

## 2 EXECUTIVE SUMMARY OF THE EIR

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### 2.1 PROJECT SUMMARY

The Oliveira Dairy is located on 22± acres of an existing farm totaling approximately 290 acres in unincorporated Merced County. The project site is located on the southwest corner of West Oak Avenue and North Gurr Road in the Merced area of the County. The project cropland application area consists of 249± acres located on portions of seven parcels.

Conditional Use Permit CUP16-005 proposes to expand the existing dairy so that the modified dairy would house 2,900 mature cows and 1,500 support stock. This would represent an increase of 2,182 animals from existing numbers. The proposed project would include the construction of supporting buildings and structures, including two new shade barns, two new freestall barns, and a new milking parlor. With construction of the proposed facilities, approximately seven acres of cropped acreage would be converted to active dairy facilities. The remaining 242± acres would continue to be cropped with dairy feed crops.

### 2.2 SUMMARY OF PROJECT ALTERNATIVES

Section 15126.6 of the California Environmental Quality Act (CEQA) Guidelines requires that an Environmental Impact Report (EIR) describe and comparatively evaluate a range of reasonable alternatives to a project that would feasibly attain most of the basic objectives of the project but would avoid or substantially lessen any of the significant effects of the project. Thus, the range of alternatives evaluated in the following analysis is dictated by the range of significant impacts identified in this EIR, and evaluated alternatives are limited to those that would reduce or eliminate identified environmental impacts. As discussed in this EIR, the secondary and cumulative impacts of implementing the Oliveira Dairy Expansion project would lead to significant adverse and unavoidable impacts. Accordingly, two alternatives in addition to the required No Project alternative, listed below, were formulated to illustrate the range of projects that could be implemented as an alternative to the proposed Oliveira Dairy Expansion project.

- Alternative 1 – No Project Alternative
- Alternative 2 – On-Site Anaerobic Digester Alternative
- Alternative 3 – Air Emissions Limited Herd Size

Based on the comparative evaluation contained in the EIR, other than the No Project Alternative, Alternative 3 (Air Emissions Limited Herd Size) would reduce the magnitude of the most impacts. Several of the significant impacts identified for the project would be reduced, but not eliminated, with implementation of Alternative 3. Alternative 3 would be the environmentally superior alternative.

## 2.3 AREAS OF CONTROVERSY/ISSUES TO BE RESOLVED

The potential areas of controversy and issues to be resolved through the EIR process were derived from analysis conducted during preparation of the Notice of Preparation (NOP) (See Appendix A, *Notice of Preparation and Initial Study*). These areas are summarized as follows:

- Short-term construction air quality impacts and long-term air quality impacts from an increase in operational emissions, including generation of odors (see Chapter 5, *Air Quality and Odors*).
- Potential loss of foraging habitat for special-status species (see Chapter 6, *Biological Resources*).
- Cultural resources impacts from site clearing, grading, and other ground disturbing activities (see Chapter 7, *Cultural Resources*).
- Greenhouse gas emissions from direct and indirect sources (see Chapter 8, *Greenhouse Gas Emissions and Energy Use*).
- Potential generation of nuisance insects (see Chapter 9, *Nuisance Insects*).
- Violation of water quality standards, depletion of groundwater, groundwater and surface water contamination, and impacts to water quality at off-site locations (see Chapter 10, *Hydrology, Water Quality, and Soil Erosion*).
- Conflict with Merced County Zoning Code and Animal Confinement Ordinance requirements, and land use incompatibility with surrounding residences (see Chapter 11, *Land Use Compatibility*).

Responses received from public agencies and the public during circulation of the NOP raised no environmental concerns not previously identified in the NOP.

## 2.4 SUMMARY OF ENVIRONMENTAL IMPACTS AND MITIGATION MEASURES

Table 2-1 presents a summary of project impacts and proposed mitigation measures that would avoid or minimize potential impacts. The level of significance for each environmental impact is indicated both before and after mitigation. For a detailed discussion of the proposed project impacts and mitigation measures, see Chapters 5 through 11 of the Draft EIR.

**Table 2-1 Summary of Impacts and Mitigation Measures**

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measure/Alternative	Level of Significance After Mitigation	
	LS	PS		LS	SU
<b>Air Quality and Odors</b>					
<p><b>Impact AQ-1: Construction-related emissions</b> Construction activities associated with the Oliveira Dairy Expansion project would result in short-term air emissions including ROG, CO, SO<sub>2</sub>, NO<sub>x</sub>, and fugitive dust. For projects in which construction related activities would disturb equal to or greater than one acre of surface area, the SJVAPCD requires implementation of an approved Dust Control Plan.</p>		PS	<p><b>Mitigation Measure AQ-1:</b> Prior to the release of the first-issued building permit, the applicant shall provide to the County a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form in compliance with Regulation VIII – Fugitive Dust PM<sub>10</sub> Prohibitions. The dairy expansion may be subject to additional rules, including, but not limited to Rule 4570, Confined Animal Facilities, Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations), and Rule 4002 (National Emission Standards for Hazardous Air Pollutants). The project applicant will be required to implement measures of applicable SJVAPCD Rules and Regulations as noted.</p>	LS	
<p><b>Impact AQ-2: Carbon monoxide emissions from operational equipment and increased traffic</b> Operation of equipment used at the Oliveira Dairy Expansion for processing and farming would result in emissions of carbon monoxide. Because the magnitude of emissions from the Oliveira Dairy Expansion would not exceed SJVAPCD significance criteria, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure AQ-2:</b> None required.</p>	LS	

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<p><b>Impact AQ-3: Ozone precursor emissions from dairy operations, farm equipment, and increased traffic</b></p> <p>Emissions of ozone precursors (volatile organic Compounds (VOC)/Reactive Organic Gases (ROG) and Nitrogen Oxides (NOx)) from dairy operations, farm equipment, and increased traffic from the Oliveira Dairy Expansion project would exceed SJVAPCD emissions criteria with establishment of the dairy expansion, which could result in human health effects.</p>		PS	<p><b>Mitigation Measure AQ-3a:</b></p> <p>The proposed dairy expansion would exceed SJVAPCD permit thresholds for ROG emissions; therefore, in order to reduce emissions, prior to the initiation of operations, the applicant shall implement all air quality provisions of the ACO, including Chapter 18.48.50 U; comply with all applicable SJVAPCD Rules including but not limited to: Rule 2010 – apply for an Authority to Construct/Permit to Operate; Rule 2201 New Source Review; Rule 4570, Confined Animal Facilities; implement BACT/BARCT mitigation measures appropriate for this dairy operation to be developed during permit review in cooperation with SJVAPCD staff, including but not limited to all applicable measures in Appendix D of this EIR; and Rules 4701 and 4702, Internal Combustion Engines.</p> <p><b>Mitigation Measure AQ-3b:</b></p> <p>Because project emissions have been evaluated to exceed SJVAPCD significance thresholds, the project applicant shall consult with the SJVAPCD regarding the establishment of a Voluntary Emissions Reduction Agreement between the applicant and the SJVAPCD. Consultation shall occur prior to issuance of building permits, and documentation of consultation with the SJVAPCD shall be provided to the County.</p>		SU
			Implementation of Alternative 1, No Project, would reduce the magnitude and significance of this effect.	LS	
			Implementation of Alternative 2, On-Site Anaerobic Digester, would potentially increase the magnitude but not the significance of this effect.		SU
			Implementation of Alternative 3, Limited Herd Size, would reduce the magnitude and significance of this effect.	LS	

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<p><b>Impact AQ-4: PM<sub>10</sub> and PM<sub>2.5</sub> emissions from fugitive dust during project operations</b></p> <p>Operations at the Oliveira Dairy Expansion would result in fugitive dust (PM<sub>10</sub> and PM<sub>2.5</sub>) emissions from wind erosion, farming operations, animal movement in unpaved corrals, vehicle use along unpaved driveways and access roads, and equipment operation. Because pollutant concentrations would not exceed SJVAPCD emissions thresholds, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure AQ-4:</b> None required.</p>	LS	
<p><b>Impact AQ-5: Expose nearby residents to substantial pollutant concentrations from the emissions of toxic air contaminants from project operations</b></p> <p>The proposed dairy expansion would be a potential source of hazardous air pollutants from construction activities, animal movement, manure management, and on-site mobile sources. Without the application of SJVAPCD-approved control measures, this project would exceed health risk thresholds.</p>		PS	<p><b>Mitigation Measure AQ-5:</b></p> <p>The project applicant shall apply SJVAPCD-approved control measures to reduce PM<sub>10</sub> emissions below SJVAPCD health risk thresholds. As applied in the HRA prepared for the project, these control measures would include providing shaded areas, sprinklers, feed young stock at dusk, and planting upwind and downwind shelter breaks. If necessary, control measures for PM<sub>10</sub> emissions may be modified by the SJVAPCD during their permitting process. All control measure requirements shall be included in the SJVAPCD permit documents.</p>	LS	
<p><b>Impact AQ-6: Expose nearby residents to substantial pollutant concentrations from emissions of criteria air pollutants</b></p> <p>Operations at the Oliveira Dairy Farm Expansion would result in emissions of criteria air pollutants that could impact ambient air quality through a violation of air quality standards. Without the application of SJVAPCD-approved control measures, this project would exceed ambient air quality standards for areas adjacent to the dairy.</p>		PS	<p><b>Mitigation Measure AQ-6a:</b> Implement Mitigation Measure AQ-5.</p> <p><b>Mitigation Measure AQ-6b:</b> In the event the project site plan is modified, the project applicant shall be required to complete a revised ambient air quality analysis that shows the modified project would not violate any ambient air quality standards.</p>	LS	

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<p><b>Impact AQ-7: Adverse odor from project operations</b></p> <p>Operations and manure management at the Oliveira Dairy Expansion in Merced County may emit odors that may be bothersome to nearby sensitive uses, including residences and wildlife areas. While there have been no nuisance odor complaints for the existing dairy, because the nearest off-site residences are located less than 1,000 feet from proposed active dairy facilities, there is an increased potential for nuisance conditions.</p>			<p><b>Mitigation Measure AQ-7a:</b></p> <p>To minimize potential for odor nuisance conditions, prior to initiating operations at the new facilities, the applicant shall prepare an Odor Control Plan for submission and approval by the Merced DEH. Following approval, the applicant shall implement the approved Plan. The following odor control measures shall be required in the Plan:</p> <ul style="list-style-type: none"> <li>• Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than 24 hours.</li> <li>• Implement odor control measures as contained in the Plan, which may include, but not be limited to the following:                             <ol style="list-style-type: none"> <li>1. Ration/diet manipulation This approach involves the alteration of feed in order to reduce the volume of substrate available for anaerobic activity. The approach includes reducing the nitrogen content of food, phase feeding, repartitioning agents, improved animal genetics, and various feed additives.</li> <li>2. Manure management Utilize best management practices for manure management, including minimizing the time between excretion and application, and aeration of retention basins.</li> </ol> </li> </ul> <p>Additionally, implement the following additional best management practices:</p> <p><i>Manure Collection Areas</i></p> <ul style="list-style-type: none"> <li>• Clean out manure generated at the freestall barns daily and corrals at least twice a year, or more frequently as necessary to minimize odors;</li> <li>• Keep cattle as dry and clean as possible at all times;</li> <li>• Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that would reduce or minimize odors.</li> </ul> <p><i>Manure Treatment and Application</i></p> <ul style="list-style-type: none"> <li>• Minimize moisture content of stockpiled manure/retained solids to a level that would reduce the potential for release of odorous compounds during storage;</li> <li>• Minimally agitate stockpiled manure during loading for off-site transport;</li> </ul>	LS	

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			<ul style="list-style-type: none"> <li>Mix process water with irrigation water prior to irrigation (dilution rate shall be adequate to minimize odor levels and maintain appropriate nutrient content in effluent);</li> <li>Clean up manure spills upon occurrence;</li> <li>Maintain and operate settling ponds and retention ponds to minimize odor levels.</li> </ul> <p><i>General</i></p> <ul style="list-style-type: none"> <li>Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;</li> <li>During project operations, the dairy operator/owner shall respond to neighbors who are adversely affected by odors generated at the project site and take prompt corrective action.</li> </ul> <p>If necessary and feasible, the animal confinement operation must implement the following additional measures:</p> <ul style="list-style-type: none"> <li><b>Manure treatment</b> Manure treatment methods include maintaining aerobic conditions during storage, aerobic treatment using aerated lagoons or composting, anaerobic digestion, and biochemical treatment.</li> <li><b>Capture and treatment of emitted gases</b> This approach includes the use of covered storage pits or lagoons, soil incorporation of applied liquid or solid manure, and dry scrubbers for building exhaust gases including soil absorption beds, bio-filter fields, or packed beds.</li> <li><b>Enhanced air dispersion</b> Odor and other air contaminants are diluted to below threshold levels by atmospheric turbulence that increases with wind velocity, solar radiation, and roughness elements such as buildings, trees, or barriers. Sound site selection with adequate separation distance and elevated sources or mechanical turbulence can aid in dispersing odorous compounds and avoiding nuisance conditions.</li> <li><b>Enhanced land spreading procedures</b> Procedures may be modified to minimize impacts by avoiding spreading when the wind is blowing towards populated areas,</li> </ul>		

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			employing technologies to incorporate manure into soil during or directly after application (i.e. injection, plowing, disking), or spreading manure in thin layers during warm weather.  <b>Mitigation Measure AQ-7b:</b> Implement the nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b. The nuisance control measures include best management practices and manure management measures that would also act to control odors.		
<b>Impact AQ-8: Conflict with or obstruct implementation of the applicable air quality plan</b> Implementation of the Oliveira Dairy Expansion project would not conflict with or obstruct implementation of the SJVAPCD air quality attainment plan.	LS		<b>Mitigation Measure AQ-8:</b> None required.	LS	
<b>Biological Resources</b>					
<b>Impact BIO-1: Nest disturbance and loss of foraging habitat for Swainson’s hawk</b> Implementation of the proposed Oliveira Dairy Expansion project would result in the loss of approximately seven acres of potential foraging habitat for Swainson’s hawk. Because Swainson’s hawk is a state-listed special status species; it may forage on the dairy farm cropland; appropriate foraging habitat would be removed with project implementation; and potential nesting areas could be disrupted during construction, this would be a significant impact.		PS	<b>Mitigation Measure BIO-1a:</b> <i>Protocol Surveys and Nesting Impacts:</i> 1. <i>Protocol Surveys:</i> For work that begins between March 1 and August 30, a qualified biologist with expertise in Swainson’s hawk shall conduct protocol surveys of potential nesting habitat within 0.5 mile of any earth-moving activities prior to initiation of such activities. The project applicant shall conduct a protocol-level survey 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 ( <a href="https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds">https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds</a> ) (May 31, 2000) hereby incorporated by references. 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. If construction work begins after August 30 and ends before March 1 (outside of the breeding season), impacts to the Swainson’s hawk would be avoided. Surveys would not be required for work conducted during this part of the year.	LS	



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			<p>A written report with the pre-construction survey results must be provided to the Merced County Community and Economic Development Department and 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.</p> <p>2. <i>Nest Avoidance</i>: If the required protocol surveys show there are no active nests within the appropriate radius as defined by the technical advisory referenced above, then no additional mitigation for nest disturbance will be required. If nesting Swainson’s hawks are observed within 0.5-mile of the project site, the project applicant must implement CDFW pre-approved mitigation measures to avoid nest impacts during construction. These measures include:</p> <ul style="list-style-type: none"> <li>a. All project-related activities with the potential to cause nest abandonment or forced fledging of young shall be avoided until the young have fledged.</li> <li>b. 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 (0.5-mile), monitoring of the nest site by a qualified raptor biologist, funded by the project applicant, shall be required, 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.</li> <li>c. The project applicant shall be required to obtain an Incidental Take Permit under the California Endangered Species Act from the CDFW if project activities with the potential to cause disturbance to nesting Swainson’s hawks are proposed to be conducted within the 0.5 mile buffer.</li> <li>d. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within one-quarter-mile of an active nest are not prohibited.</li> </ul>		

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			<p><b>Mitigation Measure BIO-1b:</b>  <i>Foraging Impacts:</i></p> <ol style="list-style-type: none"> <li>1. Prior to issuance of a building permit, the project applicant shall consult with CDFW to determine if mitigation is necessary for the loss of approximately seven acres of potential Swainson’s hawk foraging habitat. The project applicant shall submit documentation of CDFW consultation to Merced County. Should CDFW consider there to be impacts to Swainson’s hawk requiring mitigation under CDFW guidelines, CDFW pre-approved CEQA mitigation measures shall be implemented as outlined in Mitigation Measure BIO-1b(2).</li> <li>2. Generally, CDFW requires mitigation for foraging habitat based on the presence of active nests within 10 miles of the project. If an active nest site is identified within ten miles of the Project Boundary, the project proponent will be required by CDFW to provide off-site foraging habitat management lands at a specified Mitigation Ratio that is based on nest proximity to the project site, as follows:</li> </ol> <table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;">Distance from Project Boundary</th> <th style="text-align: left;">Mitigation Acreage Ratio*</th> </tr> </thead> <tbody> <tr> <td>Within 1 mile</td> <td>1.00:1**</td> </tr> <tr> <td>Between 1 and 5 miles</td> <td>0.75:1</td> </tr> <tr> <td>Between 5 and 10 miles</td> <td>0.50:1</td> </tr> </tbody> </table> <p>* Ratio means [acres of mitigation land] to [acres of foraging habitat impacted].                      **This ratio shall be 0.5:1 if the acquired lands can be actively managed for prey production.</p> <p>CDFW provides options for off-site habitat management by fee title acquisition or conservation easement acquisition with CDFW-approved management plan, and by the acquisition of comparable habitat. Mitigation credits may be pursued through a CDFW-approved mitigation bank for Swainson’s hawk impacts in Merced County. Go to: <a href="http://www.dfg.ca.gov/habcon/conplan/mitbank/catalogue">www.dfg.ca.gov/habcon/conplan/mitbank/catalogue</a>                      The CDFW pre-approved CEQA mitigation measures are found at: “DFG Staff Report Regarding Mitigation for Impacts to Swainson’s Hawks in the Central Valley of California,” CDFW (November 8, 1994).</p>	Distance from Project Boundary	Mitigation Acreage Ratio*	Within 1 mile	1.00:1**	Between 1 and 5 miles	0.75:1	Between 5 and 10 miles	0.50:1		
Distance from Project Boundary	Mitigation Acreage Ratio*												
Within 1 mile	1.00:1**												
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Between 5 and 10 miles	0.50:1												

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<p><b>Impact BIO-2: Loss of foraging and nesting habitat for sensitive and migratory bird species</b>                      The proposed Oliveira Dairy Expansion project would be constructed on land that has previously been cultivated in corn, and has provided foraging and nesting habitat for a variety of special-status and migratory bird species. Because seven acres of cropland that provides potential foraging and nesting habitat for these birds would be converted to active dairy facilities with the proposed project, this would be a significant impact.</p>		PS	<p><b>Mitigation Measure BIO-2a:</b>                      Implement Mitigation Measure BIO-1b, if necessary, which includes measures to minimize potential impacts to Swainson’s hawk, and which would benefit other species as well.</p> <p><b>Mitigation Measure BIO-2b:</b>                      To reduce project-related impacts to active bird nests and to reduce the potential for construction activities to interrupt breeding and rearing behaviors of birds, the following measures shall be implemented prior to and during construction activities:</p> <ol style="list-style-type: none"> <li>1. A preconstruction survey shall be conducted to determine the presence / absence of nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). The project site and potential nesting areas within 100 feet of the site for MBTA protected birds and 500 feet for raptors shall be surveyed within 7 days prior to the initiation of construction. Surveys will be performed by a qualified biologist or ornithologist to verify the presence or absence of nesting birds.</li> <li>2. Construction shall not occur within a 500-foot buffer surrounding nests of raptors (including burrowing owls) or a 100-foot buffer surrounding nests of migratory birds (including killdeer, house finch, mourning dove, etc.).</li> <li>3. If construction within these buffer areas is required, or if nests must be removed to allow continuation of construction, prior approval must be obtained from the CDFW.</li> </ol>	LS	
<p><b>Impact BIO-3: Loss of nesting habitat for tricolored blackbird</b>                      The Oliveira Dairy Farm provides potential nesting habitat for tricolored blackbird, which was recently given threatened species status under CESA. Because seven acres of cropland that provides potential nesting habitat for these birds would be converted to active dairy facilities with the proposed project, this would be a significant impact.</p>	PS		<p><b>Mitigation Measure BIO-3a:</b>                      Implement Mitigation Measure BIO-1a and BIO-1b, if necessary, which includes measures to minimize potential impacts to Swainson’s hawk, and which would benefit other species as well.</p> <p><b>Mitigation Measure BIO-3b:</b>                      Implement Mitigation Measure BIO-2b, which includes a preconstruction survey to determine presence / absence of TCBB or MBTA protected nesting birds if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15).</p>	LS	

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			<p><b>Mitigation Measure BIO-3c:</b></p> <p>If a TCBB nest colony is discovered during preconstruction surveys, CDFW will be consulted prior to ground disturbing activities to determine the appropriate actions or required mitigation. Avoidance and minimization measures are likely to include the delayed harvest of silage until the TCBB young have fledged. If there is a permanent loss of TCBB breeding habitat, compensatory mitigation may be required. Loss of TCBB habitat may be compensated through a combination of: (1) creation of replacement habitat; (2) habitat preservation through Conservation Easement; (3) acquisition of credits at an approved mitigation bank; (4) in-lieu contribution to a regional habitat restoration fund; and/or (5) other compensatory measures that are deemed acceptable by the CDFW.</p>		
<p><b>Impact BIO-4: Loss of habitat for the San Joaquin kit fox and/or American badger</b></p> <p>Implementation of the proposed dairy expansion project could impact San Joaquin Kit fox or American badger that may occur on site as transient foragers.</p>		PS	<p><b>Mitigation Measure BIO-4:</b></p> <ol style="list-style-type: none"> <li>1. Project-related vehicles should observe a daytime speed limit of 20-mph throughout the site in all project areas, except on county roads and state and federal highways; this is particularly important at night when kit foxes are most active. Night-time operations should be minimized to the extent possible. However, if it does occur, then the speed limit should be reduced to 10-mph. Off-road traffic outside of designated project areas should be prohibited.</li> <li>2. To prevent inadvertent entrapment of San Joaquin kit foxes or other animals, all excavated, steep-walled holes or trenches more than two feet deep should be covered at the close of each working day by plywood or similar materials. If the trenches cannot be closed, one or more escape ramps constructed of earthen-fill or wooden planks shall be installed. Before such holes or trenches are filled, they should be thoroughly inspected for trapped animals. If at any time a trapped or injured San Joaquin kit fox is discovered, USFWS and CDFW shall be contacted as noted under Measure 13 referenced below.</li> <li>3. San Joaquin kit foxes are attracted to den-like structures such as pipes and may enter stored pipes and become trapped or injured. All pipes, culverts, or similar structures with a diameter of four-inches or greater that are stored at the site for one or more overnight periods should be thoroughly inspected for kit foxes before the pipe is subsequently buried, capped, or otherwise used or moved in any way. If a San</li> </ol>	LS	

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			<p>Joaquin kit fox is discovered inside a pipe, that section of pipe should not be moved until the USFWS has been consulted. If necessary, and under the direct supervision of the biologist, the pipe may be moved only once to remove it from the path of construction activity, until the fox has escaped.</p> <ol style="list-style-type: none"> <li>4. All food-related trash items such as wrappers, cans, bottles, and food scraps should be disposed of in securely closed containers and removed at least once a week from the project site.</li> <li>5. No firearms shall be allowed on the project site.</li> <li>6. If any San Joaquin kit fox or American badger, or their sign, are detected on site, dogs and cats shall be kept off the project site to prevent harassment, mortality of San Joaquin kit foxes or American badgers, and/or destruction of their dens.</li> <li>7. Use of rodenticides and herbicides in project areas should be restricted. This is necessary to prevent primary or secondary poisoning of San Joaquin kit foxes and the depletion of prey populations on which they depend. All uses of such compounds should observe label and other restrictions mandated by the U.S. Environmental Protection Agency, California Department of Food and Agriculture, and other state and federal legislation, as well as additional project-related restrictions deemed necessary by the USFWS. If rodent control must be conducted, zinc phosphide should be used because of a proven lower risk to kit fox.</li> <li>8. A representative shall be appointed by the project proponent who will be the contact source for any employee or contractor who might inadvertently kill or injure a San Joaquin kit fox or who finds a dead, injured or entrapped San Joaquin kit fox. The representative will be identified during the employee education program and their name and telephone number shall be provided to the Service.</li> <li>9. An employee education program should be conducted for any project that has anticipated impacts to kit fox or other endangered species. The program should consist of a brief presentation by persons knowledgeable in kit fox biology and legislative protection to explain endangered species concerns to contractors, their employees, and military and/or agency personnel involved in the project. The program should include the following: A description of the San</li> </ol>		

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			<p>Joaquin kit fox and its habitat needs; a report of the occurrence of kit fox in the project area; an explanation of the status of the species and its protection under the Endangered Species Act; and a list of measures being taken to reduce impacts to the species during project construction and implementation. A fact sheet conveying this information should be prepared for distribution to the previously referenced people and anyone else who may enter the project site.</p> <p>10. Upon completion of the project, all areas subject to temporary ground disturbance, including storage and staging areas, temporary roads, pipeline corridors, etc. should be recontoured if necessary, and revegetated to promote restoration of area to pre-project conditions.</p> <p>11. In the case of trapped animals, escape ramps or structures should be installed immediately to allow the animal(s) to escape, or the USFWS should be contacted for guidance.</p> <p>12. Any contractor, employee, or military or agency personnel who are responsible for inadvertently killing or injuring a San Joaquin kit fox shall immediately report the incident to their representative. This representative shall contact the CDFW immediately in the case of a dead, injured or entrapped kit fox. The CDFW contact for immediate assistance is State Dispatch at (916) 445-0045. They will contact the local warden or Mr. Paul Hoffman, the wildlife biologist at (530) 934-9309. The USFWS should be contacted at the numbers below.</p> <p>13. The Sacramento Fish and Wildlife Office and CDFW shall be notified in writing within three working days of the accidental death or injury to a San Joaquin kit fox during project related activities. Notification must include the date, time, and location of the incident or of the finding of a dead or injured animal and any other pertinent information. The USFWS contact is the Chief of the Division of Endangered Species, at the addresses and telephone numbers below. The CDFW contact is Mr. Paul Hoffman at 1701 Nimbus Road, Suite A, Rancho Cordova, California 95670, (530) 934-9309.</p> <p>14. New sightings of San Joaquin kit fox shall be reported to the CNDDDB. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the USFWS at the address below.</p>		

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			15. New sightings of kit fox shall be reported to the California Natural Diversity Database. A copy of the reporting form and a topographic map clearly marked with the location of where the kit fox was observed should also be provided to the Service at the address below. 16. Any project-related information required by the USFWS or questions concerning the above conditions or their implementation may be directed in writing to the U.S. Fish and Wildlife Service at: Endangered Species Division, 2800 Cottage Way, Suite W2605, Sacramento, California, 95825-1846, (916) 414-6620 or (916) 414-6600.		
<b>Impact BIO-5: Impacts to additional special-status wildlife species</b> Implementation of the proposed Oliveira Dairy Expansion project would not impact additional special-status wildlife species, such as the giant garter snake, since there is no habitat to support this species that would be impacted by the proposed dairy expansion.	LS		<b>Mitigation Measure BIO-5:</b> None required.	LS	
<b>Impact BIO-6: Loss and/or degradation of special-status plant species</b> Implementation of the proposed Oliveira Dairy Expansion project would not result in the loss of special-status plant species since the project site does not provide suitable habitat for these species.	LS		<b>Mitigation Measure BIO-6:</b> None required.	LS	
<b>Impact BIO-7: Loss and/or degradation of riparian and vernal pool habitat or sensitive natural communities; loss or modification of wetlands</b> Implementation of the proposed Oliveira Dairy Expansion project would not result in the loss of riparian or vernal pool habitat; loss of any sensitive natural community; or loss or modification of wetlands, since no such resources are located within the area that would be disturbed by construction of the proposed dairy expansion.	LS		<b>Mitigation Measure BIO-7:</b> None required.	LS	

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<p><b>Impact BIO-8: Interference with on-site wildlife movement corridor</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project would not interfere with a wildlife movement corridor, migratory patterns, or wildlife within a nursery site, since there is a considerable amount of open space in the greater vicinity that can continue to be used for wildlife movement.</p>	LS		<p><b>Mitigation Measure BIO-8:</b></p> <p>None required.</p>	LS	
<p><b>Impact BIO-9: Potential selenium and heavy metals effects to on-site biological resources</b></p> <p>The use of supplemented feeds at the proposed Oliveira Dairy Expansion could result in the introduction of heavy metals into the environment by the application of dairy waste to on-site agricultural fields and retention ponds. If concentrations of metals in terrestrial or aquatic media are significantly higher than naturally occurring background levels, adverse effects to terrestrial or aquatic biota within the project area could occur.</p>		PS	<p><b>Mitigation Measure BIO-9:</b></p> <p>Implement Sections 18.48.050 E, K, O, T, LL, MM, NN, and Sections 18.48.055 D, E, F, and G of the Merced County Animal Confinement Ordinance. These measures include: management practices to prevent degradation; requirements for manure, soils, and groundwater testing; and in the event of contamination, remediation to meet receiving water standards by the RWQCB as set forth in the Basin Plan.</p>	LS	
<p><b>Impact BIO-10: Conflict with local policies or ordinances protecting biological resources</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project would not conflict with local policies or ordinances that protect biological resources because it would be consistent with the Merced County 2030 General Plan, the Open Space Action Plan, and the Animal Confinement Ordinance.</p>	LS		<p><b>Mitigation Measure BIO-10:</b></p> <p>None required.</p>	LS	



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<b>Cultural Resources and Tribal Cultural Resources</b>					
<p><b>Impact CUL-1: Cause a substantial adverse change in the significance of a historical, archaeological, or paleontological resource, or a unique geological feature</b></p> <p>Construction of the proposed dairy facilities could result in substantial adverse changes to the significance of historical, archaeological, or paleontological resources within the project area. Because ground-disturbing activities could affect unidentified remains of subsurface historic, archaeological, or paleontological resources, this would be a significant impact.</p>		PS	<p><b>Mitigation Measure CUL-1:</b></p> <p>The project applicant and construction contractor shall implement measures to address discovery of unanticipated buried cultural or paleontological resources. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, or paleontological resources are inadvertently discovered during ground-disturbing activities, work shall stop in that area and within 100 feet of the find until a qualified archaeologist or paleontologist can assess the significance of the find and, if necessary, develop responsible treatment measures in consultation with Merced County and other appropriate agencies. Measures must result in the avoidance, preservation, or recordation of the resource.</p>	LS	
<p><b>Impact CUL-2: Result in the accidental discovery and disturbance of human remains</b></p> <p>Construction activities associated with the Oliveira Dairy Expansion project could result in the accidental discovery of human remains. Because ground-disturbing activities could result in the disturbance of human remains, this would be a significant impact.</p>		PS	<p><b>Mitigation Measure CUL-2a:</b></p> <p>Implement Mitigation Measure CUL-1.</p> <p><b>Mitigation Measure CUL-2b:</b></p> <p>The project applicant and construction contractor shall implement a plan to address discovery of human remains. If remains of Native American origin are discovered during proposed project construction, it shall be necessary to comply with state laws concerning the disposition of Native American burials, which fall within the jurisdiction of the Native American Heritage Commission (NAHC). If any human remains are discovered or recognized in any location other than a dedicated cemetery, there shall be no further excavation or disturbance of the site or any nearby area reasonably suspected to overlie adjacent human remains until:</p> <ul style="list-style-type: none"> <li>• The County coroner has been informed and has determined that no investigation of the cause of death is required; and</li> <li>• If the remains are of Native American origin: <ul style="list-style-type: none"> <li>√ The most likely descendants of the deceased Native Americans (identified by the NAHC) has made a recommendation to the landowner or person responsible for the excavation work for means of treating or disposing of, with appropriate dignity, the human remains and any associated grave goods as provided in PRC 5097.98; or</li> </ul> </li> </ul>	LS	

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			<p>√ The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.</p> <p>According to the California Health and Safety Code, six or more human burials at one location constitute a cemetery (Section 8100), and disturbance of Native American cemeteries is a felony (Section 7052). Section 7050.5 requires that construction or excavation be stopped in the vicinity of discovered human remains until the coroner can determine whether the remains are those of a Native American. If the remains are determined to be Native American, the coroner must contact the NAHC.</p>		
<p><b>Impact CUL-3: Cause a substantial adverse change in the significance of a tribal cultural resource</b></p> <p>Ground-disturbing construction activities associated with the Oliveira Dairy Expansion project would not result in a substantial adverse change in the significance of a tribal cultural resource since no tribal cultural resources were identified on the project site, and no Native American tribes requested consultation.</p>	LS		<p><b>Mitigation Measure CUL-3:</b></p> <p>None required.</p>	LS	
<b>Greenhouse Gas Emissions and Energy Use</b>					
<p><b>Impact GHG-1: Greenhouse gas emissions from project construction and operation</b></p> <p>Construction and operation of the Oliveira Dairy Expansion project would result in greenhouse gas emissions from direct and indirect sources. Because the proposed project would not exceed established significance thresholds for GHG emissions, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure GHG-1:</b></p> <p>None required.</p>	LS	

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<p><b>Impact GHG-2: Wasteful or inefficient use of energy</b></p> <p>Construction and operation of the Oliveira Dairy Expansion project would result in the use of electricity, natural gas, and other fossil fuels. Because the operations at the Oliveira Dairy would be considered energy efficient from a regional and statewide perspective, and energy efficiency measures have been applied to project operations, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure GHG-2:</b></p> <p>None required.</p>	LS	
<p><b>Impact GHG-3: Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions, or conflict with or obstruct a state or local plan for renewable energy or energy efficiency</b></p> <p>Implementation of the Oliveira Dairy Expansion project would not be inconsistent with the California Air Resources Board’s Climate Change Scoping Plan or California’s Long Term Energy Efficiency Strategic Plan since standards and required actions for the reduction of greenhouse gas emissions and energy efficiency in the agricultural sector have not currently been adopted. Therefore, the proposed dairy expansion would not conflict with any applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions or promoting renewable energy or energy efficiency.</p>	LS		<p><b>Mitigation Measure GHG-3:</b></p> <p>None required.</p>	LS	

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<b>Nuisance Conditions from Insects</b>					
<p><b>Impact HAZ-1: Increased fly production and related nuisance effects (ACO)</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project could result in the generation of flies that can adversely affect animal and human health, and become a nuisance for other adjacent land uses. While there have been no nuisance fly complaints for the existing dairy facility, because the nearest off-site residence is located less than 1,000 feet from proposed active dairy facilities, there is an increased potential for nuisance conditions, and this would be a potentially significant impact.</p>		PS	<p><b>Mitigation Measure HAZ-1a:</b></p> <p>Prior to obtaining a building permit, the project sponsor shall prepare a Vector Control Plan to meet the requirements of the Animal Confinement Ordinance Chapter 18.48.055 C.8.c. The Vector Control Plan shall be submitted to the Merced County Division of Environmental Health for review and approval. The applicant shall implement all measures within the approved Vector Control Plan throughout the active life of the dairy.</p> <p><b>Mitigation Measure HAZ-1b:</b></p> <ol style="list-style-type: none"> <li>1. All confined animal facilities shall implement the following Best Management Practices to address potential fly problems:                             <ol style="list-style-type: none"> <li>a. Daily inspection of manure flushing systems to ensure that manure is being effectively removed from flushed areas, with particular attention paid to corners and isolated areas;</li> <li>b. Daily inspections of water supply and circulation systems to ensure that any leaks are promptly repaired. These inspections shall include all watering troughs to ensure that mechanisms for controlling water level are operating effectively and are protected from damage;</li> <li>c. Regular blading of feeding lanes in freestall barns and corrals to ensure that spilled feed is promptly removed and disposed;</li> <li>d. Daily removal of manure and spilled feed from stalls in freestall barns;</li> <li>e. Scraping of corrals at least twice a year to minimize the potential for development of fly populations on manure;</li> <li>f. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;</li> <li>g. Weekly inspection of fence lines of corrals and other “edge” areas, and removal of any accumulated manure;</li> <li>h. Periodic monitoring of stable flies by direct observation and counting of the number of stable flies on the legs of a representative number, minimum of two percent, of the support stock herd;</li> </ol> </li> </ol>	LS	

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			<ul style="list-style-type: none"> <li>i. All exterior doors and windows in milk rooms shall have screens that are inspected monthly to determine if they are working properly, and to identify rips in the screening. Ripped or otherwise damaged screens shall be repaired or replaced immediately;</li> <li>j. If necessary, flytraps shall be set throughout barns at strategic locations. The traps are inspected monthly, or more frequently if necessary, and replaced when saturated with captured flies.</li> </ul> <p>2. In addition to fly management practices in the cattle housing and milking areas of dairy facilities, the following sanitation practices shall be implemented at animal confinement facilities to control fly populations:</p> <ul style="list-style-type: none"> <li>a. Dead animals shall be stored in a secured area at the dairy facility, and off-site rendering plant operators shall immediately be notified for pickup of carcasses. Carcasses must be removed within three business days pursuant to ACO Section 18.48.005(A);</li> <li>b. Residual feed shall be removed from infrequently used feeding areas;</li> <li>c. All garbage shall be disposed of in closed dumpsters that are regularly emptied by a contracted waste management service for off-site disposal;</li> <li>d. Grass and other landscape clippings shall be removed from the site for off-site disposal or reuse (as feed or soil amendment).</li> </ul>		
<p><b>Impact HAZ-2: Create significant nuisance conditions due to increased mosquito production (ACO)</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project would not provide additional mosquito-breeding habitat since the proposed dairy expansion would not modify existing active dairy facilities that provide potential mosquito habitat.</p>	LS		<p><b>Mitigation Measure HAZ-2:</b></p> <p>None required.</p>	LS	

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<b>Hydrology, Water Quality, and Soil Erosion</b>					
<p><b>Impact HYD-1: Degradation of water quality due to storm water runoff during project construction</b></p> <p>Construction of the proposed project could result in the erosion of on-site soils or the loss of topsoil, which could cause degradation of water quality in waterways draining the site by reducing the quality of storm water runoff during project construction.</p>		PS	<p><b>Mitigation Measure HYD-1:</b></p> <p>The project applicant shall submit Permit Registration Documents (PRD) for the Construction General Permit Order 2009-0009-DWQ to the State Water Resources Control Board, and comply with, and implement, all requirements of the permit. A Legally Responsible Person (LRP) shall electronically submit PRDs prior to commencement of construction activities in the Storm Water Multi-Application Report Tracking System. PRDs consist of the Notice of Intent, Risk Assessment, Post-Construction Calculations, a Site Map, the Storm Water Pollution Prevention Plan (SWPPP), a signed certification statement by the LRP, and the first annual fee. Following submittal of a Notice of Intent package and development of a SWPPP in accordance with the Construction General Permit, the applicant will receive a Waste Discharge Identification Number from the SWRCB. All requirements of the site-specific SWPPP, including any revisions, shall be included in construction documents and must be available on site for the duration of the project. Proof of registration shall be submitted to the Merced County Building Department prior to the initiation of construction.</p>	LS	
<p><b>Impact HYD-2: Degradation of surface water quality from operation of the Oliveira Dairy Expansion</b></p> <p>The project would not result in the degradation of surface water quality during project operations. Crop fields associated with the existing and proposed expansion of the dairy are developed with an existing tailwater return system. Wastewater is applied, and would continue to be applied, in accordance with ACO and CVRWQCB requirements.</p>	LS		<p><b>Mitigation Measure HYD-2:</b></p> <p>None required.</p>	LS	

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<p><b>Impact HYD-3: Groundwater contamination from operation of the Oliveira Dairy Expansion</b></p> <p>Expanded operations of the Oliveira Dairy could result in degradation of groundwater resources.</p>		PS	<p><b>Mitigation Measure HYD-3a:</b></p> <p>The following Best Management Practices shall be implemented by the Oliveira Dairy:</p> <ol style="list-style-type: none"> <li>1. Positive drainage shall be included in project design and construction to ensure that excessive ponding does not occur. The design shall comply with Title 3, Division 2, Chapter 1, Article 22, Section 646.1 of the Food and Agriculture Code for construction and maintenance of dairy or facility surroundings, corrals, and ramps, as described below.</li> <li>2. Dirt or unpaved corrals, or unpaved lanes, shall not be located closer than 25 feet from the milking barn or closer than 50 feet from the milk house. Corral drainage must be provided.</li> <li>3. A paved (concrete or equivalent) ramp or corral shall be provided to allow the animals to enter and leave the milking barn. This paved area shall be curbed (minimum of 6 inches high and 6 inches wide) and sloped to a drain. Cow washing areas shall be paved (concrete or equivalent) and sloped to a drain. The perimeter of the area shall be constructed in a manner that will retain the wash water to a paved drained area. Paved access shall be provided to permanent feed racks, mangers, and water troughs. Water troughs shall be provided with: (1) a drain to carry the water from the corrals; and (2) pavement (concrete or equivalent) which is at least 10 feet wide at the drinking area.</li> <li>4. The cow standing platform at permanent feed racks shall be paved with concrete or equivalent for at least 10 feet back of the stanchion line.</li> <li>5. As unpaved areas are cleaned, depressions tend to form, allowing ponding and increased infiltration. Regular maintenance shall include filling of depressions. Personnel shall be taught the correct use of manure collection machines (wheel loaders or elevating scrapers).</li> </ol>		SU
			<p><b>Mitigation Measure HYD-3b</b></p> <p>The applicant shall comply with requirements of the NMP/WMP, implement CVRWQCB requirements included in the individual WDR provided for the proposed expansion, and meet all Merced County ACO requirements not superseded by the conditions of the individual WDR.</p>		

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			<p><b>Mitigation Measure HYD-3c:</b>                      As set forth in the NMP, proposed application rates of liquid and/or solid manure shall not exceed agronomic rates. Nutrient samples shall be collected prior to and during applications periods to confirm agronomic rates within all portions of cropped areas receiving manure, and to protect water supplies. Soil testing frequency for nitrogen, potassium, phosphorus, and salts are described in the NMP. Modifications to the NMP may be required as outlined in the individual WDR for the proposed expansion to be issued by the CVRWQCB.</p>		
			<p><b>Mitigation Measure HYD-3d:</b>                      The CVRWQCB may require an industry-wide or site-specific salinity report to be submitted to the CVRWQCB for review and approval prior to operation or final inspection. The County understands that the salinity report will identify sources of salt in waste generated at the dairy, and evaluate measures that can be taken to minimize salt in the dairy waste. Should a salinity report define measures necessary to reduce salt loading from dairy operations, the owner/operator of the Oliveira Dairy shall implement measures identified to minimize salt in the dairy waste to meet Basin Plan or other CVRWQCB requirements. As specified by the CVRWQCB, necessary measures may be incorporated into the WDR issued for the facility or become a required deliverable of the WDR.</p>		
			<p><b>Mitigation Measure HYD-3e:</b>                      Because the Oliveira Dairy is a member of a Groundwater Monitoring Coalition, no site-specific shallow groundwater monitoring system has been implemented for the Oliveira Dairy. As a condition of the individual WDR issued for the facility, the applicant shall maintain continued membership in the groundwater monitoring network or install a site-specific groundwater monitoring system. The resulting groundwater monitoring objectives for either the regional program or an individual site are intended to be used by the Regional Board to assess and mitigate groundwater impacts.</p>		



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			<p><b>Mitigation Measure HYD-3f:</b> Groundwater monitoring of the on-site domestic and irrigation wells shall be continued by the dairy operator. If appropriate, surrounding properties with domestic water supply wells within 500 feet of the land application property could be considered for sampling for nitrate and E.C. at a minimum. An updated well monitoring schedule shall be developed and submitted to the County DEH. The updated well monitoring schedule will be fully incorporated into the WDR issued for the facility.</p>		
			<p><b>Mitigation Measure HYD-3g:</b> After project implementation and subsequent groundwater monitoring, if the dairy shows increased concentration in groundwater of constituents of concern, then additional manure exportation, a reduction in herd size, or additional crop acres may be necessary to accommodate the proposed expansion. The project applicant shall clearly demonstrate that the herd size will not constitute a threat to groundwater quality, and the County may alter conditions of the Conditional Use Permit, if necessary. In addition, a new Report of Waste Discharge (ROWD) may be required by the CVRWQCB. If necessary, the CVRWQCB may revise the WDR issued to the facility.</p>		
			<p><b>Mitigation Measure HYD-3h:</b> The existing heifer facility on Buhach Field, west of the main production area, shall be closed in accordance with Chapter 18.48.050 R of the ACO. All liquid and dry manure shall be removed from the facility within one hundred twenty (120) days of closure (weather conditions permitting) and soil samples shall be taken to determine the levels of nitrogen in the soil. The specific constituents to be sampled, number of samples, and sample depths, shall be determined by the Division of Environmental Health.</p>		
			<p><b>Mitigation Measure HYD-3i:</b> The Department of Community and Economic Development and the Division of Environmental Health shall make a final inspection of the facility prior to the commencement of expanded operations to confirm the dairy meets local and state requirements.</p>		

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			Implementation of Alternative 1, No Project, would reduce the magnitude and significance of this effect.	LS	
			Implementation of Alternative 2, On-Site Anaerobic Digester, would potentially increase the magnitude but not significance of this effect.		SU
			Implementation of Alternative 3, Limited Herd Size, would reduce the magnitude but not significance of this effect.		SU
<p><b>Impact HYD-4: Depletion of groundwater resources</b></p> <p>Implementation of the proposed project may result in depletion of groundwater resources since there could be an overall increase of groundwater use with the proposed dairy expansion. However, because the majority of the water would be used for irrigation and would contribute to groundwater recharge, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure HYD-4:</b></p> <p>None required.</p>	LS	
<p><b>Impact HYD-5: Modification of surface water drainage patterns and an increase in runoff</b></p> <p>Implementation of the proposed dairy expansion project would not modify surface water drainage patterns, and would not cause localized off-site migration of runoff, erosion, and/or flooding since the expansion could require minimal grading over a previously disturbed area. Because all storm water generated by the project would be collected and maintained within the project proponent’s larger property, this would be a less than significant impact.</p>	LS		<p><b>Mitigation Measure HYD-5:</b></p> <p>None required.</p>	LS	

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<p><b>Impact HYD-6: Risk release of pollutants due to project inundation in flood zones</b></p> <p>The project site could be subject to a flood event, during which dairy facilities could be damaged, or floodwaters could inundate dairy facilities and fields where wet or dry manure had been applied, causing impacts to surface water quality.</p>		PS	<p><b>Mitigation Measure HYD-6:</b></p> <ul style="list-style-type: none"> <li>As recommended by the Flood Protection Analysis report (Sousa 2018), the following measures shall be implemented to bring the proposed facilities into compliance with General Order requirements for flood protection: The project shall include construction of an access road along the west, south, and southeast boundary of the project site and new structures with finished floor elevations higher than the base flood elevation.</li> <li>Following construction of the proposed facilities and prior to commencement of dairy expansion operations, the project applicant shall obtain a flood proofing certificate in accordance with Section 18.34.050 of the Merced County Code from the Merced County Public Works Building Department. If any portion of the dairy facility is found not to comply with flood proofing requirements, the project applicant shall complete flood proofing as necessary to obtain the flood-proofing certificate from the County.</li> </ul>	LS	
<p><b>Impact HYD-7: Water supply pathways for pollutant migration</b></p> <p>Existing water supply wells on site and adjacent to the proposed dairy may represent preferred pathways for pollutant migration to groundwater. Following the DEH inspection (June 2018), the project applicant has documented compliance with setback requirements or adequate well protection for on-site wells.</p>	LS		<p><b>Mitigation Measure HYD-7:</b></p> <p>None required.</p>	LS	
<p><b>Impact HYD-8: Impacts to water quality at off-site locations as a result of project operations</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project could result in increased export of dry manure and wastewater slurry, associated pathogens, and residual contaminants to off-site locations, potentially causing impacts to water quality at off-site locations.</p>		PS	<p><b>Mitigation Measure HYD-8:</b></p> <p>Over the course of dairy operations, the project sponsor shall obtain written agreement from the recipients of manure exported off site that will include the following requirements:</p> <ul style="list-style-type: none"> <li>All manure shall be applied to cropland at rates and times that are reasonable for the crop, soil, climate, special local situations, and management system. Manure applications shall be timed and managed to minimize nitrogen movement below the root zone and to minimize percolation of waste constituents to groundwater.</li> </ul>		SU

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			<ul style="list-style-type: none"> <li>All stormwater that is or has been in contact with manure shall be maintained on site. No storm drainage that has been in contact with manure shall be allowed to flow or seep onto adjacent properties or public roads, or into any waterway.</li> <li>Where the commingling of water containing manure can take place with irrigation wells and irrigation and/or drainage district facilities, these facilities must be protected from pollution by a backflow device or method that is approved by the Division of Environmental Health and/or the appropriate irrigation/drainage district. It is the obligation of the property owner to install and maintain or cause to be installed and maintained the backflow device or method.</li> <li>Manure shall not be applied within 100 feet of any domestic well, irrigation well, or surface water body. Surface water bodies include creeks, streams, lakes and reservoirs, but do not include canals constructed above grade. Adequate protection of surface water bodies or irrigation wells shall prevent discharge or infiltration of manure constituents to the water body or well.</li> </ul> <p>The project sponsor shall provide the most recent analysis of the dry manure, in writing, to the manure recipient. The signed agreement between the project sponsor and the recipient of manure exported off site shall be submitted to the Merced County Division of Environmental Health for review.</p>		
			Implementation of Alternative 1, No Project, would reduce the magnitude and significance of this effect.	LS	
			Implementation of Alternative 2, On-Site Anaerobic Digester, would not change the magnitude or significance of this effect.		SU
			Implementation of Alternative 3, Limited Herd Size, would reduce the magnitude but not significance of this effect.		SU

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measure/Alternative	Level of Significance After Mitigation	
	LS	PS		LS	SU
<p><b>Impact HYD-9: Impacts to water quality due to septic systems located in limited on-site soils</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project would include the installation of a septic system where soils may be incapable of adequately supporting its use. Because on-site soils are very limited with respect to wastewater treatment and disposal, impacts to water quality could occur.</p>		PS	<p><b>Mitigation Measure HYD-9a:</b></p> <p>A permit shall be applied for and obtained from the DEH prior to abandonment of three existing septic systems to be removed. Abandoned OWTS shall be properly disconnected from the building or sewer source, and pumped by a licensed septic tank pumper. Components removed must be disposed of at an approved location, or destroyed in-place and backfilled with compacted earth, sand, or other approved materials. Septic tanks destroyed in-place shall be rendered incapable of fluid storage.</p> <p><b>Mitigation Measure HYD-9b:</b></p> <p>A permit shall be applied for and obtained from the DEH prior to construction of the proposed OWTS. A soils study performed in accordance with the Merced County On-Site Septic System Standards or subsequent ordinance may be required by DEH to determine the feasibility of using on-site septic systems and type of system appropriate for the site. The study shall address all soil conditions potentially affecting septic system function, including but not limited to highest anticipated groundwater, soil permeability, loading rate, impervious layers, and perched water tables. The system shall be designed by a qualified professional. The DEH may exempt these requirements (except for plot plan submittal) on parcels where documented OWTS performance is adequate.</p> <p><b>Mitigation Measure HYD-9c:</b></p> <p>The following conditions of approval as required by DEH shall be documented in the permit application and implemented throughout project operations.</p> <ul style="list-style-type: none"> <li>The leach field replacement areas (300% of required leach field for non-residential systems) shall remain unpaved, contain no structure, and not be under a permanent drive or parking area.</li> <li>A permanent barrier shall surround the septic system. The barrier shall protect each septic tank (unless the tank is traffic rated and has traffic rated risers and lids) and leach line area from vehicle traffic, parking, and any other soil-compacting activity.</li> </ul>	LS	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measure/Alternative	Level of Significance After Mitigation	
	LS	PS		LS	SU
<p><b>Impact HYD-10: Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan</b></p> <p>Implementation of the Oliveira Dairy Expansion project would not conflict with or obstruct implementation of the General Order for Existing Milk Cow Dairies WDRs or the Merced Subbasin Groundwater Sustainability Plan.</p>	LS		<p><b>Mitigation Measure HYD-10:</b></p> <p>None required.</p>	LS	
<b>Land Use Compatibility</b>					
<p><b>Impact LU-1: Consistency with Merced County Land Use Plans and policies adopted to protect the environment, including setback standards</b></p> <p>As proposed, the Oliveira Dairy Expansion project would be consistent with Merced County land use policies, including setback standards for animal confinement facilities. Because the proposed project would comply with land use regulations established by Merced County under the 2030 General Plan, ACO, and Zoning Code provisions, this would be considered a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure LU-1:</b></p> <p>None required.</p>	LS	
<p><b>Impact LU-2: Land use compatibility with existing off-site residential uses adjacent to the project area</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project could be incompatible with existing off-site residences due to the siting of active dairy facilities in close proximity to these uses. While there have been no nuisance complaints for the dairy, the proposed dairy expansion would not meet Merced County setback requirements for the control of nuisance conditions.</p>		PS	<p><b>Mitigation Measure LU-2a:</b></p> <p>Implement the odor control measures set forth in Mitigation Measure AQ-7a.</p> <p><b>Mitigation Measure LU-2b:</b></p> <p>Implement the nuisance control measures set forth in Mitigation Measures HAZ-1a and HAZ-1b.</p>	LS	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measure/Alternative	Level of Significance After Mitigation	
	LS	PS		LS	SU
<p><b>Impact LU-3: Land use compatibility with existing wildlife uses adjacent to the project area (ACO)</b></p> <p>Implementation of the proposed Oliveira Dairy Expansion project would not be incompatible with adjacent wildlife areas since there are none in the project vicinity. Because the proposed dairy expansion is consistent with the setback requirements of the Merced County ACO and 2030 General Plan; adjacent land uses consist of similar agricultural activities to those present and proposed on site; and no managed wildlife habitat is located adjacent to the project, this would be a less-than-significant impact.</p>	LS		<p><b>Mitigation Measure HYD-4:</b></p> <p>None required.</p>	LS	
<b>Cumulative Impacts</b>					
Aesthetics	LS		No cumulatively considerable contribution.	LS	
Agricultural Resources	LS		No cumulatively considerable contribution.	LS	
Air Quality		PS	The project would have a cumulatively considerable contribution.		SU
Biological Resources	LS		No cumulatively considerable contribution.	LS	
Cultural Resources	LS		No cumulatively considerable contribution.	LS	
Geological Resources	LS		No cumulatively considerable contribution.	LS	
Greenhouse Gas Emissions	LS		No cumulatively considerable contribution.	LS	
Hazards (Nuisance Insects)	LS		No cumulatively considerable contribution.	LS	
Hydrology and Water Quality		PS	The project would have a cumulatively considerable contribution.		SU
Land Use	LS		No cumulatively considerable contribution.	LS	
Mineral Resources	LS		No cumulatively considerable contribution.	LS	
Noise	LS		No cumulatively considerable contribution.	LS	
Population and Housing	LS		No cumulatively considerable contribution.	LS	
Public Services	LS		No cumulatively considerable contribution.	LS	
Recreation	LS		No cumulatively considerable contribution.	LS	

Environmental Impact	Level of Significance Before Mitigation		Mitigation Measure/Alternative	Level of Significance After Mitigation	
	LS	PS		LS	SU
Transportation and Circulation	LS		No cumulatively considerable contribution.	LS	
Utilities and Service Systems	LS		No cumulatively considerable contribution.	LS	
<b>Growth Inducement and Secondary Effects</b> Implementation of the Oliveira Dairy Expansion project would not result in any growth inducement.	LS		None required.	LS	
<b>Irreversible Commitment of Resources</b> The demand for all such resources is expected to increase regardless of whether or not the project is developed. As discussed in the ACO EIR, the number of dairy facilities in the San Joaquin Valley is expected to increase under the cumulative herd forecast. Therefore, if not consumed by this project, these resources would likely be committed to other projects in the region intended to meet this anticipated growth. The investment of additional resources in the project would be typical of the level of investment normally required for dairies of this scale. Mitigation measures have been included in this EIR to reduce and minimize the impact to renewable and non-renewable resources.	LS		None required.	LS	
<b>Potential Environmental Damage from Accidents</b> The project proposes no uniquely hazardous uses, and its operation would not be expected to cause environmental accidents that would affect other areas.	LS		None required.	LS	