-May	None	None	G3	S3	4.2	Yes	2001-01-01	 © 2009 Zoya Akulova
<u><i>Lasthenia glabrata</i> ssp. <i>coulteri</i></u>	Coulter's goldfields	Asteraceae	annual herb	Feb-Jun	None	None	G4T2	S2	1B.1		1994-01-01	 © 2013 Keir Morse
<u><i>Leptosiphon ambiguus</i></u>	serpentine leptosiphon	Polemoniaceae	annual herb	Mar-Jun	None	None	G4	S4	4.2	Yes	1994-01-01	 © 2010 Aaron Schusteff
<u><i>Malacothamnus hallii</i></u>	Hall's bushmallow	Malvaceae	perennial deciduous shrub	(Apr)May- Sep(Oct)	None	None	G2	S2	1B.2	Yes	1974-01-01	 © 2017 Keir Morse
<u><i>Myosurus minimus</i> ssp. <i>apus</i></u>	little mousetail	Ranunculaceae	annual herb	Mar-Jun	None	None	G5T2Q	S2	3.1		1980-01-01	No Photo Available
<u><i>Navarretia nigelliformis</i> ssp. <i>radians</i></u>	shining navarretia	Polemoniaceae	annual herb	(Mar)Apr- Jul	None	None	G4T2T3	S2S3	1B.2	Yes	1994-01-01	No Photo Available
<u><i>Navarretia prostrata</i></u>	prostrate vernal pool navarretia	Polemoniaceae	annual herb	Apr-Jul	None	None	G2	S2	1B.2	Yes	2001-01-01	No Photo Available
<u><i>Puccinellia simplex</i></u>	California alkali grass	Poaceae	annual herb	Mar-May	None	None	G2	S2	1B.2		2015-10-15	 © 2017 Chris Winchell
<u><i>Sagittaria sanfordii</i></u>	Sanford's arrowhead	Alismataceae	perennial rhizomatous herb (emergent)	May- Oct(Nov)	None	None	G3	S3	1B.2	Yes	1984-01-01	 ©2013 Debra L. Cook
<u><i>Senecio aphanactis</i></u>	chaparral ragwort	Asteraceae	annual herb	Jan- Apr(May)	None	None	G3	S2	2B.2		1994-01-01	No Photo Available

<u><i>Streptanthus insignis</i> ssp. <i>insignis</i></u>	plumed jewelflower	Brassicaceae	annual herb	Mar-May	None	None	G3G4T3T4	S3S4	4.3	Yes	2021-02-03	No Photo Available
<u><i>Streptanthus insignis</i> ssp. <i>lyonii</i></u>	Arburua Ranch jewelflower	Brassicaceae	annual herb	Mar-May	None	None	G3G4T2	S2	1B.2	Yes	1984-01-01	No Photo Available
<u><i>Stuckenia filiformis</i> ssp. <i>alpina</i></u>	northern slender pondweed	Potamogetonaceae	perennial rhizomatous herb (aquatic)	May-Jul	None	None	G5T5	S2S3	2B.2		1994-01-01	 Dana York (2016)
<u><i>Trichocoronis wrightii</i> var. <i>wrightii</i></u>	Wright's trichocoronis	Asteraceae	annual herb	May-Sep	None	None	G4T3	S1	2B.1		1988-01-01	No Photo Available

Showing 1 to 35 of 35 entries

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