

INITIAL STUDY
FOR THE
GODINHO HEIFER RANCH
EXPANSION PROJECT

CONDITIONAL USE PERMIT APPLICATION NO. CUP19-006

COUNTY OF MERCED
DEPARTMENT OF COMMUNITY AND ECONOMIC DEVELOPMENT
2222 'M' Street
Merced, CA 95340

Prepared with the Technical Assistance of:



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April 2020

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**NOTICE OF INTENT
TO ADOPT A MITIGATED NEGATIVE DECLARATION
FOR THE GODINHO HEIFER RANCH EXPANSION PROJECT**

To: Interested Persons

From: County of Merced
Department of Community and Economic Development
2222 'M' Street
Merced, CA 95340
Phone: (209) 385-7654
Tiffany.Ho@countyofmerced.com

Contact: Tiffany Ho, Planner II

Merced County is the Lead Agency pursuant to the California Environmental Quality Act (CEQA) for the proposed Godinho Heifer Ranch Expansion Project. Merced County intends to adopt a Mitigated Negative Declaration for the proposed project.

The project site is located on the east side of Johnson Road approximately 600 feet south of Henry Miller Road in the Los Banos area of unincorporated Merced County as described in the attached Initial Study/Mitigated Negative Declaration (IS/MND). Merced County is considering Conditional Use Permit Application No. CUP19-006 to allow the construction of three new freestall barns and a loafing barn within and adjacent to the existing heifer ranch footprint and modification of the facility to increase the number of animals housed from 2,004 to 3,501 (1,103 Animal Units (AU) to 2,125 AU).

The proposed IS/MND is available for public review from 8:30 a.m. to 4:30 p.m., Monday through Friday, at the offices of the Merced County Community and Economic Development Department (address listed above) and online at the Merced County website at:

www.co.merced.ca.us/index.aspx?nid=414

The public comment period on the IS/MND begins on April 15, 2020 and closes on May 15, 2020. Comments may be submitted to "Tiffany.Ho@countyofmerced.com" and should include the phrase "Godinho Heifer Ranch Expansion Project IS/MND" in the subject line. The public hearing for the project is tentatively scheduled to be heard at 9:00 a.m. on May 27, 2020, during the Planning Commission Meeting. Although the public may not attend the meeting in person, the live broadcast will be available to the public via a link on the Planning Commission page of the Merced County website: www.co.merced.ca.us/planning/index.html. The County will accept comments for consideration during the meeting via email according to the following protocol:

IMPORTANT NOTICE AND GUIDANCE REGARDING COVID-19 & PUBLIC HEARINGS

Based on guidance from the California Department of Public Health and the California Governor's Office, in order to minimize the spread of the COVID-19 virus, please comply with the following:

1. Meeting location(s) will be unavailable to the public in order to limit potential transmission of COVID-19.
 2. You are strongly encouraged to observe the live stream of the Planning Commission meetings remotely by visiting <https://www.co.merced.ca.us/2229/Planning-Commission-Meetings>
 3. If you wish to make a comment on a specific agenda item, please submit your comment via email by 5:00 p.m. on the Monday prior to the Planning Commission meeting. Please submit your comment to the Planning Department at planning@countyofmerced.com. Your comment will be placed into the record at the meeting.
 4. If you are watching the live stream of the Planning Commission meeting and wish to make either a general public comment or to comment on a specific agenda item as it is being heard, please submit your comment, limited to 250 words or less, to planning@countyofmerced.com. Every effort will be made to read your comment into the record, but some comments may not be read due to time limitations. Comments received after an agenda item is heard will be made part of the record if received prior to the end of the meeting.
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Appendices

Bound Separately – Available from the Merced County Department of Community and Economic Development

Appendix A	Merced County Regulations Pertaining to Dairies and Other Animal Confinement Facilities
Appendix B	Waste Management Plan For Godinho Heifer Facility, Merced CA
Appendix C	Air Pollutant and Greenhouse Gas Emissions - Technical Calculations
Appendix D	Health Risk Assessment and Ambient Air Quality Analysis – Godinho Heifer Ranch Expansion
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INITIAL STUDY AND ENVIRONMENTAL EVALUATION

Project Title: Godinho Heifer Ranch Expansion
Conditional Use Permit No. CUP19-006

Project Location: 13140 Johnson Road
Los Banos, CA 93635

Lead Agency Name and Address: Merced County
Community and Economic Development Department
2222 'M' Street
Merced, CA 95340

Contact Person and Phone Number: Tiffany Ho, Planner II
Phone: (209) 385-7654

General Plan Designation: Agricultural (Merced County General Plan)

Zoning: A-1 (General Agricultural; Merced County)

1. DESCRIPTION OF PROJECT

The project under evaluation in this Initial Study (IS) is the expansion of an existing heifer ranch located in rural Merced County north of the City of Los Banos. This Initial Study focuses on whether the proposed project may cause significant effects on the environment. In particular, consistent with Section 21083.3 of the Public Resources Code, this Initial Study is intended to assess any effects on the environment, which are peculiar to the proposed project or to the parcel on which the project would be located. The Initial Study is also intended to assess whether any environmental effects of the project are susceptible to substantial reduction or avoidance by the choice of specific revisions in the project, by the imposition of conditions, or by other means [Section 15152(d)(2) of the Guidelines for the California Environmental Quality Act (CEQA)]. If such revisions, conditions or other means are identified, they will be imposed as mitigation measures.

This initial study relies on CEQA Guidelines Sections 15064 – 15064.7 in its determination of the significance of environmental effects. According to Section 15064(f), the finding as to whether a project may have one or more significant effects shall be based on substantial evidence in the record, and that controversy alone, without substantial evidence of a significant effect, does not trigger the need for an EIR.

LOCATION

The Godinho Heifer Ranch is located on 15.4± acres of two existing parcels totaling approximately 64.1 acres in unincorporated Merced County north/northwest of the City of Los Banos. The project site is located on the east side of Johnson Road approximately 600 feet south of Henry Miller Road.

The project's location is within the central California region (see Figures 1 and 2). Merced County Assessor's Parcels (APN) are identified in Figure 3¹ and Table 1. The project site is located in Section 3, Township 10 South, Range 10 East, Mount Diablo Base and Meridian; 37°05'50.35"N, 120°51'45.74" W.

Table 1 Godinho Heifer Ranch Project Parcels, Acreage, and Use

APN	Gross Acres	Use
081-020-008	58.4	Active Heifer Ranch Facilities / Residences / Cropped Field
081-020-019	5.7	Active Heifer Ranch Facilities
Total	64.1	

APN = Assessor's Parcel Number.

Construction of the proposed facilities would result in the conversion of approximately 6 acres of dairy cropland located on APN 081-020-008.

Source: Project Applicant, April 2019; Google Earth, 2019; Site Reconnaissance, August 2019.

EXISTING CONDITIONS

The existing heifer ranch currently consists of buildings and infrastructure for the housing, feeding, and raising of support stock for a separate, nearby dairy operation. The heifer facilities include 140,640 square feet of buildings that are sited on a 15.4-acre portion of a 64.1-acre site, located on APNs 081-020-008 and 081-020-019 (see Figures 2 and 3). The facilities include:

- shade structures
- open corrals
- two wastewater storage ponds
- office and storage buildings

The undeveloped portion of parcel 081-020-008 totaling approximately 50 acres is used as cropland and for wastewater application by the nearby Godinho Dairy. No cropped fields are associated with the heifer ranch. All liquid and solid manure produced by the heifer ranch is exported from the facility to the Godinho Dairy.

As established at the time of Initial Study preparation (November 2019), there are approximately 2,004 support stock (1,103 Animal Units (AU)²) housed at the facility. There are no milk or dry cows on the facility³. The predominant breed of cows housed at the heifer facility is Holstein. Currently, there is no bedding used at the facility.

¹ In late 2019, a Property Line Adjustment was submitted and approved by Merced County so that the proposed structures would not built over property lines. The Property Line Adjustment has two years to record; however, Figure 3 may be inaccurate if the property owners record the map prior to completion of the Initial Study.

² An Animal Unit (AU) is 1,000 pounds of animal weight. The Central Valley Regional Water Quality Control Board Waste Discharge Requirements General Order for Confined Bovine Operations, Order R5-2107-0058, uses AU to regulate feedlot operations. Merced County and San Joaquin Valley Air Pollution Control District permit requirements regulate animals by age class. For the purposes of this Initial Study, both the number of animals and AU are used throughout this document.

³ The milking parlor that was part of the original dairy operation has been demolished, and the facility currently has no capacity or ability to milk cows.

The existing facility consists of flush and scrape systems that are used to collect and process wastewater and solid manure. Animal wastes from freestall and other concrete-surfaced areas (such as feed lanes) are flushed with recycled water to an on-site waste management system that consists of two wastewater storage ponds (retention pond). The area of active heifer facility facilities has been graded to direct corral runoff to the existing waste management system. Corrals are scraped twice annually to remove solids and maintain proper gradient for drainage. Manure is stored on the north side of the wastewater storage pond. Stormwater runoff from impervious surfaces is routed to the wastewater ponds. Stormwater from all roofed areas is routed to a nearby field.

Solid manure is removed from wastewater ponds with excavation equipment and exported to land application areas associated with the adjacent, separate dairy operation. Wastewater collected in the retention pond is also applied to the same land application areas via irrigation. There are no agricultural wells on the project site. Wastewater export agreements are in place as required by the Merced County Animal Confinement Ordinance (ACO).

Many of the nearby properties are used for growing feed crops for the existing heifer ranch or for other similar animal confinement facilities in the area. There is an existing commodity barn on site that is used only for storage. No feed is stored on this facility – all feed is stored on the Godinho Dairy facility on Wilson Road and delivered to the heifer ranch daily. There are no silage piles on site.

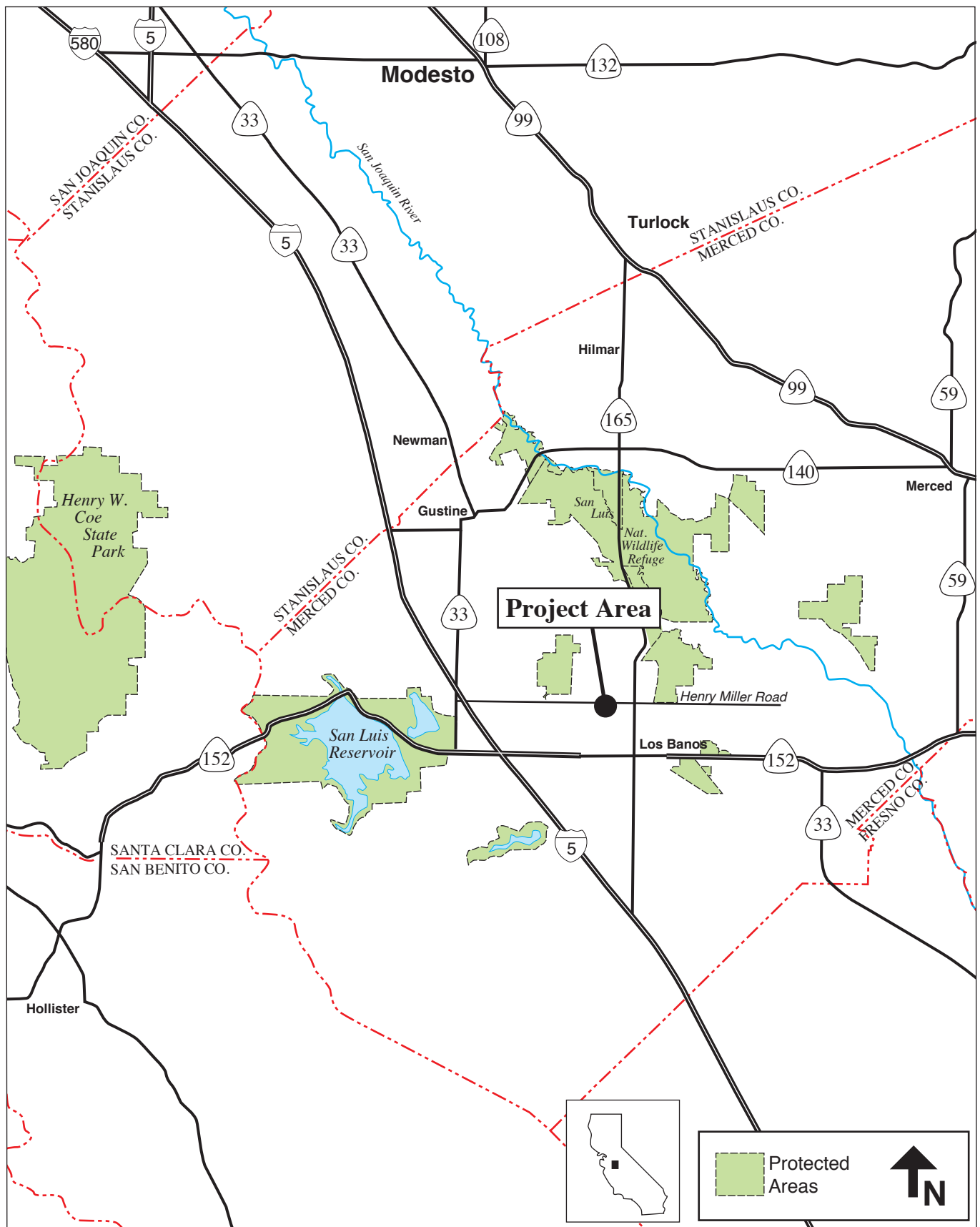
No hazardous materials, chemicals, pesticides, flammable liquids, or fuels are stored on the project site. No pest control chemicals are used at this facility.

There are three residences occupied by employees at the heifer facility. One existing well on the project site provides domestic water for the residences and also provides drinking water for the herd (see Figure 4 for well location). Each residence is served by an on-site septic system.

The primary operating hours for the facility are from 6:00 a.m. to 8:00 a.m. when the animals are fed, and from 3:00 p.m. to 3:30 p.m. when feed is pushed back into feedracks. During these times, two employees are on site. A veterinarian visits the heifer ranch once per week to monitor herd health. Night lighting at the facility includes LED fixtures mounted on the buildings.

Currently, heavy trucks (milk tankers, commodity deliveries) and other vehicles serve the project site. Existing daily trips by all classes of vehicles are estimated at 6.8 average daily trips (ADT). All trips currently access the site via Johnson Road and Henry Miller Road. State Route (SR) 165 to the east and SR 152 to the south provide regional access to the site. The heifer ranch provides on-site parking areas for employees and visitors.

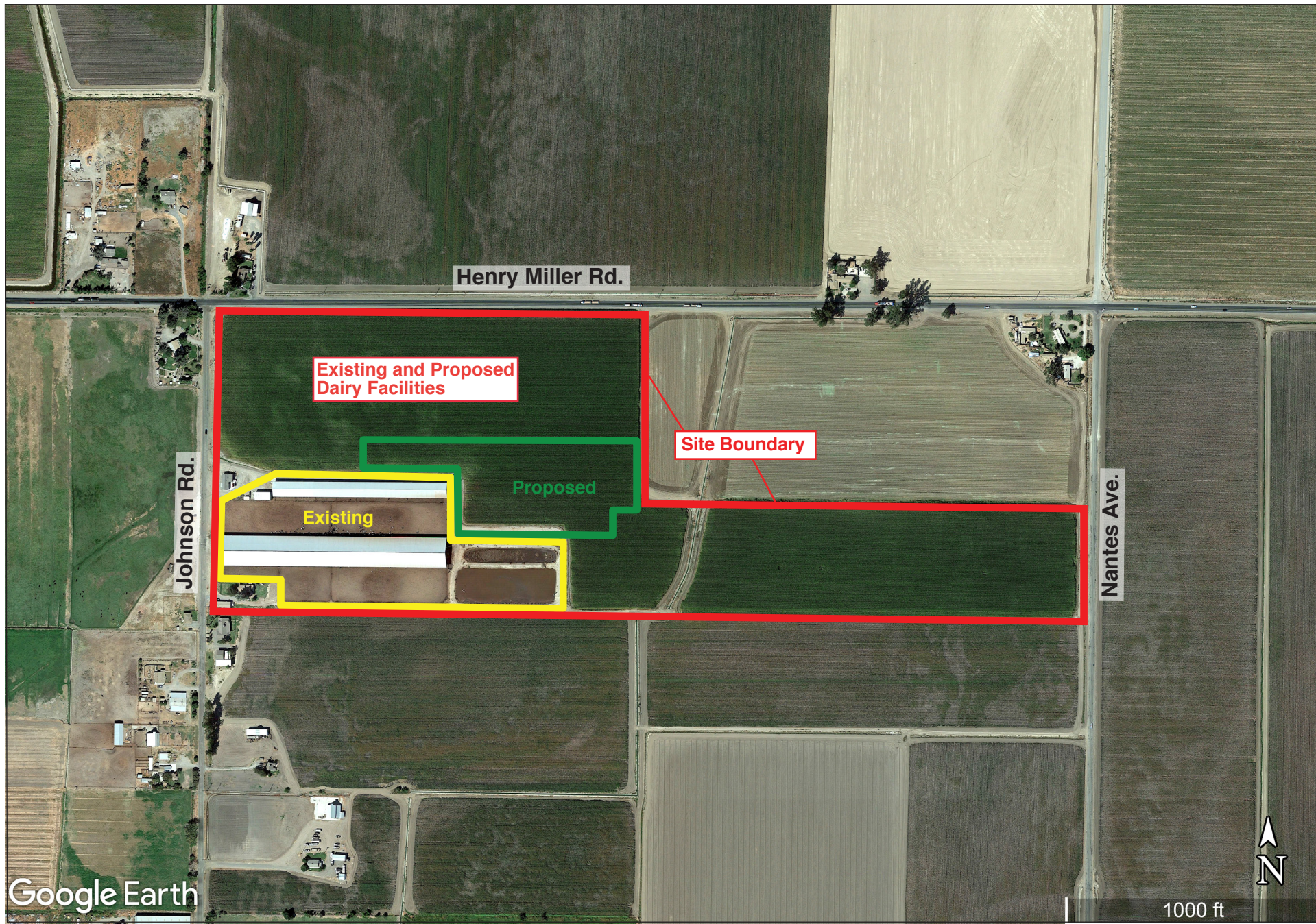
The project site is located within Flood Zone X, an area determined by the Federal Emergency Management Agency (FEMA) to be outside the 100- and 500- year floodplains.



SOURCE: Planning Partners, 2019

Godinho Heifer Ranch Expansion Project CUP19-006

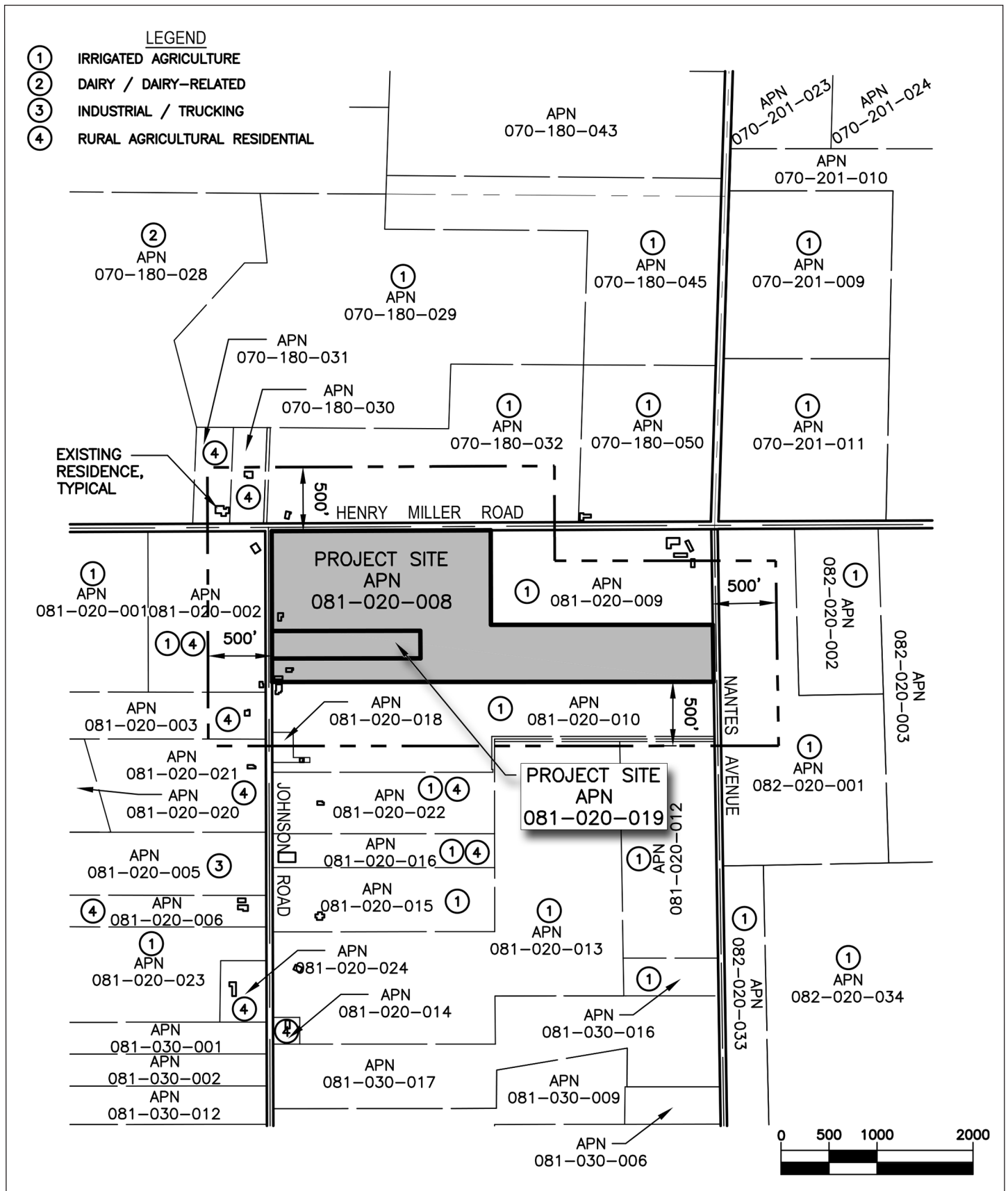
Figure 1
Regional Location



SOURCE: Planning Partners, 2020

Godinho Heifer Ranch Expansion Project CUP19-006

Figure 2
Project Location

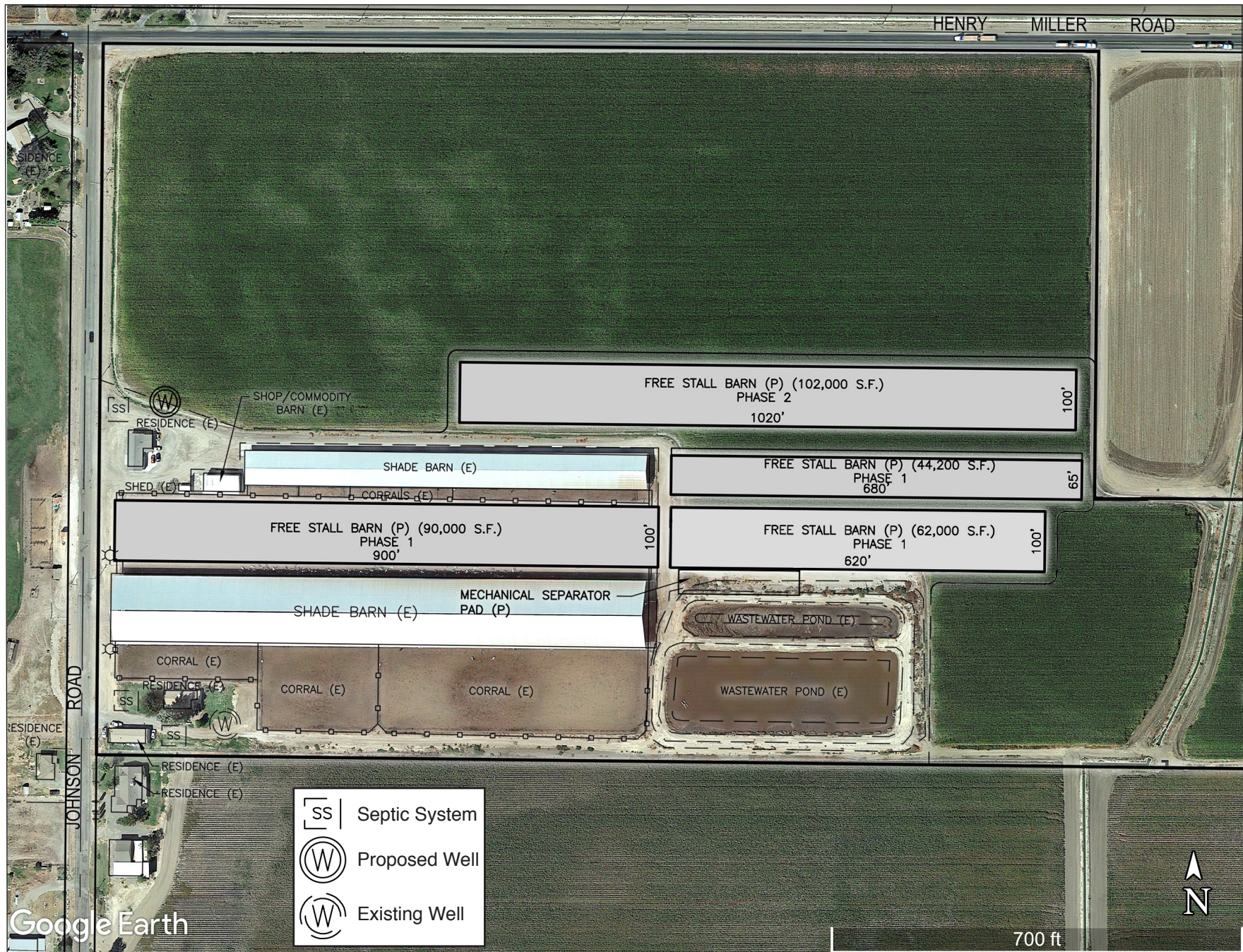


Godinho Heifer Ranch Expansion Project CUP19-006

SOURCE: Merced County GIS 2019; Sousa Engineering 2019

Figure 3

Project Site Merced County Assessor Parcel Numbers



SOURCE: Planning Partners, 2020

Godinho Heifer Ranch Expansion Project CUP19-006

Figure 4
Existing and Proposed Facilities

SURROUNDING LAND USES AND SETTING

There are off-site single-family residences surrounding the project site and located within the windshed of the heifer facility (defined as an area of 1,320 feet upwind to 2,640 downwind of the periphery of the animal facility) (see Table 2 and Figure 5). The closest off-site residences are located approximately 205 and 215 feet south of existing active heifer facility facilities (see Figure 6).

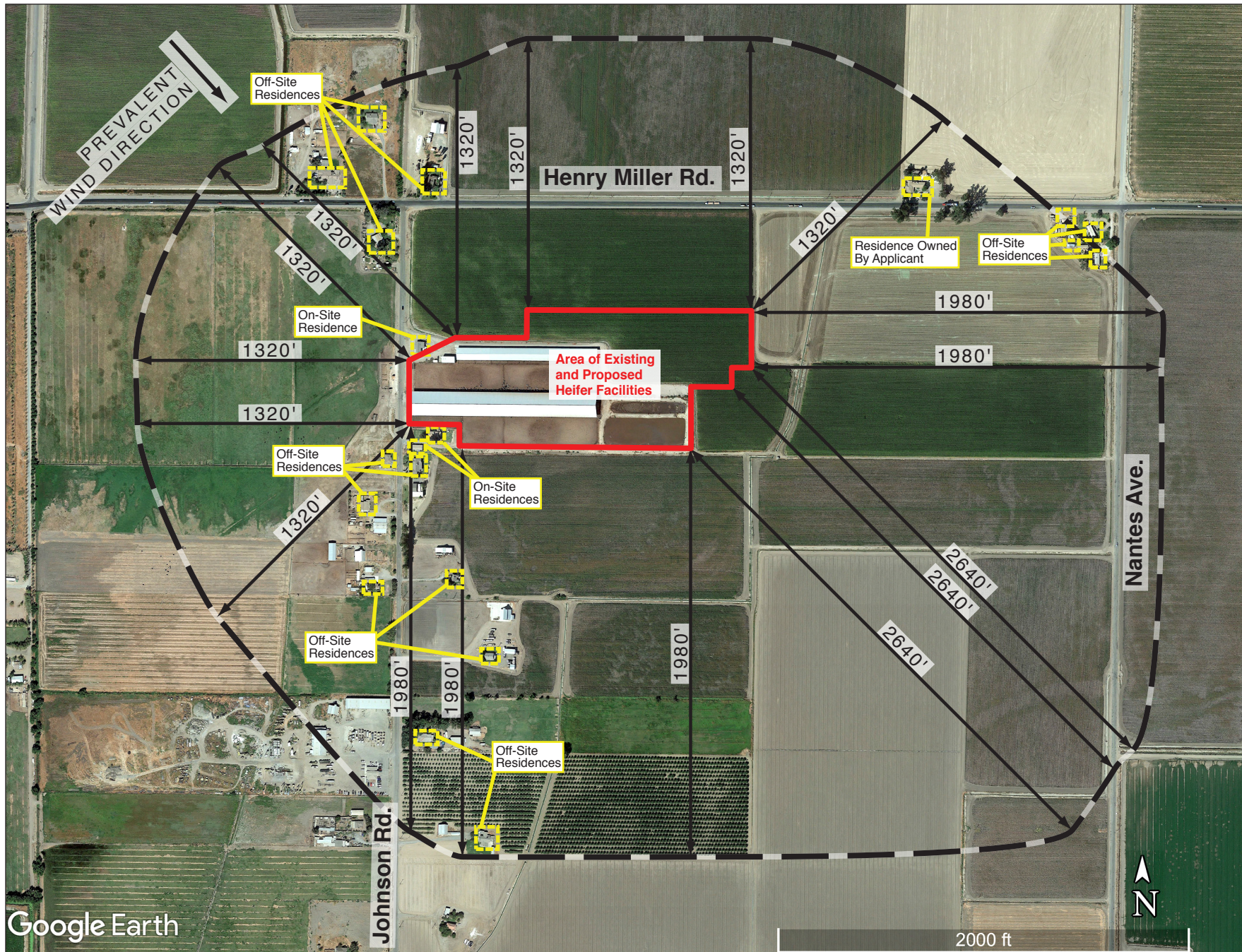
The dairy facility located to the north of the heifer ranch is owned by the project applicant but is operated separately from the Godinho Heifer Ranch. The applicant also owns cropland immediately adjacent to the heifer ranch and in the project area that is used for dairy facility operations.

Table 2 Surrounding Land Uses at the Godinho Heifer Ranch			
Location	Land Use	General Plan	Zoning
ON SITE	Heifer facility / Residences	Agricultural	General Agricultural A-1
NORTH	Agriculture / Dairy / Residences	Agricultural	Exclusive Agricultural A-2
EAST	Agriculture / Residences	Agricultural	General Agricultural A-1
SOUTH	Agriculture / Residences / Animal Confinement Facility	Agricultural	General Agricultural A-1
WEST	Agriculture / Residences	Agricultural	General Agricultural A-1

Source: Project Applicant, April 2019; Google Earth, 2019; Site Reconnaissance, August 2019.

There are Central California Irrigation District (CCID) surface water canals within the vicinity of the proposed project. The urban boundary of the City of Los Banos is located approximately 0.5 miles southeast of the Godinho active heifer facilities (see Figure 6). The project site is outside of the Grasslands Ecological Area but within the boundary of the Grasslands Focus Area.

Project details such as adjacent land uses and cropping patterns could change over the course of evaluation, and from those existing at the time of this Initial Study. These changes, however, would consist of agricultural and ancillary uses consistent with the 2030 Merced County General Plan, and would not affect the analysis contained in this Initial Study.

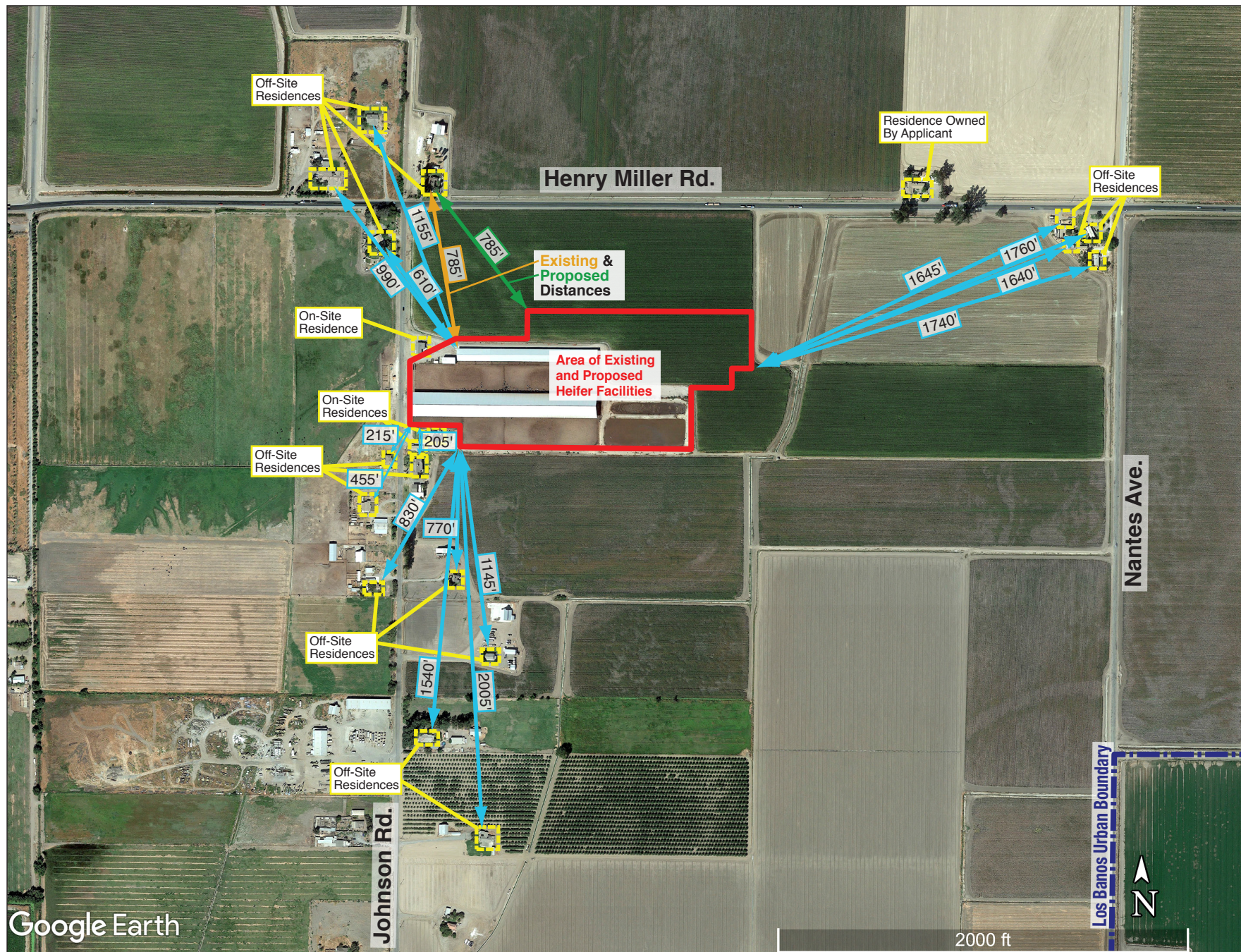


SOURCE: Planning Partners 2019

Godinho Heifer Ranch Expansion Project CUP19-006

Figure 5

Project Heifer Facilities and Nearby Residences Located in the Windshed



SOURCE: Planning Partners 2019

Godinho Heifer Ranch Expansion Project CUP19-006

Figure 6

Distance of Nearest Off-Site Residences to Existing and Proposed Active Heifer Facilities

PROJECT OPERATIONS AND PERMITTING HISTORY

There are no Merced County permits for the existing animal confinement facility. There are several permits on file for existing onsite residences, including CUP2575 for a mobile home, approved by the Planning Commission on March 11, 1981; and AA00076 permitting a 2nd and 3rd residence, approved on August 22, 2000. The project NMP indicates that the facility has been in operation since 1975.

Historically, the facility was operated as a small dairy with approximately 300 milk cows and 500 total head. The project applicant purchased the facility in 2009, and began housing heifers and support stock on the facility. The milking parlor that was part of the original dairy operation has been demolished, and the facility currently has no capacity or ability to milk cows.

To allow for the expansion of the heifer facility, the applicant has submitted an application for issuance of a new Conditional Use Permit (CUP19-006) from the County. It is this action that is the subject of this Initial Study. The Central Valley Regional Water Quality Control Board (CVRWQCB) and the San Joaquin Valley Air Pollution Control District (SJVAPCD) both regulate the existing heifer facility. As responsible agencies, they will be required to use the County's environmental document in their consideration of the proposed heifer facility expansion.

Historically, heifer facilities have not been regulated by the state, and there are generally limited records for these facilities. On June 8, 2017, the Central Valley Regional Water Quality Control Board adopted the Waste Discharge Requirements General Order for Confined Bovine Operations, Order R5-2107-0058 (Bovine Feedlot Order). The Bovine Feedlot Order obligated owners and operators of existing bovine feedlots within the Central Valley to submit a Notice of Intent as application for regulatory coverage under the Order, by July 1, 2018. Facilities that house 100 or more Animal Units (AUs) require full coverage under the Bovine Feedlot Order. The project applicant submitted a Notice of Intent (NOI) for the expanded heifer ranch in June 2018.

There are no existing permits for the Godinho Heifer Ranch with the San Joaquin Valley Air Pollution Control District (SJVAPCD). An application for an Authority to Construct (ATC) and Permit to Operate (PTO) has been submitted to the SJVAPCD for the proposed herd expansion and the modification of existing facilities. Since no cropland is associated with the existing heifer ranch, the facility is exempt from submitting a Conservation Management Plan (CMP) to the SJVAPCD.

PROJECT CHARACTERISTICS

The project sponsor has applied for a new Conditional Use Permit (CUP19-006) from Merced County to expand the existing heifer facility so that the modified heifer facility would house 471 dry cows and 3,030 support stock (2,125 AU) (see Table 3). This would represent an increase of 1,497 animals (1,022 AU) from existing numbers.

Table 3 Existing and Proposed Herd at the Godinho Heifer Ranch Expansion Project

	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo.)	Calves (4-6 mo.)	Calves (0-3 mo.)	Total Animals	Animal Units (AU)
Existing	0	0	1,632	372	0	2,004	1,103
Proposed	471	1,262	354	882	532	3,501	2,125
Change	471	1,262	-1,278	510	532	1,497	1,022

Note: This evaluation considers maximum buildout.

AU = Animal Unit. An animal unit is 1,000 pounds of animal weight.

Source: Project Applicant, March 2019; Waste Management Plan (03/03/2019)

The proposed project would include the construction of three freestall barns and a loafing barn with sizes of approximately 90,000 square feet, 62,000 square feet, 44,200 square feet, and 102,00 square feet. With implementation of the proposed heifer facility expansion, new structures would consist of approximately 298,200 square feet of construction. A mechanical solids separator and separator pad would be installed with the proposed expansion (see Figure 4 for the proposed heifer site plan). A new well may be constructed on the north side of the heifer facility. Construction of these facilities would eliminate an existing area of open corrals and increase the developed area of the site by approximately six acres. These six acres would be located on cropped acreage currently managed by the Godinho Dairy. Grading would be required for new building pads and access roads. Approximately 15,000 cubic yards of fill would be obtained from adjacent fields associated with the Godinho Dairy.

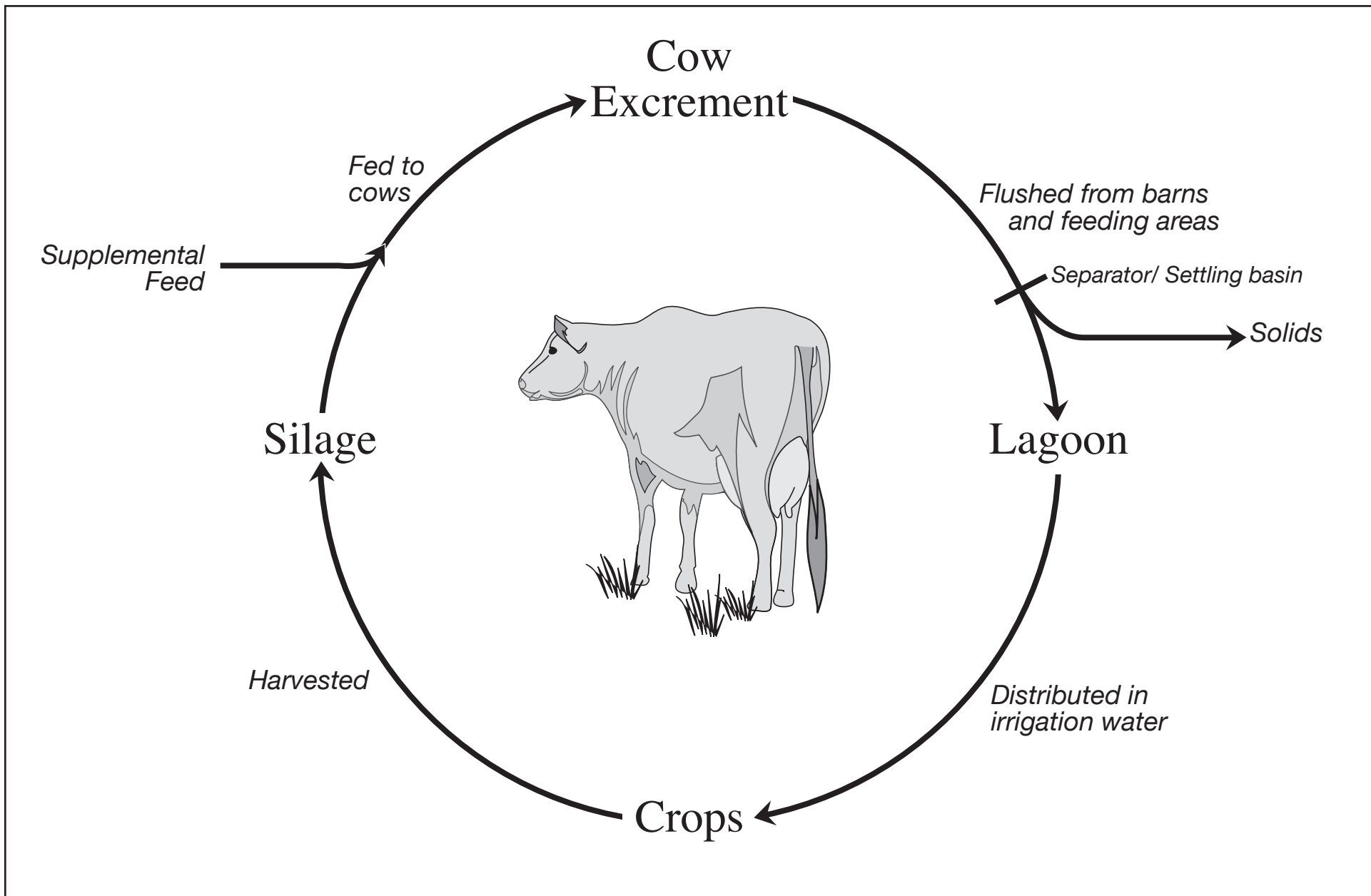
None of the proposed buildings would be constructed within 100 feet of the existing domestic well. While there are several off-site residences within 1,000 feet of existing heifer facilities, these distances would not be reduced with the proposed expansion (see Figure 6).

Animal wastes from freestall and other concrete-surfaced areas would continue to be flushed to an on-site waste management system, except for solid manure within corral areas, which would continue to be scraped. Liquid manure would continue to be directed to the wastewater storage ponds.

Stormwater runoff from roofed areas would continue to be routed to the adjacent fields. Wastewater would continue to be exported from the facility and applied to adjacent cropland.

Solid manure that accumulates within corrals would continue to be removed two times per year. With the proposed heifer facility expansion, dry manure would continue to be stockpiled on site at the existing dry manure storage area. Dry manure would be used for bedding or sold and hauled off site for use as fertilizer and soil amendments. As reported in the NMP for the heifer ranch, liquid and solid manure would be trucked and/or piped to adjacent fields and non-adjacent fields. All land application areas are managed and reported under the Godinho Dairy NMP. While the exact location of these off-site cropland parcels may vary throughout operations, the disposal of manure at off-site locations and the acreage necessary to properly dispose of manure liquids and solids are accounted for in the project NMP. Figure 7 illustrates the processes that occur at a heifer farm.

The proposed heifer facility expansion would rely on existing utilities, including domestic water, stormwater, and electrical services. The existing septic systems would not be affected by the proposed heifer facility expansion (see Figure 4 for septic system locations).



Operations at the heifer facility would continue to occur during primary operating hours of 6:00 a.m. to 8:00 a.m. when the animals are fed, and from 3:00 p.m. to 3:30 p.m. when feed is pushed back into feedracks. With implementation of the proposed project, the number of employees would remain at two workers. Once per week, during the veterinarian check, there would be as many as five (5) individuals on site.

Replacement Well – The proposed project would include installation of a new well on the north side of the heifer facility. The proposed well would function as a replacement well to the existing, older domestic well to serve the residences and drinking water for the herd. At this time and in accordance with Merced County Code Chapter 9.28, it is the applicant's intent to destroy the existing well when the new well is put into service. A water meter would be installed on the proposed well to monitor water use.

Circulation and Parking

The project site would continue to be served by heavy trucks (commodity deliveries, solid manure transport), and other vehicles. Daily trips by all classes of vehicle are estimated to increase from approximately 6.8 to 7.4 average daily trips, with an increase of less than one daily trip (see Table 4). The majority of trips would consist of auto and light truck trips. All trips would continue to access Johnson Road and Henry Miller Road.

Table 4 Godinho Heifer Ranch Expansion Project Trip Generation and Assignment					
Trip Type/Purpose	Daily Trip Generation Factor	Type of Vehicle	Daily Trips		Local Route of Trip
			Existing	With Project	
Residential Dwellings (on site)	2/residence *See Note 1	Auto/Light Truck	6	6	Johnson Road
Commodities transport from off site	*See Note 2	Heavy Truck	0.3	0.6	Johnson Road
Solid and liquid manure transport to off-site fields	*See Note 3	Heavy Truck	0.3	0.6	Johnson Road
Rendering Service	*See Note 4	Medium Truck	0.1	0.1	Johnson Road
Veterinarian	1/week	Light Truck	0.1	0.1	Johnson Road
Total Auto/Light Truck Trips			6.1	6.1	
Total Medium Truck Trips			0.1	0.1	
Total Heavy Truck Trips			0.6	1.2	
Total Trips			6.8	7.4	

Notes: Trip Generation table based on Planning Partners assumptions and information obtained from project applicant.

1. There are three existing residences located on site, all of which are occupied by employees (since there are only 2 employees, it is assumed 1 employee works at the neighboring Godinho Dairy facility). For a heifer facility farm operation, a trip generation factor of 2 trips per day was used for both on-site residences and off-site employees.
2. There are 2 commodity truck trips from off site per week, and there would be 4 with the proposed expansion.
3. Currently, there are approximately 100 diesel truck trips per year to export dry manure to off-site fields. Under proposed operations, there would be approximately 200 diesel truck trips per year to export dry manure to off-site fields.
4. There is approximately 1 truck trip per week for rendering service. There would be no increase with the proposed expansion.

Source: Planning Partners 2019. Project Applicant April 2019.

PROJECT CONSTRUCTION AND PHASING

As indicated on Figure 4, the proposed heifer facility expansion would be constructed in two phases. Phase 1 would include construction of two freestall barns and one loafing barn within 3 to 5 years. The replacement well would be installed during Phase 1 of animal housing construction. Phase 2 would include the construction of one freestall barn and would likely occur within 10 years.

REQUIRED APPROVALS, OTHER PROCESSES, AND CONSULTATIONS

A listing and brief description of the regulatory permits and approvals required to implement the proposed project is provided below. This environmental document is intended to address the environmental impacts associated with all of the following decision actions and approvals.

Merced County and Other Local and Regional Agencies

Merced County

The County has the following permitting authority related to the proposed Godinho Heifer Ranch Expansion project:

- Preparation and approval of an Initial Study/Mitigated Negative Declaration - Merced County will act as the lead agency as defined by CEQA, and will have authority to determine if the Initial Study/Mitigated Negative Declaration is adequate under CEQA.
- Approval of the Conditional Use Permit - Merced County will consider the proposed heifer facility project as a “Conditional Use Permit.” Conditional Use Permits are discretionary permits for uses of land that require special review to ensure that they are compatible with the neighborhood and surrounding land uses. They are considered more likely to affect surrounding land uses than uses permitted by right in a zoning district or those uses permitted under Administrative Permits.
- Building Permit - Merced County will require a building permit for the proposed heifer facility expansion project.
- Hazardous Material Business Plan (HMBP) - The on-site storage of any hazardous material over threshold quantities (55 gallons; 200 cu. ft.; or 500 pounds) would require a HMBP to be filed with the Merced County Division of Environmental Health (DEH). Any quantity of hazardous waste generated on site also requires that a HMBP be filed. A Hazardous Material Business Plan has been submitted and accepted by Merced County Department of Environmental Health as of March 2, 2019.
- Well Permit – A well permit application will be considered by Merced County for the proposed replacement well.

San Joaquin Valley Air Pollution Control District

- Authority to Construct / Permit to Operate – The owner or operator of any facility or activity (including agricultural activities) that emits criteria air pollutants or their precursors above certain thresholds must first obtain an ATC from the SJVAPCD. All new sources exceeding thresholds will be required to apply for an ATC and PTO; this essentially is one permit that is issued in two steps. The applicant first obtains an ATC with specific conditions for implementation during construction; then an inspection is

completed and, if all the conditions of the ATC are met during construction, the applicant is issued a PTO. Beyond the ATC and PTO, preparation of an air quality impact assessment (AQIA) would be required, in addition to compliance with other SJVAPCD regulations.

- Since no cropland would be associated with the expanded heifer ranch, the facility is exempt from submitting a Conservation Management Plan (CMP) to the SJVAPCD.

State of California

State agencies have the following permitting authority related to the proposed Godinho Heifer Ranch Expansion project:

State Water Resources Control Board

- General Construction Activity – The State Water Resources Control Board (SWRCB) has adopted a General Construction Activity Storm Water Permit for storm water discharges associated with any construction activity, including clearing, grading, excavation, reconstruction, and dredge and fill activities, that results in the disturbance of at least one acre of total land area.

Regional Water Quality Control Board - Central Valley Region

- Waste Discharge Requirements – The owner or operator of any facility or activity that discharges, or proposes to discharge, waste that may affect groundwater quality or from which waste may be discharged in a diffused manner (e.g., erosion from soil disturbance) must first obtain a WDR permit from the CVRWQCB. The CVRWQCB regulates discharges from confined animal facilities according to the anti-degradation requirements of the Porter-Cologne Water Quality Control Act and the Water Quality Control Plan for the Sacramento River and San Joaquin River Basins. The project applicant submitted a Notice of Intent (NOI) for coverage under the Waste Discharge Requirements General Order for Confined Bovine Operations, Order R5-2017-0058 (Bovine Feedlot Order) for the expanded heifer ranch in June 2018.

Federal Government

It is anticipated that no permitting from federal agencies would be required.

APPLICATION OF THE 2030 MERCED COUNTY GENERAL PLAN, MERCED COUNTY ANIMAL CONFINEMENT ORDINANCE, AND MERCED COUNTY ZONING CODE

2030 Merced County General Plan

The 2030 Merced County General Plan guides economic development, land use, agriculture, transportation and circulation, public facilities and services, natural resource, recreation and cultural resources, health and safety, air quality, water, and other matters of public interest and concern. The General Plan is intended to provide for orderly growth, and to convey the community's values and expectations for the future. An EIR for the 2030 General Plan was certified and the General Plan was adopted by Merced County in December 2013. A Draft Background Report of existing environmental conditions within the County was finalized in December 2013 with certification of

the General Plan EIR. The Background Report functions as the existing setting section for the General Plan EIR. The EIR, including the Background Report as updated, is used in this Initial Study, along with other resources, to establish the existing setting for the proposed project. The General Plan EIR will serve as the first tier of environmental analysis for the proposed project, including the evaluation of countywide and cumulative impacts. The 2030 General Plan EIR, including the Background Report, is hereby incorporated by reference pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein. A copy of the General Plan, General Plan EIR, and Background Report can be obtained at the Department of Community and Economic Development, 2222 “M” Street, Merced, CA 95340. These documents are also available for download from the Merced County General Plan website at:

<http://www.co.merced.ca.us/index.aspx?NID=1170>

Merced County Animal Confinement Ordinance and Zoning Code

On October 22, 2002, Merced County adopted revisions to the County’s Animal Confinement Ordinance (ACO). Additional revisions to the Merced County ACO and Merced County Code Chapter 18.02.02 (Zoning Code Agricultural Zones)⁴ were adopted on February 8, 2005 (the text of the ACO is included in Appendix A, bound separately). The ACO regulates the design, construction, and operation of animal confinement facilities within the county. Because the Ordinance is regulatory rather than permissive, all existing and proposed animal confinement facilities within the county are required to comply with the terms of the Ordinance, including the proposed Godinho Heifer Ranch Expansion project.

Following is a summary of major ACO provisions. Copies of the complete text of the Ordinance are available from: the Merced County Division of Environmental Health, 260 East 15th Street, Merced, California 95341; the Merced County Community and Economic Development Department, 2222 ‘M’ Street, Merced, California 95340, and on the County’s Internet site at <<http://www.qcode.us/codes/mercedcounty/>>

Merced County’s ACO provides environmental compliance regulations that affect dairies and other animal confinement facilities in Merced County. The ACO requires that all animal confinement facilities, existing and new, complete and implement a Comprehensive Nutrient Management Plan (CNMP). For the construction of a new confined animal facility, or for modification or expansion of an existing animal confinement facility, the CNMP must be completed prior to construction. The purpose of the CNMP is to ensure a balance between manure/wastewater application and nutrient uptake by crops in order to minimize impacts to groundwater. Since adoption of the ACO, the CVRWQCB has issued new requirements for preparation of a NMP and WMP, which would serve in place of the CNMP as allowed by County Code Chapter 18.64.060K.

In addition to the CNMP, the ACO includes measures designed to increase protection of surface and groundwater resources. Both liquid and dry manure are regulated by the ACO under detailed management requirements. For example, the ACO prohibits the storage or application of manure (liquid or dry) within 100 feet of a domestic well, irrigation well, or surface water body unless adequate protection is provided. Dry manure storage and application is regulated to prevent groundwater or surface water contamination. In addition, the liquid manure management system

⁴ Currently codified as Article 2, Chapter 18.10 Agricultural Zones with the Zoning Code Update adopted in October 2019.

must include provisions for appropriate cropland application and collection of tailwater from cropland irrigated with liquid manure. The ACO requires that all off-site discharge of drainage water from cropland application areas meet the discharge and receiving water standards of the appropriate irrigation or drainage district and the CVRWQCB.

The ACO also includes design and management provisions for the construction of retention ponds and settling basins to prevent groundwater contamination, obnoxious odors, or excessive fly or mosquito breeding. The retention pond provisions of the ACO apply only to new or expanding animal confinement facilities. The ACO measures for retention ponds and settling basins include capacity requirements, maintenance guidelines, size restrictions, and minimum design standards of 10^{-6} centimeters per second seepage velocity or less.

To prevent nuisances from odors or vectors, the ACO requires animal confinement facilities to implement both odor control measures and a vector control plan. The need for specific control measures is determined by the Merced County DEH on a site-specific basis. Additionally, the ACO prohibits the location of new animal confinement facilities within one-half mile of urban areas or areas zoned for residential uses, or concentrations of rural residences. To provide additional protection from the nuisances mentioned above, the ACO generally prohibits the location of animal confinement facilities within 1,000 feet of an off-site residence, unless written permission from the off-site resident or property owner is given.

The ACO regulates the design, construction, and operation of animal confinement facilities within the County; all existing and proposed animal confinement facilities within the County are required to comply with the terms of the Ordinance, including the Godinho Heifer Ranch Expansion project. To ensure compliance with the provisions of the ACO, the Ordinance requires routine inspections of animal confinement facilities by Merced County DEH. Enforcement of the provisions contained in the revised ACO is conducted by Merced County DEH and the Community and Economic Development Department. In addition, the ACO includes penalties for any person who violates or fails to comply with the provisions of the ACO.

TIERING FROM BOTH THE 2030 MERCED COUNTY GENERAL PLAN EIR AND THE MERCED COUNTY ANIMAL CONFINEMENT ORDINANCE EIR

“Tiering” refers to the relationship between a program-level EIR (where long-range programmatic cumulative impacts are the focus of the environmental analysis) and subsequent environmental analyses such as this subject document, which focus primarily on issues unique to a smaller project within the larger program or plan pursuant to Section 15168 of the State CEQA Guidelines. Through tiering, a subsequent environmental analysis can incorporate, by reference, discussion that summarizes general environmental data found in the program EIR that establishes cumulative impacts and mitigation measures, the planning context, and/or the regulatory background. These broad-based issues need not be reevaluated subsequently, having been previously identified and evaluated at the program stage.

Tiering focuses the environmental review on the project-specific significant effects that were not examined in the prior environmental review or are susceptible to substantial reduction or avoidance by specific revisions in the project, by the imposition of conditions, or by other means. Section 21093(b) of the Public Resources Code requires the tiering of environmental review whenever feasible, as determined by the Lead Agency.

In the case of the Godinho Heifer Ranch Expansion project, the environmental analysis for this Initial Study is tiered from the EIR for the 2030 Merced County General Plan. The Merced County Board of Supervisors certified the EIR and adopted the 2030 General Plan on December 10, 2013 (SCH #2011041067). The 2030 General Plan regulates the location, use, design, construction, and operation of developed land uses within the County; all existing and proposed land uses within the County are required to comply with the goals and policies of the 2030 General Plan, including the Godinho Heifer Ranch Expansion project. To reflect this, the requirements of the 2030 General Plan and conclusions of the environmental analysis contained in the 2030 General Plan EIR were incorporated into this Initial Study.

The 2030 General Plan EIR comprehensively evaluated the potential environmental effects of implementing the 2030 General Plan and from the approval of new or modified land uses. The 2030 General Plan EIR identified a number of mitigation measures that would reduce the magnitude of these potential effects. Those measures were subsequently adopted by the County in its approval of the 2030 General Plan, and a Mitigation Monitoring and Reporting Program was adopted. Because the Godinho Heifer Ranch Expansion project is consistent with, and implements, the 2030 General Plan, those previously adopted mitigation measures and conditions apply to the Godinho Heifer Ranch Expansion project, and would continue to apply after approval of the currently requested actions. Therefore, the Godinho Heifer Ranch Expansion project is related to the 2030 General Plan EIR and, pursuant to Section 15152(a) of the CEQA Guidelines, tiering of environmental documents is appropriate.

The 2030 General Plan EIR can be reviewed at the location set forth above.

Incorporation of the 2030 Merced County General Plan EIR By Reference

Based on the reasoning set forth above, this environmental evaluation implements, and is consistent with, the environmental conclusions, mitigation measures, and study protocols adopted by Merced County in its certification of the 2030 General Plan EIR and its approval of the 2030 Merced County General Plan. Because of its importance relative to understanding the environmental analysis that has occurred to date with respect to the potential environmental impacts associated with the construction and operation of developed land uses in Merced County, the 2030 General Plan EIR is hereby incorporated by reference pursuant to CEQA Guidelines Section 15150 as though fully set forth herein.

Summary of the Impacts Analysis of the 2030 Merced County General Plan EIR

The 2030 Merced County General Plan EIR presents an assessment of the environmental impacts associated with the implementation of the General Plan and land uses developed consistent with the Plan in Merced County. The EIR evaluated the environmental impacts of the Plan on a comprehensive basis, including discussion of the full range of impacts that would occur because of future development. The EIR identified potential significant environmental impacts arising from implementation of the General Plan and land uses developed consistent with the Plan for the following issue areas:

Aesthetics: light and glare; and cumulative impacts to visual quality.

Agriculture and Forestry: conversion of Important Farmland to non-agriculture use; conflict with zoning for agricultural use or provisions of the Williamson Act; land use changes that would result in conversion of farmland to non-agricultural uses from urban development; land use changes that would result in conversion of farmland to non-agricultural uses due to the Minor Subdivision of Rural Parcels or due to inadequate parcel sizes; and cumulative impacts to agricultural resources.

Air Quality: operational emissions of PM₁₀ and PM_{2.5} associated with General Plan buildout; health risks associated with locating sensitive receptors near high volume roads; cumulative impacts to air quality.

Biological Resources: adverse effects to special status species and sensitive habitats due to conversion of farmlands and open space; adverse effect on wetlands, riparian habitat, and other sensitive natural communities; loss or modification of federally protected wetlands; interference with animal movement/migration patterns; cumulative impacts to biological resources.

Cultural Resources: adverse changes to the significance of a historical resource; adverse change in the significance of archaeological resources, paleontological resources, unique geological features, or disturbances to human remains; degradation or loss of traditional cultural properties where Native American customs and traditions are practiced; cumulative impacts to cultural resources.

Geology: use of septic tanks or alternative wastewater disposal systems in unfit soils that may result in increased nutrients or other pollutants reaching and damaging groundwater resources.

Global Climate Change: increase in GHG emissions associated with 2030 General Plan buildout; increase in GHG emissions that would conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing GHG emissions; cumulative impacts to global climate change.

Hazards and Hazardous Materials: projects located on a site that is included on a list of hazardous materials sites resulting in a significant hazard to the public or to the environment; projects located within an airport land use plan or within the vicinity of a public or private airport resulting in a safety hazard for people working or residing in the area.

Hydrology and Water Quality: depletion of groundwater supplies or interference with groundwater recharge; modification of surface water drainage patterns resulting in detrimental flooding or substantial erosion or siltation; cumulative impacts to hydrology and water quality.

Land Use Compatibility: physical division of an established community.

Mineral Resources: loss of mineral resources; and cumulative loss of mineral resources.

Noise: permanent increase in ambient noise levels; traffic noise level increases at existing sensitive uses caused by development consistent with the 2030 General Plan; exposure of people to, or generation of excessive groundborne vibration or groundborne noise levels; cumulative impacts to noise.

Population and Housing: inducement of population growth, directly or indirectly.

Transportation and Circulation: conflict with an applicable plan, ordinance or policy establishing measures of effectiveness of county roads, State Highways, or streets within incorporated cities in Merced County; increase hazards due to a design feature or incompatible uses; inadequate emergency access; conflict with policies, plans or programs regarding public transit, bicycle, or pedestrian facilities, or decrease the performance or safety of those facilities; cumulative impacts to transportation and circulation.

Utilities and Service Systems: sufficient water supply resources available to accommodate continued development through buildout of the 2030 General Plan; cumulative impacts to utilities and service systems.

Other CEQA Topics: cumulative impacts to growth inducement and irreversible environmental changes.

2. ENVIRONMENTAL ANALYSIS

PURPOSE AND LEGAL BASIS FOR THE INITIAL STUDY

As a public disclosure document, this Initial Study also provides local decision makers and the public with information regarding the environmental impacts associated with the proposed project. According to Section 15063 of the CEQA Guidelines, the purpose of an Initial Study is to:

1. Provide the Lead Agency with information to use as the basis for deciding whether to prepare an EIR or a Negative Declaration.
2. Enable an applicant or Lead Agency to modify a project, mitigating adverse impacts before an EIR is prepared, thereby enabling the project to qualify for a Negative Declaration.
3. Assist in the preparation of an EIR, if one is required by:
 - a. Focusing the EIR on the effects determined to be significant,
 - b. Identifying the effects determined not to be significant,
 - c. Explaining the reasons for determining that potentially significant effects would not be significant, and
 - d. Identifying whether a program EIR, tiering, or another appropriate process can be used for analysis of the project's environmental effects.
4. Facilitate environmental assessment early in the design of a project.
5. Provide documentation of the factual basis for the finding in a Negative Declaration that a project will not have a significant effect on the environment.
6. Eliminate unnecessary EIRs.
7. Determine whether a previously prepared EIR could be used with the project.

INITIAL ENVIRONMENTAL CHECKLIST

Following each major category in the Initial Study, there are four determinations by which to judge the project's impact. These categories and their meanings are shown below:

“No Impact” means that it is anticipated that the project will not affect the physical environment on or around the project area. It therefore does not warrant mitigation measures.

“Less-than-Significant Impact” means the project is anticipated to affect the physical environment on and around the project area, however to a less-than-significant degree, and therefore not warranting mitigation measures.

“Less than Significant with Mitigation Incorporated” applies to impacts where the incorporation of mitigation measures into a project has reduced an effect from “Potentially Significant” to “Less Than Significant.” In such cases, and with such projects, mitigation measures will be provided including a brief explanation of how they reduce the effect to a less-than-significant level.

“Potentially Significant Impact” means there is substantial evidence that an effect is significant, and no mitigation is possible.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED

The environmental factors checked below would be potentially affected by this project, including several impacts that are “Less than Significant with Mitigation Incorporated” as indicated by the checklist on the following pages.

	Aesthetics		Agriculture and Forestry Resources	X	Air Quality
X	Biological Resources	X	Cultural Resources		Energy
	Geology / Soils		Greenhouse Gas Emissions	X	Hazards & Hazardous Materials
X	Hydrology / Water Quality	X	Land Use / Planning		Mineral Resources
	Noise		Population and Housing		Public Services
	Recreation		Transportation		Tribal Cultural Resources
	Utilities / Service Systems		Wildfire	X	Mandatory Findings of Significance

ENVIRONMENTAL SETTING AND EVALUATION OF POTENTIAL IMPACTS

Responses to the following questions and related discussion indicate whether or not the proposed project would have or would potentially have a significant adverse impact on the environment, either individually or cumulatively with other projects. All phases of project planning, implementation, and operation are considered. Mandatory Findings of Significance are located in Section XXI below.

I. AESTHETICS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Except as provided in Public Resources Code Section 21099, would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of public views of the site and its surroundings? (Public views are those that are experienced from a publicly accessible vantage point). If the project is in an urbanized area, would the project conflict with applicable zoning and other regulations governing scenic quality?			X	
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?			X	

ENVIRONMENTAL SETTING

The primary scenic resource within Merced County is the rural and agricultural landscape of non-urbanized areas of the county. The project site is currently in agricultural use (heifer ranch), and is surrounded by agricultural uses and associated residences. Due to the relatively flat topography, short- and mid-range views are limited to agricultural uses, including pasture, row crops, and orchards. Long-range views feature the Coastal ranges. (Merced County 2013a)

The site appearance is one of a developed animal confinement facility within a rural, agricultural setting. Viewers outside the project site are limited to motorists on perimeter roadways and residents of surrounding agricultural facilities and operations. Neither the project site nor the views to or from the site have been designated as an important scenic resource by Merced County or any other public agency. No state or locally designated scenic highway has been identified in the vicinity of the project area. (Merced County 2013a)

ENVIRONMENTAL EVALUATION

Question (a) Scenic vista: No Impact. Given the lack of distinctive topographical features in the project vicinity, the project site is not located in an area with scenic vistas. The agricultural-related facilities and associated residences in the vicinity are existing uses, and are considered common to the area. No designated scenic vista is visible from the project site, nor is the site visible from any nearby scenic vista. The heifer ranch is an existing use, and would be considered common to the area. The proposed project would be an expansion of that existing use. Because the proposed heifer ranch expansion would not affect a scenic vista, no impact would result with implementation of the project, and no mitigation would be required.

Question (b) Scenic resources: No Impact. No state- or locally-designated scenic highway is visible from the project site, nor is the site visible from any nearby designated scenic highway. The nearest designated State Scenic Highway, Interstate 5, is approximately eight miles to the west of the project site. In addition, no scenic highways are designated within the project area in the Merced County 2030 General Plan. Because the project site is not located within the viewshed of a

designated scenic highway, there would be no damage to scenic resources within a scenic highway. No impact would result with implementation of the project, and no mitigation would be required.

Question (c) Visual character: Less-than-significant Impact. Developed agricultural uses in the vicinity range from irrigated cropland to animal confinement facilities. Though the existing heifer ranch facilities are visible from perimeter roads, their appearance is a common sight in rural areas of Merced County, and the visual effects of the animal confinement facilities are reasonable and expected in the context of the County's Agricultural land use designation. The proposed expanded heifer ranch facilities would appear similar to existing uses on the project site and in the project area, and would continue to be considered common and appropriate to the region by most viewers. Since the proposed project is consistent with the existing and planned agricultural uses of the area, implementation of the project would not degrade the existing visual character of the site or surroundings. This would be a less-than-significant impact, and no mitigation would be required.

Question (d) New source of light or glare: Less-than-significant Impact. Existing night lighting in the area of the proposed project includes LED fixtures mounted on the existing freestall structures. The proposed expansion would result in additional building-mounted lighting on the proposed animal housing structures. While there are residences in the vicinity of active heifer ranch operations, which are considered sensitive receptors for nighttime light and glare, County standards require that all new lighting be directed away from or be properly shaded to eliminate light trespass or glare within a project or onto surrounding properties. Compliance with County requirements would reduce any light and glare effects to less-than-significant levels. For a discussion of light and glare impacts to nearby biological resources, see Section IV, *Biological Resources*.

II. AGRICULTURE AND FORESTRY RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?			X	
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?			X	
c) Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code section 12220(g)), timberland (as defined in Public Resources Code section 4526), or timberland zoned Timberland Production (as defined in Public Resources Code section 51104(g))?				X
d) Result in the loss of forest land or conversion of forest land to non-forest use?				X
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?				X

ENVIRONMENTAL SETTING

The project area consists of an existing heifer ranch and cropped fields surrounded by similar agricultural uses and associated residences. The project site and surrounding area is designated Agricultural by the 2030 Merced County General Plan and is zoned A-1 (General Agricultural). The project parcels are not subject to a Williamson Act Contract, nor are they zoned as forest land or timberland production (Merced County 2020).

According to the California Department of Conservation's (DOC) Important Farmlands Map¹ of Merced County, the area of existing active heifer ranch facilities is designated as Confined Animal Agriculture (DOC 2016). As defined by the DOC, this designation includes poultry facilities, feedlots, dairy and other confined animal facilities, and fish farms. The proposed expansion would include six acres of existing cropland that is designated by the DOC's Farmland Mapping and Monitoring Program as Prime Farmland and Unique Farmland.

The Natural Resources Conservation Service (NRCS) provides agricultural ratings for soils in the project area in the Merced County Soil Survey. The project site and existing cropland areas associated with the project are designated by the NRCS as "Prime Farmland if Irrigated" and "Not Prime Farmland" (NRCS 2020). For a discussion of project site soil properties, Section VII, *Geology and Soils*.

There are no forest lands, timberland, or timberland zoned Timberland Production in Merced County (Merced County 2019a, CDFW 2015).

¹ The Important Farmland Map uses a classification system that combines technical soil ratings from the Natural Resources Conservation Service digital soil data and current land use. The minimum land use mapping unit is 10 acres unless specified.

ENVIRONMENTAL EVALUATION

Question (a) Convert farmland to non-agricultural use: Less-than-significant Impact. The area of existing facilities is located on land that is classified as Confined Animal Agriculture. The project area is designated for agricultural use by the 2030 Merced County General Plan. The proposed expansion would include the construction of new facilities on six acres of existing cropland that is designated as Prime Farmland and Unique Farmland. As a result of project construction, existing cropland would be converted to active heifer ranch facilities. The proposed expansion, however, would represent a continuation of existing agricultural uses, and no conversion of agricultural soils to non-agricultural uses would occur. Because the project site would be maintained in agricultural use, construction of the proposed facilities would not convert Prime Farmland, Unique Farmland, or Farmland of statewide importance to a non-agricultural use, and a less-than-significant impact would result. No mitigation would be required.

Question (b) Conflict with zoning for agricultural use: Less-than-significant Impact. The 2030 Merced County General Plan and Zoning Ordinance designate the project area predominantly for agricultural uses. The project site is not under a Williamson Act Contract. The existing use, a heifer ranch, is an agricultural use consistent with the General Plan and Zoning Ordinance. Adjacent properties include agricultural uses, primarily field crops and animal confinement facilities. No feature of the proposed heifer ranch expansion project would preclude or limit the agricultural use of adjoining parcels. Thus, the proposed project would permit the continuation of existing agricultural uses consistent with County policies, and would not conflict with adjacent agricultural and/or non-agricultural uses. A less-than-significant impact would result, and no mitigation would be required. For a discussion of project compatibility with adjacent residential uses, see Section XI, *Land Use and Planning* of this Initial Study.

Questions (c) through (e) Conflict with zoning for or loss of farmland, forest land, or timber land: No Impact. The project site is not zoned for forest land or timberland, and there are no forest or timber resources located on the project site. Thus, there would be no loss of forest land or conversion of forest land to non-forest use. The proposed facilities would not result in any change to the existing environment that could result in the conversion of farmland to non-agricultural use. Because the proposed project would not conflict with any existing forest land or timberland productions zoning, and no changes associated with the project are proposed that would result in the conversion of existing farmland, forest land, or timber lands, no impact would occur. No mitigation would be required.

III. AIR QUALITY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Where 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?		X		
b) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard?		X		
c) Expose sensitive receptors to substantial pollutant concentrations?			X	
d) Result in other emissions (such as those leading to odors) adversely affecting a substantial number of people?		X		

ENVIRONMENTAL SETTING

Air quality influences public health and welfare, the economy, and quality of life. Air pollutants have the potential to adversely impact public health, the production and quality of agricultural crops, visibility, native vegetation, and buildings and structures.

Criteria pollutants are those that are regulated by either the state or federal Clean Air Acts. Non-criteria pollutants are not regulated by these Acts, but are a concern as precursors to criteria pollutants and/or for their potential for harm or nuisance.

The criteria pollutants of most interest in the San Joaquin Valley associated with dairy or feedlot sources are ozone and particulates (dust). Ozone is not emitted directly into the environment; rather, it is generated from complex chemical reactions in the presence of sunlight between reactive organic gases (ROG) (or non-methane hydrocarbons), and oxides of nitrogen (NO_x). Ozone is a powerful respiratory irritant. Particulate matter is classified as respirable particulate matter (PM₁₀) and fine particulate matter (PM_{2.5}). Exposure to elevated levels of particulate matter causes irritation of the eyes and respiratory system, and exposure is implicated in increased levels of disease and death.

Important non-criteria pollutants include air toxics. Air toxics are generated from industrial processes (e.g., gas stations, dry cleaners, or car repairs), mobile sources using diesel engines, and agricultural sources.

Regulatory Framework

The U.S. Environmental Protection Agency (EPA) has set National Ambient Air Quality Standards (NAAQS) for ozone, nitrogen dioxide, carbon monoxide, sulfur dioxide, respirable particulate matter (PM₁₀), and airborne lead. Similarly, the California Air Resources Board (ARB) has established California Ambient Air Quality Standards (CAAQS) to protect public health and welfare. CAAQS for criteria pollutants equal or surpass NAAQS, and include other pollutants for which there are no NAAQS. The ARB is responsible for control program oversight activities, while regional Air Pollution Control Districts and Air Quality Management Districts are responsible for air quality planning and enforcement. The ARB is also responsible for assigning air basin attainment and non-attainment designations for state criteria pollutants.

Under the federal Clean Air Act, state and local agencies in areas that exceed the NAAQS are required to develop state implementation plans (SIP) to show how they will achieve the NAAQS for ozone and particulate matter by specified dates (42 USC 7409, 7411). The EPA's responsibility to control air pollution in individual states is primarily to review submittals of SIPs that are prepared by each state.

The heifer facility expansion project site is located within the San Joaquin Valley Air Basin in Merced County. Under both the federal and state CAAs, the San Joaquin Valley Air Pollution Control District (SJVAPCD) regulates air quality in Merced County. The SJVAPCD has jurisdiction over all point and area sources of air emissions except for mobile sources (such as motor vehicles), consumer products, and pesticides. To improve the health and air quality for Valley residents, the SJVAPCD implements air quality management strategies and enforces its Rules and Regulations. The SJVAPCD and the ARB have joint responsibility for attaining and maintaining the NAAQS and CAAQS in the SJVAB.

Ambient air quality is described in terms of compliance with state and national standards, and the levels of air pollutant concentrations considered safe to protect the public health and welfare. These standards are designed to protect people most sensitive to respiratory distress, such as asthmatics, the elderly, very young children, people already weakened by other disease or illness, and persons engaged in strenuous work or exercise. CAAQS and NAAQS are listed in Table 5.

Table 5 Federal and California Ambient Air Quality Standards and Attainment Status			
Pollutant	Averaging Time	California Standards Concentration	Federal Primary Standards Concentration
Ozone (O ₃)	8-hour	0.07 ppm (137 µg/m ³)	0.070 ppm (137 µg/m ³)
	1-hour	0.09 ppm (180 µg/m ³)	---
Respirable Particulate Matter (PM ₁₀)	24-hour	50 µg/m ³	150 µg/m ³
	Annual Arithmetic Mean	20 µg/m ³	---
Fine Particulate Matter (PM _{2.5})	24-hour	---	35 µg/m ³
	Annual Average	12 µg/m ³	12 µg/m ³
Carbon Monoxide	8-hour	9.0 ppm (10 mg/m ³)	9 ppm (10 mg/m ³)
	1-hour	20 ppm (23 mg/m ³)	35 ppm (40 mg/m ³)
Nitrogen Dioxide	Annual Average	0.03 ppm (57 µg/m ³)	0.053 ppm (100 µg/m ³)
	1-hour	0.18 ppm (339 µg/m ³)	0.100 ppm (188 µg/m ³)
Lead	30 day Average	1.5 µg/m ³	---
	Rolling 3-Month Average	---	0.15 µg/m ³
	Quarterly Average	---	1.5 µg/m ³
Sulfur Dioxide	24-hour	0.04 ppm (105 µg/m ³)	0.14 ppm (for certain areas)
	3-hour	---	---
	1-hour	0.25 ppm (655 µg/m ³)	0.075 ppm (196 µg/m ³)
Sulfates	24-hour	25 µg/m ³	No Federal Standard
Hydrogen Sulfide	1-hour	0.03 ppm (42 µg/m ³)	No Federal Standard
Vinyl Chloride	24-hour	0.01 ppm (26 µg/m ³)	No Federal Standard

Notes: ppm = parts per million; mg/m³ = milligrams per cubic meter; µg/m³ = micrograms per cubic meter

Shaded areas indicate that Merced County is in non-attainment for that air pollutant standard

Source: ARB 2019, EPA 2020, EPA 2019.

State and national air quality standards consist of two parts: an allowable concentration of a pollutant, and an averaging time over which the concentration is to be measured. Allowable concentrations are based on the results of studies on the effects of the pollutants on human health, crops and vegetation, and, in some cases, damage to paint and other materials. The averaging times are based on whether the damage caused by the pollutant is more likely to occur during exposures to a high concentration for a short time (i.e., one hour), or to a relatively lower average concentration over a longer period (i.e., eight hours, 24 hours, or one month). For some pollutants, there is more than one air quality standard, reflecting both its short-term and long-term effects.

The ARB is required to designate areas of the state as attainment, non-attainment, or unclassified for any state standard. An “attainment” designation for an area signifies that pollutant concentrations do not violate the standard for that pollutant in that area. A “non-attainment” designation indicates that a pollutant concentration violated the standard at least once, excluding those occasions when a violation was caused by an exceptional event, as defined in the criteria. An “unclassified” designation signifies that data does not support either an attainment or non-attainment status. An area where the standard for a pollutant is exceeded is considered to be in non-attainment and is subject to planning and pollution control requirements that are more stringent than normal requirements. The California Clean Air Act (CCAA) divides districts into moderate, serious, and severe air pollution categories, with increasingly stringent control requirements mandated for each category. Of the criteria pollutants, the project area is in non-attainment for federal and state ozone, state PM_{10} , and state and federal $PM_{2.5}$ standards (see Table 5 above) (ARB 2019, EPA 2020, EPA 2019). Concentrations of all other pollutants meet state and federal standards. The SJVAPCD is required to enact plans designed to bring the basin back to attainment status for ozone and $PM_{2.5}$.

Odors

No state laws exist for odor emissions; regulation is achieved through County ordinances, and enforced based upon complaints. Merced County uses a setback approach to odor nuisance control, requiring setbacks between animal confinement facilities and other uses of 0.5 mile for urban areas and sensitive uses, and 1,000 feet for isolated rural residences. If the specified uses are within the setback distances, the County presumes an increased potential for odor nuisance conditions, though it relies on a record of odor complaints to confirm nuisance conditions. The Merced County Code also includes a Right-to-Farm Ordinance (Chapter 17.08.080(H)) that seeks to reduce the opposition of residential neighbors to nuisances created by commercial farming, such as odors.

Criteria Air Pollutants

Ozone is not emitted directly into the environment, but is generated from complex chemical reactions between reactive organic gases (ROG), or non-methane hydrocarbons, and oxides of nitrogen (NO_x) that occur in the presence of sunlight. ROG and NO_x generators in Merced County include motor vehicles, recreational boats, other transportation sources, and industrial processes. Ozone exposure causes eye irritation and damage to lung tissue in humans. Ozone also harms vegetation, reduces crop yields, and accelerates deterioration of paints, finishes, rubber products, plastics, and fabrics. Research also shows that children exposed to unhealthful levels of ozone suffer decreased lung function growth and increased asthma.

PM_{10} , or inhalable particulate matter, is a complex mixture of primary or directly emitted particles, and secondary particles or aerosol droplets formed in the atmosphere by precursor chemicals. The main sources of fugitive dust are unpaved roads, paved roads, and construction. Additional sources

of PM₁₀ include fires, industrial processes, mobile sources, fuel combustion, agriculture, miscellaneous sources, and solvents. Health studies link particulate pollution to sudden death in infants as well as adults with heart and lung ailments, shortening lives by years. Exposure to airborne particles also aggravates respiratory illnesses like asthma, bronchitis, emphysema, and pneumonia.

PM_{2.5} is atmospheric particulate matter having a particle size less than 2.5 microns (µm) in diameter. These particles are so small they can be detected only with an electron microscope. Sources of fine particles include all types of combustion, including motor vehicles, power plants, residential wood burning, forest fires, agricultural burning, and some industrial processes. These small particles can be inhaled into the lungs and have the potential to cause health-related impacts in sensitive persons.

Air Quality Monitoring

The SJVAB's air quality monitoring network provides information on ambient concentrations of air pollutants. The SJVAPCD operates several monitoring stations in the SJVAB, including two stations in Merced County, where the air quality data for ozone, PM_{2.5}, and PM₁₀ were obtained. Table 6 compares a five-year summary of the highest annual criteria air pollutant emissions collected at these monitoring stations with applicable CAAQS, which are more stringent than the corresponding NAAQS. Due to the regional nature of these pollutants, ozone, PM_{2.5}, and PM₁₀ are expected to be fairly representative of the project site.

As indicated in Table 6, the O₃, PM_{2.5} and PM₁₀ federal and state standards have been exceeded in Merced County over the past five years, with the exception of the federal PM₁₀ standard, which was not exceeded.

Table 6 Annual Air Quality Data for Merced County Air Quality Monitoring Stations					
Pollutant	2014	2015	2016	2017	2018**
Ozone (O₃) 1-hour: Monitoring location: Merced County – S Coffee Avenue					
Maximum Concentration (ppm)	<u>0.100</u>	<u>0.102</u>	<u>0.097</u>	0.093	<u>0.104</u>
Days Exceeding State Standard (1-hr avg. > 0.09 ppm)	3	2	2	0	4
Ozone (O₃) 8-hour: Monitoring location: Merced County – S Coffee Avenue					
Maximum Concentration (ppm)	<u>0.088</u>	<u>0.089</u>	<u>0.086</u>	<u>0.084</u>	<u>0.083</u>
Days Exceeding State Standard (8-hr avg. > 0.070 ppm)	40	29	28	16	21
Days Exceeding National Standard (8-hr avg. > 0.075 ppm)	22	14	13	8	7
PM₁₀: Monitoring location: Merced County – 2334 M Street					
Days Exceeding State Standard (Daily Standard 50 µg/m ³)	*	31.8	38.9	76.6	59.6
Maximum State 24-Hour Concentration (µg/m ³)	<u>92.7</u>	<u>94.0</u>	<u>64.5</u>	<u>144.0</u>	<u>142.7</u>
Days Exceeding Federal Standard (Daily Standard 150 µg/m ³)	0	0	0	0	0
Maximum Federal 24-Hour Concentration (µg/m ³)	88.3	97.2	64.3	146.6	137.0
PM_{2.5}: Monitoring location: Merced County – 2334 M Street					
Days Exceeding National 2006 Standard (Daily Standard 35 µg/m ³)	18.2	15.2	6.3	20.4	29.7
Maximum National 24-Hour Concentration (µg/m ³)	<u>53.7</u>	<u>60.8</u>	<u>42.8</u>	<u>66.7</u>	<u>94.7</u>

Notes: Underlined Values in excess of applicable standard / ppm = parts per million / µg/m³ = micrograms per cubic meter.

*Insufficient data to determine the value

**2018 is the latest year of data available as of preparation of this chapter (January 2020).

Source: California Air Resources Board, 2020. *Air Quality Trend Summaries*. Accessed at <www.arb.ca.gov/adam>.

SJVAPCD Rules and Regulations Applicable to Dairies and Feedlots

Dairies and feedlots must comply with many air district rules and regulations including at least Regulation VIII, New Source Review, and health risk assessments in compliance with AB2588. Selected rules are described below.

- **Rule 2010 Permits Required and Rule 2201: New and Modified Source Review (NSR).** The SJVAPCD requires an Authority to Construct (ATC) and a Permit to Operate (PTO) for expanding facilities with an existing ATC/PTO. If any existing source makes modifications to its operations, and those modifications generate two pounds or more per day of any criteria emissions, the NSR is triggered. This triggers Best Available Control Technology (BACT) or Best Available Retrofit Control Technology (BARCT) for the new “emissions sources,” applied through the ATC and PTO permits.
- **Regulation VIII Fugitive PM₁₀ Prohibitions: Rules 8011-8081.** Regulation VIII includes specific emission control strategies for fugitive dust from construction/demolition, bulk materials, carryout, open areas, paved and unpaved roads, equipment on unpaved roads, paved road dust, fugitive windblown dust, and farming operations.
- **Rule 4550: Conservation Management Practices.** The rule outlines requirements for owner/operators of agricultural operations to prepare CMP plans for all agricultural producers with 100 contiguous acres or more to reduce dust emissions in areas of crop production, animal feeding operations, and unpaved roads/equipment areas.
- **Rule 4570: Confined Animal Facilities.** Rule 4570 requires an emission mitigation plan that lists the VOC mitigation measures that the facility with greater than or equal to 500 milk cows will use to comply with all applicable requirements of Rule 4570.
- **SJVAPCD Policy for Risk Management Review:** The purpose of a Risk Management Review (RMR) is to ensure on-going compliance with the Air Toxics “Hot Spots” information and Assessment Act of 1987 (AB 2588). SJVAPCD’s Technical Services performs the RMRs for dairies being permitted by the District for those activities covered under the permits.

Significance Thresholds

The SJVAPCD’s *Guide for Assessing and Mitigating Air Quality Impacts* (GAMAQI) (SJVAPCD 2015) has established thresholds for certain criteria pollutants for determining whether a project would have a significant air quality impact. Construction and operational emissions are calculated separately. The SJVAPCD significance thresholds are presented in Table 7.

Table 7 SJVAPCD Significance Thresholds – Criteria Pollutants

Pollutant/Precursor	Threshold of Significance		
	Construction Emissions (tons/year)	Operational Emissions	
		Permitted Equipment and Activities (tons/year)	Non-Permitted Equipment and Activities (tons/year)
Reactive Organic Gases (ROG)	10	10	10
Oxides of Nitrogen (NO _x)	10	10	10
PM ₁₀	15	15	15
PM _{2.5}	15	15	15
Carbon Monoxide (CO)	100	100	100
Sulfur Oxide (SO _x)	27	27	27

Notes: The significance of the impacts of the emissions from construction, operational non-permitted equipment and activities, and operational permitted equipment and activities are evaluated separately. The thresholds of significance are based on a calendar year basis. For construction emissions, the annual emissions are evaluated on a rolling 12-month period.

Source: San Joaquin Valley Air Pollution Control District "Guidance for Assessing and Mitigating Air Quality Impacts" 2015.

ENVIRONMENTAL ANALYSIS

The evaluation of the Godinho Heifer Expansion project addresses the emissions associated with the expansion of the existing herd size from 1,103 cows to the proposed level of operations at 2,125 cows (see Table 3 in Section 1, *Description of Project* of this Initial Study for a breakout of the herd by age-class).

The existing operation includes a heifer ranch located on an approximate 15.4-acre portion of the 64.1-acre site. The developed facilities include shade structures and open corrals, two wastewater storage ponds, office and storage buildings, and three on-site employee residences. No feed is stored on this facility – all feed is stored on the Godinho Dairy facility on Wilson Road. There are no silage piles on site.

The proposed project would include the construction of three freestall barns and a loafing barn, with new structures totaling approximately 298,200 square feet. Grading would be required for new building pads and access roads. Approximately 15,000 cubic yards of fill would be obtained from adjacent fields associated with the Godinho Dairy. A mechanical solids separator and separator pad would be installed with the proposed expansion. With implementation of the proposed project, the number of employees would remain at two workers.

An undeveloped portion of the project area totaling approximately 50 acres is used as cropland and for wastewater application by the nearby Godinho Dairy. No cropped fields are associated with the heifer ranch. With construction of the project facilities, approximately six acres of cropped acreage currently managed by the Godinho Dairy would be converted to active animal confinement facilities. All project-related construction and operational activities would generate some level of air quality emissions, and thus are being assessed as part of this Initial Study.

Question (a) Conflict with air quality plan: Less-than-significant Impact with Mitigation. As stated above in the discussion of the regulatory environment, for nonattainment criteria pollutants, the SJVAPCD has attainment plans in place that identify strategies to bring regional emissions into compliance with federal and state air quality standards. As of January 2020, these plans include the

2018 Plan for the 1997, 2006, and 2012 PM_{2.5} Standards, the 2007 PM₁₀ Maintenance Plan, the 2016 Plan for the 2008 8-Hour Ozone Standard, and the 2013 Plan for the Revoked 1-Hour Ozone Standard.

The policies and provisions of the SJVAPCD and the 2030 Merced County General Plan control air quality impacts from the proposed projects within Merced County. The proposed project would be consistent with the Agricultural land use designation of the site set forth by the 2030 Merced County General Plan. Thus, the proposed project would be consistent with the land use assumptions used by the SJVAPCD in drafting the air quality attainment plans.

The SJVAPCD regulates air emissions at the Godinho Heifer through its ATC/PTO permit process, and has required operational mitigation measures to reduce air emissions at the animal confinement facility. The project applicant submitted an ATC permit application for the proposed facility expansion in March 2019. Additional applicable SJVAPCD Rules and Regulations may include: Regulation VIII (Fugitive PM₁₀ Prohibitions), Rule 4102 (Nuisance), Rule 4601 (Architectural Coatings), and Rule 4641 (Cutback, Slow Cure, and Emulsified Asphalt, Paving and Maintenance Operations). To ensure project compliance with applicable SJVAPCD Rules and Regulations, the following mitigation measure would be required:

Mitigation Measure AQ-1:

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 PM₁₀ Prohibitions. The animal confinement facility 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.

Implementation of Mitigation Measure AQ-1 would require compliance with applicable Rules and Regulations of the SJVAPCD as described above, and ensure the proposed project would not conflict with or obstruct implementation of any SJVAB attainment plan or the SIP. Therefore, a less-than-significant impact would result, and no additional mitigation would be necessary.

Question (b) Net increase of criteria pollutant: Less-than-significant Impact with Mitigation. Implementation of the proposed project would result in short-term (construction) and long-term (operations) air pollutant emissions, including ROG, CO, SO₂, NO_x, and fugitive dust.

Construction

Construction activities associated with the Godinho Heifer project would result in short-term air emissions including ROG, CO, SO₂, NO_x, and fugitive dust. Construction-related emissions were calculated using the California Emissions Estimator Model (CalEEMod) Version 2016.3.2 (see Appendix C). The individual components of construction emissions include employee trips, exhaust emissions from construction equipment, and fugitive dust emissions. The proposed heifer facility expansion would be constructed in two phases as indicated in Figure 4. Phase 1 would include construction of two freestall barns and one loafing barn within 3 to 5 years. Phase 2 would include the construction of one freestall barn and would likely occur within 10 years.

Table 8 presents an estimate of annualized construction emissions for the Godinho Heifer Expansion project. Construction of the proposed project would produce maximum annual

unmitigated emissions of 0.24 tons of ROG, 2.19 tons of NO_x, and 0.39 tons of PM₁₀. Construction of the proposed project would not exceed the significance criteria of 10 tons/year of ROG, 10 tons/year of NO_x, or 15 tons/year for PM₁₀.

Table 8 Construction Related Emissions

	ROG (tons/year)	NO_x (tons/year)	CO (tons/year)	SO₂ (tons/year)	PM₁₀ (tons/year)	PM_{2.5} (tons/year)
Year 2025 Emissions ⁽¹⁾	0.24	2.19	2.48	0.00	0.39	0.20
Year 2026 Emissions	0.01	0.10	0.17	0.00	0.00	0.01
Maximum Emissions	0.24	2.19	2.48	0.00	0.39	0.20
SJVAPCD Significance Criteria	10	10	100	27	15	15
Criterion Exceeded?	No	No	n/a	n/a	No	n/a

Notes: Calculations completed in February 2020.

1 See CalEEMod calculation assumptions in Appendix C. To represent the worst-case scenario, the entirety of the project was assumed to be constructed in one phase.

Source: Planning Partners, 2020.

Although the project would not exceed significance thresholds, the applicant would still be required to comply with Regulation VIII and all applicable SJVAPCD Rules and Regulations. SJVAPCD's Regulation VIII (Rule 8021) specifies control measures for PM₁₀ emissions from construction related activities, including demolition. In addition, Rule 3135 establishes a Dust Control Plan Fee, which would also be required. A summary of control measures for construction and other earthmoving activities included in Regulation VIII are as follows:

Pre-Activity:

- Pre-water site sufficient to limit VDE to 20% opacity, and
- Phase work to reduce the amount of disturbed surface area at any one time.

During Active Operations:

- Apply water or chemical/organic stabilizers/suppressants sufficient to limit VDE to 20% opacity; or
- Construct and maintain wind barriers sufficient to limit VDE to 20% opacity. If utilizing wind barriers, control measure above shall also be implemented.
- Apply water or chemical/organic stabilizers/suppressants to unpaved haul/access roads and unpaved vehicle/equipment traffic areas sufficient to limit VDE to 20% opacity and meet the conditions of a stabilized unpaved road surface.

Temporary Stabilization During Periods of Inactivity:

- Restrict vehicular access to the area; and
- Apply water or chemical/organic stabilizers/suppressants, sufficient to comply with the conditions of a stabilized surface. If an area having 0.5 acres or more of disturbed surface area remains unused for seven or more days, the area must comply with the conditions for a stabilized surface area as defined in section 3.53 of Rule 8011.

Speed Limitations and Posting of Speed Limit Signs on Uncontrolled Unpaved Access/Haul Roads on Construction Sites:

- Limit the speed of vehicles traveling on uncontrolled unpaved access/haul roads within construction sites to a maximum of 15 miles per hour.
- Post speed limit signs that meet State and federal Department of Transportation standards at each construction site's uncontrolled unpaved access/haul road entrance. At a minimum, speed limit signs shall also be posted at least every 500 feet and shall be readable in both directions of travel along uncontrolled unpaved access/haul roads.

Wind Generated Fugitive Dust Requirements:

- Cease outdoor construction, excavation, extraction, and other earthmoving activities that disturb the soil whenever VDE exceeds 20% opacity. Indoor activities such as electrical, plumbing, dry wall installation, painting, and any other activity that does not cause any disturbances to the soil are not subject to this requirement.
- Continue operation of water trucks/devices when outdoor construction excavation, extraction, and other earthmoving activities cease, unless unsafe to do so.

The SJVAPCD requires that animal confinement facilities obtain an ATC permit prior to initiating construction on a new facility if the facility results in emissions in excess of five tons/year of VOCs, or for expanding facilities with an existing ATC/PTO. The proposed dairy expansion project would require a new ATC and PTO from the SJVAPCD for the expanded herd and modification of the existing facilities. The project's compliance with Regulation VIII would be enforced through the ATC permit. For projects in which construction related activities would disturb equal to or greater than one acre of surface area, the SJVAPCD recommends that the County's conditions of approval require that the applicant provide a receipt of a SJVAPCD approved Dust Control Plan or Construction Notification form prior to the issuance of the first building permit.

Emissions of construction-related ozone precursors and fugitive dust would not exceed the threshold values used by the SJVAPCD. In addition, the project would be required to implement construction dust control measures and comply with SJVAPCD rules described above to reduce construction emissions. To ensure project compliance with applicable SJVAPCD Rules and Regulations, the following mitigation measure would be required.

Mitigation Measure AQ-2:

Implement Mitigation Measure AQ-1.

Compliance with Regulation VIII and all other applicable SJVAPCD Rules and Regulations as described above in Mitigation Measure AQ-1 would ensure that the proposed construction-related emissions are reduced, and would not exceed SJVAPCD significance criteria.

Operations

Ozone precursor emissions from dairy operations, farm equipment, and increased traffic. Operations at the project site would generate air pollutant emissions of ozone precursors (volatile organic Compounds (VOC)/Reactive Organic Gases (ROG) and Nitrogen Oxides (NO_x)) from heifer ranch operations and increased traffic. There are several management practices used at the Godinho Heifer Ranch that control emissions at the animal confinement facility. For example, all animals are fed in accordance with National Research Council (NRC) guidelines to minimize undigested protein and other undigested nutrients in the manure with the result that the overall emissions of NH₃ and VOCs associated with manure decomposition are reduced.

With the proposed expansion, dry cows, bred heifers, and calves would be increased, while heifer support stock would be reduced, resulting in an overall increase of 1,497 animals from existing numbers. The VOC Emission Factors used in this analysis are from the dairy emissions calculator spreadsheet provided by the SJVAPCD (dated May 2019). VOC emissions from feed and manure management would increase from 14.23 tons/year to 23.42 tons/year. This represents an increment of increase of 9.18 tons/year (see Appendix C). Increased traffic and off-road equipment emissions were calculated using CalEEMod Version 2016.3.2 (see Appendix C). The estimated increment of increase of VOC/ROG emissions from traffic and off-road equipment at the facility is 0.0185 tons/year.

Farming equipment used for crop harvesting would also result in exhaust emissions. While there is no agricultural cropland associated with the Godinho Heifer Ranch, there would be an expected overall reduction in emissions from farming activities with conversion of six acres of cropland

associated with the Godinho Dairy. These emissions were not calculated since cropping patterns at the Godinho Dairy could change with conversion of the six acres of cropland.

Aggregated VOC emissions for activities associated with the Godinho Heifer Ranch Expansion are presented in Table 9.

Table 9 Aggregated VOC/ROG Emissions			
Emission Source	Existing VOC/ROG Emissions	Proposed VOC/ROG Emissions	Increment of Increase with Proposed Expansion
Increased Mobile Source	-	-	0.0185 tons/year
Feed and Manure Management	14.24 tons/year	23.42 tons/year	9.18 tons/year
Total			9.1985 tons/year
SJVAPCD Significance Criterion			10 tons/year
Criterion Exceeded?			NO

See Appendix C for emissions estimate calculations.

Source: Planning Partners, 2020.

Fugitive dust during project operations. Operations at the expanded heifer ranch would result in fugitive dust (PM₁₀ and PM_{2.5}) emissions from animal movement in unpaved corrals, vehicle use along unpaved driveways and access roads, and equipment operation. Various management practices are used at this facility to control PM emissions. Concrete lanes in the freestall barns reduce PM emissions since the cows are on a paved surface instead of loose dirt, and flushing of the freestalls to remove manure also minimizes PM emission. Removal of the heifer pens and construction of the freestall barns would result in a decrease in PM emissions from animal movement.

Wind erosion from land cultivation produces PM₁₀ and PM_{2.5} emissions. While there is no agricultural cropland associated with the Godinho Heifer Ranch, there would be an expected overall reduction in emissions from farming activities with conversion of six acres of cropland associated with the Godinho Dairy. Similarly, there would be an expected reduction in PM emissions from land preparation and harvesting. These emissions were not calculated since cropping patterns at the Godinho Dairy could change with conversion of the six acres of cropland. There would be a minimal increase in emissions from on-site mobile sources and from traffic on unpaved roadways. There would be an overall decrease in PM₁₀ emissions from the proposed herd due to the change in cow housing, removal of the existing pens and heifers, and application of control efficiencies as required by the SJVAPCD. With the proposed expansion, PM₁₀ emissions would decrease from 9.69 tons/year to 1.51 tons/year, or an overall decrease of 8.19 tons/year. As calculated in CalEEMod, mobile sources of PM₁₀ from on-site traffic and equipment would increase by 0.01 tons/year (see Appendix C). Therefore, fugitive dust emissions would not exceed SJVAPCD significance criteria for PM₁₀ of 15 tons/year.

Based on the project size, project specific emissions of criteria air pollutants would not exceed SJVAPCD significance thresholds. As part of the ATC/PTO process, the dairy operator has submitted an ATC/PTO application detailing an emission mitigation plan listing all chosen BACT/BARCT mitigation measures. The SJVAPCD will consider implementation of the selected mitigation measures as conditions of the ATC permit required by District Rule 2201.

Summary

Because project construction and operation emissions of criteria pollutants are not expected to exceed SJVAPCD significance thresholds, and the proposed project would require compliance with applicable SJVAPCD Rules and Regulations as required in Mitigation Measure AQ-1, the project would not emit air pollutants that would violate any air quality standard or contribute to an existing air quality violation, or result in a cumulatively considerable net increase in any criteria pollutant. A less-than-significant impact would result, and no additional mitigation would be necessary.

Question (c) Expose sensitive receptors to substantial pollutant concentrations: Less-than-significant Impact.

Hazardous Air Pollutants and Health Risk: Proposed modifications to the heifer facility would result in emissions of hazardous air pollutants near existing residences; therefore, an assessment of the potential risk to the population attributable to emissions of hazardous air pollutants from the proposed heifer ranch expansion is required. The Health Risk Assessment (HRA) prepared for the Godinho Heifer Ranch Expansion project assesses the potential risk to the adjacent residents and workers attributable to emissions of hazardous air pollutants from construction and operation of the proposed dairy (see Appendix D²).

Emissions of hazardous air pollutants attributable to proposed increases in construction activities, animal movement, manure management and on-site mobile sources were calculated using generally accepted emission factors and the California Emissions Estimator Model version 2016.3.2. Ambient air concentrations were predicted with dispersion modeling to arrive at a conservative estimate of increased individual carcinogenic risk that might occur as a result of continuous exposure over a 70-year lifetime. Similarly, concentrations of compounds with non-cancer adverse health effects were used to calculate hazard indices (HIs), which are the ratio of expected exposure to acceptable exposure.

The SJVAPCD has set the level of significance for carcinogenic risk to twenty in one million (20×10^{-6}), which is understood as the possibility of causing twenty additional cancer cases in a population of one million people. The level of significance for acute and chronic non-cancer risk is a hazard index of 1.0. The maximum predicted cancer risk among the modeled receptors is 4.50 in one million, which is below the significance level of twenty in one million. The maximum predicted acute and chronic non-cancer hazard indices among the modeled receptors are 0.100 and 0.058, respectively, which is below the significance level for chronic and acute significance level (see Appendix D).

In accordance with the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015) and polices the potential health risk attributable to the proposed project is determined to be less than significant, and no mitigation would be necessary.

Ambient Air Quality: An ambient air quality analysis (AAQA) was prepared to determine if the proposed heifer ranch expansion has the potential to impact ambient air quality through a violation of the ambient air quality standards or a substantial contribution to existing or projected air quality standards using air dispersion modeling (see Appendix D). In order to determine whether a project will cause or contribute significantly to an AAQS violation, the maximum impacts attributable to the project are added to the existing background concentrations, and are then compared to the applicable

² Calculations for this Appendix were completed in January 2020.

ambient air quality standard. If an ambient air quality standard is not exceeded, the project is judged to not cause or contribute significantly to an AAQS violation for the applicable pollutant. If an ambient air quality standard is exceeded, it must be determined whether the project will cause a Prevention of Significant Deterioration increment violation, which is achieved by comparing the maximum predicted concentration from the project to the established significant impact level for the applicable pollutant. The SJVAPCD has developed alternative SILs for fugitive emissions of PM₁₀ and PM_{2.5}. If a source's maximum impacts are below the applicable SIL, the project is judged to not cause or contribute significantly to an AAQS violation or cause an increment violation.

For the Godinho Heifer Ranch Expansion project, maximum predicted concentrations of NO₂, SO₂, CO, PM₁₀, and PM_{2.5} were predicted based on an analysis of the project-related emissions and air dispersion modeling. Emissions were calculated using generally accepted emission factors. Ambient air concentrations were predicted for the 1-hour, 3-hour, 8-hour, 24-hour and annual averaging periods using the most recent version of EPA's AMS/EPA Regulatory Model - AERMOD (recompiled for the Lakes ISC-AERMOD View interface).

Proposed emissions for the project would not cause or contribute to a violation of any NAAQS or CAAQS for any of the averaging periods for NO₂, SO₂, CO, or H₂S, or cause an increment violation of the SJVAPCD SILs for the annual and 24-hour averaging periods for PM₁₀ and PM_{2.5}.

In accordance with the SJVAPCD's Guide for Assessing and Mitigating Air Quality Impacts (SJVAPCD 2015), the potential impact to air quality attributable to the proposed project is determined to be less than significant, and no mitigation would be necessary.

Question (d) Odors. Less-than-significant Impact with Mitigation. Operations and manure management at the Godinho Heifer may emit odors that may be bothersome to nearby sensitive uses, including residences and wildlife areas. Odors associated with dairy and other animal confinement operations are primarily generated from manure and silage. Unlike the other air pollutants, odor does not have generally accepted methods of measurement or allowable concentration, and its offensiveness differs among individuals. For these reasons, Merced County has sought to prevent nuisances by the use of setbacks between potential sources of offensive odors and adjoining sensitive land uses, rather than regulating the concentration of odor-producing compounds. Under existing regulations, Merced County enforces a setback of 0.5-mile from animal confinement facilities to specified urban uses, residentially zoned property, concentrations of five or more off-site residences, parks, and wildlife refuges, and a minimum of 1,000 feet between animal confinement facilities (ponds, corrals, barns) and rural residences.

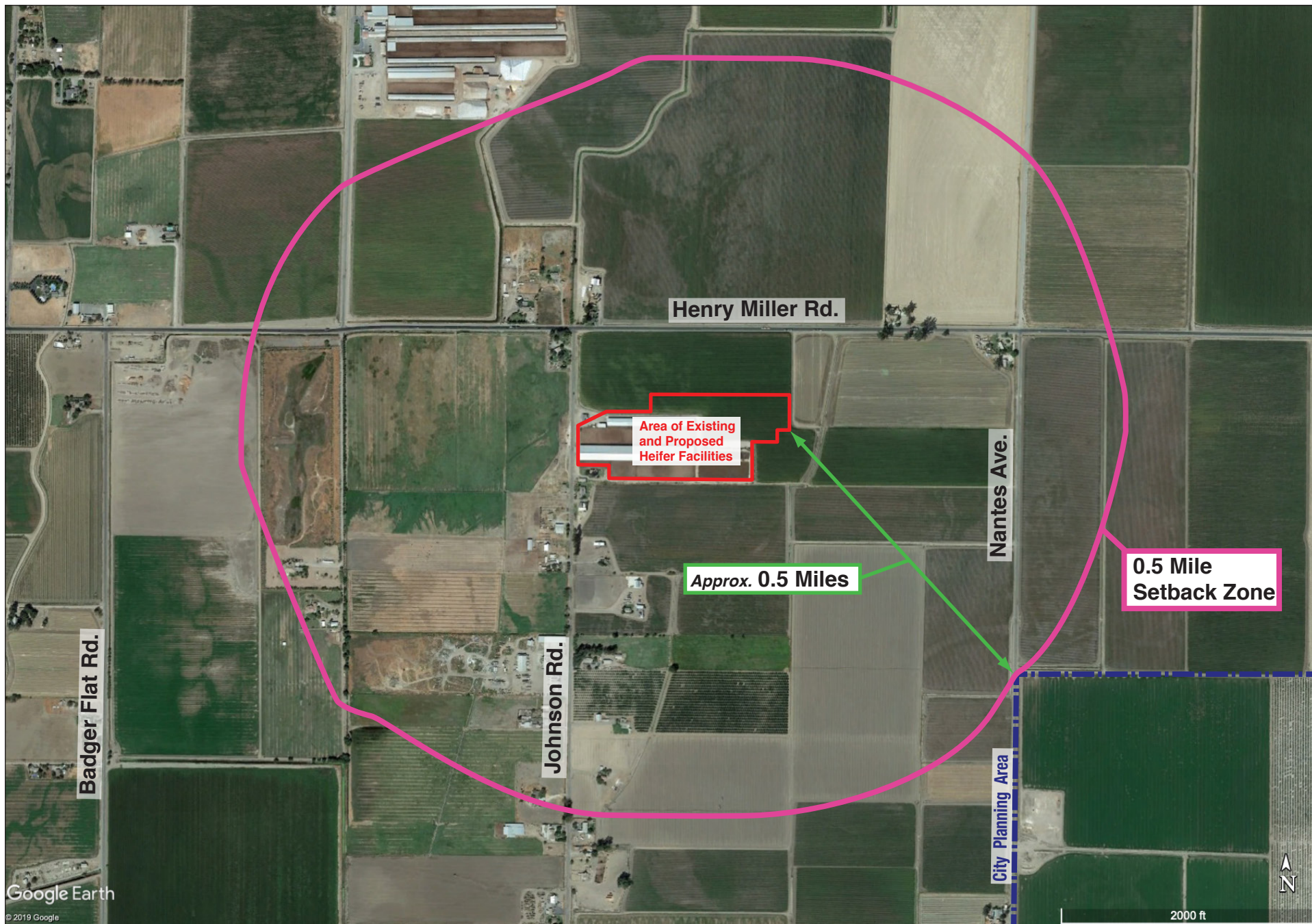
There are numerous off-site residences located within the windshed of the dairy (see Figure 5), and there are eight off-site residences located within 1,000 feet of the existing facility (see Figure 6). According to Merced County Code Chapter 18.64.040 (B)(2), the modification or expansion of an existing facility must not decrease the existing separation distance from residentially zoned property, concentrations of five or more off-site residences, or off-site residences to less than 1,000 feet unless the off-site property owner provides written permission. Construction of the proposed freestall barns would occur outside the existing footprint of active animal confinement operations. While there are off-site residences within 1,000 feet, the heifer facility expansion would not reduce the existing distance to these residences. The proposed expansion would not reduce the distance to less than 1,000 feet for any off-site residence currently greater than 1,000 feet from existing active heifer

facilities. No odor complaints have been reported at the Godinho Heifer and submitted to the Division of Environmental Health (Merced County Public File Review, February 2020).

The ACO also prohibits new dairies within one-half mile of urban areas, areas zoned for residential uses, concentrations of rural residences, and parks (Merced County Code Chapter 18.64.040 (B)(1)(a)). According to Merced County Code Chapter 18.64.040 (B)(2), if the animal confinement facility is located within the minimum setback distance, the modification or expansion of an existing facility must not decrease the existing separation distance from these areas. There are no residentially zoned areas or concentrations of rural residences within the 0.5-mile setback distance (Merced County GIS 2020). The urban boundary of the City of Los Banos is located approximately 0.5 miles southeast of the Godinho active heifer facilities. The proposed expansion would not reduce this setback distance (see Figure 8).

Chapters 18.64.050 H, 18.64.060 C.8.a, and 18.64.040 B.1 of the ACO (see Appendix A, bound separately) address potential odor impacts, and require preparation of an odor control plan. Additionally, the nuisance requirements and protocols set forth in the Merced County Code regarding odor nuisances would apply. Summarily, if an odor nuisance condition were reported, as required by the ACO, DEH would implement the following procedures:

- A. If nuisance conditions are reported to the DEH, the Division shall take the following actions:
Within 72 hours of receiving a complaint, the DEH shall determine whether an odor exists during an inspection of the location of the complaint, and identify potential sources of odor in the vicinity. If a confined animal facility is identified as a potential source of the odor nuisance, the County will evaluate the affected facility and identify sources of the odor. In the event of odor causing a nuisance, the County will impose additional control measures on a site-specific basis. Measures that may be required by DEH include the operational measures set forth above.
- B. If odor nuisance conditions are confirmed, and are attributable to operations at a confined animal facility, the DEH shall require the owner/operator to remedy the nuisance condition within a specified period of time. The Division shall notify the parties reporting the nuisance of its findings, and shall provide follow-up inspections to ensure that the nuisance condition is cured. Should the condition persist, the Division shall initiate an enforcement action against the offending operator.



SOURCE: Merced County 2030 General Plan, Planning Partners 2020

Godinho Heifer Ranch Expansion Project CUP19-006

Figure 8

Distance of Los Banos City Planning Area to Active Animal Confinement Facilities

Because there are several residential uses within ACO setback areas, expansion of the proposed facilities and an increase in cow numbers could increase the potential for nuisance conditions, and the following mitigation would be required.

Mitigation Measure AQ-3a:

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:

- Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than 24 hours.
- Implement odor control measures as contained in the Plan, which may include, but not be limited to the following:

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.

2. Manure management

Utilize best management practices for manure management, including minimizing the time between excretion and application, and aeration of retention basins.

Additionally, implement the following additional best management practices:

Manure Collection Areas

- Clean out manure generated at the freestall barns daily and corrals at least twice a year, or more frequently as necessary to minimize odors;
- Keep cattle as dry and clean as possible at all times;
- Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that would reduce or minimize odors.

Manure Treatment and Application

- Minimize moisture content of stockpiled manure/retained solids to a level that would reduce the potential for release of odorous compounds during storage;
- Minimally agitate stockpiled manure during loading for off-site transport;
- 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);
- Clean up manure spills upon occurrence;
- Maintain and operate settling ponds and retention ponds to minimize odor levels.

General

- Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;
- 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.

If necessary and feasible, the animal confinement operation must implement the following additional measures:

1. Manure treatment
Manure treatment methods include maintaining aerobic conditions during storage, aerobic treatment using aerated lagoons or composting, anaerobic digestion, and biochemical treatment.
2. Capture and treatment of emitted gases
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.
3. Enhanced air dispersion
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.
4. Enhanced land spreading procedures
Procedures may be modified to minimize impacts by avoiding spreading when the wind is blowing towards populated areas, 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.

Mitigation Measure AQ-3b:

Implement the nuisance control measures set forth in Mitigation Measure HAZ-1.

Implementation of the foregoing measures would reduce the magnitude of this potential effect by requiring housekeeping and management measures to reduce the incidence of odors for nearby residents. While there may be an increased potential for nuisance conditions with the heifer ranch expansion, the proposed expansion would not reduce the setback distances specified by the ACO. With implementation of the above mitigation measures, the potential impact from odors would be reduced to less than significant.

Naturally Occurring Asbestos

Naturally occurring asbestos is not a potential concern in the project area. For more information, see Section IX, *Hazards and Hazardous Materials*.

IV. BIOLOGICAL RESOURCES

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

This analysis is based on and summarizes the *Biological Resources Reconnaissance Survey and CEQA Analysis, Godinbo Heifer Ranch Expansion Project*, prepared in January 2020 by Padre Associates, Inc. (Padre), included as Appendix E of this Initial Study. (Padre 2020)

Research on the biological resources associated with the proposed project included: (1) a query of the California Natural Diversity Database (CNDDB) to identify occurrences of special-status species within the Merced, California and surrounding eight 7.5-Minute Topographic Quadrangles (CDFW 2019); (2) a query of federally listed Threatened and Endangered species from the U.S. Fish and Wildlife Service (USFWS) (USFWS 2019a) and the California Native Plant Society's (CNPS) Electronic Inventory (CNPS 2019); and (3) a review of the USFWS National Wetland Inventory (NWI) map to identify the presence of wetlands within the project area (USFWS 2019b). The results of the literature review were used to identify known occurrences of special-status plant and animal species in the project vicinity, and to identify potentially sensitive and regulated habitat. A biological reconnaissance survey of the proposed heifer ranch expansion location was conducted on September 27, 2019. The purpose of the survey was to characterize general biological resources supported by the project site and to evaluate the potential for sensitive biological resources to occur on the project area that may be affected by implementation of the proposed project.

ENVIRONMENTAL SETTING

The proposed project is located primarily in agricultural lands. Operations occur within a relatively flat and partially graded area on bare and exposed soil within an existing heifer ranch. There are CCID surface water canals within the vicinity of the proposed project, and one canal crosses the eastern portion of the project site. The City of Los Banos is approximately 0.5 miles southeast of the heifer facilities.

The Grasslands Ecological Area (GEA) in the central portion of Merced County encompasses over 179,000 acres of wetlands and associated habitats and 51,000 acres of upland. The GEA is composed of two Federal wildlife refuges, four State wildlife management areas, a State park, and hundreds of privately owned parcels. The USFWS, California Department of Fish and Wildlife (CDFW), Grassland Water District, conservation groups, and the private landowners work cooperatively in the GEA to manage the wetland complex; their aim is to aid the recovery of San Joaquin Valley threatened and endangered species, protect seasonal wetlands, provide a wildlife corridor to prevent isolation of resident wildlife species, and promote wildlife-based education and recreation opportunities by fostering public awareness and appreciation of local wildlife resources. In February 2005, the GEA was designated a Wetlands of International Importance by the Ramsar Convention (USFWS 2005). The GEA is within the Grasslands Focus Area (GFA), an area designated by the Central Valley Joint Venture as a priority habitat conservation area that includes the GEA and a buffer of agricultural and other working landscapes that are compatible with wetland habitats and functions. The Godinho Heifer Ranch is located within the boundary of the GFA, but outside of the GEA.

Vegetation

The majority of the project area that supports active facilities has no vegetation due to trampling by the herd. The NWI query identified riverine features within the site boundary, consisting of agricultural ditches and the CCID canal. The ditches and canal were surveyed during field surveys. At the time of the survey there was no water in the ditch on the northern portion of the site, and virtually no plants. The sparse plants that were present were primarily weedy, ruderal species. Water was found in the CCID canal on the eastern portion of the site boundary, and several patches of aquatic plants occurred within the canal. A complete list of plant species observed during the field survey appears in Table 2 of Appendix E.

Wildlife

As shown in Table 2 of Appendix E, wildlife observed at the project site was characteristic of the region, and included primarily bird species. No ground squirrel colonies or other burrows were observed in concentrations; few scattered burrows were found along the berms surrounding the wastewater ponds. A single burrow was observed to be open and of adequate size for use by burrowing owl or San Joaquin kit fox. Its location, however, is within the limits of active and ongoing heifer ranch operations. Due to the high level of disturbance and poor habitat quality, it is very unlikely that this burrow would be used by these two species. The complete list of species observed on the project site appears in Table 2 of Appendix E.

Sensitive Habitats, Special-Status Plants, and Special-Status Wildlife

A list of special-status plant and animal species that historically occurred in the vicinity of the project site was compiled using the resources discussed above. The species identified from these data

sources were further assessed for their potential to occur within the project site based upon previously documented occurrences, their habitat requirements, and the quality and extent of any available habitat within the site. Special status species recorded in the quadrangles surrounding the project site include 4 natural communities, 24 special-status plants, and 35 special-status wildlife species. See Table 3 of Appendix E for a complete list of special-status species potentially occurring in the vicinity of the proposed project site, including an analysis of the probability of occurrence on the site.

Sensitive Habitats

Sensitive natural communities are those that are considered rare within the region, support sensitive plant and/or wildlife species, or function as corridors for wildlife movement. The four sensitive natural communities recorded in the area (cismontane alkali marsh, coastal and valley freshwater marsh, valley sacaton grassland, and valley sink scrub) do not occur on the project site or in the immediate vicinity of the project site.

Special-Status Species

Neither special-status plants nor habitat that would support special-status plants occur on the project site. The entire site is or was in the recent past managed cattle facilities and/or crop fields. Special-status wildlife species that may occur on the site from time to time include tricolored blackbird, American badger, and Swainson's hawk. The San Joaquin kit fox has been known to occur at the Merced National Wildlife Refuge, which is approximately 12 miles northeast of the site, and the species has been reported within 5.5 miles of the site at the San Luis National Wildlife Refuge to the north. No sign of San Joaquin kit fox was observed, but they may occur on site as transient foragers. Although very few burrows were observed on site, it is likely that the project site could support small mammals that provide prey for San Joaquin kit fox, American badger, and Swainson's hawk. Agricultural access roads, open or fallow fields, and irrigation ditches and canals provide an important corridor for the movements of these mammals. There was no vernal pool habitat that could support listed vernal pool invertebrates observed on site during the reconnaissance survey.

The project site may provide occasional foraging opportunities for additional sensitive wildlife species including various raptors and migratory birds that are protected by the Migratory Bird Treaty Act. The nearby Los Banos Waterfowl Management Area, located two miles to the east, provides habitat for migratory waterfowl and shorebirds. This area also provides potential habitat for nesting wildlife species such as ducks, short-eared owls, northern harriers, and pheasants, and upland foraging and grazing wildlife species such as raptors, geese, cranes, and egrets. These species may disperse to or forage within surrounding areas, including the project site.

Merced County 2030 General Plan Policy LU-1.13 restricts development within a half mile of State or Federal wildlife refuges within the GEA if the County determines that there are unmitigated impacts to natural resources or habitat. The proposed project site is more than one-half mile from any State or Federal wildlife refuges. In addition, Merced County 2030 General Plan Policy LU-10.14 requires Merced County to consult with the Grassland Resources Regional Working Group (GRRWG) during project review for projects located within the GFA. Consultation with the GRRWG has been initiated through the CEQA process during the Preliminary Application Review, prior to circulation of the Initial Study. As of April 2020, no response from the GRRWG was received. (Merced County 2013)

Waters and Wetlands

The NWI map indicates that the heifer ranch is within and adjacent to a riverine, excavated, semi permanently flooded, unconsolidated bottom wetland. This riverine feature identified by NWI is the CCID irrigation canal that bisects the parcel. At the time of the reconnaissance survey the site was dry, and no standing water was observed except in the wastewater treatment ponds, and in the CCID canal. On both the eastern and western side of the canal there were small areas of ponded water present, presumably from irrigation practices. These water features would not provide habitat to sensitive species due to their unpredictability. The proposed project does not involve any development that would impact the CCID canal.

Surrounding the existing cropped field there is a shallow irrigation drainage ditch. The great majority of this ditch lacked water and consisted of sparse patches of ruderal and some hydrophytic³ plants. At the northwestern corner of the property, this drainage ditch flows into a culvert under Johnson Road.

Local Habitat Conservation Plans

No Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan has been approved for Merced County.

ENVIRONMENTAL EVALUATION

Question (a) Adverse effect on special-status species: Less-than-significant Impact with Mitigation.

Plants

The likelihood of occurrence of special-status plant species on the site is considered extremely low due to a lack of suitable habitat and ongoing intensive ranching and agricultural operations. The proposed project would have no new or increased impacts that would affect special-status plants.

Wildlife

No potential denning habitat is present for San Joaquin kit fox within the area of the proposed project. Nevertheless, there are records of occurrences of San Joaquin kit fox within the Merced National Wildlife Refuge, approximately twelve miles northeast of the project site, and within the San Luis National Wildlife Refuge, approximately six miles away. Signs of the American badger were not observed during field surveys, but there are two known records of the species within two miles of the site (see Table 3 of Appendix E). This species may occur occasionally as a transient, but is not expected to den on site. Because new construction associated with the project would not result in the conversion of habitat to agricultural production, no new impacts would occur to San Joaquin kit fox or American badger.

³ Plants that live in water.

Nesting Birds

Implementation of the proposed project would result in the conversion of six acres of cropland to developed lands for the construction of new heifer facilities. The facility would be constructed on land that has been previously cultivated in corn, and currently provides nesting and/or foraging habitat for a variety of special-status and migratory bird species.

There is the potential for migratory birds, especially ground nesters, to breed on site. Suitable habitat for ground nesting birds such as western meadowlark, killdeer, short-eared owl, and horned lark is limited, and only expected along edges of the agricultural fields. This would be a potentially significant impact, and the following mitigation would be required:

Mitigation Measure BIO-1:

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:

1. A preconstruction survey shall be conducted to determine the presence 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 seven 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.
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.).
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.

Preconstruction surveys and avoidance measures would reduce this impact to less-than-significant levels, and no additional mitigation would be required. Further, while approximately six acres of cropland would be converted to active heifer ranch facilities, 44 acres would remain as cropland and continue to provide foraging habitat.

Tricolored Blackbird

Tricolored blackbird (TCBB) is a California threatened species under CESA as of April 19, 2018. TCBB is a highly colonial species that nests in large flocks near open water with a protected substrate and nearby foraging area. TCBB have two specific peaks in breeding activity: one in the first week of June, and one in the first two weeks of July. Total nesting duration is approximately 45 days. TCBB foraging typically occurs within 3-5 miles of the nesting colony. Lightly grazed fields, irrigated pastures, annual grasslands, and grain fields that provide habitat for a supply of large insects such as grasshoppers, dragonflies, and damselflies offer the best foraging habitat. However, silage edge and feed lots maybe also used for foraging. Surface water is typically present within a half mile of the nesting colony, a habitat criterion that would be met by the wastewater storage ponds at the Godinho Heifer Ranch site. Although TCBB was not observed during the site survey, the croplands on site could provide suitable nesting habitat for TCBB.

Construction of the proposed heifer ranch expansion would result in the conversion of approximately six acres of cropland to developed ranch facilities, and temporary disturbance of potential TCBB breeding habitat in the project area. This would be a significant impact, and the following mitigation measure would be required:

Mitigation Measure BIO-2:

1. A preconstruction survey shall be conducted to determine presence / absence of TCBB if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). This measure is also required for all MBTA protected nesting birds, as indicated in Mitigation Measure BIO-2.
2. 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.

Preconstruction surveys and avoidance measures would reduce this impact to less-than-significant levels, and no additional mitigation would be required.

Swainson's Hawk

The state-threatened Swainson's hawk is known to nest and forage in the project vicinity. Although no raptor nests were observed, a Swainson's hawk nesting occurrence is located approximately 0.2 miles from the site in a eucalyptus tree (see Table 3 of Appendix E). Due to the proximity of the suitable nesting habitat, direct impacts could occur if a Swainson's hawk nested in that area when construction took place. There are 35 Swainson's hawk occurrences within 5 miles, and 63 occurrences within 10 miles of the project site. Swainson's hawks generally forage within 10 miles of their nest tree, and more commonly within 5 miles of their nest tree (CDFW 2019). Because cropland provides foraging habitat for small ground-dwelling mammals, which are prey species for raptors, conversion of cultivated farmland to heifer ranch facilities would contribute to the loss of foraging habitat for the Swainson's hawk.

According to the CDFW Staff Report regarding Mitigation for Impacts to Swainson's Hawks (CDFW 1994), the following vegetation types are considered small mammal and insect foraging habitat for Swainson's hawks: alfalfa; fallow fields; beet, tomato, and other low-growing row or field crops; dry-land and irrigated pasture; rice land (when not flooded); and cereal grain crops (including corn after harvest). Because Swainson's hawk is a state-listed species, and approximately six acres of appropriate foraging habitat would be removed with project implementation, this would be a potentially significant impact. The following compensatory mitigation would be required:

Mitigation Measure BIO-3:

1. Protocol Surveys. 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 (<https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds>) (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.

A written report with the pre-construction survey results must be provided to the Planning 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.

2. Nest Avoidance. If the required protocol surveys show there are no active nests within 0.5-mile of construction activities, 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:
 - 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.
 - 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.
 - c. The project applicant shall be required to coordinate with CDFW to determine if project activities with the potential to cause disturbance to nesting Swainson's hawks within the 0.5-mile buffer may proceed with a reduced nest buffer and an approved biological monitor. CDFW may authorize a reduced nest buffer with the presence of a monitoring biologist during construction activities to ensure that the nest is not disturbed.
 - d. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.5-mile of an active nest are not prohibited.
3. Foraging Impacts: 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 site, 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:

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
*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.	

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: www.dfg.ca.gov/habcon/conplan/mitbank/catalogue

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 (http://www.madera-county.com/rma/archives/uploads/1188143775_Document_upload_23w.pdf) (November 8, 1994).

The Merced County Community and Economic Development Department may negotiate Management Conditions that differ from the foregoing CDFW pre-approved mitigation measures if such conditions are consistent with California Fish and Wildlife Commission and the state legislative policy, and such conditions are approved by CDFW prior to reaching agreement with the project applicant.

Summary

In summary, implementation of Mitigation Measures BIO-1 through BIO-3 would reduce potential impacts to species identified as a candidate, sensitive, or special status species to a less-than-significant level. No additional mitigation would be required.

Question (b) Adverse effect on riparian habitat or sensitive natural communities: No Impact.

No riparian habitats or other sensitive natural communities have been mapped or observed on the site of the Godinho Heifer Ranch Expansion project. Because construction associated with the project is located in active cropland, and no sensitive natural communities occur on site, the project would not have a substantial adverse effect on any riparian habitats or other sensitive natural communities. There would be no impact, and no mitigation would be required.

Question (c) Adverse effect on wetlands: No Impact.

The NWI map for the project site indicates that potential jurisdictional Waters of the U.S. occur adjacent to the project site. However, the waterway identified within the NWI map is a concrete-lined canal that will not be impacted by proposed project activities. Because construction would not alter the existing irrigation canal, and no other wetlands presently occur on site, the project would not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act. There would be no impact, and no mitigation would be required.

Question (d): Interfere with species movement, wildlife corridors, or native wildlife nursery sites: Less-than-significant Impact with Mitigation.

There are no creeks, valleys, or other wildlife movement corridors in the site. The project is located within the GFA boundary but is not within 0.5-mile of State or Federal wildlife refuges or managed wetlands within the GEA. The site is 1.8 miles west of the Los Banos Waterfowl Management Area and 2.5 miles east of the Volta Wildlife Area. Wildlife areas provide wetland and riparian habitat for migratory waterfowl and shorebirds and potential wildlife movement corridors and nursery sites.

Published studies of the effects of night lighting on wildlife generally conclude that there is limited scientific understanding of the ecological impacts of night lighting, but that night lighting may have an adverse effect on wildlife in certain situations. One study found that “research focusing on artificial night lighting will probably reveal it to be a powerful force structuring local wildlife communities by disrupting competition and predator-prey interactions” (Longcore and Rich 2004). The type of night lighting (such as lighted buildings, street lamps, and vehicle lamps), the percent change in illumination, and the type of light (i.e., ultraviolet wavelengths versus infrared) can have varying effects on wildlife (Longcore and Rich 2004). The same paper also notes that “our understanding of the full range of ecological consequences of artificial night lighting is still limited.” The authors of these reports concur on the need for continued studies.

Existing night lighting at the Godinho Heifer Ranch includes LED fixtures mounted on buildings. With implementation of the proposed herd expansion, the project applicant expects new building-mounted lighting with LED fixtures on the proposed expanded facilities. Existing County standards require that all lighting be directed away from or be properly shaded to eliminate light trespass or glare within a project or onto surrounding properties. Based on the existing lighting configuration and proposal of new lighting in expansion areas, there may be light trespass beyond the area of active confined animal facilities into cropped or natural areas where night-active wildlife may forage, nest, and rest. To ensure that existing lighting and proposed lighting at the heifer ranch facility meets County standards to reduce the potential for impact to migratory birds and night-active wildlife, the following mitigation measure would be required.

Mitigation Measure BIO-4:

A Lighting Plan shall be developed to modify existing and future lighting at the Godinho Heifer Ranch. Project-related lighting shall be minimized and directed away or shielded to maintain lighting within developed areas of the facility and away from sensitive areas. No light trespass shall occur onto adjacent fields or off site. The Lighting Plan must comply with the following general standards:

- Lighting shall be designed so that exterior light fixtures are hooded, with light directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project site boundary and neither the lamp nor the reflector interior surface are visible from outside the footprint of the facilities;
- Light fixtures shall be installed on poles of minimal height and/or be building-mounted;
- All lighting shall be of minimum necessary brightness consistent with worker safety;
- The number of lighting fixtures shall be limited to the minimum required;

- Illuminated areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied;
- All lighting poles, fixtures, and hoods will be dark-colored;
- Unless determined necessary by the County for safety or security reasons, any signs at the entry of the project site will not be lit (reflective coating is acceptable).
- When possible, green light bulbs will be utilized to minimize lighting impact on birds
- The Lighting Plan must specify the type and intensity of lighting and shall be approved by the County and implemented prior to final inspection.

Minimizing and/or directing/shielding lighting away from sensitive areas would minimize disruption of night-active species and reduce impacts to less-than-significant levels. This would help reduce or minimize any accelerated night-time predation rates on adjacent agricultural fields and sensitive natural areas. No additional mitigation would be required.

Questions (e) and (f) Conflict with policies, ordinances, or plans protecting biological resources: No Impact. The project site is not located in an area covered by an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan. Merced County has not adopted a tree preservation ordinance, or any other policy or requirement to protect biological resources. Therefore, no conflict with any adopted conservation program would occur with project implementation. No significant impact would result, and no mitigation would be required.

V. 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 pursuant to § 15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?		X		
c) Disturb any human remains, including those interred outside of formal cemeteries?		X		

Records of the known cultural resources found in Merced County are included in the files of the Office of Historic Preservation, California Historical Resources Information System. The Central California Information Center (CCIC), housed at California State University, Stanislaus, locally administers these records.

The proposed project was the subject of a Cultural Resources Investigation in October 2019 (Napton 2019). Methodology included literature and records research, including those records in the files of the CCIC and the Native American Heritage Commission (NAHC), and direct in-field cultural resources sensitivity assessment of the proposed project area.

ENVIRONMENTAL SETTING

The CCIC Records Search reported that there has been one previous investigation within the project area, and two investigations within a ½ mile radius of the project area. No formally reported prehistoric, historic, or archaeological resources were found within the project area. Within the general vicinity, eleven historic ranches have been recorded. It was also noted that the project area is ¾ mile east of Los Banos Creek, an area of sensitivity in reference to prehistoric archaeological resources. (Napton 2019)

Direct field survey of the proposed project was conducted on two occasions to examine the proposed project area, within limitations imposed by the consideration that cultural resources could be buried or concealed by vegetation. The field investigation of the proposed project produced no evidence of the presence or former presence of cultural resources within the project area. (Napton 2019)

While the proposed project area cannot be characterized as highly sensitive from an archaeological or ethnographic perspective, prefield background research indicates that the region could have been visited or occupied seasonally or occasionally by the Yokuts or their Miwok neighbors. (Napton 2019)

REGULATORY FRAMEWORK

State and federal legislation requires the protection of historical and cultural resources. In 1971, President's Executive Order No. 11593 required that all federal agencies initiate procedures to preserve and maintain cultural resources by nomination and inclusion on the National Register of Historic Places. In 1980, Governor's Executive Order No. B-64-80 required that state agencies inventory all "significant historic and cultural sites, structures, and objects under their jurisdiction which are over 50 years of age and which may qualify for listing on the National Register of Historic

Places.” Section 15064.5(b)(1) of the CEQA Guidelines specifies that projects that cause “...physical demolition, destruction, relocation, or alteration of the resource or its immediate surroundings such that the significance of an historic resource would be materially impaired” shall be found to have a significant impact on the environment.

ENVIRONMENTAL EVALUATION

Questions (a) through (c) Historical and archaeological resources, human remains: Less-than-significant Impact with Mitigation. No prehistoric or historic resources were identified on the project site. Within the general vicinity of the project, eleven historic ranches have been reported to the CCIC. No archaeological resources were identified on the project site or in the general vicinity. Cultural resources are suspected to be minimal because the dominant land use has been for agricultural uses (including leveling, cultivation, grading, and construction of the existing heifer ranch). The entire project area has been highly modified by development of the existing heifer ranch facilities or cropped fields.

However, significant cultural remains can also exist below the plow zone in Merced County, and such resources could be unearthed during construction activities at the project site. Through Resolution 20-001, Merced County has imposed conditions relating to undiscovered cultural resources pursuant to Section 5097.98 of the State Public Resources Code, and Section 7050.5 of the State Health and Safety Code. To ensure project compliance with these regulatory requirements, the following mitigation measures would be required for the proposed project:

Mitigation Measure CUL-1:

- A. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, 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.
- B. 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:
 - The County coroner has been informed and has determined that no investigation of the cause of death is required; and
 - If the remains are of Native American origin:
 - √ The most likely descendants of the deceased Native Americans have 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
 - √ The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.

- C. 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.

Because the records search and field survey conducted for the project site yielded no positive results, and because no resources have been discovered during previous disturbances of the project site, with implementation of the above regulatory requirements, the proposed project would result in a less-than-significant impact to cultural resources and human remains. No additional mitigation would be required.

VI. ENERGY

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Result in potentially significant environmental impacts due to wasteful, inefficient, or unnecessary consumption of energy resources, during project construction or operation?			X	
b) Conflict with or obstruct a state or local plan for renewable energy or energy efficiency?			X	

ENVIRONMENTAL SETTING

State and Local Energy Plans

California's first Long Term Energy Efficiency Strategic Plan presents a single roadmap to achieve maximum energy savings across all major groups and sectors in California. This comprehensive Plan for 2009 to 2020 is the state's first integrated framework of goals and strategies for saving energy, covering government, utility, and private sector actions, and holds energy efficiency to its role as the highest priority resource in meeting California's energy needs. The Plan identifies agriculture as a unique opportunity to integrate renewable energy from biogas from animal waste. However, the Plan has not focused specific attention on renewable energy.

The California Renewables Portfolio Standard (RPS) was established in 2002 under Senate Bill 1078 and updated in 2006 and 2011 under Senate Bill 107 and Senate Bill 2, respectively. The California RPS program requires investor-owned utilities, electric service providers, and community choice aggregators to increase procurement from eligible renewable energy resources to 33 percent of total procurement by 2020. Dairy digesters producing electricity are a RPS eligible technology.

The *California Green Building Standards Code (CALGreen Code)* (California Code of Regulations, Title 24, Part 11) is a part of the California Building Standards Code that comprehensively regulates the planning, design, operation, and construction of newly constructed buildings throughout the state. Both mandatory and voluntary measures are included in the CALGreen Code. Mandatory measures for non-residential structures include standards for light pollution reduction, energy efficiency, and water conservation, among others.

As discussed in Section VIII, *Greenhouse Gas Emissions*, below, Merced County does not yet have a Climate Action Plan (CAP) or energy plan.

ENVIRONMENTAL ANALYSIS

Question (a) Wasteful consumption of energy resources: Less-than-significant Impact.

Development of the proposed heifer facility expansion would entail energy consumption that includes both direct and indirect expenditures of energy. Indirect energy would be consumed by the use of construction materials for the project (e.g., energy resource exploration, power generation, mining and refining of raw materials into construction materials used, including placement). Direct energy impacts would result from the total fuel consumed in vehicle propulsion (e.g., construction vehicles, heavy equipment, and other vehicles using the facility). No unusual materials, or those in short supply, are required in the construction of the project.

At the Godinho Heifer Ranch, several energy efficiency upgrades have been incorporated into existing operations at the active animal confinement facilities. At the existing heifer housing, energy efficient LED lights are used. Proposed lighting would be building-mounted with LED fixtures. During daytime hours, only natural lighting in the barns is necessary. According to the applicant, the proposed well pump would have a variable frequency drive (VFD), any replacement pumps needed in the future would have VFDs, which are more efficient than standard pumps.

While the proposed heifer facility expansion would result in an increase in energy use, there could be a small increase in energy efficiency since larger farms generally use machines more efficiently, providing some reduction in the machinery required per unit produced (USDA 2015). Because the existing features at the Godinho Heifer Ranch would be considered energy efficient, and energy efficient features have been incorporated into project operations, this would be a less-than-significant impact. No mitigation would be required.

Question (b) Conflict with state or local energy efficiency plans: Less-than-significant

Impact. Implementation of the Godinho Heifer Ranch Expansion project would not be inconsistent with the California's Long Term Energy Efficiency Strategic Plan since standards and required actions for the energy efficiency in the agricultural sector have not currently been adopted. The Long Term Energy Efficiency Strategic Plan identifies energy reduction goals for the agricultural sector, with emphasis on reducing energy from agricultural pumping. At this time, the highest priority identified in the Strategic Plan is to conduct baseline studies to understand the energy usage patterns in California's agricultural sector in order to design a cohesive strategy to pursue all cost-effective energy efficiency measures. The plans and supporting regulations cited above and in the regulatory setting of Section VIII, *Greenhouse Gas Emissions*, contain strategies that would also result in increased energy efficiency or support renewable energy on animal confinement facilities. The Scoping Plan, the Long Term Energy Efficiency Strategic Plan, SB 1383, and other GHG emissions reduction, renewable energy, and energy efficiency plans and regulatory measures do not include regulatory requirements immediately applicable to the agricultural sector; rather, as a result of these plans, agencies may establish rules in the future that could apply to the proposed heifer facility expansion project. Any future heifer facility expansion project would have to go through the local permitting process, and would have to adhere with the rules in place at that time.

Currently, there are no state, regional, or local policies or requirements in place that are specifically applicable to the project that would result in the promotion of renewable energy or energy efficiency. Because standards for the increase in energy efficiency in the agricultural sector are not currently in place, the proposed project would not conflict with any plans or regulations adopted for the purpose of promoting renewable energy or energy efficiency. This would be a less-than-significant impact, and no mitigation would be required.

VII. GEOLOGY AND SOILS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Directly or indirectly cause potential substantial adverse effects, including the risk of loss, injury, or death involving:				
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42?				X
ii) Strong seismic ground shaking?			X	
iii) Seismic-related ground failure, including liquefaction?			X	
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?			X	
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial direct or indirect risks to life or property?			X	
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X
f) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?			X	

ENVIRONMENTAL SETTING

Geology

The Godinho Heifer Ranch project site is located within the Great Central Valley of California. The Central Valley is composed primarily of alluvial deposits from erosion of the Sierra Nevada located to the east and of the Coastal Ranges located to the west. The elevation of the project site is approximately 95-100 feet above mean sea level (MSL). The topography of the project site is generally flat, with varying agricultural field elevations.

Soils

The Natural Resources Conservation Service provides agricultural ratings for soils in the project area in the Merced County Soil Survey. Predominant soils in the proposed project area as classified by the NRCS consist of the Henmel clay loam, partially drained, and Pedcat clay loam, leveled, 0 to 2 percent slopes soil types. Soil properties can also influence the development of building sites, including site selection, structural design, construction, performance after construction, and maintenance.

Soil properties that affect the load-supporting capacity of an area include depth to groundwater, ponding, subsidence, shrink-swell potential, and compressibility. The properties that affect the ease and amount of excavation include flooding, depth to a water table, ponding, slope, depth to bedrock or a cemented pan, hardness of bedrock or a cemented pan, and the amount and size of rock

fragments. The project site is comprised of soils that present limitations for development. These soil types are very limited by a shallow depth to the saturated zone, and shrink-swell potential. (NRCS 2020)

Faults and Seismicity

The project site is not located within a mapped fault zone or landslide and liquefaction zone. There is no record or evidence of faulting on the project site (DOC 2015). The site is located in Seismic Damage Zone III, indicating a high severity level with major probable damage in the event of severe seismic activity (Merced County 2013c).

REGULATORY FRAMEWORK

Merced County regulates the effects of soils and geological constraints on urban development primarily through enforcement of the California Building Code (CBC), which requires the implementation of engineering solutions for constraints to urban development posed by slopes, soils, and geology.

ENVIRONMENTAL EVALUATION

Question (a.i) Earthquake fault: No Impact. The project site is not located within a mapped earthquake fault, and there is no record or evidence of faulting on the project site (Merced County 2013b; DOC 2015). Because no fault traces underlie the project site, no hazardous conditions would result from implementation of the project. There would be no impact.

Question (a.ii) Ground shaking: Less-than-significant Impact. As noted above, the project site is located in Seismic Damage Zone III. Should an earthquake occur in the vicinity of the proposed project site, it could result in major damage. Confined animal facilities are categorized as a low risk use that is considered suitable in all ground-shaking zones. However, Merced County requires that all new construction comply with the seismic safety requirements of the CBC. Compliance with the CBC would reduce risks on the project site from seismic ground shaking to levels considered acceptable for the State and region. This would be a less-than-significant impact, and no mitigation is required beyond compliance with adopted building standards.

Question (a.iii) Ground failure, liquefaction: Less-than-significant Impact. The project site is not located within a mapped liquefaction zone (DOC 2015). The proposed project would employ standard construction practices and comply with CBC requirements for the State of California. Standard design, construction, and safety procedures, implemented with adherence to adopted building standards, would avoid substantial adverse effects due to the risk of loss, injury, or death involving liquefaction or other seismic-related ground failure. This would be a less-than-significant impact, and no mitigation is required.

Question (a.iv) Landslides: No Impact. The project site is generally flat and is not located near steep slopes with unstable soils that may be susceptible to landslides. Also, the greater project area is not noted for unstable geologic formations susceptible to landslides (DOC 2015). Therefore, the project would not be exposed to potential geologic hazards, including the risk of loss, injury, or death involving a landslide.

Question (b) Soil erosion: Less-than-significant Impact. Construction of the proposed heifer ranch expansion facilities would occur in the area of existing ranch facilities and existing agricultural fields that have been previously graded. While implementation of the proposed project could result

in temporary soil erosion and the loss of topsoil due to construction activities, the location where the proposed expansion facilities would be constructed is generally level from previous grading. Approximately 15,000 cubic yards of fill would be obtained from adjacent fields associated with the Godinho Dairy in order to construct the building pads for proposed structures. Minimal additional modification to the site's existing topography or ground surface relief would be required. Also, the proposed project site soils are not limited by erosion potential (NRCS 2020), meaning little or no erosion is likely. This would be a less-than-significant impact, and no mitigation would be necessary.

For a discussion of potential significant effects due to sedimentation during the construction period of the project, see Section X, *Hydrology and Water Quality*.

Question (c) Unstable geologic unit: Less-than-significant Impact. Construction of the expanded heifer ranch facilities could increase loads on the project site that could cause soil settlement. The project area is not noted for unstable geologic formations susceptible to subsidence, landslide, or ground failure (DOC 2015, Merced County 2013d). The topography surrounding the heifer ranch facilities and agricultural field elevations are generally level. Any potential effects from unstable or expansive soils would be minimized following compliance with the Merced County and CBC building standards, and additional corrective engineering measures that would be required to be documented during the building permit process, including the submittal of a soils report. For these reasons, the proposed heifer ranch expansion project would not result in soil instability and subsequent landslide, lateral spreading, liquefaction, or collapse. This would be a less-than-significant impact, and no mitigation would be necessary.

Question (d) Expansive soil: Less-than-significant Impact. Expansive soils are soils that shrink and swell in response to changes in moisture. These volume changes can result in damage over time to building foundations, roads, underground utilities, and other structures, if they are not designed and constructed appropriately to resist the changing soil conditions. The main limitations of the soil types found on the project site are the shallow depth to the saturated zone, and shrink-swell potential (NRCS 2020). The Merced County building code, however, requires a soils report for most non-residential structures within Merced County, and additional corrective engineering measures are required as part of the design for proposed facilities. Further, the proposed heifer ranch expansion facilities would not be used for human habitation. Compliance with the CBC requirements and additional corrective engineering measures documented during the building permit process would reduce risks on the project site from geological hazards to levels considered acceptable for the State and region. This would be a less-than-significant impact, and no additional mitigation would be required beyond compliance with adopted standards and County requirements.

Question (e) Soils adequately support septic system: No Impact. There are three septic systems that serve the residences on the existing project site; no aspect of the proposed project would affect the existing septic systems. Because the proposed heifer ranch expansion would not involve the construction of any new septic system, there would be no change or impact due to the characteristics of the soils on site. Therefore, no impact would occur, and no mitigation would be necessary.

Question (f) Paleontological resource / unique geologic feature: Less-than-significant Impact. According to available information, the project site is not located in an area known to have produced significant paleontological resources (Napton 2019), nor are there any unique geologic features. Therefore, project construction would not result in the destruction or degradation of paleontological resources or unique geological features. This would be a less-than-significant impact, and no mitigation would be required.

VIII. GREENHOUSE GAS EMISSIONS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment?			X	
b) Conflict with an applicable plan, policy, or regulation adopted for the purpose of reducing the emissions of greenhouse gases			X	

ENVIRONMENTAL SETTING

Global Warming is a public health and environmental concern around the world. As global concentrations of atmospheric greenhouse gases increase, global temperatures increase, weather extremes increase, and air pollution concentrations increase. Global warming and climate change has been observed to contribute to poor air quality, rising sea levels, melting glaciers, stronger storms, more intense and longer droughts, more frequent heat waves, increases in the number of wildfires and their intensity, and other threats to human health (IPCC 2013). The five warmest years in the 1880–2019 record have all occurred since 2015, while nine of the 10 warmest years have occurred since 2005; the year 2019 was the second warmest year in the 140-year record. The global annual temperature has increased at an average rate of 0.07°C (0.13°F) per decade since 1880 and over twice that rate (+0.18°C / +0.32°F) since 1981 (NOAA 2020). Hotter days facilitate the formation of ozone, increases in smog emissions, and increases in public health impacts (e.g., premature deaths, hospital admissions, asthma attacks, and respiratory conditions) (EPA 2017). Because oceans tend to warm and cool more slowly than land areas, continents have warmed the most. If greenhouse gas emissions continue to increase, climate models predict that the average temperature at the Earth’s surface is likely to increase by over 1.5°C by the year 2100 relative to the period from 1850 to 1900 (IPCC 2013).

The Greenhouse Effect (Natural and Anthropogenic)

The Earth naturally absorbs and reflects incoming solar radiation and emits longer wavelength terrestrial (thermal) radiation back into space. On average, the absorbed solar radiation is balanced by the outgoing terrestrial radiation emitted to space. A portion of this terrestrial radiation, though, is itself absorbed by gases in the atmosphere. The energy from this absorbed terrestrial radiation warms the Earth’s surface and atmosphere, creating what is known as the “natural greenhouse effect.” Without the natural heat-trapping properties of these atmospheric gases, the average surface temperature of the Earth would be below the freezing point of water (IPCC 2007). Although the Earth’s atmosphere consists mainly of oxygen and nitrogen, neither plays a significant role in this greenhouse effect because both are essentially transparent to terrestrial radiation. The greenhouse effect is primarily a function of the concentration of water vapor, carbon dioxide, methane, nitrous oxide, ozone, and other trace gases in the atmosphere that absorb the terrestrial radiation leaving the surface of the Earth (IPCC 2007). Changes in the atmospheric concentrations of these greenhouse gases can alter the balance of energy transfers between the atmosphere, space, land, and the oceans. Radiative forcing is a simple measure for both quantifying and ranking the many different influences on climate change; it provides a limited measure of climate change as it does not attempt to represent the overall climate response (IPCC 2007). Holding everything else constant, increases in greenhouse gas concentrations in the atmosphere will likely contribute to an increase in global average temperature and related climate changes (EPA 2017).

Greenhouse Gases

Naturally occurring greenhouse gases include water vapor, carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), and ozone (O₃). Several classes of halogenated substances that contain fluorine, chlorine, or bromine are also greenhouse gases, but they are, for the most part, emitted solely by human activities. There are also several gases that, although they do not have a direct radiative forcing effect, do influence the formation and destruction of ozone, which does have such a terrestrial radiation absorbing effect. These gases, referred to here as ozone precursors, include carbon monoxide (CO), oxides of nitrogen (NO_x), and non-methane volatile organic compounds (NMVOC). Aerosols (extremely small particles or liquid droplets emitted directly or produced as a result of atmospheric reactions) can also affect the absorptive characteristics of the atmosphere.

Carbon is stored in nature within the atmosphere, soil organic matter, ocean, marine sediments and sedimentary rocks, terrestrial plants, and fossil fuel deposits. Carbon is constantly changing form on the planet through the a number of processes referred to as the carbon cycle, which includes but is not limited to degradation and burning, photosynthesis and respiration, decay, and dissolution. When the carbon cycle transfers more carbon to the atmosphere this can lead to global warming. Over the last 300 years atmospheric levels of carbon have increased by more than 30 percent, of which approximately 65 percent is attributable to fossil fuel combustions and 35 percent is attributed to deforestation and the conversion of natural ecosystems to agricultural use (Pidwirny 2006). Carbon stored in plants and rocks is referred to as being sequestered. Within the United States, forest sequestration of carbon offset approximately 13 percent of the fossil fuel GHG emissions in 2011, and from 10 to 20 percent of U.S. emissions each year (USDA 2012).

In 2016 in the United States, energy and transportation related activities accounted for the majority of human-generated greenhouse gas emissions, mostly in the form of carbon dioxide emissions from burning fossil fuels. The major sources of GHG emissions in the U.S. include electricity production (28 percent), transportation (28 percent), industrial processes (such as the production of cement, steel, and aluminum) (22 percent), commercial and residential (11 percent), and agriculture (9 percent). Total U.S. emissions have increased by 2.4 percent from 1990 to 2016, and emissions decreased from 2015 to 2016 by 1.9 percent (126.8 MMT CO₂ Eq.). The decrease in total greenhouse gas emissions between 2015 and 2016 was driven in large part by a decrease in CO₂ emissions from fossil fuel combustion. (EPA 2018⁴)

California Greenhouse Gas Emissions

California carbon dioxide equivalent emissions were approximately 429 million metric tons in 2016⁵, which represent a declining trend since 2007. During the 2000 to 2016 period, per capita GHG emissions in California have continued to drop from a peak in 2001 of 14.0 metric tons per person to 10.8 metric tons per person in 2016, a 23 percent decrease. Of GHG emissions from within California, approximately 41 percent is from transportation, 23 percent is from industrial, over 16 percent from electric power, 7 percent residential, and 5 percent commercial. Agriculture, including fuel use by agricultural support activities, comprises nearly 8 percent of the state's GHG emissions (ARB 2018b).

⁴ As of February 2020, the 1990 to 2016 greenhouse gas emissions inventory is the most recent approved source of data available for the United States.

⁵ While the 2000 to 2017 greenhouse gas emissions inventory for California has been issued, the 2000 to 2016 report was used for comparative purposes to the U.S. inventory.

Agricultural activities are the dominant source of GHG emissions within Merced County (69 percent of total 2010 emissions in unincorporated Merced County, and 42 percent of total 2010 countywide emissions, including the incorporated cities). Transportation activities are the second leading source of GHG emissions (23 percent in unincorporated Merced County and 39 percent in total Merced County during 2010) (Merced County 2013e).

REGULATORY FRAMEWORK

The U. S. EPA is the federal agency responsible for implementing the CAA. The U.S. Supreme Court ruled on April 2, 2007 that CO₂ is an air pollutant as defined under the CAA, and that EPA has the authority to regulate emissions of GHGs. However, there are no federal regulations or policies regarding GHG emissions thresholds applicable to the proposed project at the time of this Initial Study.

Under the Final Mandatory Reporting of Greenhouse Gas Rule, suppliers of fossil fuels or industrial GHGs including carbon dioxide, methane, nitrous oxide, and fluorinated gases; manufacturers of vehicles or engines; and facilities that emit more than 25,000 metric tons or more per year of GHGs are required to submit annual reports to EPA. Large agricultural operations with manure management systems may be affected by the EPA rule. The minimum average annual animal population for dairies to emit 25,000 metric tons per year or more of GHG is 3,200 dairy cows. Operators of facilities with less than 3,200 dairy cows will likely not need to report under this rule. Congressional action, however, has blocked the rule's application to livestock manure management, and continued a provision prohibiting the expenditure of funds for this purpose (EPA 2017).

The ARB is the agency responsible for coordination and oversight of state and local air pollution control programs in California, and for implementing the CCAA. Various statewide and local initiatives to reduce the state's contribution to GHG emissions have raised awareness that, even though the various contributors to and consequences of global climate change are not yet fully understood, global climate change is under way, and there is a real potential for severe adverse environmental, social, and economic effects in the long-term. Because every nation emits GHGs, and therefore makes an incremental cumulative contribution to global climate change, cooperation on a global scale will be required to reduce the rate of GHG emissions to a level that can help to slow or stop the human-caused increase in average global temperatures and associated changes in climatic conditions.

In September 2006, then-Governor Schwarzenegger signed AB 32, the California Climate Solutions Act of 2006. AB 32 established regulatory, reporting, and market mechanisms to achieve quantifiable reductions in GHG emissions and a cap on statewide GHG emissions. AB 32 requires that statewide GHG emissions be reduced to 1990 levels by 2020. In 2011, the ARB adopted the cap-and-trade regulation. The cap-and-trade program covers major sources of GHG emissions in the State such as refineries, power plants, industrial facilities, and transportation fuels. The cap-and-trade program includes an enforceable emissions cap that will decline over time. The State will distribute allowances, which are tradable permits, equal to the emissions allowed under the cap.

The initial main strategies and roadmap for meeting the 1990 emission level reductions are outlined in a Scoping Plan approved in December 2008 and updated every five years (the Scoping Plan was most recently updated in 2014 and finalized in 2017). The Scoping Plan includes regulations and alternative compliance mechanisms, such as monetary and non-monetary incentives, voluntary

actions, and market-based mechanisms, such as a cap-and-trade program. The Climate Change Scoping Plan also includes a breakdown of the amount of GHG reductions the ARB recommends for each emissions sector of the state's GHG inventory. In January 2017, ARB issued the proposed 2017 Climate Change Scoping Plan Update to reflect the 2030 target set by Executive Order B-30-15.

As the sequel to AB 32, Senate Bill (SB) 32 was approved by the Governor on September 8, 2016. SB 32 would require the state board to ensure that statewide greenhouse gas emissions are reduced to 40 percent below the 1990 level by 2030. The 2030 target acts as an interim goal on the way to achieving reductions of 80 percent below 1990 levels by 2050, a goal set by former Governor Schwarzenegger in 2005 with Executive Order S-3-05. As set forth in the Scoping Plan, no state regulatory requirements are to go into effect prior to 2024 requiring livestock sector methane reductions to meet AB 32's 2020 reduction goals or SB 32's 2030 goals for reducing GHG emissions. The reduction of methane emissions from livestock operations will continue to be voluntary at least through 2023.

The ARB issued a Short-Lived Climate Pollutant Reduction Strategy (SLCP Strategy) in March 2017, which lays out a range of options to accelerate SLCP emission reductions in California, including regulations, incentives, and other market-supporting activities. Recent legislation (AB 1613 and SB 859) includes a spending plan for Cap-and-Trade revenues that specifically target SLCP emission reductions. These include \$5 million for black carbon wood smoke reductions, \$40 million for waste reduction and management, \$7.5 million for Healthy Soils, and \$50 million for methane emission reductions from dairy and livestock operations.

Merced County Greenhouse Gas Reduction Plans

Merced County does not yet have a Climate Action Plan (CAP) or energy plan. The County is in the process of preparing a Climate Action Plan, with anticipated completion some time in 2020.

Merced County General Plan. There are several policies in the General Plan that also seek to reduce GHG emissions, including promoting alternative energy sources and encouraging methane digesters for agricultural operations, among others. The policies that are relevant to the proposed project include:

Policy NR-2.9: Energy Conservation

Encourage and maximize energy conservation and identification of alternative energy sources (e.g., wind or solar).

Policy AQ-1.3: Agricultural Operations Emission Reduction Strategies

Promote greenhouse gas emission reductions by encouraging agricultural operators to use carbon efficient farming methods (e.g., no-till farming, crop rotation, cover cropping); install renewable energy technologies; protect grasslands, open space, oak woodlands, riparian forest and farmlands from conversion to other uses; and develop energy-efficient structures.

SIGNIFICANCE THRESHOLDS

As set forth in Appendix G to the State CEQA Guidelines, Section VII, Greenhouse Gas Emissions, and CEQA Guidelines Appendix F: Energy Conservation, this analysis considers impacts to be significant if implementation of a proposed action would:

- Generate greenhouse gas emissions, either directly or indirectly, that may have a significant impact on the environment. (*VII.a*)
- Conflict with an applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases. (*VII.b*)
- Result in inefficient, wasteful, and unnecessary consumption of energy. (*CEQA Guidelines Appendix F*)

Merced County has not established significance criteria for GHG emissions. Many adopted GHG emission reduction strategies have few or limited agricultural measures, making compliance with these strategies as a threshold an illogical choice. In an effort to capture both large increases in GHG emissions and large emitters of GHGs, for the purposes of this IS, the project's contribution to GHG emissions would be considered significant if either of the following apply:

- The increment of increase of the project's GHG emissions would be greater than 10,000 t/yr of CO₂e.
- The increment of increase of the project's GHG emissions would be less than 10,000 t/yr of CO₂e, but the total project facility's GHG emissions (existing plus project increment) would be greater than 25,000 t/yr of CO₂e.

This numeric threshold would only be applicable to animal confinement facilities, and would not apply to industrial, commercial, residential, or other development types.

ENVIRONMENTAL ANALYSIS

Question (a) Generate GHG emissions: Less-than-significant Impact. Greenhouse gases associated with operations of confined animal and agricultural activities include methane, nitrous oxide, ozone, and carbon dioxide. Several sources of these greenhouse gases are associated with animal confinement facilities: animal metabolic activity and animal housing; manure decomposition in waste deposits, treatment and storage areas, and field applied manure; on-field cultivation; fuel consumption; electricity use; and feed cultivation and transport.

Studies have shown that the use of best management practices, rather than the size or location of the dairy farm, makes the biggest difference in reducing GHG emissions (Innovation Center 2010; Paustian et. al. 2006). No provisions of the Animal Confinement Ordinance (ACO) or SJVAPCD regulations directly address methane or CO₂ emissions, but Chapter 18.64.050 U of the ACO applies to air emissions in general (see Appendix A, bound separately). Because the decomposition of manure is one source of methane emissions, measures to comply with ROG limitations required by Chapter 18.64.050 U and a SJVAPCD Permit to Operate would also reduce methane emissions.

Construction activities associated with the Godinho Heifer Ranch Expansion project would result in short-term CO₂ emissions, a greenhouse gas. Construction-related emissions were calculated using the CalEEMod Version 2016.3.2. The proposed project is estimated to result in maximum annual emissions of 551.4 metric tons of carbon dioxide equivalents (CO₂e) over the construction period (see calculations in Appendix C).

The proposed expansion includes an overall increase of 1,497 cows. Based on the SJVAPCD dairy calculator (dated May 7, 2019), GHG emissions from the increased herd would be 4,525 metric tons CO₂e per year (see Appendix C). Average daily trips at the farm would increase by approximately 0.6 heavy truck trips. Mobile source GHG emissions from project trips and feed and bedding hauling is

estimated at 49 metric tons CO₂e (see CalEEMod data in Appendix C). Additional operational GHG emissions would result from increased electricity use. Based on Godinho Heifer Ranch electricity bills, secondary GHG emissions from electricity use currently results in approximately 7.75 metric tons CO₂e per year (see Appendix C for GHG emission calculations from electricity use). Assuming the same electricity use per cow, the proposed expansion would result in approximately 5.79 metric tons CO₂e per year from increased secondary GHG emissions from electricity use. Since there is no cropland associated with the project, there would be no increase in GHG emissions from field cultivation. Based on these estimates, the project would result in a net increase of 4,580 metric tons CO₂e per year from existing operations, which is less than the 10,000 t/y CO₂e significance threshold, and a less-than-significant impact due to GHG emissions would occur with the proposed project.

Because the proposed project would not exceed established significance thresholds for GHG emissions, GHG emissions would not be expected to be significant, and the project would not be expected to make a substantial contribution to the cumulatively significant impact of global climate change. A less-than-significant impact would result, and no mitigation would be required.

Question (b) Conflict with GHG emissions reduction plans: Less-than-significant Impact.

The ARB's Climate Change Scoping Plan represents the primary plan to reduce GHG emissions throughout California. This Plan is designed to reduce California's statewide 2020 GHG emissions by 29 percent as compared to the 2020 Business As Usual scenario and a 2030 GHG emissions reduction target of 40 percent below 1990 levels (ARB 2014 and 2017). Due to limited research, and the wide variety of farm sizes, animals, and crops produced, there are few emission reduction or carbon sequestration strategies that can be generally applied to the agricultural sector. Therefore, the key recommended actions in the Scoping Plan for the agriculture sector primarily consist of developing more detailed recommendations and standards to be implemented in the near- and long-term future. Reasonably foreseeable compliance responses associated with the agriculture sector recommendations consist of nitrogen management, manure management, soil management practices, water and fuel technologies, and land use planning to enhance, protect, and conserve lands in California. Senate Bill 1383: Short-lived Climate Pollutants (2016) includes regulations to reduce methane emissions from livestock manure and dairy manure management operations by up to 40 percent below the dairy sector's and livestock sector's 2013 levels by 2030, including establishing energy infrastructure development and procurement policies needed to encourage dairy biomethane projects. The regulations will remain voluntary until they take effect on or after January 1, 2024 (ARB 2017).

The Long Term Energy Efficiency Strategic Plan identifies energy reduction goals for the agricultural sector, with emphasis on reducing energy from agricultural pumping. At this time, the highest priority identified in the Strategic Plan is to conduct baseline studies to understand the energy usage patterns in California's agricultural sector in order to design a cohesive strategy to pursue all cost-effective energy efficiency measures. The GHG gas reduction plans and supporting regulations cited above and in the regulatory setting of this chapter contain strategies that would also result in increased energy efficiency or support renewable energy on dairy farms. The Scoping Plan, the Long Term Energy Efficiency Strategic Plan, SB 1383, and other GHG emissions reduction, renewable energy, and energy efficiency plans and regulatory measures do not include regulatory requirements immediately applicable to the agricultural sector; rather, as a result of these plans, agencies may establish rules in the future that could apply to the proposed heifer ranch expansion project. Any future animal confinement facility expansion project would have to go through the local permitting process, and would have to adhere with the rules in place at that time.

Currently, there are no state, regional, or local policies or requirements in place that are specifically applicable to the project that would result in the reduction of greenhouse gas emissions or the promotion of renewable energy or energy efficiency. Because standards for the reduction of greenhouse gas emissions or increase in energy efficiency in the agricultural sector are not currently in place, the proposed project would not conflict with any plans or regulations adopted for the purpose of reducing the emissions of greenhouse gases or promoting renewable energy or energy efficiency.

IX. 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?			X	
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?			X	
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard or excessive noise for people residing or working in the project area?				X
f) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
g) Expose people or structures, either directly or indirectly, to a significant risk of loss, injury, or death involving wildland fires?				X
i) Create significant nuisance conditions to the public or the environment through the generation of insects due to project operations?		X		

ENVIRONMENTAL SETTING

Animal agriculture, such as a dairy, results in the production of copious amounts of manure. Animal wastes contain zoonotic pathogens, which are viruses, bacteria, and parasites of animal origin that cause disease in humans.

No hazardous materials, chemicals, pesticides, flammable liquids, or fuels are stored on the project site. No pest control chemicals are used at this facility. There are no diesel generators on site (Project Applicant 2019).

According to the records search of federal, state, and local environmental databases (pursuant to Government Code Section 65962.5), the project site does not contain any history of hazardous site contamination (CA DTSC 2020).

There are no schools located within one-quarter mile of the proposed project site. The nearest schools are located in the City of Los Banos, located over 1.5 miles from the project site (Google Earth 2020). The Merced County Airport Land Use Commission has developed an Airport Land Use Compatibility Plan for county airports. The Los Banos Municipal Airport is located approximately 2.1 miles south of the project site. The project site is not situated within any land use

compatibility zones identified in the Plan (Merced County ALUC 2012). According to the 2030 Merced County Emergency Operations Plan, freeways and major county roads would be used as primary evacuation routes in the event of a natural hazard, technological hazard, or domestic security threat.

According to California Fire and Resource Management Program, the proposed project area is within the Local Responsibility Area (LRA), with an Unzoned designation. The threat of wildfire hazard in that area is determined unlikely (CalFIRE 2007).

The proposed project site is not in an area identified by the California Geological Survey as having soils that are likely to contain naturally occurring asbestos (USGS 2011). Therefore, no naturally occurring asbestos is expected in on-site soils that could be disturbed during construction, and this issue will not be discussed further.

REGULATORY FRAMEWORK

Both federal and state laws include provisions for the safe handling of hazardous substances. The federal Occupational Safety and Health Administration (OSHA) administers requirements to ensure worker safety. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations.

The Merced County Division of Environmental Health is the lead agency for the enforcement of State Hazardous Waste Control laws and regulations. The DEH maintains standards and guidelines relating to the proper handling and storage of hazardous materials. Facilities that handle and store considerable amounts of hazardous materials (55 gallons for liquids, 500 pounds for solids, or 200 cubic feet for compressed gas) are required to implement a Hazardous Materials Business Plan. The HMBP must include the following: an inventory of all hazardous materials handled at the facility, floor plans showing where hazardous materials are stored, an emergency response plan, and provisions for employee training in safety and emergency response procedures. The DEH also maintains minimum design standards relating to the operation and maintenance of on-site septic systems.

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Use and/or accident conditions related to hazardous materials: Less-than-significant Impact. Construction of the proposed project would include the use, storage, transport, and disposal of oil, diesel fuel, paints, solvents, and other hazardous materials. If spilled, these substances could pose a risk to the environment and to human health. Both federal and state laws include provisions for the safe handling of hazardous substances. According to federal health and safety standards, applicable federal OSHA requirements would be in place to ensure worker safety. Construction activity must also be in compliance with the California Occupational Safety and Health Administration regulations (Occupational Safety and Health Act of 1970).

Nutrient-rich process water from the heifer ranch would continue to be used to fertilize off-site crops associated with the Godinho Dairy, thereby precluding the need for large amounts of chemical fertilizers and minimizing the potential risk of release within the project area and region. Similarly, dry manure would continue to be accumulated on site, and then hauled off site for use as fertilizer and soil amendments in place of chemical fertilizers.

Previous evaluations of animal confinement facility operations conducted by Merced County (Merced County Animal Confinement Ordinance Revision DEIR, February 2002; Vander Woude Dairy FEIR Staff Presentation to Planning Commission, March 30, 2004) indicate that the following activities and operations at dairies would not result in the release of hazardous substances to the environment:

Potential Source	Explanation	Information Source
Supplements in cattle feed	No complete exposure pathways	Animal Confinement Ordinance DEIR, February 2002, pps. 5-141 to 5-145
Genetically modified crops (grown as forage for dairy animals)	Cattle digestive process breaks down components in feeds, including protein into amino acids, and DNA into nucleic acids, that are then excreted; Unpublished research indicates no adverse effects on dung beetles from ingesting manure from cows feeding on Bt corn; Incomplete exposure pathway GENETICALLY MODIFIED CROPS ARE NOT GROWN AT THE PROJECT SITE SINCE THERE IS NO CROPLAND ASSOCIATED WITH THE FACILITY	Vander Woude Dairy FEIR, January 2004, pps. 3-42 to 3-43; Staff Presentation to Planning Commission, March 30, 2004, slides 19 and 25
Recombinant Bovine Growth Hormone	bST is a complex protein that is immediately broken down into small, inactive amino acids and peptides and rendered ineffective when it enters a cows digestive system; Incomplete exposure pathway NOT USED AT THE HEIFER RANCH	Vander Woude Dairy FEIR, January 2004, pps. 3-42 to 3-43; Staff Presentation to Planning Commission, March 30, 2004, slides 19 and 25
Antibiotics	Use of antibiotics is prohibited for the milking herd NONE USED ON-SITE. SICK ANIMALS ARE HOUSED AND TREATED AT THE GODINHO DAIRY FACILITY	Vander Woude Dairy FEIR, January 2004, pps. 3-42 to 3-43; Staff Presentation to Planning Commission, March 30, 2004, slides 19 and 25

No proposed operation or facility of the Godinho Heifer Ranch would alter the results of these previous evaluations regarding the release of hazardous substances to the environment from dairy and feedlot operations.

Construction activities for the proposed project would involve the use, storage, transport, and disposal of oil, gasoline, diesel fuel, paints, solvents, and other hazardous materials. Both construction and operation activities must be in compliance with the California OSHA regulations. The proposed operations would not store any diesel fuels and other chemicals commonly used for animal confinement operations. Any quantity of hazardous waste generated on site requires that a HMBP to be filed with the Merced County DEH. Compliance with these requirements would reduce the risk of hazards related to the routine transport, use, or disposal of hazardous materials to a less-than-significant level. The risk of hazards to the public or to environmental conditions related to accident conditions would also be reduced to a less-than-significant level.

For a discussion of impacts to water quality as a result of increased export of dry manure and associated pathogens and residual contaminants, see Section X, *Hydrology and Water Quality*.

Because the routine transport, use, and disposal of these materials are subject to local, state, and federal regulations, this impact would be considered less than significant. The risk of hazards to the public or to environmental conditions related to accident conditions would also be reduced to a less-than-significant level, and no mitigation would be required.

Question (c) Hazardous emissions or materials near a school: No Impact. The nearest schools to the animal confinement facilities are located over 1.5 miles from the project site in the city of Los Banos. Therefore, the proposed heifer ranch expansion would not result in hazardous emissions or handle hazardous waste within 0.25 miles of an existing or proposed school, and no impact would result.

Question (d) Included on list of hazardous materials sites: No Impact. According to queries of the GeoTracker and Envirostor Data Management Systems, the heifer ranch expansion project site would not be located on a site identified on a list of hazardous materials sites compiled pursuant to California Government Code Section 65962.5. Therefore, implementation of the project would not create a significant hazard to the public or the environment. No impact would result, and no mitigation would be required.

Question (e) Safety hazard or excessive noise near airports: No Impact. There are no existing public airports within two miles of the proposed project site, nor is the project site located within an area regulated by an airport land use plan (Merced ALUC 2012). Therefore, the project would not result in a safety hazard or excessive noise for people residing or working in the project area due to aircraft over-flight. There would be no impact, and no mitigation would be required.

For an analysis of the potential noise effects related to construction and operation of the proposed project, see Section XIII, *Noise*.

Question (f) Impair or interfere with an adopted emergency response/evacuation plan: Less-than-significant Impact. The project site is located in the area of Johnson Road and Henry Miller Road. State Route 165 to the east and SR 152 to the south provide regional access to the site. Freeways and major county roads would be used as primary evacuation routes in the event of emergency. The proposed active heifer facilities within the project site are not located near a designated arterial roadway; such roadways are used as evacuation routes. The nearest designated arterial roadway is SR 165, located approximately 1.4 miles to the east of the project site (Merced County 2013f). The proposed project does not include any modification of existing area roadways or intersections, and the project would not add significant amounts of traffic that would interfere with emergency response or evacuation. Therefore, the proposed project would result in a less-than-significant impact, and no mitigation would be necessary.

Question (g) Exposure to risk involving wildland fires: No Impact. The Fire Hazard Severity Zone map for Merced County indicates that the project site and surrounding area is located in the Non-Wildland / Non-Urban Severity Zone (Merced County 2013g). The project site is designated as a Local Responsibility Area – Unincorporated in an area not considered a fire risk (CAL FIRE 2007). Therefore, no hazard would occur related to risk of loss, injury, or death due to wildland fire with implementation of the proposed project. There would be no impact.

Question (i) Odors: Less-than-significant Impact after Mitigation. While the existing agricultural character of the project vicinity tends to minimize incompatibility to existing uses, implementation of the Godinho Heifer Expansion project could introduce an additional source of flies and other insects in the area of adjacent residences. No pest control chemicals are used at this facility (Project Applicant 2019).

In efforts to minimize agricultural nuisances, Merced County imposes a required minimum setback between new or expanded confined animal facilities and individual off-site rural residences of 1,000 feet, and the construction of new off-site dwellings is prohibited within 1,000 feet of an existing animal confinement facility. For the Godinho Heifer project, there are eight off-site residences located within 1,000 feet of the existing facility (see Figure 6).

According to Merced County Code Chapter 18.64.040 (B)(2), the modification or expansion of an existing facility must not decrease the existing separation distance from residentially zoned property, concentrations of five or more off-site residences, or off-site residences to less than 1,000 feet unless the off-site property owner provides written permission. Construction of the proposed freestall barns would occur outside the existing footprint of active animal confinement operations, north of existing facilities. While there are off-site residences within 1,000 feet, the heifer facility expansion would not reduce the existing distance to these residences. The proposed expansion would not reduce the distance to less than 1,000 feet for any off-site residence currently greater than 1,000 feet from existing active dairy facilities.

The ACO also prohibits new dairies within one-half mile of urban areas, areas zoned for residential uses, concentrations of rural residences, and parks (Merced County Code Chapter 18.64.040 (B)(1)(a)). According to Merced County Code Chapter 18.64.040 (B)(2), if the animal confinement facility is located within the minimum setback distance, the modification or expansion of an existing facility must not decrease the existing separation distance from these areas. There are no residentially zoned areas or concentrations of rural residences within the 0.5-mile setback distance (Merced County GIS 2020). The urban boundary of the City of Los Banos is located approximately 0.5 miles southeast of the Godinho active heifer facilities. The proposed expansion would not reduce this setback distance (see Figure 8).

The DEH has responsibility for the maintenance of public health in the county. As required by the DEH, the methods for insect control must be described in a Vector Control Plan as outlined in Chapter 18.64.060 C.8.c of the ACO (see Appendix C). A Vector Control Plan has been prepared for the Godinho Heifer Ranch (March 2019). The Plan includes Best Management Practices aimed to provide a reduction in vector populations.

Since adoption of the ACO, the Regional Water Quality Control Board has become the regulatory body for nutrient management planning, thereby replacing the ACO requirement for submission of a Comprehensive Nutrient Management Plan (CNMP) to the DEH with a state process. As a result, no CNMP (that would have included a Vector Control Plan) has been submitted to DEH for review and approval.

DEH enforces the operational measures of each Vector Control Plan through periodic random inspections, and by requiring the annual submittal of compliance reports. The DEH also responds to complaints from neighbors of such facilities as described above. No current or active fly

complaints have been reported and submitted to DEH at the Godinho Heifer Ranch (Merced County, February 2020).

As required by the ACO, DEH must implement the following procedures if nuisance insect conditions are reported at, or adjacent to, the animal confinement facility:

- A. If fly nuisance conditions are reported to the Division of Environmental Health, the Division shall take the following actions:
Within 72 hours of receiving a complaint, the Division of Environmental Health shall determine the species and population density of a fly population during an inspection of the location of the complaint, and identify potential sources of flies in the vicinity. At the location of the nuisance complaint, the County will seek to identify access points, identify attractants, and locate breeding sites. If an animal confinement facility is identified as a potential source of the fly nuisance, the County will evaluate the affected herd, identify sources of the fly population, and evaluate weather conditions. In general, an infestation would be indicated by insect pests found on over 25 percent of the animals sampled during monitoring, or by the presence of substantial breeding areas. In the event of infestation causing a nuisance, the County will impose additional control measures on a site-specific basis. Measures that may be required by DEH include both biological and/or chemical pest control methods.
- B. If fly nuisance conditions are confirmed, and are attributable to operations at an animal confinement facility, the Division of Environmental Health shall require the owner/operator to remedy the nuisance condition within a specified period of time. The Division shall notify the parties reporting the nuisance of its findings, and shall provide follow-up inspections to ensure that the nuisance condition is cured. Should the condition persist, the Division shall initiate an enforcement action against the offending operator.

Management measures previously adopted by the County in the EIR for the ACO would apply to the proposed project as included in Mitigation Measures HAZ-1. Because the nearest off-site residence is located less than 1,000 feet from proposed active facilities and the proposed expansion could result in an increase in flies, there is an increased potential for nuisance conditions, and the following mitigation would be required.

Mitigation Measure HAZ-1:

The following operational measures identified in the EIR for the ACO shall be implemented throughout ongoing operations.

1. All confined animal facilities shall implement the following Best Management Practices to address potential fly problems:
 - 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;
 - 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;

- c. Regular blading of feeding lanes in freestall barns and corrals to ensure that spilled feed is promptly removed and disposed;
 - d. Daily removal of manure and spilled feed from stalls in freestall barns;
 - e. Scraping of corrals at least twice a year to minimize the potential for development of fly populations on manure;
 - f. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;
 - g. Weekly inspection of fence lines of corrals and other “edge” areas, and removal of any accumulated manure;
 - 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;
 - 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;
 - 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.
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:
 - 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 18.64.005(A);
 - b. Residual feed shall be removed from infrequently used feeding areas;
 - c. All garbage shall be disposed of in closed dumpsters that are regularly emptied by a contracted waste management service for off-site disposal;
 - d. Grass and other landscape clippings shall be removed from the site for off-site disposal or reuse (as feed or soil amendment).

Implementation of the foregoing measures and measures included in the Godinho Heifer Ranch Vector Control Plan would reduce the magnitude of this potential effect by requiring housekeeping and management measures. Because the setback distance to the nearby off-site residences would not be reduced with project implementation, with implementation of the above mitigation measures, the potential impact from nuisance flies would be reduced to less than significant.

X. HYDROLOGY AND WATER RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Violate any water quality standards or waste discharge requirements or otherwise substantially degrade surface or ground water quality?		X		
b) Substantially decrease groundwater supplies or interfere with groundwater recharge such that the project may impede sustainable groundwater management of the basin?		X		
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river or through the addition of impervious surfaces, in a manner which would:			X	
(i) result in substantial erosion or siltation on- or off-site;				
(ii) substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site;			X	
(iii) create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff; or			X	
(iv) impede or redirect flood flows?			X	
d) In flood hazard, tsunami, or seiche zones, risk release of pollutants due to project inundation?			X	
e) Conflict with or obstruct implementation of a water quality control plan or sustainable groundwater management plan?			X	

ENVIRONMENTAL SETTING

Dairies, feedlots, and other confined animal facilities pose a number of potential risks to water quality, primarily related to the amount of manure and wastewater that they generate. Manure and wastewater from animal confinement facilities can contribute pollutants such as nutrients (nitrogen), ammonia, phosphorus, organic matter, sediments, pathogens, hormones, antibiotics, and total dissolved solids (salts). These pollutants, if uncontrolled, can cause several types of water quality impacts, including contamination of drinking water, impairment of irrigation systems, and impairment of surface water and groundwater.

The project site is located in an active agricultural district in the San Joaquin Valley and within the larger Central Valley of California. The topography of the site is nearly flat with surface elevations ranging from 95 to 100 feet above mean sea level. There are CCID surface water canals within the vicinity of the proposed project.

There is an on-site waste management system that consists of two wastewater storage ponds (retention pond). The area of active heifer facility facilities has been graded to direct corral runoff to the existing waste management system. Stormwater runoff from impervious surfaces is routed to the wastewater ponds. Stormwater from all roofed areas is routed to a nearby field.

Solid manure is removed from wastewater ponds with excavation equipment and exported to land application areas associated with the adjacent, separate dairy operation. Wastewater collected in the

retention pond is also applied to the same land application areas via irrigation. Wastewater export agreements are in place as required by the Merced County ACO.

One existing well on the project site provides domestic water for the residences and also provides drinking water for the herd (see Figure 4 for well location). There are no irrigation wells on the project site, and there are no agricultural fields associated with the operation.

Site Specific Hydrogeology

Regional groundwater in Merced County is composed of four subbasins of the San Joaquin Hydrologic Region: the Turlock, the Merced, the Chowchilla, and the Delta-Mendota. The project site lies within the Delta-Mendota subbasin. Groundwater flow in the Delta-Mendota Subbasin within the project vicinity is generally to the east or northeast, towards the San Joaquin River. In general, groundwater depths are shallowest near the San Joaquin River and increase away from the river as surface elevation increases.

California Department of Water Resources groundwater level records indicate depth to groundwater near the project site has remained relatively consistent for the past 15 years, ranging from 1.6 feet below ground surface (bgs) in 2007 to 8.3 bgs in 2012 (DWR 2018).

Existing Water Quality

Water quality data collected as required by the General Order for Existing Milk Cow Dairies was available from 2016 through 2018 for the on-site domestic well, summarized in Table 10. From 2016-2018, the Maximum Contaminant Limit (MCL) of 900 $\mu\text{mhos/cm}$ for Electrical Conductivity (EC)⁶ was exceeded at the on-site domestic well. Soluble salts (TDS) levels were exceeded in 2016.

Table 10 Domestic Well Water Quality at the Godinho Heifer Ranch			
Sample Name	Date	Specific Conductance (EC) ($\mu\text{mhos/cm}$)	Nitrate as Nitrogen (mg/L)
Water Quality Standard*		900 – 2,200	10
Domestic Well DW-6 / Field 13-DW	11/10/2016	1,210	4.4
	10/23/2017	1,240	4.2
	12/4/2018	1,210	4.1

Notes: ND - not detect. MCL - Maximum Contaminant Limit. $\mu\text{mhos/cm}$ = micro mhos/centimeter. mg/L = miligrams/liter. ppm = parts per million.

Bold: MCL exceedance

* Nitrate as NO_3 is a California Title 22 Primary Maximum Contaminant Limit,

EC is a California Title 22 Secondary Maximum Contaminant Limit.

EPA Secondary MCLs are specific water quality aesthetics, taste, and odor.

Source: Dellavalle Laboratory, Inc., 2016 - 2018.

⁶ Conductivity is the total soluble salts contained within a liquid solution.

REGULATORY SETTING

Regional Water Quality Control Boards

General Order for Confined Bovine Operations

In general, the Waste Discharge Requirements (WDR) Program regulates point discharges that are exempt pursuant to Title 27 of the California Code of Regulations⁷ and not subject to the Federal Water Pollution Control Act. In California, the permitting authorities for WDRs are the Regional Water Quality Control Boards (RWQCB). The CVRWQCB has jurisdiction over the project site. Historically, heifer facilities have not been regulated by the state, and there are generally limited records for these facilities. On June 8, 2017, the Central Valley Regional Water Quality Control Board adopted the Waste Discharge Requirements General Order for Confined Bovine Operations, Order R5-2017-0058 (Bovine Feedlot Order). The Bovine Feedlot Order obligated owners and operators of existing bovine feedlots within the Central Valley to submit a Notice of Intent as application for regulatory coverage under the Order, by July 1, 2018. Facilities that house 100 or more Animal Units (AUs) require full coverage under the Bovine Feedlot Order. The project applicant submitted a Notice of Intent (NOI) for the expanded heifer ranch in June 2018.

Under the Bovine Feedlot General Order Waste Discharge Permit Program, Confined Bovine Feeding Operations are prohibited from discharging waste into surface water or into groundwater that is directly connected to surface water. All facilities covered under the Bovine Feedlot Order are required to:

- Comply with all provisions of the Bovine Feedlot Order,
- Submit a Waste Management Plan (WMP) for the production area,
- Develop and implement a Nutrient Management Plan (NMP) for all land application areas, as applicable,
- Monitor wastewater, soil, crops, manure, surface water discharges, and storm water discharges,
- Monitor surface water and groundwater,
- Keep records for the production and land application areas, and
- Submit annual monitoring reports.

The NMP and WMP describe the regulatory requirements for the facility, and together they serve as the primary tool to prevent groundwater contamination and poor operations. In compliance with the requirements of the CVRWQCB, the proponents of the Godinho Heifer Ranch Expansion have completed the required components of the WMP and NMP of the Bovine Feedlot Order.

The General Order includes a provision that requires compliance with a Monitoring and Reporting Program (MRP) R5-2017-0058. Under the MRP, surface water and groundwater monitoring is required to determine if a Confined Bovine Feeding Operation is in compliance with the surface water and groundwater limitations of the Bovine Feedlot Order.

Under the MRP, individual feedlots have the option to implement either individual surface and/or groundwater monitoring, or to participate in an approved Representative Monitoring Program

⁷ Subsection 20090 of Article 1, Subchapter 2, Chapter 7, Division 2, Title 27 of the California Code of Regulations.

(RMP) to determine if they are protective of groundwater. The Central Valley Dairy Representative Monitoring Program (CVD RMP) has established an RMP, or regional monitoring network for member dairies, and now also non-dairy cattle operators under the Bovine Feedlot Order. The regional monitoring network is established by installing individual monitoring well networks at animal confinement facilities with hydrogeologic and land use characteristics typical of the area. Groundwater monitoring results for these facilities are then extrapolated to other member animal confinement facilities of the RMP, theoretically removing the need to install monitoring well networks on an individual basis.

Though the CVRWQCB recognizes that degradation of high-quality surface and/or groundwater will still occur pursuant to the Bovine Feedlot Order, the implementation of nutrient management plans, waste management plans, enhanced management practices within the production area, and improved containment features for new and expanding wastewater retention ponds will limit the amount of degradation that will occur under the Bovine Feedlot Order and will not cause long-term impacts to beneficial uses. Where immediate compliance with water quality objectives cannot be achieved, this Order allows time for the implementation or modification of waste management practices. Consistent with the State Anti-Degradation Policy, the Bovine Feedlot Order establishes requirements and standards that will result in the implementation of best practical treatment measures to limit the degradation caused by animal confinement facility discharges (General Order R5-2017-0058 Findings 32 and 33).

Nutrient Management Plan and Waste Management Plan. The NMP/WMP planning process is used to implement best management practices for bovine feeding operations. The NMP/WMP are planning documents used to describe facility operations, develop wastewater disposal options, and outline mitigation measures for each facility. These documents are required to be revised as appropriate for the operation. Specific elements related to the number and type of animals dictate the size of a facility, fresh/flush water needs, and wastewater generation. Nitrogen and salt balance calculations based on the herd description, housing requirements (i.e., flush freestalls or dry lots), acreage available for land application, and crop nutrient removal rates are made to determine the nitrogen and salt uptake for the proposed cropping pattern. On-site wastewater plans, storage elements, and storm water planning may be modified based on the calculations contained in the NMP/WMP.

As mandated by the ACO, a NMP/WMP in place of a Comprehensive Nutrient Management Plan (CNMP)⁸ for the Godinho Heifer facility has been prepared pursuant to the requirements of the CVRWQCB (see Appendix B, bound separately). The NMP and WMP for the proposed heifer facility expansion, both dated March 2019, have been used for the evaluation in this section.

Irrigated Lands Regulatory Program

A range of pollutants can be found in runoff from irrigated lands, such as pesticides, fertilizers, salts, pathogens, and sediment. The Irrigated Lands Regulatory Program (ILRP) of the CVRWQCB regulates discharges from irrigated agricultural lands throughout the Central Valley. Its purpose is to prevent agricultural discharges from impairing the surface waters that receive the discharges. To protect these waters, RWQCBs have issued conditional waivers of WDRs to growers that contain conditions requiring water quality monitoring of receiving waters and corrective actions when

⁸ Since adoption of the ACO, the CVRWQCB has required the preparation of a NMP and WMP, which serve in place of the CNMP as allowed by Merced County Code Chapter 18.64.060 K.

impairments are found. The Long-term Irrigated Lands Regulatory Program General Orders adopted by the RWQCB protect both surface water and groundwater throughout the Central Valley.

There is significant overlap between the ILRP, the Dairy Programs, and the Bovine Feedlot Order with regard to regulatory requirements, monitoring, and best management practices. The Godinho Heifer Ranch is not regulated under the ILRP program. However, the ILRP could regulate discharges from off-site agricultural operations receiving liquid or solid manure from the Godinho Heifer Ranch in the future.

Merced County

The Merced County ACO contains provisions to protect water quality. For example, Chapters 18.64.050 E and I of the ACO require that all wastewater or storm water that has come into contact with manure be maintained on the project site, or applied to other sites only upon written approval of the landowner. Chapter 18.64.050 J requires that off-site property owners accepting wastewater (liquid manure) complete written agreements to accept responsibility for proper land application. Chapter 18.64.050 G requires notification of Merced County Division of Environmental Health (DEH) for any off-site discharge of wastewater. Chapter 18.64.050 BB requires application of manure at agronomic rates. For the permanent closure of an animal confinement facility, Chapter 18.64.050 R requires DEH to review and approve specific collection of soil samples from underneath existing ponds to be abandoned after liquid and solids have been removed. Portions of the ACO that specifically apply to protection of water quality include: Chapters 18.64.050 D, E, F, G, H, J, K, M, N, O, P, Q, R, T, V, Z, AA, BB, CC, DD, EE, II, JJ, KK, LL, MM, NN, QQ; 18.64.060 A, B, C, D, E, F, H, K; and 18.64.070 A, D, E, G, H, I, K, L, M, P, Q, S, and T (see Appendix A, bound separately, for the full text of the ACO).

Merced County Well Ordinance

The Merced County Code Chapter 9.28, *Wells* contains Water Well Standards (Chapter 9.28.060) that would minimize the potential for contaminated water to enter the well and contaminate groundwater. The standards include well setback distances from potential sources of contamination and pollution, and standards for construction.

Merced County Groundwater Ordinance

With the adoption of the Sustainable Groundwater Management Act of 2014 (SGMA), Merced County has adopted a groundwater ordinance No. 1930, which prohibits the unsustainable extraction of groundwater or conveyance of groundwater outside of a subbasin. This ordinance is a transition document until documents required by the SGMA are published and implemented. Two prohibitions were set in place as part of the ordinance. The first prohibits the construction of new wells within unincorporated areas of the county showing excess extraction patterns from 1995 through 2013. The second prohibits the export of groundwater from Merced County to areas outside of the groundwater basin where it originated. Multiple exemptions are in place to allow water districts and water agencies to continue to operate.

Regulatory Compliance Audit

The Merced County Community and Economic Development Department requests regulatory compliance audits of expanding animal confinement facilities from the Division of Environmental Health as part of the CUP evaluation process prior to project approval. The DEH staff evaluated

the facility for compliance with the Merced County ACO (Merced County Code Chapter 18.64). The DEH concluded that the heifer facility was in substantial compliance with the requirements of the ACO (letter dated October 7, 2019).

ENVIRONMENTAL EVALUATION

Proposed Project Operations and NMP and WMP Summary

The project applicant has prepared a proposed WMP/NMP, both dated March 2019, as required by the CVRWQCB Bovine Feedlot Order⁹. A professional engineer registered in the State of California and a Certified Crop Advisor completed the required elements of the NMP/WMP. In summary, the proposed NMP/WMP establishes the following required facility improvements for the herd and potential areas of sensitivity under the proposed expansion¹⁰:

- All solid, separated, and liquid manure would continue to be exported to the nearby cropland associated with the Godinho Dairy operation, which is regulated under the Reissued Dairy General Order (R5-2013-0122). Wastewater export agreements have been completed as part of the NMP.
- The 3,227,672 gallons of storage capacity for the existing wastewater ponds would be sufficient to permit storage of wastewater generated by the facility for a 120-day cycle during normal precipitation periods and 1.5 times the normal precipitation periods. There would be no changes to the wastewater ponds with the proposed heifer facility expansion. Pond freeboard of 2 feet would be able to contain 100-year storm events. All ponds are of earthen construction and are not synthetically lined.
- Stormwater runoff from impervious surfaces is routed to the wastewater ponds. Stormwater from all roofed areas is routed to a nearby field.
- The site is located in an area where the Federal Emergency Management Agency (FEMA 2008) has determined the risk of exposure to flood hazards. The project site is located within Flood Zone X - an area determined to be outside the 100- and 500- year floodplains.

Question (a) Violation of Water Quality Standards: Less-than-significant Impact with Mitigation.

Surface and groundwater quality could be adversely affected from operation of the Godinho Heifer project. With implementation of the mitigation measures identified below, the proposed project would not be expected to violate any water quality standards or waste discharge requirements, or substantially degrade water quality during construction or operation.

Degradation of surface water quality due to storm water runoff during project construction. The proposed new structures would be constructed over approximately six acres of cropland and within the existing animal confinement facility footprint. Storm water runoff during the construction period could result in the siltation and sedimentation of waterways draining the site or in the transport of pollutants used during construction. Because the proposed project would disturb more than one acre, the applicant would be required to obtain a General Construction Activity Storm Water Permit

⁹ Since there are no land application areas associated with the Godinho Heifer Facility, the Bovine Feedlot Order does not require preparation of a Nutrient Management Plan, and this plan is not considered in detail.

¹⁰ These standards and improvements do not address potential environmental effects from the proposed expansion. For an evaluation of these effects and required additional mitigation, see analysis below.

from the State Water Resources Control Board (SWRCB) for stormwater discharges associated with construction activities, which would require the implementation of a Stormwater Pollution and Prevention Plan (SWPPP). The SWPPP must contain Best Management Practices (BMPs) to reduce soil erosion and protect stormwater runoff. To ensure implementation of stormwater requirements and to avoid siltation effects, the following mitigation measure would be required.

Mitigation Measure HYD-1:

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.

With implementation of Mitigation Measure HYD-1, the proposed project would not be expected to violate any water quality standards or waste discharge requirements during construction. Compliance with applicable requirements would minimize project impacts to water quality. A less-than-significant impact would result, and no additional mitigation would be necessary.

Degradation of surface water quality from operations. As noted on USGS topographic maps, there are CCID surface water canals within the vicinity of the project site. As reported in the NMP, liquid and solid manure would be trucked and/or piped to adjacent fields and non-adjacent fields. All land application areas are managed and reported under the Godinho Dairy NMP. No impacts to surface water from wastewater application to cropland would occur, since there are none associated with the project.

As required by the Bovine Feedlot Order WDRs, the facility operator must document compliance with provisions to prevent backflow or direct discharge of wastewater away from surface water resources. Locations of cross-connections with wastewater and surface water must be identified, along with how backflow can or does occur at each location and any current backflow preventive measures. The WMP includes documentation signed by a professional certified by the State of California in compliance with Bovine Feedlot Order requirements that there are no cross-connections on the site that would allow for direct discharge to surface or groundwater. Therefore, no adverse impacts to surface water would occur as a result of the proposed heifer facility expansion. This would be a less-than-significant impact.

Groundwater contamination from operations. Water quality data from the Godinho Heifer Facility domestic well shows elevated levels of EC, or elevated levels of dissolved salts and other particles (see Table 10, above). The Central Valley Dairy Representative Monitoring Program (CVDRMP), developed in accordance with Dairy General Order requirements and with review by the CVRWQCB, has found that shallow groundwater has been affected across the Central Valley due to historic or current animal confinement operations, especially underlying cropland.

The Godinho Heifer project would concentrate animals and their wastes within the feeding areas, and to a lesser degree, within open corrals. Concrete lined feed lanes would flush wastes to the on-site wastewater management system for treatment and storage in ponds. As required by the Bovine Feedlot Order, the production areas are required to be managed to limit the extent to which wastewater can infiltrate into the underlying materials.

Following solids removal and additional settling in the storage pond, the wastewater with dissolved constituents would be stored in the treatment pond for later application in irrigation water to crops at the adjacent Godinho Dairy fields. Since all land application areas are managed and reported under the Godinho Dairy NMP and the Reissued Dairy General Order, there would be no impacts to groundwater quality from wastewater and/or solid manure application to cropland with implementation of the proposed project.

All wastewater storage structures, which are of earthen construction, would continue to be subject to regular maintenance. The existing wastewater ponds have the potential to impact groundwater because they contain elevated concentrations of inorganic and organic constituents, and because hydraulic pressure and gravity force liquids downward through soils to groundwater. However, since no changes to the pond construction or operation are proposed with the facility expansion, the hydraulic pressure within the ponds and pond leakage would stay the same. There would be no increase to groundwater quality impacts from the ponds with implementation of the proposed project.

The intent of regulatory requirements is to implement operational improvements and monitor groundwater quality to assess impacts. Long-term groundwater monitoring would continue to be used to determine the success of the program on a regular basis and determine the need for additional action.

Chapters 18.64.050 D, E, F, G, H, J, K, M, N, O, P, Q, R, T, V, Z, AA, BB, CC, DD, EE, JJ, KK, LL, MM, NN, QQ; 18.64.060 A, B, C.8.d, D, E, F; and 18.64.070 A, D, E, G, H, I, K, L, M, P, Q, S, and T of the ACO apply to this potential effect.

The proposed project as planned would be required to use best management practices, engineering, and design consistent with local and state regulations. While the proposed heifer facility expansion would not increase the potential for impacts to groundwater quality, because of existing elevated levels of dissolved salts and other compounds at the project site domestic well, and because elevated nitrate levels have been observed in the area and from agricultural operations in general in the Central Valley, the following mitigation measures would be required to ensure implementation of regulatory measures.

Mitigation Measure HYD-2a:

The following Best Management Practices shall be implemented as applicable:

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 facility surroundings, corrals, and ramps, as described below.

2. 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.
3. 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.
4. 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).

Mitigation Measure HYD-2b:

The applicant shall comply with requirements of the NMP/WMP, implement CVRWQCB requirements included in the Bovine Feedlot Order WDR for the proposed expansion, and with all Merced County ACO requirements not superseded by the conditions of the WDR.

Mitigation Measure HYD-2c:

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 heifer facility meets local and state requirements.

As stated above, the proposed heifer facility expansion would not increase the potential for impacts to groundwater quality. Mitigation Measures HYD-2a-c reinforce CVRWQCB requirements to quantify and evaluate water quality and determine necessary measures to remediate water quality conditions. The Bovine Feedlot Order includes monitoring of the effectiveness of implemented measures, and modification or addition of measures if water quality problems persist. Compliance with applicable requirements would minimize project impacts to groundwater quality. A less-than-significant impact would result, and no additional mitigation would be necessary.

Impacts to water quality at off-site locations as a result of project operations. The proposed heifer facility expansion would increase the number of cows from 2,004 to 3,501. The herd expansion would result in an overall increase in manure and associated pathogens produced at the project site. The manure could also contain residual amounts of contaminants such as hormones, antibiotics, or pesticides. Therefore, manure process water applied to fields may contain these pathogens and contaminants.

While implementation of the ACO, the Bovine Feedlot Order, and the Merced County Well Ordinance would minimize potential impacts from pathogen contamination on site, the proposed heifer facility expansion includes the increased export of manure generated from the facility. No cropped fields are associated with the heifer ranch. All liquid and solid manure is exported from the facility to the Godinho Dairy. Wastewater export agreements are in place as required by the Merced County ACO. With the proposed herd increase, the amount of exported manure to off-site fields would increase.

The Long-term Irrigated Lands Regulatory Program General Orders adopted by the RWQCB (see Regulatory Setting of this section) provide general waste discharge requirements to protect ground and/or surface waters for owners and operators of irrigated lands throughout the Central Valley

who join an approved third-party group or coalition. The Individual Discharger General Order (Order R5-2013-0100) regulates waste discharges from irrigated lands for individuals that are not enrolled under WDRs administered by a third-party, or who are not covered by the Dairy General Order WDRs. All growers are required to submit farm information to either their coalition or the RWQCB. These include both a farm evaluation and a nitrogen management plan. The Farm Evaluation helps determine what farm practices are currently being implemented and whether any improvements can be made to protect water quality. A significant amount of adsorption¹¹ of nutrients to soil particles and inactivation of pathogenic organisms would be expected to occur in the fields, and potential impacts to water quality at off-site fields receiving exported liquid and dry manure would be reduced. The growers are required to implement management practices to protect surface water in areas where monitoring has identified problems.

As defined by the adopted Irrigated Lands Program General Orders and animal confinement facility WDRs, surface and groundwater water monitoring and corrective actions conducted by water quality coalitions and individuals would reduce this potential impact to water quality at off-site fields. To ensure compliance with regulatory requirements, the following measure would be required.

Mitigation Measure HYD-3:

Over the course of operations, the project sponsor shall obtain written agreement from the recipients of dry and liquid manure exported off site to require demonstrated compliance with the following:

- The recipient belongs to an approved third-party group or coalition compliant with the Long-term Irrigated Lands Regulatory Program General Orders adopted by the RWQCB, is covered by an Individual Discharger General Order, or is otherwise covered by Confined Animal Facility WDRs as adopted by the RWQCB.
- 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.
- 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.
- 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.
- 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.

¹¹ Not to be confused with absorption, adsorption is the adhesion of atoms, ions, or molecules from a gas, liquid, or dissolved solid to a surface. Absorption is the process in which a fluid permeates or is dissolved by a liquid or solid.

- The project sponsor shall provide the most recent analysis of the liquid or 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.

Implementation of these measures would reduce the magnitude of this potential effect by requiring compliance with RWQCB requirements to minimize impacts to surface and ground water quality from manure applied to cropland off site. A less-than-significant impact would result, and no additional mitigation would be necessary.

Water supply pathways for pollutant migration. Existing irrigation and water supply wells (either active or abandoned) in the site proximity that do not meet current well standards of construction may act as conduits for pollutant migration to the subsurface. If any of the wells were not constructed with effective sanitary seals upon construction, or have been damaged since installation, surface water may seep into the wells and the underlying aquifer, causing water quality degradation.

The Merced County ACO, together with the Merced County Well Ordinance, recognizes the importance of protecting water quality from the release of animal pathogens. Chapter 18.64.050 establishes a minimum setback of 100 feet between any manured areas and water wells. However, application of manure (liquid or dry) may be closer than 100 feet to a surface water body or irrigation well if adequate protection to the surface water body or well is provided. As noted in the DEH inspection, the Godinho Heifer Ranch is in substantial compliance with ACO requirements. While the domestic well is within 100 feet of active animal confinement facilities, the well has been examined by a Registered Civil Engineer and has adequate protection of groundwater.

Since existing wells at the project site meet current Merced County standards for well protection as set forth above, and the Godinho Heifer Ranch would continue to be subject to ACO and Well Ordinance requirements, there would be no potential conduits for groundwater contamination. This would be a less-than-significant impact.

Question (b) Decrease groundwater supplies or interfere with recharge: Less-than-significant Impact with Mitigation.

Depletion of groundwater resources. Since there is no cropland to be irrigated associated with the Godinho Heifer Ranch, there would be no change to irrigation water use at the facility. Domestic water supply to water the herd would continue to be derived from groundwater. Based on the proposed expansion, herd water consumption would increase from 16,548 gallons per day (gpd) to 27,100 gpd.

Groundwater overdraft conditions have been documented during the 2011-2018 drought within Merced County and specifically the Delta-Mendota Subbasin. While water levels in the vicinity of the site have remained fairly stable over the last 15 years, the Delta-Mendota Groundwater Subbasin is identified by the California Department of Water Resources as critically overdrafted, and is considered a high priority groundwater basin. The Sustainable Groundwater Management Act (SGMA) of 2014 (as amended) allows customized groundwater sustainability plans (GSP) to be designed by groundwater sustainability agencies (GSA) to manage groundwater resources while being sensitive to local economic and environmental needs. The goal of SGMA is to have sustainably managed groundwater within 20 years of the initial GSP submittal and maintain sustainability for a 50-year planning and implementation horizon.

As of June 2017, 24 GSAs have formed in the Delta-Mendota Subbasin. The San Joaquin River Exchange Contractors Water Authority (SJREC GSA) is the GSA for the project area. The SJREC GSA worked with 10 neighboring GSAs to develop a joint *Groundwater Sustainability Plan for the San Joaquin River Exchange Contractors GSP Group in the Delta-Mendota Subbasin*, which was issued in December 2019. The GSPs for critically overdrafted basins are open for public comment through May 15, 2020, and June 3, 2020. An annual report to DWR is required by April 1 to provide information on groundwater conditions and an update on implementation efforts for the prior year. Until the GSP is approved and implemented, the Merced County Groundwater Ordinance regulates water management in the county. Merced County Code 9.27.050(B)2 allows for the “replacement of existing wells that do not produce further decline of groundwater levels, land subsidence, or other significant damage”.

The proposed project would include installation of a new well on the north side of the heifer facility. In order to construct the well, the project applicant would need to obtain a well permit from Merced County Division of Environmental Health. The proposed well would function as a replacement well to the existing, older domestic well to serve the herd. The proposed well pump would include a 10 – 20 horsepower motor to ensure reliability, compared to the existing well which has a 2 horsepower pump. The well would be drilled to 200 feet or less. According to existing DWR maps, the depth to the Corcoran clay in the project area is about 250 feet in this area (DWR 1981). In accordance with Merced County Code Chapter 9.28, it is the applicant’s intent to destroy the existing well in compliance with State and County requirements when the new well is put into service. A water meter would be installed on the proposed well to monitor water use. To ensure the proposed replacement well would meet Merced County Groundwater Ordinance requirements until the GSP is approved and implemented, the following mitigation measure would be required:

Mitigation Measure HYD-4:

The replacement well permit for the project shall be conditioned such that the applicant shall not increase groundwater use from current extractions until the *Groundwater Sustainability Plan for the San Joaquin River Exchange Contractors GSP Group in the Delta-Mendota Subbasin* is approved and implemented. A water meter shall be installed on the new well to monitor groundwater extraction. With implementation of the GSP, as part of the SGMA program, there is an existing monitoring network and associated management strategies to protect the local beneficial users of groundwater, such as the Godinho Heifer Ranch (SJREC GSA 2019). The Godinho Heifer Ranch will be expected to follow the guidelines within the GSP, as applicable, to monitor and manage groundwater depletion in the area.

While the proposed heifer facility expansion would result in an increase in overall groundwater use, implementation of Mitigation Measure HYD-4 would ensure compliance with Merced County regulations until the GSP is implemented. While there would be an increase in groundwater use from herd consumption, impacts from groundwater depletion would be considered less than significant with implementation of mitigation.

Question (c) Substantially alter drainage patterns: Less-than-significant Impact with Mitigation.

Questions (c)(i) and (c)(ii) Modification of surface water drainage patterns and an increase in runoff.

Implementation of the proposed heifer facility 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 efforts over a previously disturbed area. A less-than-significant impact would result, and no mitigation would be required.

Questions (c)(iii) Exceed stormwater drainage capacity. Stormwater generated at the project site would continue to be collected and routed to the existing on-site ponds, except for rainwater from roofed areas, which is routed to a nearby field. Because stormwater generated by the project would be collected and maintained within the project proponent's larger property, no additional drainage would reach regional waterways as a result of the project. Run-on and runoff water would be prevented from entering or leaving the facility.

Chapters 18.64.050 E and I of the ACO require that all wastewater or stormwater that has come into contact with manure be maintained on the project site, or applied to other sites only upon written approval of the landowner. Chapter 18.64.050 G requires notification of Merced County Division of Environmental Health for any off-site discharge of wastewater. Chapter 18.64.050 BB requires application of manure at agronomic rates. Additionally, Chapter 18.64.050 O requires a separation of at least 100 feet between waste application areas and any surface water feature. However, application of manure (liquid or dry) may be closer than 100 feet to a surface water body or irrigation well if adequate protection to the surface water body or irrigation well is provided. While the domestic well is within 100 feet of active animal confinement facilities, the WMP contains documentation of adequate protection. Chapter 18.64.070 M requires a separation of at least 50 feet between waste management ponds and settling basins and any public irrigation facilities, with a maintained drainage area between the two facilities. As noted in the DEH inspection, the Godinho Heifer Ranch is in substantial compliance with ACO requirements.

Under State regulations and according to the WMP, the Godinho Heifer Ranch has been designed to retain all facility wastewater generated, together with all precipitation on, and drainage through, manured areas during a 100-year, 24-hour storm event, including 120-day storage period. All precipitation and surface drainage outside of manured areas would be diverted away from manured areas unless it would be fully retained (CCR Title 27, Division 2, Subdivision 1 22562(a)). On-going maintenance inspections of the storage ponds as outlined in the WMP Operation and Maintenance Plan would ensure compliance with stormwater retention requirements.

The runoff from increased impervious surfaces outside of manured areas may be substantial during intense storm events. However, the annual rainfall for the project area is relatively low, and under normal circumstances, little runoff would be expected. Conformance with the County ACO requirements and Bovine Feedlot Order WDRs would reduce surface drainage impacts associated with runoff from animal confinement facilities to a less than significant level. Because all stormwater generated by the project would be collected and maintained within the project proponent's larger property, no adverse effects due to runoff would occur, and no mitigation would be necessary.

Question (c)(iv) Impede or redirect flood flows. The project site is located within an area that would not be exposed to a 100-year flood. Implementation of the project at this location would not impede or redirect flood flows since it would not be located within a floodway. Therefore, implementation of the proposed project would not impede or redirect flood flows, and a less-than-significant impact would result. No mitigation would be required.

Question (d) Flood hazard, tsunami, or seiche zones: Less-than-significant Impact. The project site is not located within the FEMA designated 100-year or 500-year floodplains. Because the project site is located distant from the sea or any large reservoir, the project would not be located in an area subject to inundation hazards from seiche or tsunami.

Because the project site would not be sited within a floodway, implementation of the proposed project would not risk the release of pollutants due to project inundation. Thus, no adverse effects from flooding and pollutant release would occur, no impacts would result, and no mitigation would be required.

Question (e) Conflict with water quality or sustainable groundwater management plans: Less-than-significant Impact. The project site is located within the Delta-Mendota Groundwater Subbasin. The current Basin Plan for the Sacramento River and San Joaquin River Basins was issued in May 2018. As noted above under Question a, the proposed project would be required to implement a stormwater pollution prevention plan during construction, and proposed project operations would not result in hazardous wastewater discharges. Therefore, the proposed project would not include any waste discharges that could conflict with the Basin Plan. Further, agriculture and animal confinement facilities are designated as beneficial uses of water resources in the Basin Plan.

As described under Question (b), above, the San Joaquin River Exchange Contractors Water Authority worked with 10 neighboring GSAs to develop a joint Groundwater Sustainability Plan for the Delta-Mendota Subbasin in order to implement the SGMA requirements and achieve the sustainability goals outlined in SGMA. While the Godinho Heifer Ranch Expansion would result in an increase in groundwater use in order to water the expanded herd, the Godinho Heifer Ranch will be expected to follow the guidelines within the GSP, as applicable, to manage groundwater depletion.

Therefore, the project would not conflict with or obstruct the water quality control plan or a sustainable groundwater management plan, and the potential impacts would be less than significant. No mitigation would be required.

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

ENVIRONMENTAL SETTING

The land surrounding the project site and in the general vicinity is primarily developed for agricultural uses. Scattered rural residences are located in the general area of the project; most are associated with agricultural operations. The project site is designated Agricultural by the 2030 Merced County General Plan, and zoned A-1 (General Agricultural) by the Merced County Zoning Code (Merced County 2020).

ENVIRONMENTAL EVALUATION

Question (a) Physically divide established community: No Impact. Other than scattered rural residences, there is no established community in the area of the project site. The nearest established community within the project area is the City of Los Banos, approximately 0.5 miles southeast of the Godinho active heifer facilities. Because the project would not divide a community, no adverse effects would result, and no mitigation would be necessary.

Question (b) Conflict with land use plans or policies: Less-than-significant Impact with Mitigation. The project site and the area surrounding the site are designated Agricultural on the 2030 Merced County General Plan Land Use Diagram. As set forth in the 2030 Merced County General Plan, the Agricultural land use designation:

... provides for cultivated agricultural practices which rely on good soil quality, adequate water availability, and minimal slopes. This is the largest County land use designation by area in the County and is typically applied to areas on the valley floor. (Merced County 2013)

The project site and the area surrounding the site in Merced County are located in the A-1 (General Agricultural) zoning district of Merced County. The purpose of the General Agriculture zone is to provide for areas of more intensive farming operations dependent on higher quality soils, water availability, and relatively flat topography; and to host agricultural and/or industrial uses dependent on proximity to urban areas or requiring a location in sparsely populated areas. Parcels smaller than 40 acres down to a minimum of 20 acres can be considered under the General Agriculture zone where agricultural productivity of the property will not be reduced.

Animal confinement facilities such as dairies and heifer lots may be permitted in all agricultural zones within Merced County subject to approval of an Administrative Permit or Conditional Use Permit as determined by the number of off-site dwellings within the windshed, and whether animal confinement facility criteria are met. Animal confinement facilities face greater regulatory scrutiny if greater than five off-site residential dwellings are located within the windshed, defined as an area of

1,320 feet upwind to 2,640 downwind of the periphery of the animal facility, or if the animal confinement facility does not meet other locational criteria as defined by County Code Section 18.64.040 (B). For the Godinho Heifer Ranch project, there are numerous off-site residences located within the windshed of the dairy (see Figure 5), and there are eight off-site residences located within 1,000 feet of the existing facility (see Figure 6). Because there are off-site residences that are situated at a distance that is less than the setback distances established in the Merced County Code locational criteria, Merced County is considering the project under its Conditional Use Permit process.

Within Merced County, Conditional Use Permits are discretionary permits that require special review and control to ensure that a use of land is compatible with the neighborhood and surrounding residences. Land uses subject to a CUP are considered more likely to have greater impacts than uses permitted by right, or uses permitted under Administrative Permits (Merced County Code Section 18.116.010 (B)). The proponents of the proposed Godinho Heifer Ranch Expansion project have made application to the County of Merced for a Conditional Use Permit (CUP19-006) to construct and operate the proposed heifer facility expansion.

No fly complaints have been reported at the Godinho Heifer Ranch and submitted to DEH (Merced County, February 2020). While the existing agricultural character of the vicinity would tend to minimize incompatibility to existing uses in the project vicinity, implementation of the heifer facility expansion project could introduce an additional source of odors, flies, and other insects in the area of these residences. (These potential adverse odor and nuisance insect effects are evaluated in Section III, *Air Quality and Odors* and Section VII, *Hazards and Hazardous Materials* of this IS.) The combination of these nuisance effects contributes on a cumulative level to determine land use compatibility with existing residents in the area.

Merced County regulates land use through the 2030 General Plan and Zoning Code. The EIR prepared for the Merced County ACO assessed potential land use conflicts with rural residences for new and expanding animal confinement facilities in Merced County. In efforts to minimize these conflicts and protect agricultural uses, the ACO requires a minimum setback between new or expanded animal confinement facilities and individual off-site rural residents to 1,000 feet, and generally prohibits the construction of new off-site dwellings within 1,000 feet of an existing animal confinement facility, with some exceptions. According to Merced County Code Chapter 18.64.040 (B)(2), the modification or expansion of an existing facility must not decrease the existing separation distance from residentially zoned property, concentrations of five or more off-site residences, or off-site residences to less than 1,000 feet unless the off-site property owner provides written permission. Construction of the proposed freestall barns would occur outside the existing footprint of active animal confinement operations. While there are off-site residences within 1,000 feet, the heifer facility expansion would not reduce the existing distance to these residences (see Figure 6). The proposed expansion would not reduce the distance to less than 1,000 feet for any off-site residence currently greater than 1,000 feet from existing active heifer facilities.

The ACO also prohibits new dairies within one-half mile of urban areas, areas zoned for residential uses, concentrations of rural residences, and parks (Merced County Code Chapter 18.64.040 (B)(1)(a)). According to Merced County Code Chapter 18.64.040 (B)(2), if the animal confinement facility is located within the minimum setback distance, the modification or expansion of an existing facility must not decrease the existing separation distance from these areas. There are no residentially zoned areas or concentrations of rural residences within the 0.5-mile setback distance (Merced County GIS 2020). The urban boundary of the City of Los Banos is located approximately 0.5 miles

southeast of the Godinho active heifer facilities. The proposed expansion would not decrease this setback distance (see Figure 8).

While no official nuisance complaints have been reported at the Godinho Heifer Ranch, because the active animal confinement facilities are located less than 1,000 feet from several off-site residences, there would be an increased potential for nuisance conditions at these residences with implementation of the proposed heifer facility expansion, and the following mitigation would be required.

Mitigation Measure LU-1a:

Implement the odor control measures set forth in Mitigation Measure AQ-2a.

Mitigation Measure LU-1b:

Implement the nuisance control measures set forth in Mitigation Measure HAZ-1.

Implementation of the foregoing mitigation measures and measures included in the Godinho Heifer Ranch Vector Control Plan would reduce the magnitude of this potential effect by requiring housekeeping and management measures. Because the setback distance to the nearby off-site residences would not be reduced with project implementation, with implementation of the above mitigation measures, the potential impact from nuisance conditions would be reduced to less than significant.

XII. MINERAL RESOURCES				
	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
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?				X
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?				X

ENVIRONMENTAL SETTING

The majority of the land area of Merced County lies within the Central Valley physiographic province, which is dominated by significant amounts of overburden soils that are alluvial in nature. Less than 30 percent of Merced County lies in higher topographic areas, away from the alluvium and closer to bedrock conditions. Very few traditional hard rock mines exist in the county. The county's mineral resources in the project vicinity are primarily sand and gravel mining operations. (Merced County 2013h)

No Mineral Resource Zones or mineral resource production areas are located in or adjacent to the project area. The western portion of Merced County includes the following aggregate resource areas: Garzas Creek, Basalt Hill, Los Banos Valley, and Los Banos Creek Fan. According to the 2030 Merced County General Plan Background Report (Figure 8-10), the project site is not located in an area of sand and gravel resources (Merced County 2013i). The California Geological Survey indicates that the proposed project is not within an Aggregate Production Area (CGS 2018).

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Loss of mineral resources of value and/or delineated on land use plans: No Impact. No important mineral deposits, Mineral Resource Zones, or existing or previous mines are located on the project site or in the surrounding area. Because there are no mineral resources or resource protection zones in the vicinity of the project site, there would be no loss of availability of known mineral resources. No adverse effect would result, and no mitigation would be required.

XIII. NOISE

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in:				
a) Generation of a substantial temporary or permanent increase in ambient noise levels in the vicinity of the project in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Generation of excessive ground-borne vibration or ground-borne noise levels?			X	
c) For a project located within the vicinity of a private airstrip or an airport land use plan, or where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?				X

ENVIRONMENTAL SETTING

Characteristics of Noise

Noise consists of any sound that may produce physiological or psychological damage and/or interfere with communication, work, rest, recreation, or sleep. Several noise measurement scales exist that are used to describe noise in a particular location. A decibel (dB) is a unit of measurement that indicates the relative intensity of a sound. The 0 point on the dB scale is based on the lowest sound level that the healthy, unimpaired human ear can detect. Changes of 3 dB or less are only perceptible in laboratory environments. Sound levels in dB are calculated on a logarithmic basis. An increase of 10 dB represents a 10-fold increase in acoustic energy, while 20 dB is 100 times more intense, and 30 dB is 1,000 times more intense. Each 10 dB increase in sound level is perceived as approximately a doubling of loudness; and similarly, each 10 dB decrease in sound level is perceived as half as loud. Sound intensity is normally measured through the A-weighted sound level (dBA). This scale gives greater weight to the frequencies of sound to which the human ear is most sensitive. The A-weighted sound level is the basis for 24-hour sound measurements that better represent how humans are more sensitive to sound at night.

As noise spreads from a source, it loses energy so that the farther away the noise receiver is from the noise source, the lower the perceived noise level would be. Geometric spreading causes the sound level to attenuate or be reduced, resulting in a 6 dB reduction in the noise level for each doubling of distance from a single point source of noise to the noise-sensitive receptor of concern.

Many ways are available to rate noise for various time periods, but an appropriate rating of ambient noise affecting humans also accounts for the annoying effects of sound. Equivalent continuous sound level (L_{eq}) is the total sound energy of time varying noise over a sample period. However, the predominant rating scales for human communities in the State of California are the L_{eq} , the community noise equivalent level (CNEL), and the day-night average level (L_{dn}) based on A-weighted decibels (dBA). CNEL is the time varying noise over a 24-hour period, with a 5 dBA weighting factor applied to the hourly L_{eq} for noises occurring from 7:00 p.m. to 10:00 p.m. (defined as relaxation hours) and 10 dBA weighting factor applied to noise occurring from 10:00 p.m. to 7:00 a.m. (defined as sleeping hours). L_{dn} is similar to the CNEL scale, but without the adjustment for events occurring during the evening relaxation hours. CNEL and L_{dn} are within one dBA of each

other and are normally interchangeable. The noise adjustments are added to the noise events occurring during the more sensitive hours.

Existing Noise Environment

The project site is located in an agricultural area with surrounding rural residential uses and agricultural operations. One of the primary existing noise sources in the project vicinity is the traffic on nearby roadways, in addition to SR 165. Other than traffic noise, the predominant noise sources at the proposed project site are characterized as low-intensity residential and agricultural uses, including noise from activities at surrounding residences, and infrequent cultivation and harvesting.

Noise sensitive land uses are locations where people reside or where the presence of unwanted sound could adversely affect the use of the land. Residences, schools, hospitals, guest lodging, libraries, churches, nursing homes, auditoriums, concert halls, amphitheaters, playgrounds and parks are considered noise-sensitive uses. The noise level experienced at a sensitive receptor depends on the distance between the source and the receptor, the presence or absence of noise barriers and other shielding devices, and the amount of noise attenuation (lessening) provided by the intervening terrain.

Existing sensitive land uses within the project area include single-family residences. The closest off-site residences to the active heifer ranch facility are located approximately 205 and 215 feet south of active heifer ranch facilities.

The Los Banos Municipal Airport lies approximately 2.1 miles south of the proposed project site; however, the project site is not located within the Airport Influence Area as indicated in the Merced County Airport Land Use Compatibility Plan (Merced County ALUC 2012).

REGULATORY FRAMEWORK

The 2030 Merced County General Plan Noise Element provides a basis for local policies to control and abate environmental noise, and to protect the citizens of Merced County from excessive noise exposure (Merced County 2013). The County also enforces its Noise Ordinance (Chapter 10.60, *Noise Control*) in the County Code. This ordinance contains noise level standards for residential and non-residential land uses. Specifically, the County Code sets 65 dBA Ldn¹² and 75 dB Lmax¹³ standards for residential property, with standards applicable to nonresidential properties 5 dB higher (Chapter 10.60.030). The County Code (Chapter 10.60.050(A)(2)) further exempts noise sources associated with agricultural activities or agricultural operations on agricultural property from sound level limitations.

According to County Code (Chapter 10.60.040(5)), construction activities that include the operation of any tools or equipment used during construction, drilling, earth moving activities, excavating, or demolition are prohibited from 6:00 p.m. to 7:00 a.m. the following day on weekdays. They are also prohibited at any hour during weekend days or legal holidays, except for emergency work.

¹² Ldn = Day/night average sound level during 24-hour day weighted by a factor of three.

¹³ Lmax: The highest root-mean-square (RMS) sound level measured over a given period of time.

ENVIRONMENTAL EVALUATION

Potential noise impacts can be categorized as those resulting from construction and those from operational activities. Construction noise would have a short-term effect; operational noise would continue throughout the lifetime of the project. Construction associated with the development of the project would increase noise levels temporarily during the construction of the proposed heifer ranch expansion facilities. Operational noise associated with the proposed heifer ranch facility would occur 24 hours per day, 365 days per year.

Question (a) Generate noise increase in excess of local plan standards: Less-than-significant Impact.

Construction Noise

Construction of the Godinho Heifer Ranch Expansion project may result in a temporary increase in ambient noise levels. The project would be constructed in two phases, over a period of approximately six months each. Construction activities would be considered an intermittent noise impact throughout the construction period of the project. These activities could result in various effects on sensitive receptors, depending on the presence of intervening barriers or other insulating materials. While some construction would take place within the existing facility footprint, additional construction of proposed structures would convert approximately six acres of cropland to active heifer ranch facilities (see Figure 4).

Based on typical construction equipment noise emission levels (FHWA 2017), noise levels produced during construction could potentially exceed those determined to be acceptable for parcels not zoned for residential land use by the 2030 General Plan (80 dBA L_{max} at the property line) (Merced County Code Section 10.60.030(A)(3)). However, Merced County Code Section 10.60.030(B)(5) acknowledges there may be temporary, elevated noise levels during construction. No feature of the project would cause noticeable levels of ground borne vibration or noise. Because construction activities would be temporary and would not likely result in noise levels that exceed General Plan standards for agricultural areas, construction noise would be considered to be a less-than-significant impact, and no mitigation would be necessary.

Operational Noise

Situated in a rural area removed from significant noise sources, the noise environment within the project site is dominated by traffic noise from trucks and vehicles on adjacent and private roadways, and operational noise from agricultural uses on the site and on adjacent farms. Existing operational noise is associated with on-site ranch operations, and nearby dairy farm and associated agricultural operations. Most noise events are associated with tractor and equipment operation. With project implementation, there would be little increase in existing ambient noise levels. No new large machinery or other noise-producing activities would occur, and no activities different from those currently occurring are proposed. However, some permanent increases associated with noise generated by additional vehicle and truck trips would occur. Generally, a doubling of traffic is necessary to result in a perceptible change in noise levels. Daily trips associated with the proposed project are estimated to increase from approximately 6.8 average daily trips (ADT) to approximately 7.4 ADT. Since there is minimal traffic on Johnson Road and Henry Miller Road, traffic noise would not exceed noise levels determined to be acceptable for agriculture by the Merced County General Plan, even with the addition of new traffic. Also, noise levels in the vicinity of the project site would comply with the Merced County Code noise standard of 70 dB L_{dn} for agricultural uses (Merced

County Code Section 10.60.030(A)(2)). This would be a less-than-significant impact, and no mitigation would be necessary.

Operation of the facility would not generate noise levels that would conflict with or exceed standards established by the Merced County General Plan Noise Element, Noise Ordinance, and Right-to-Farm Ordinance. This would be a less-than-significant impact, and no mitigation would be necessary.

Question (b) Ground-borne vibration or noise: Less-than-significant Impact. Construction activities associated with implementation of the proposed Godinho Heifer Ranch Expansion project are not expected to result in excessive groundborne vibration or groundborne noise levels. Additionally, groundborne vibration during construction activity is temporary and would cease to occur after project construction is completed. No permanent noise sources that would generate excessive groundborne vibration or groundborne noise levels would be located within the project area. Therefore, impacts would be less than significant and no mitigation would be required.

Question (c) Excessive noise levels near airports: No Impact. The Los Banos Municipal Airport is located approximately three miles south of the proposed project site. There are no existing public or private airports or airstrips within two miles of the proposed project site. Since the proposed project site would be approximately 2.1 miles from the nearest public airport, and noise levels from airport operations do not exceed Merced County General Plan standards at the project site, workers at the proposed project site would not be exposed to excessive noise levels. No impact would result, and no mitigation would be required.

XIV. POPULATION AND HOUSING

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Induce substantial unplanned population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing people or housing, necessitating the construction of replacement housing elsewhere?				X

ENVIRONMENTAL EVALUATION

Question (a) Induce unplanned population growth: No Impact. The Godinho Heifer Ranch Expansion project site is located in an agricultural region developed with other animal confinement operations. It would not result in a new or different type of use for the area, nor does the project create or improve any infrastructure serving the site or region. The proposed project is consistent with Merced County land use plans, and no modification of land use and development policies would be necessary to accommodate the proposed heifer ranch project.

The heifer ranch currently employs a staff of two workers. With implementation of the proposed project, the number of employees would not increase, although up to five individuals may be on site during weekly veterinarian checks. In December 2019, the labor force in Merced County totaled 115,600 persons, with an official unemployment rate of 7.9 percent (or 9,100 unemployed persons) (EDD 2020). The continuing labor needs of the project can be accommodated by this existing workforce within Merced County, and would not require the importation of workers. Because no new employees would be added as a result of the proposed project, there would be no demand for additional housing; existing and planned housing resources within Merced County would be sufficient.

The proposed project would not result in a meaningful increase in the County's population; implementation of the project would not result in the exceedance of population projections or result in any significant growth inducing effects. The proposed heifer ranch expansion project would not be expected to result in substantial new growth in the project vicinity. Therefore, the proposed project would not induce substantial direct or indirect population growth. There would be no impact, and no mitigation would be necessary.

Question (b) Displace substantial numbers of people or housing: No Impact. There are three residences located at the Godinho Heifer Ranch facility. The proposed project would not impact the existing residences, and no new housing is proposed. There would be no impact to available housing units in Merced County. In 2018, the last year for which data is available, there were 85,766 housing units; 6,279 of those units were vacant (US Census Bureau 2020). Implementation of the project would not displace substantial numbers of people or existing housing units. There would be no impact, and no mitigation would be necessary.

XV. PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives of any of the public services:				
a) Fire protection?			X	
b) Police protection?			X	
c) Schools?			X	
d) Parks?			X	
e) Other facilities?			X	

ENVIRONMENTAL SETTING

Public services provided in the project area include fire, police, hospital, school, library, and park services.

There are no public facilities located within the immediate project vicinity. The unincorporated area outside the Los Banos city limits depends on fire protection from the Merced County Fire Department; the closest fire station is located in Los Banos, approximately 2.5 miles to the south. The Merced County Sheriff's Department provides police protection in the unincorporated areas of Merced County. The nearest schools are located approximately 1.6 miles away in the community of Los Banos. Three hospitals provide medical services to county residents; Memorial Hospital in Los Banos is closest to the project site. Merced County Library services are available at the Los Banos branch located on Seventh Street in Los Banos. Park services are discussed in more detail in Section XV, *Recreation*. Utility services are discussed in more detail in Section XIX, *Utilities and Service Systems*.

ENVIRONMENTAL EVALUATION

Questions (a) through (e) New or physically altered governmental public service facilities: Less-than-significant Impact. Implementation of the proposed heifer ranch expansion would include construction on the project site of approximately 298,200 square feet of new support buildings. The proposed project is located in an area with rural levels/standards of fire protection. In response to this common condition in agricultural areas of the county, the Merced County Fire Department generally imposes requirements for on-site water storage for fire protection. Compliance with measures as set forth by the Fire Department would be required as conditions of approval, and would reduce fire risk and hazard to levels found acceptable by the Merced County Fire Department. Therefore, there would be no increase or changed in the demand for fire service that would require the provision of new or physically altered fire facilities.

No feature of the project would result in the need for new or altered facilities for police protection, schools, parks, libraries, or health services. Because no new residences would be constructed, and no additional employees would be added, no increase in population is expected to result from the proposed project. No feature of the proposed project would pose unusual police protection demands. Therefore, there would be no increase in the demand for public services such as police facilities, schools, parks, libraries, or health services that would require the construction of new facilities or physically altered facilities. This would be a less-than-significant impact, and no mitigation would be necessary.

XVI. RECREATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
a) Would the project increase the use of existing neighborhood or regional parks or other recreational facilities such that substantial deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X

ENVIRONMENTAL SETTING

Merced County contains several federal, State, and county parks and recreation areas. Aside from parks in the county, there are many public open space areas as well.

- There are three National Wildlife Refuges located in Merced County: the Merced National Wildlife Refuge, the San Luis National Wildlife Refuge, and the San Joaquin River National Wildlife Refuge. The San Luis National Wildlife Refuge is nearest the site of the proposed project, approximately 6.5 miles to the northeast.
- The State of California Department of Parks and Recreation operates six parks in Merced County. The California Department of Fish and Wildlife operates seven wildlife areas. The proposed project is located between the Volta Wildlife Area to the northwest and the Los Banos Wildlife Area to the east.
- The Merced County Parks and Recreation Department maintains a variety of parklands throughout the county. County maintained parklands are divided into four basic classes: regional parks, community parks, dual-use parks, and neighborhood parks. There are a total of 21 parks owned and/or operated by Merced County. (Merced County 2013i)

ENVIRONMENTAL EVALUATION

Questions (a) and (b) Increase park use, construct or expand recreational facilities: No Impact. No existing public recreational facilities are located on the project site or in the vicinity, and implementation of the project would not directly affect the provision or demand for any recreation. There would be no increase in the use of existing neighborhood or regional parks or other recreational facilities that would cause or accelerate the physical deterioration of such facilities. The proposed project does not include recreational facilities, nor does it require the construction or expansion of such facilities. Thus, no significant adverse impacts to recreation would occur with implementation of the proposed Godinho Heifer Ranch Expansion project, and no mitigation would be required.

XVII. TRANSPORTATION

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Conflict with a program, plan, ordinance or policy addressing the circulation system, including transit, roadway, bicycle and pedestrian facilities?			X	
b) Would the project conflict with or be inconsistent with CEQA Guidelines Section 15064.3, subdivision (b)?			X	
c) Substantially increase hazards due to a geometric design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?			X	
d) Result in inadequate emergency access?			X	

ENVIRONMENTAL SETTING

The proposed project site is located in areas dominated by agricultural uses. Vehicle access to the project site is via Johnson Road and Henry Miller Road, a major collector roadway. State Routes (SR) 165 to the east and SR 152 to the south are arterial roadways that provide regional access to the site.

There are no alternative transportation facilities, such as bus, bicycle, or pedestrian travel routes, in the vicinity of the proposed project.

ENVIRONMENTAL EVALUATION

Question (a) Conflict with local circulation plans: Less-than-significant Impact. The proposed heifer ranch expansion would result in an increase from 6.8 to 7.4 average daily trips (see Table 4 on page 14 of this Initial Study). Because of the existing low levels of traffic in the vicinity, and because minimal new trips would be generated by the proposed project expansion, congestion on nearby roadways would not increase. There would be no reduction of the existing Levels of Service on nearby roads, nor would the project conflict with any applicable congestion management plan. Therefore, impacts due to increased roadway congestion would be less than significant, and no mitigation would be required.

The proposed project includes the construction of approximately 298,200 square feet of new support buildings. Construction of the proposed project would be considered temporary over two periods of approximately six months each. Employee trips and construction deliveries would be considered temporary construction traffic.

The proposed project use would be considered consistent with existing General Plan land use designation with issuance of Conditional Use Permit CUP19-006 (see Section XI, *Land Use and Planning* of this Initial Study). Because minimal new trips would be generated by the proposed project, and the proposed heifer ranch facility would be consistent with existing General Plan land use designation and would not result in a more intense use than previously considered, the proposed project would not conflict with any program, plan, ordinance or policy addressing the circulation system.

Question (b) Conflict with CEQA Guidelines regarding analysis of transportation impacts: Less-than-significant Impact. Section 15064.3, subdivision (b) of the CEQA Guidelines describes criteria for analyzing transportation impacts. The proposed project would result in an increase in approximately 0.6 truck trips from existing operations. Many local agencies have developed screening thresholds to indicate when detailed analysis is needed. As set forth in the Governor's Office of Planning and Research Technical Advisory on Evaluating Transportation Impacts in CEQA (December 2018), "absent substantial evidence indicating that a project would generate a potentially significant level of VMT, or inconsistency with a Sustainable Communities Strategy or general plan, projects that generate or attract fewer than 110 trips per day generally may be assumed to cause a less-than-significant transportation impact." Because the project would be considered consistent with the Merced County General Plan, and the project would not generate a significant number of trips and associated vehicle miles traveled, a less-than-significant impact would occur, and no mitigation would be required.

Question (c) Increase hazards due to geometric design feature: Less-than-significant Impact. Construction activities for the proposed project would not include work on any public roadway. Implementation of the proposed project would not result in any permanent changes to the design features or uses of local roadways, or the construction of any new roadways. There would be no increase to hazards related to a geometric design feature, or due to incompatible uses. A less-than-significant impact would result, and no mitigation would be required.

Question (d) Inadequate emergency access: Less than significant Impact. The Merced County Fire Department maintains standards for access roadways to provide for adequate emergency access to the project site. Construction activities associated with the proposed project would be temporary in nature, and would not interrupt emergency access to or from the project site. Because construction effects on traffic and emergency circulation for the Godinho Heifer Ranch Expansion project would be temporary and well managed, there would be a less-than-significant impact to emergency access. No mitigation would be necessary.

XVIII. TRIBAL CULTURAL RESOURCES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
Cause a substantial adverse change in the significance of a tribal cultural resource, defined in Public Resources Code section 21074 as either a site, feature, place, cultural landscape that is geographically defined in terms of the size and scope of the landscape, sacred place, or object with cultural value to a California Native American tribe, and that is:				
a) Listed or eligible for listing in the California Register of Historic Resources, or in a local register of historical resources as defined in Public Resources Code section 5020.1(k), or			X	
b) A resource determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. In applying the criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, the lead agency shall consider the significance of the resource to a California Native American tribe.			X	

REGULATORY SETTING

Effective July 1, 2015, Assembly Bill 52 (AB 52) amended CEQA to require that: 1) a lead agency provide notice to any California Native American tribes that have requested notice of projects proposed by the lead agency; and 2) for any tribe that responded to the notice within 30 days of receipt with a request for consultation, the lead agency must consult with the tribe. Topics that may be addressed during consultation include Tribal Cultural Resources (TCR), the potential significance of project impacts, type of environmental document that should be prepared, and possible mitigation measures. (Napton 2019)

ENVIRONMENTAL SETTING

Records Search

A Tribal Sacred Lands search request was filed with the Native American Heritage Commission. The search was completed and the NAHC reported its conclusion that no tribal cultural resources are located on or in the vicinity of the proposed project site. The NAHC also provided a list of tribes that could be traditionally and culturally affiliated with the geographic area of the proposed project.

Records of the known cultural resources found in Merced County are included in the files of the Office of Historic Preservation, California Historical Resources Information System. The Central California Central Information Center locally administers these records. A cultural resources records search was conducted at the CCIC for the project site and surrounding area to determine its historic and cultural sensitivity. Based on the records search, there are no known prehistoric or historic archaeological resources on the project site that have been reported to the CCIC (Napton 2019).

Summary of AB 52 Compliance

Section 21080.3.1 (b) of the Public Resources Code states that:

“... the lead agency shall begin consultation with a California Native American tribe that is traditionally and culturally affiliated with the geographic area of the proposed project if: (1) the California Native American tribe requested to the lead agency, in writing, to be informed by the lead agency through formal notification of proposed project in the geographic area that is traditionally and culturally affiliated with the tribe...”

As part of the cultural resources investigation, letters were issued to the tribes appearing on the list provided by the NAHC. As of the date of this Initial Study (February 2020), no tribes have responded with information regarding potential tribal cultural resources in the project vicinity. Merced County has received no written requests to be notified of projects in which the Merced County is the Lead Agency under CEQA. Accordingly, Merced County has no further responsibility in regard to AB 52 consultation.

Should one or more tribes request consultation on the project at some point in the future, Merced County may engage in discussions with the tribe, but such discussions would not be subject to the requirements of the AB 52 process.

ENVIRONMENTAL ANALYSIS

AB 52 established that a substantial adverse change to a TCR has a significant effect on the environment. In assessing substantial adverse change, the County must determine whether or not substantial evidence of a TCR exists within the project area. If substantial evidence of a TCR exists, the County would then determine whether or not the project would adversely affect the qualities of the known tribal cultural resource.

Questions (a) and (b) Affect CRHR resources, or significant California Native American Tribal resources: Less-than-significant Impact. A sacred lands file search was conducted by the NAHC, and no sacred lands were identified for the vicinity of the project site. Additionally, a CCIC Records Search for cultural resources found no prehistoric archaeological resources on the project site or in its vicinity that have been reported to the CCIC. No tribes listed by the NAHC as being traditionally and culturally affiliated with the area requested notification from Merced County of proposed projects in the area, nor did they respond to a letter issued as part of the cultural resources investigation.

Because no known tribal cultural resources were identified that are listed/eligible for listing on the CRHR, or are otherwise deemed significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1, and because no tribes have registered with the County for consultation on proposed projects in the area or responded to letters issued regarding the proposed project, implementation of the proposed project would not cause a significant adverse change in significance of a TCR determined by the lead agency, in its discretion and supported by substantial evidence, to be significant pursuant to criteria set forth in subdivision (c) of Public Resources Code Section 5024.1. A less-than-significant impact would result, and no mitigation would be required.

XIX. UTILITIES AND SERVICE SYSTEMS

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less than Significant Impact	No Impact
Would the project:				
a) Require or result in the relocation or construction of new or expanded water, wastewater treatment or storm water drainage, electric power, natural gas, or telecommunications facilities, the construction or relocation of which could cause significant environmental effects?			X	
b) Have sufficient water supplies available to serve the project and reasonably foreseeable future development during normal, dry, and multiple dry years?			X	
c) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?			X	
d) Generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals?			X	
e) Comply with federal, state, and local management and reduction statutes and regulations related to solid waste?			X	

ENVIRONMENTAL SETTING

There are three single-family residences located at the Godinho Heifer Ranch facility. These residences are occupied by employees of the heifer ranch. Domestic water is delivered to the site by one on-site water well. Each of the residences is provided with an individual on-site septic system. Stormwater runoff from roofed areas is routed to adjacent fields on site. Solid waste collection and disposal are provided by private service.

The proposed heifer facility expansion would rely on existing utilities, including domestic water, stormwater, and electrical services. No additional utilities would be required.

ENVIRONMENTAL EVALUATION

Because confined animal facilities, including heifer ranches, would not require additional public facilities beyond those typically provided in agricultural areas, implementation of the proposed project would not be expected to increase the demand for public facilities beyond the levels provided and planned for by public utilities.

Questions (a) through (c) Construct or relocate new service system facilities, sufficient water supply, adequate wastewater treatment capacity: Less-than-significant Impact. The proposed project would include installation of a new well on the north side of the heifer facility. The proposed well would function as a replacement well to the existing, older domestic well to serve the residences and drinking water for the herd. For more information regarding the proposed well, see Section X, *Hydrology and Water Resources*, above. The proposed heifer ranch expansion project would not involve the construction of any new septic systems. The proposed project would not require the construction of new community water or wastewater treatment facilities. For a discussion of issues related to water supply and water use, see Section X, *Hydrology and Water Resources*.

All stormwater generated at the project site from existing and proposed areas with impermeable surfaces is, and would continue to be, collected and routed to wastewater storage ponds onsite. Therefore, no adverse effects to storm drainage are expected, and no needs for, or modifications to, storm drainage systems in the project vicinity are necessary. For more information regarding storm drainage, see Section X, *Hydrology and Water Resources*, above.

Based on the information above, implementation of the proposed heifer ranch expansion project would not result in the relocation or construction of new or expanded water, wastewater, storm water drainage, electric power, natural gas, or telecommunications facilities. This would be a less-than-significant impact, and no mitigation would be required.

Questions (d) and (e) Solid waste: Less-than-significant Impact. The proposed project consists of construction of expanded heifer ranch facilities. The provision of solid waste collection service to serve the proposed project would be subject to the normal tariffs and requirements of the service provider, and would not result in the need for any major new systems or substantial alterations to these utility systems. It would not generate solid waste in excess of State or local standards, or in excess of the capacity of local infrastructure, or otherwise impair the attainment of solid waste reduction goals. There would be no change to existing conditions that would result in non-compliance with federal, state, and local management and reduction statutes and regulations related to solid waste. This would be a less-than-significant impact, and no mitigation would be required.

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

According to California Fire and Resource Management Program Fire Hazard Severity Zone map, the proposed project area is within the Local Responsibility Area, with an Unzoned designation. The threat of wildfire hazard in that area is determined unlikely. (CalFIRE 2007)

Questions (a) through (d) Wildfire risk in state responsibility areas/very high fire hazard severity zones: No Impact. The project site is not located in or near state responsibility areas or lands classified as very high fire hazard severity zones. It is located in an existing low-density agricultural area, and the threat of wildland fire has been determined to be unlikely (CalFIRE 2007). Because the proposed project is not located in or near a State Responsibility Area nor on lands classified as very high fire hazard severity zones, no impact would occur and no mitigation would be required.

XXI. 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 substantially degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?		X		
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)?			X	
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?			X	

Question (a) Degrade quality of the environment: Less than significant Impact with Mitigation. As discussed above, the project has the potential to adversely impact: air quality (construction dust, increase of criteria air pollutants, odors), biological resources (protected bird species, night lighting), undiscovered cultural resources, hazards (nuisance insects), water quality (surface water quality, groundwater contamination, water quality at off-site locations, depletion of groundwater resources), and land use (conflict with policies regarding odors and nuisance insects). With the implementation of mitigation measures identified in this Initial Study (see below), all potential impacts would be reduced to a less-than-significant level. No significant or potentially significant impacts would remain.

Mitigation Measure AQ-1:

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 PM10 Prohibitions. The animal confinement facility 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.

Mitigation Measure AQ-2:

Implement Mitigation Measure AQ-1.

Mitigation Measure AQ-3a:

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:

- Liquid manure utilized for irrigation purposes shall be managed so that it does not stand in the application field for more than 24 hours.
- Implement odor control measures as contained in the Plan, which may include, but not be limited to the following:

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.

2. Manure management

Utilize best management practices for manure management, including minimizing the time between excretion and application, and aeration of retention basins.

Additionally, implement the following additional best management practices:

Manure Collection Areas

- Clean out manure generated at the freestall barns daily and corrals at least twice a year, or more frequently as necessary to minimize odors;
- Keep cattle as dry and clean as possible at all times;
- Scrape manure from the corrals and bedding from the freestall barns and corrals at a frequency that would reduce or minimize odors.

Manure Treatment and Application

- Minimize moisture content of stockpiled manure/retained solids to a level that would reduce the potential for release of odorous compounds during storage;
- Minimally agitate stockpiled manure during loading for off-site transport;
- 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);
- Clean up manure spills upon occurrence;
- Maintain and operate settling ponds and retention ponds to minimize odor levels.

General

- Implement dust suppression measures to prevent the release of odorous compound-carrying fugitive dust;
- 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.

If necessary and feasible, the animal confinement operation must implement the following additional measures:

1. Manure treatment

Manure treatment methods include maintaining aerobic conditions during storage, aerobic treatment using aerated lagoons or composting, anaerobic digestion, and biochemical treatment.

2. Capture and treatment of emitted gases
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.
3. Enhanced air dispersion
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.
4. Enhanced land spreading procedures
Procedures may be modified to minimize impacts by avoiding spreading when the wind is blowing towards populated areas, 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.

Mitigation Measure AQ-3b:

Implement the nuisance control measures set forth in Mitigation Measure HAZ-1.

Mitigation Measure BIO-1:

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:

1. A preconstruction survey shall be conducted to determine the presence 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 seven 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.
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.).
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.

Mitigation Measure BIO-2:

1. A preconstruction survey shall be conducted to determine presence / absence of TCBB¹⁴ if ground clearing or construction activities will be initiated during the breeding season (February 15 through September 15). This measure is also required for all MBTA protected nesting birds, as indicated in Mitigation Measure BIO-2.
2. 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

¹⁴ Tricolored Blackbird

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.

Mitigation Measure BIO-3:

1. Protocol Surveys. 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 (<https://www.wildlife.ca.gov/conservation/survey-protocols#377281284-birds>) (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.

A written report with the pre-construction survey results must be provided to the Planning 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.

2. Nest Avoidance. If the required protocol surveys show there are no active nests within 0.5-mile of construction activities, 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:
 - 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.
 - 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.
 - c. The project applicant shall be required to coordinate with CDFW to determine if project activities with the potential to cause disturbance to nesting Swainson's hawks within the 0.5-mile buffer may proceed with a reduced nest buffer and an approved biological

- monitor. CDFW may authorize a reduced nest buffer with the presence of a monitoring biologist during construction activities to ensure that the nest is not disturbed.
- d. Routine disturbances such as agricultural activities, commuter traffic, and routine maintenance activities within 0.5-mile of an active nest are not prohibited.
3. Foraging Impacts: 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 site, 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:

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
*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.	

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:
www.dfg.ca.gov/habcon/conplan/mitbank/catalogue

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 (http://www.madera-county.com/rma/archives/uploads/1188143775_Document_upload_23w.pdf) (November 8, 1994).

Mitigation Measure BIO-4:

A Lighting Plan shall be developed to modify existing and future lighting at the Godinho Heifer Ranch. Project-related lighting shall be minimized and directed away or shielded to maintain lighting within developed areas of the facility and away from sensitive areas. No light trespass shall occur onto adjacent fields or off site. The Lighting Plan must comply with the following general standards:

- Lighting shall be designed so that exterior light fixtures are hooded, with light directed downward or toward the area to be illuminated, and so that backscatter to the nighttime sky is minimized. The design of the lighting shall be such that the luminescence or light sources are shielded to prevent light trespass outside the project site boundary and neither the lamp nor the reflector interior surface are visible from outside the footprint of the facilities;
- Light fixtures shall be installed on poles of minimal height and/or be building-mounted;
- All lighting shall be of minimum necessary brightness consistent with worker safety;
- The number of lighting fixtures shall be limited to the minimum required;
- Illuminated areas not occupied on a continuous basis shall have switches or motion detectors to light the area only when occupied;
- All lighting poles, fixtures, and hoods will be dark-colored;

- Unless determined necessary by the County for safety or security reasons, any signs at the entry of the project site will not be lit (reflective coating is acceptable).
- When possible, green light bulbs will be utilized to minimize lighting impact on birds
- The Lighting Plan must specify the type and intensity of lighting and shall be approved by the County and implemented prior to final inspection.

Mitigation Measure CUL-1:

- A. If buried cultural resources such as chipped or ground stone, midden deposits, historic debris, building foundations, human bone, 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.
- B. 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:
 - The County coroner has been informed and has determined that no investigation of the cause of death is required; and
 - If the remains are of Native American origin:
 - √ The most likely descendants of the deceased Native Americans have 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
 - √ The NAHC has been unable to identify a descendant, or the descendant failed to make a recommendation within 24 hours after being notified.
- C. 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.

Mitigation Measure HAZ-1:

The following operational measures identified in the EIR for the ACO shall be implemented throughout ongoing operations.

1. All confined animal facilities shall implement the following Best Management Practices to address potential fly problems:
 - 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;
 - 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;
- c. Regular blading of feeding lanes in freestall barns and corrals to ensure that spilled feed is promptly removed and disposed;
 - d. Daily removal of manure and spilled feed from stalls in freestall barns;
 - e. Scraping of corrals at least twice a year to minimize the potential for development of fly populations on manure;
 - f. Weekly inspection of silage storage areas to ensure proper covering, drainage, and removal of any spoiled silage;
 - g. Weekly inspection of fence lines of corrals and other “edge” areas, and removal of any accumulated manure;
 - 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;
 - 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;
 - 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.
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:
 - 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 18.64.005(A);
 - b. Residual feed shall be removed from infrequently used feeding areas;
 - c. All garbage shall be disposed of in closed dumpsters that are regularly emptied by a contracted waste management service for off-site disposal;
 - d. Grass and other landscape clippings shall be removed from the site for off-site disposal or reuse (as feed or soil amendment).

Mitigation Measure HYD-1:

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.

Mitigation Measure HYD-2a:

The following Best Management Practices shall be implemented as applicable:

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 facility surroundings, corrals, and ramps, as described below.
2. 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.
3. 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.
4. 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).

Mitigation Measure HYD-2b:

The applicant shall comply with requirements of the NMP/WMP, implement CVRWQCB requirements included in the Bovine Feedlot Order WDR for the proposed expansion, and with all Merced County ACO requirements not superseded by the conditions of the WDR.

Mitigation Measure HYD-2c:

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 heifer facility meets local and state requirements.

Mitigation Measure HYD-3:

Over the course of operations, the project sponsor shall obtain written agreement from the recipients of dry and liquid manure exported off site to require demonstrated compliance with the following:

- The recipient belongs to an approved third-party group or coalition compliant with the Long-term Irrigated Lands Regulatory Program General Orders adopted by the RWQCB, is covered by an Individual Discharger General Order, or is otherwise covered by Confined Animal Facility WDRs as adopted by the RWQCB.
- 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.

- 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.
- 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.
- 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.
- The project sponsor shall provide the most recent analysis of the liquid or 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.

Mitigation Measure HYD-4:

The replacement well permit for the project shall be conditioned such that the applicant shall not increase groundwater use from current extractions until the *Groundwater Sustainability Plan for the San Joaquin River Exchange Contractors GSP Group in the Delta-Mendota Subbasin* is approved and implemented. A water meter shall be installed on the new well to monitor groundwater extraction. With implementation of the GSP, as part of the SGMA program, there is an existing monitoring network and associated management strategies to protect the local beneficial users of groundwater, such as the Godinho Heifer Ranch (SJREC GSA 2019). The Godinho Heifer Ranch will be expected to follow the guidelines within the GSP, as applicable, to monitor and manage groundwater depletion in the area.

Mitigation Measure LU-1a:

Implement the odor control measures set forth in Mitigation Measure AQ-2a.

Mitigation Measure LU-1b:

Implement the nuisance control measures set forth in Mitigation Measure HAZ-1.

Question (b) Cumulatively considerable impacts: Less-than-significant Impact. While the proposed project could contribute to cumulative impacts associated with increased development in the region, these impacts have previously been evaluated by the County and considered in development of the County's 2030 General Plan. The 2030 General Plan EIR comprehensively evaluated the potential environmental effects, including the potential countywide and cumulative impacts, of implementing the 2030 General Plan. As discussed in the preceding discussion of tiering, the General Plan EIR is hereby incorporated by reference into this Initial Study pursuant to State CEQA Guidelines Section 15150 as though fully set forth herein.

As discussed in this Initial Study, the Godinho Heifer Ranch Expansion project has the potential to result in impacts to air quality, biological resources, cultural resources, hazards and hazardous materials, hydrology and water quality, and land use. As set forth in the appropriate topical discussions of this Initial Study, effects to these issue areas are all subject to the proposed mitigation measures identified in this Initial Study, State, Federal, and County standards and regulations, and 2030 Merced County General Plan policies and programs designed to avoid, reduce, or mitigate such effects.

Implementation of the proposed project would result in the expansion of an existing heifer ranch facility. As viewed within the context of the overall growth and development in the County as outlined in the 2030 Merced County General Plan, the potential impacts of the proposed project are individually limited and not considered “cumulatively considerable.” Additionally, after mitigation, the project has been determined not to have significant project level or cumulative level effects for any environmental issue. Therefore, construction and operation of the proposed project would not make a cumulatively considerable contribution to cumulative impacts, and would result in a less-than-significant impact when viewed in connection to the effects of past and probable future projects.

Question (c) Adversely affect human beings: Less-than-significant Impact. As demonstrated in the detailed evaluation contained in this Initial Study, because of existing site conditions, Merced County standards, Merced County 2030 General Plan programs and policies, and the regulation of potential environmental impacts by other agencies, in addition to mitigation measures included in this Initial Study, the proposed Godinho Heifer Ranch project would not have the potential to cause substantial adverse effects on human beings. This would be a less-than-significant impact.

3. APPLICANT AGREEMENT TO MITIGATION MEASURES

By the signature below, the project applicant agrees to implement and incorporate the Mitigation Measures identified in this Initial Study as outlined above in Section XXI, *Mandatory Findings of Significance*, as part of the Godinho Heifer Ranch Expansion project.

Signed:

Manuel O. Godinho

Printed Name:

MANUEL O. GODINHO

Date:

4/9/2020

4. PREPARERS OF THE INITIAL STUDY / NEGATIVE DECLARATION

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5. LITERATURE CITED

The following documents were referred to as information sources during preparation of this document. They are available for public review at the web addresses shown after the listing. All documents without an Internet address are available at the County of Merced, Community and Economic Development Department 2222 'M' Street, Merced, California 95340.

ALUC, see Merced County Airport Land Use Commission

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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.

X I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project applicant. A NEGATIVE DECLARATION will be prepared.

I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.

I find that the proposed project MAY have a “potentially significant impact” or “potentially significant unless mitigated” impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.

I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date



4/15/2020

Tiffany Ho, Planner II
Merced County
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