DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

Referral
Early Consultation

Date: **November 10, 2021**

To: **Distribution List (See Attachment A)**

From: **Avleen K. Aujla, Assistant Planner**
Planning and Community Development

Subject: **USE PERMIT APPLICATION NO. PLN2021-0087 – JORDAO DAIRY - CENTRAL AVENUE**

Respond By: **November 29, 2021**

****PLEASE REVIEW REFERRAL PROCESS POLICY****

The Stanislaus County Department of Planning and Community Development is soliciting comments from responsible agencies under the Early Consultation process to determine: a) whether or not the project is subject to CEQA and b) if specific conditions should be placed upon project approval.

Therefore, please contact this office by the response date if you have any comments pertaining to the proposal. Comments made identifying potential impacts should be as specific as possible and should be based on supporting data (e.g., traffic counts, expected pollutant levels, etc.). Your comments should emphasize potential impacts in areas which your agency has expertise and/or jurisdictional responsibilities.

These comments will assist our Department in preparing a staff report to present to the Planning Commission. Those reports will contain our recommendations for approval or denial. They will also contain recommended conditions to be required should the project be approved. Therefore, please list any conditions that you wish to have included for presentation to the Commission as well as any other comments you may have. Please return all comments and/or conditions as soon as possible or no later than the response date referenced above.

Thank you for your cooperation. Please call (209) 525-6330 if you have any questions.

Applicant: **Jordao Dairy**

Project Location: **6321, 6237, 6233, 6235, 6231, 6033, 6031, 6025 S Central Ave Turlock, between Hilmar and Bradbury Roads, in the Turlock area.**

APN: **057-004-013**

Williamson Act Contract: **73-1344**

General Plan: **Agriculture**

Current Zoning: **General Agriculture (A-2-40)**

Project Description: **Request to expand an existing dairy facility located on a parcel of 79.74 ± acres, in the General Agriculture (A-2-40) zoning district. The applicant proposes to expand the herd from 1035 to 2300 mature cows, which includes an increase of 1065 milk and 230 dry cows. Additionally, the applicant proposes to increase support stock numbers by 740 for a total of 1690 heifers, 15-24 months old. The project also proposes the construction of three new animal housing structures (roof only) totaling 236,000± square feet in size within the existing dairy production area boundary. The applicant anticipates an increase of 3,385 cubic feet of additional manure per day generated from the proposed herd expansion for a total of 6,094 cubic feet of manure per day. Nutrients produced from the herd will be utilized to fertilize irrigated cropland on parcels surrounding the existing dairy operation owned by the property owner. Hours of operation are 24-hours a day, seven days a week.**

There are currently six single-family dwellings onsite occupied by dairy workers. The proposed request is expected to increase the number of employees from eight to twelve and 8 employees will live on site. No new employee housing is proposed as part of this request. The applicant does not anticipate any customers or visitors onsite. The proposed request is expected to increase the number of feed truck trips from four to six per week and from two milk truck trips to three per day. The number of tallow truck, and veterinary trips are not expected to increase as part of this request. The existing dairy facility is currently improved with 312,285± square feet of building space. The project site is served by private well and septic system and has access to County-maintained Central Avenue. Confined Animal Facilities (CAF), which include dairies, are considered to be permitted agricultural uses in the A-2 zoning district; however, a use permit is required for new or expanding CAFs requiring a new or modified permit waiver, order, or Waste Discharge Requirements (WDRs) from the Regional Water Quality Control Board (RWQCB), where the issuance of such permit, waiver, order, or WDR requires compliance with the California Environmental Quality Act (CEQA) (Section 21.20.030 (F) of the Stanislaus County Zoning Code). The County adopted the use permit requirement in 2003 in order to allow the County to facilitate the environmental review (in accordance with CEQA) required for issuance of any permit, waiver, order, or WDR by the RWQCB.

Full document with attachments available for viewing at:
http://www.stancounty.com/planning/pl/act-projects.shtm

DEPARTMENT OF PLANNING AND COMMUNITY DEVELOPMENT
1010 10TH Street, Suite 3400, Modesto, CA 95354
Planning Phone: (209) 525-6330 Fax: (209) 525-5911
Building Phone: (209) 525-6557 Fax: (209) 525-7759

USE PERMIT APPLICATION NO. PLN2021-0087 – JORDAO DAIRY - CENTRAL AVENUE
Attachment A

Distribution List

X	CA DEPT OF CONSERVATION Land Resources		STAN CO ALUC
X	CA DEPT OF FISH & WILDLIFE		STAN CO ANIMAL SERVICES
	CA DEPT OF FORESTRY (CAL FIRE)	X	STAN CO BUILDING PERMITS DIVISION
	CA DEPT OF TRANSPORTATION DIST 10	X	STAN CO CEO
X	CA OPR STATE CLEARINGHOUSE		STAN CO CSA
X	CA RWQCB CENTRAL VALLEY REGION	X	STAN CO DER
	CA STATE LANDS COMMISSION	X	STAN CO ERC
	CEMETERY DISTRICT	X	STAN CO FARM BUREAU
	CENTRAL VALLEY FLOOD PROTECTION	X	STAN CO HAZARDOUS MATERIALS
	CITY OF:	X	STAN CO MILK AND DAIRY
	COMMUNITY SERVICES DIST:	X	STAN CO PUBLIC WORKS
X	COOPERATIVE EXTENSION		STAN CO RISK MANAGEMENT
X	COUNTY OF: MERCED	X	STAN CO SHERIFF
X	DER GROUNDWATER RESOURCES DIVISION	X	STAN CO SUPERVISOR DIST 2: CHIESA
X	FIRE PROTECTION DIST: MOUNTAIN VIEW	X	STAN COUNTY COUNSEL
X	GSA: WEST TURLOCK SUBBASIN		StanCOG
	HOSPITAL DIST:	X	STANISLAUS FIRE PREVENTION BUREAU
X	IRRIGATION DIST: TURLOCK	X	STANISLAUS LAFCO
X	MOSQUITO DIST: TURLOCK	X	STATE OF CA SWRCB DIVISION OF DRINKING WATER DIST. 10
X	MOUNTAIN VALLEY EMERGENCY MEDICAL SERVICES		SURROUNDING LANDOWNERS
	MUNICIPAL ADVISORY COUNCIL:	X	TELEPHONE COMPANY: AT&T
X	PACIFIC GAS & ELECTRIC		TRIBAL CONTACTS (CA Government Code §65352.3)
	POSTMASTER:		US ARMY CORPS OF ENGINEERS
	RAILROAD:	X	US FISH & WILDLIFE
X	SAN JOAQUIN VALLEY APCD		US MILITARY (SB 1462) (7 agencies)
X	SCHOOL DIST 1: TURLOCK UNIFIED	X	USDA NRCS
X	SCHOOL DIST 2: CHATOM UNION		WATER DIST:
	WORKFORCE DEVELOPMENT		
X	STAN CO AG COMMISSIONER		
	TUOLUMNE RIVER TRUST		

STANISLAUS COUNTY
CEQA REFERRAL RESPONSE FORM

TO: **Stanislaus County Planning & Community Development**
1010 10th Street, Suite 3400
Modesto, CA 95354

FROM: _____

SUBJECT: **USE PERMIT APPLICATION NO. PLN2021-0087 – JORDAO DAIRY - CENTRAL AVENUE**

Based on this agency's particular field(s) of expertise, it is our position the above described project:

_____ Will not have a significant effect on the environment.
_____ May have a significant effect on the environment.
_____ No Comments.

Listed below are specific impacts which support our determination (e.g., traffic general, carrying capacity, soil types, air quality, etc.) – (attach additional sheet if necessary)

1.
2.
3.
4.

Listed below are possible mitigation measures for the above-listed impacts: *PLEASE BE SURE TO INCLUDE WHEN THE MITIGATION OR CONDITION NEEDS TO BE IMPLEMENTED (PRIOR TO RECORDING A MAP, PRIOR TO ISSUANCE OF A BUILDING PERMIT, ETC.):*

1.
2.
3.
4.

In addition, our agency has the following comments (attach additional sheets if necessary).

_____

_____

Response prepared by:

_____

Name Title Date

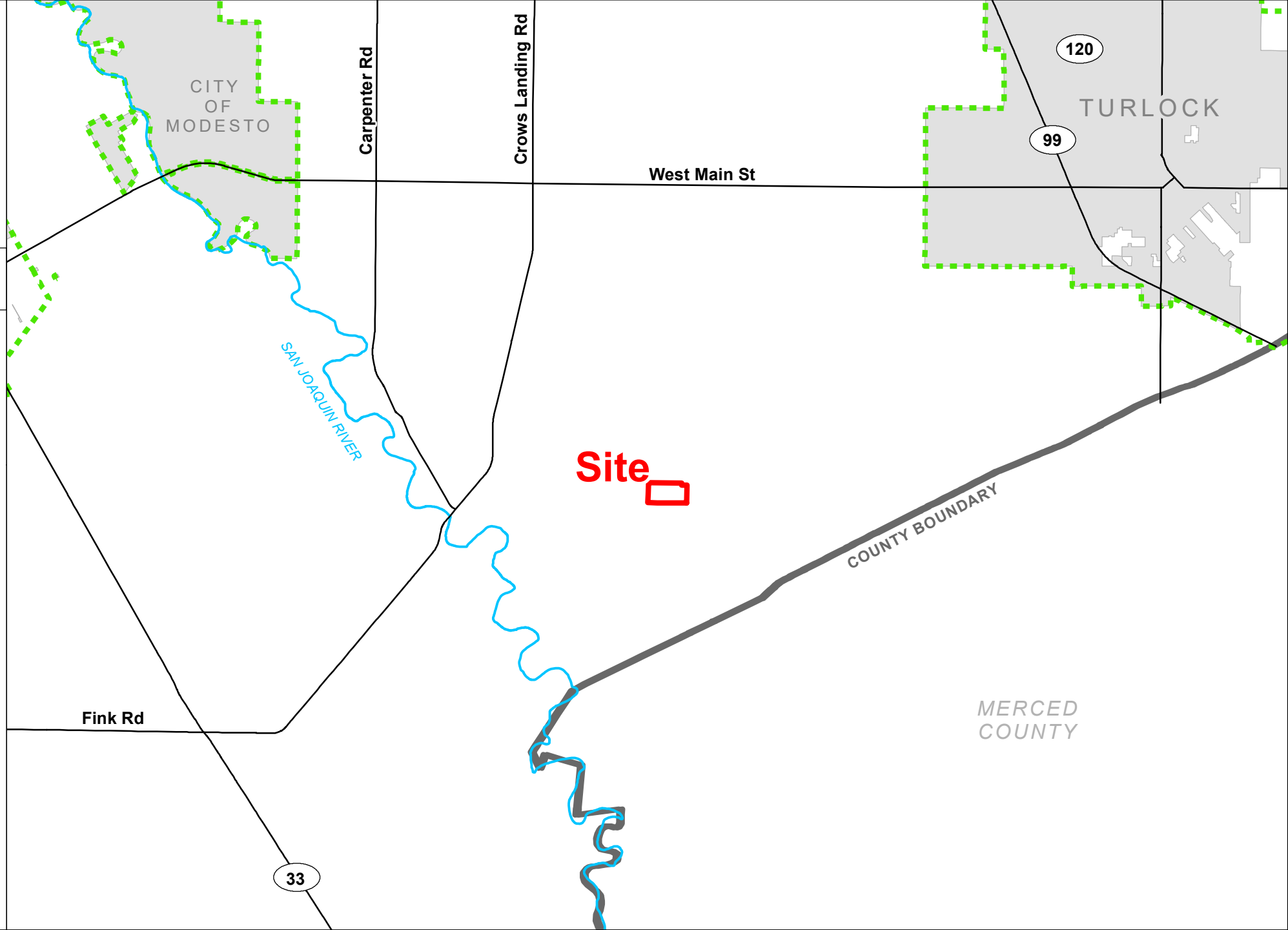
JORDAO DAIRY

UP
PLN2021-0087

AREA MAP

LEGEND

- Project Site
- Sphere of Influence
- City
- Road
- River



N

0 2 mi

0 2 km

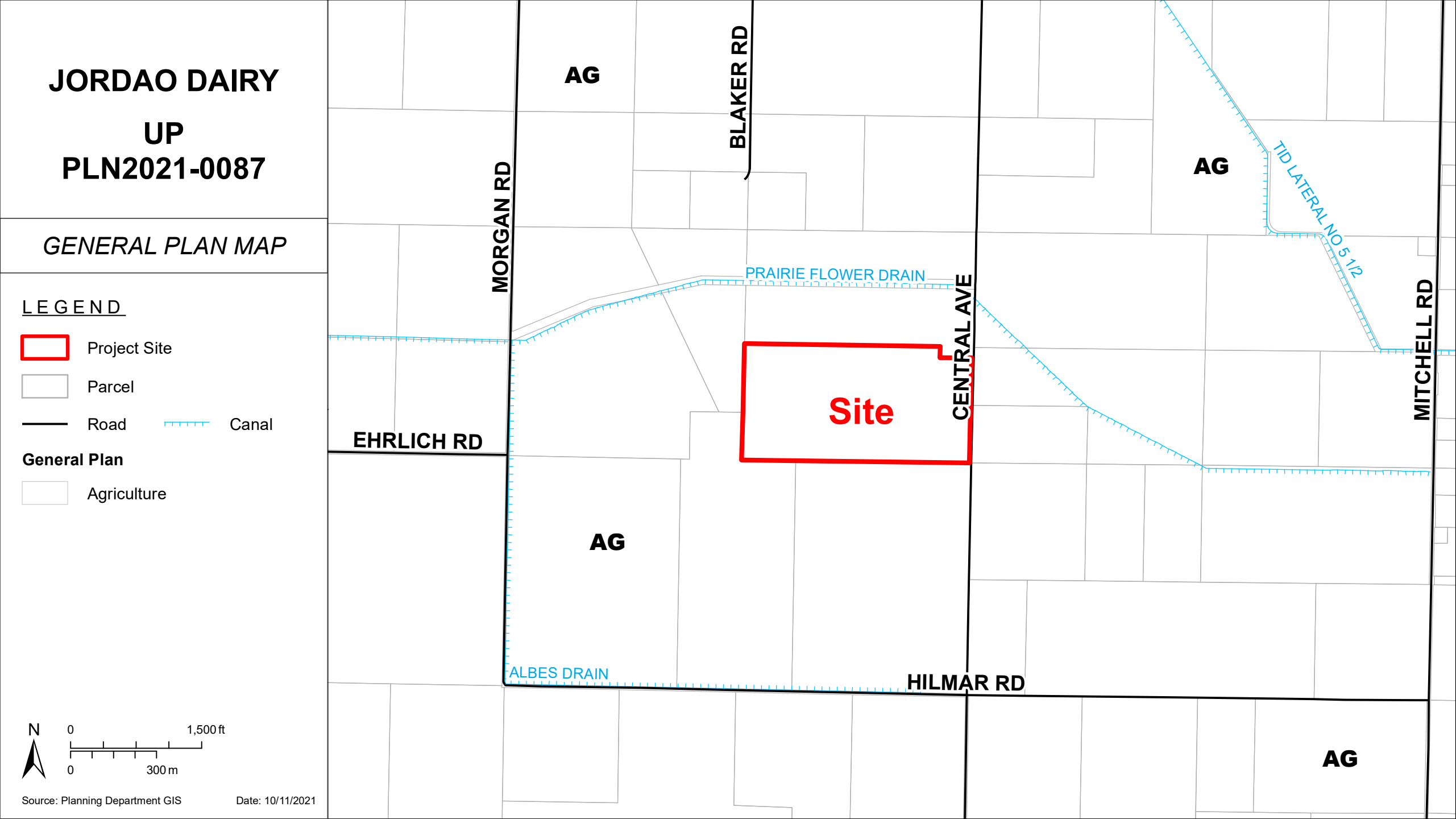
Source: Planning Department GIS

Date: 10/11/2021

JORDAO DAIRY

UP
PLN2021-0087

GENERAL PLAN MAP



Source: Planning Department GIS

Date: 10/11/2021

JORDAO DAIRY

UP
PLN2021-0087

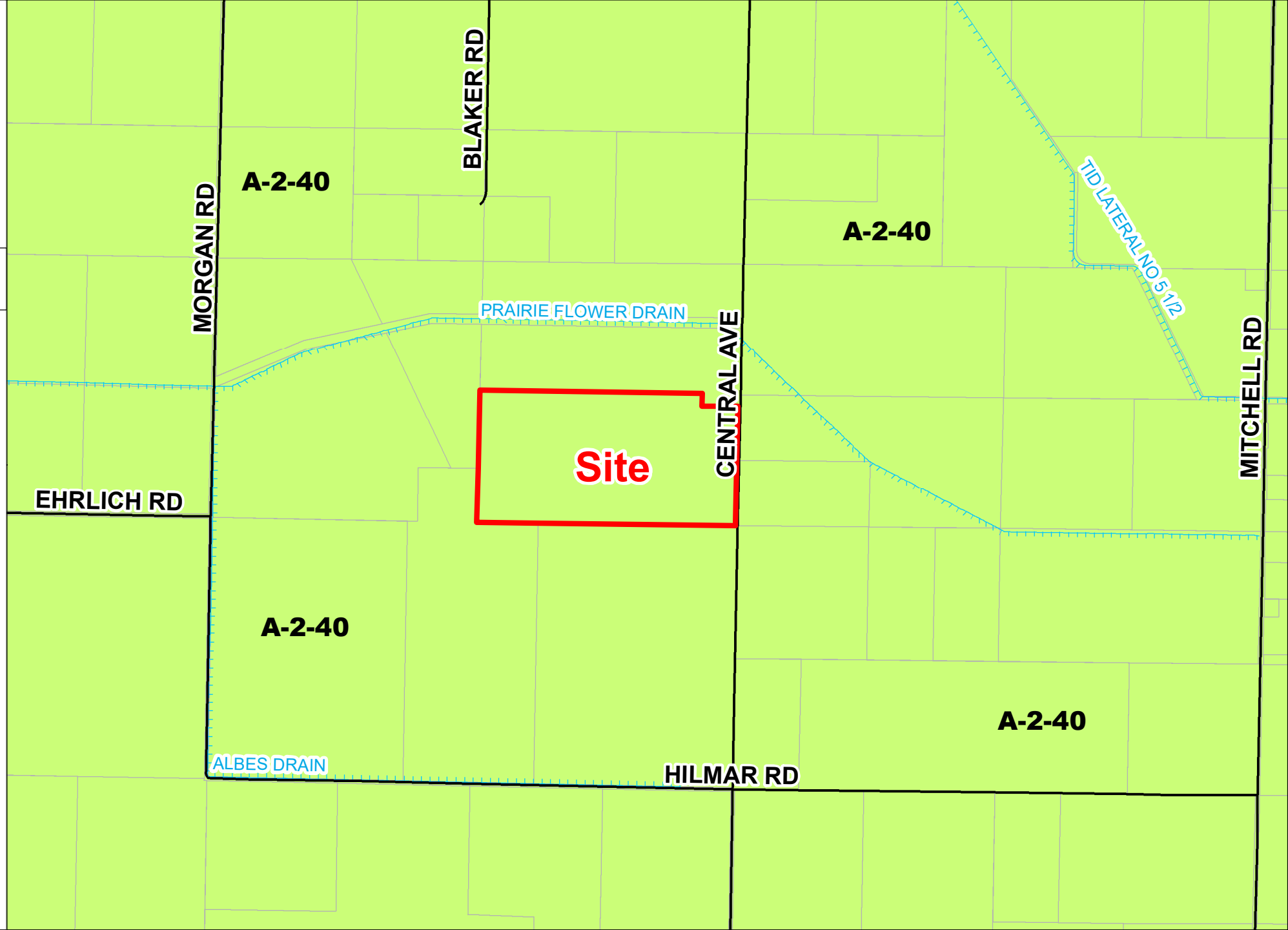
ZONING MAP

LEGEND

- Project Site
- Parcel
- Road
- Canal

Zoning Designation

- General Agriculture 40 Acre



N

0 1,500 ft

0 300 m

Source: Planning Department GIS

Date: 10/11/2021

JORDAO DAIRY

UP
PLN2021-0087

2021 AERIAL AREA MAP

LEGEND

- Project Site
- Road
- Canal

N

0 1,500 ft

0 300 m

Source: Planning Department GIS

Date: 10/11/2021

JORDAO DAIRY

UP
PLN2021-0087

2021 AERIAL SITE MAP

LEGEND

Project Site

Road

N

0 400 ft

0 100 m

Source: Planning Department GIS

Date: 10/11/2021

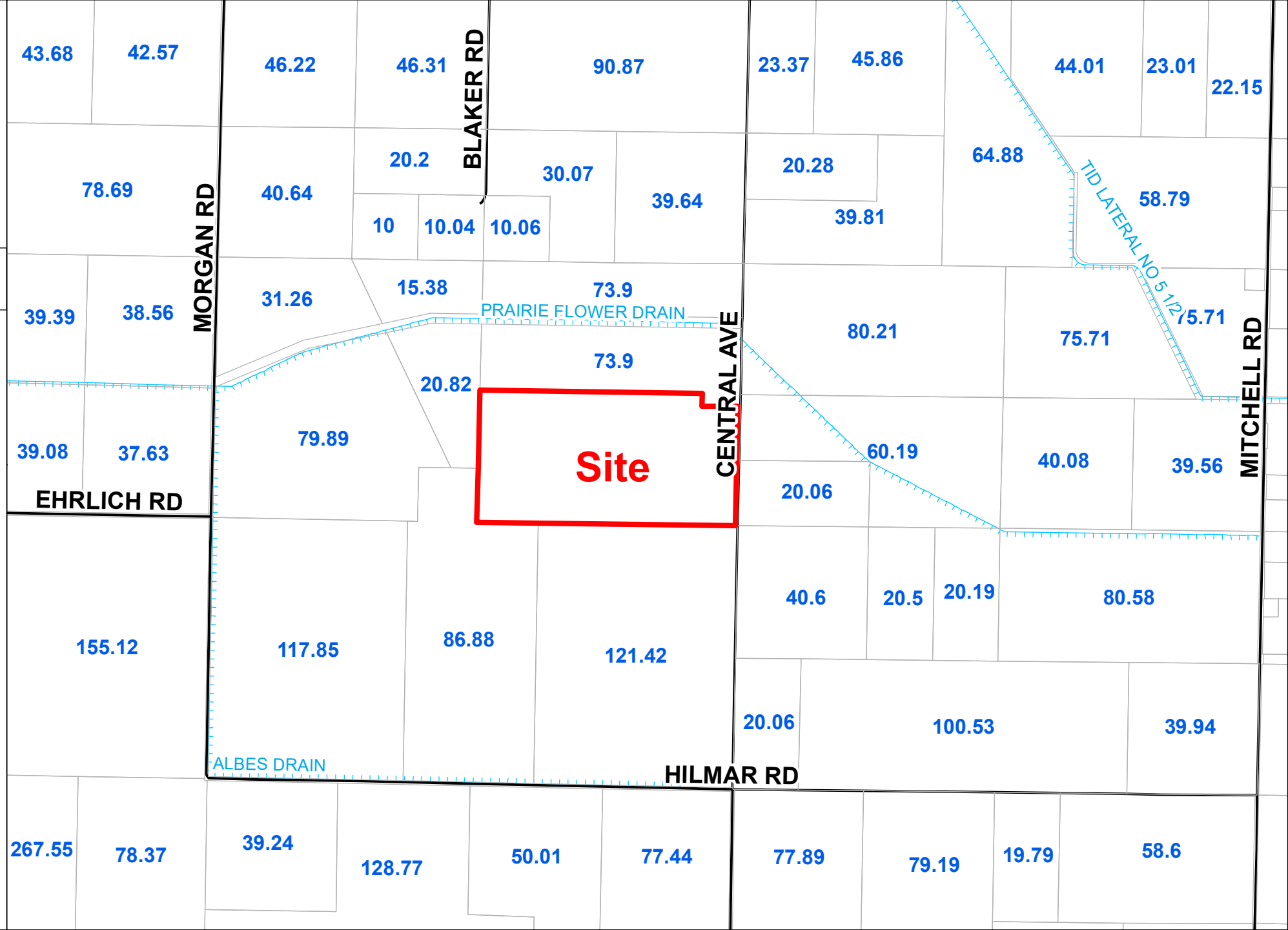
JORDAO DAIRY

UP
PLN2021-0087

ACREAGE MAP

LEGEND

- Project Site
- # Parcel/Acres
- Road
- Canal



N

0 1,500 ft

0 300 m

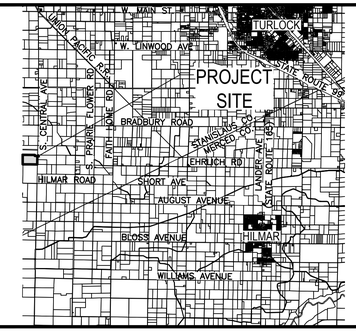
Source: Planning Department GIS

Date: 10/11/2021

LOAFING BARN END ELEVATION
NO SCALE

NOTE: FEATURES AND DIMENSIONS SHOWN ARE CONCEPTUAL ONLY. DETAILS MAY DIFFER AT THE TIME OF BUILDING DEPARTMENT SUBMITTAL.

VICINITY MAP



PROJECT SITE INFORMATION

APPLICANT: JOE JORDAO DAIRY
6025 S CENTRAL AVENUE
TURLOCK, CA 95380

PROPERTY OWNER: JOE JORDAO
6025 S CENTRAL AVENUE
TURLOCK, CA 95380

PROPERTY ADDRESS: 6025 S CENTRAL AVENUE
TURLOCK, CA 95380

PROPERTY ASSESSOR'S PARCEL NUMBER: 057-004-013

PROPOSED BUILDING SQUARE FOOTAGE: 236,000 S.F.

THE PROJECT SITE IS LOCATED IN ZONE X PER FEMA FLOOD INSURANCE RATE MAP 06099C0565E. ZONE X IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE PROJECT SITE IS LOCATED BETWEEN THE 60' AND 70' CONTOURS ACCORDING TO USGS TOPOGRAPHIC MAPS (NAVD88 DATUM).

ALL STRUCTURES LABELED "LOAFING BARN" OR "FREE STALL BARN" ARE ANIMAL HOUSING STRUCTURES.

LEGEND

CORRAL (E)	EXISTING FACILITY IMPROVEMENT
100	EXISTING COUNTOUR AND ELEVATION PER USGS TOPOGRAPHIC MAP
	EXISTING FENCE
W	EXISTING WELL
SS	APPROXIMATE LOCATION OF EXISTING SEPTIC TANK AND LEACH FIELD
WT	EXISTING WATER TANK
EXERCISE PEN (P)	PROPOSED FACILITY IMPROVEMENT
	PROPOSED FENCE
FREE STALL BARN (P)	PROPOSED STRUCTURE OR IMPROVEMENT

ANIMAL HOUSING IDENTIFICATION LEGEND

3	EXISTING CORRAL NUMBER
4	EXISTING LOAFING BARN NUMBER
5	EXISTING FREE STALL BARN NUMBER
3	PROPOSED CORRAL NUMBER
4	PROPOSED LOAFING BARN NUMBER
5	PROPOSED FREE STALL BARN NUMBER

EXISTING BUILDING DIMENSIONS

BUILDING	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. FT.)
LOAFING 1	355	108	38,340
LOAFING 2	260	40	10,400
LOAFING 3	50	40	2,000
LOAFING 4	650	118	76,700
FREE STALL 1	IRREGULAR	IRREGULAR	39,400
FREE STALL 2	IRREGULAR	IRREGULAR	37,300
FREE STALL 3	625	125	78,125
FREE STALL 4	650	118	76,700
FREE STALL 5	650	118	76,700
FREE STALL 6	700	118	82,600
MILKING PARLOR	IRREGULAR	IRREGULAR	5,200
CALF HUTCHES	N/A	N/A	3,500
COMMODITY 1	IRREGULAR	IRREGULAR	4,800
COMMODITY 2	133	40	5,320
HAY BARN	140	80	11,200

SHEET 1 OF 1

SOUSA ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613
OAKDALE, CA 95361
PH: (209)238-3151
WWW.SOUSAENG.COM

SITE PLAN
TO ACCOMPANY CONDITIONAL USE PERMIT APPLICATION
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 9/15/2021
FILE: 01_site.dwg
JOB NO.: 2021-026

SYMBOL	REVISIONS DESCRIPTION	APPD.

APPLICATION QUESTIONNAIRE

Please Check all applicable boxes

APPLICATION FOR:

Staff is available to assist you with determining which applications are necessary

☐	General Plan Amendment	☐	Subdivision Map
☐	Rezone	☐	Parcel Map
☒	Use Permit	☐	Exception
☐	Variance	☐	Williamson Act Cancellation
☐	Historic Site Permit	☐	Other _____

PLANNING STAFF USE ONLY:

Application No(s): PLN 2021-0087

Date: 9-16-2021

S 03 T 6S R 9E

GP Designation: Agriculture.

Zoning: A-2-40

Fee: 4761 $

Receipt No. 1644

Received By: A.A.

Notes: _____

In order for your application to be considered COMPLETE, please answer all applicable questions on the following pages, and provide all applicable information listed on the checklist on pages i – v. Under State law, upon receipt of this application, staff has 30 days to determine if the application is complete. We typically do not take the full 30 days. It may be necessary for you to provide additional information and/or meet with staff to discuss the application. Pre-application meetings are not required, but are highly recommended. An incomplete application will be placed on hold until all the necessary information is provided to the satisfaction of the requesting agency. An application will not be accepted without all the information identified on the checklist.

Please contact staff at (209) 525-6330 to discuss any questions you may have. Staff will attempt to help you in any way we can.

PROJECT INFORMATION

PROJECT DESCRIPTION: (Describe the project in detail, including physical features of the site, proposed improvements, proposed uses or business, operating hours, number of employees, anticipated customers, etc. – Attach additional sheets as necessary)

Please note: A detailed project description is essential to the reviewing process of this request. In order to approve a project, the Planning Commission or the Board of Supervisors must decide whether there is enough information available to be able to make very specific statements about the project. These statements are called "Findings". It is your responsibility as an applicant to provide enough information about the proposed project, so that staff can recommend that the Commission or the Board make the required Findings. Specific project Findings are shown on pages 17 – 19 and can be used as a guide for preparing your project description. (If you are applying for a Variance or Exception, please contact staff to discuss special requirements).

The proposed project will expand the existing dairy facility herd size from 1,035 combined milk and dry cows and 950 support stock (1,985 total animals) to 2,300 combined milk and dry cows (2,000 milk and 300 dry) and 1,690 support stock (3,990 total a animals). The project will also involve the construction of three (3) new animal housing structures totaling 236,000 square feet.

PROJECT SITE INFORMATION

Complete and accurate information saves time and is vital to project review and assessment. Please complete each section entirely. If a question is not applicable to your project, please indicated this to show that each question has been carefully considered. Contact the Planning & Community Development Department Staff, 1010 10th Street – 3rd Floor, (209) 525-6330, if you have any questions. Pre-application meetings are highly recommended.

ASSESSOR'S PARCEL NUMBER(S): **Book** 057 **Page** 004 **Parcel** 013

Additional parcel numbers: _____

Project Site Address or Physical Location: _____

_____

Property Area: Acres: 79.7 or Square feet: _____

Current and Previous Land Use: (Explain existing and previous land use(s) of site for the last ten years)

Property is an existing dairy facility and has been a dairy facility for more than the last thirty (30) years.

List any known previous projects approved for this site, such as a Use Permit, Parcel Map, etc.: (Please identify project name, type of project, and date of approval)

The existing dairy facility has an existing Conditional Use Permit.

_____

Existing General Plan & Zoning: General Plan : Agriculture / Zoning: A-2-40

Proposed General Plan & Zoning: n/a (no General Plan or Zoning changes are proposed)
(if applicable)

ADJACENT LAND USE: (Describe adjacent land uses within 1,320 feet (1/4 mile) and/or two parcels in each direction of the project site)

East: Dairy

West: Irrigated Agriculture / Dairy

North: Rural Residential / Irrigated Agriculture

South: Irrigated Agriculture / Dairy

WILLIAMSON ACT CONTRACT:

Yes ☒ **No** ☐

Is the property currently under a Williamson Act Contract?
Contract Number: 1973-1344

If yes, has a Notice of Non-Renewal been filed?

Date Filed: Notice has not been filed.

Yes ☐ No ☒ Do you propose to cancel any portion of the Contract?

Yes ☐ No ☒ Are there any agriculture, conservation, open space or similar easements affecting the use of the project site. (Such easements do not include Williamson Act Contracts)

If yes, please list and provide a recorded copy: _____

_____

SITE CHARACTERISTICS: (Check one or more) Flat ☒ Rolling ☐ Steep ☐

VEGETATION: What kind of plants are growing on your property? (Check one or more)

Field crops ☒ Orchard ☐ Pasture/Grassland ☐ Scattered trees ☐

Shrubs ☐ Woodland ☐ River/Riparian ☐ Other ☐

Explain Other: _____

Yes ☐ No ☒ Do you plan to remove any trees? (If yes, please show location of trees planned for removal on plot plan and provide information regarding transplanting or replanting.)

GRADING:

Yes ☒ No ☐ Do you plan to do any grading? (If yes, please indicate how many cubic yards and acres to be disturbed. Please show areas to be graded on plot plan.) Approximately 8,700 cubic yards and 10 acres are expected to be disturbed during construction of the 5 proposed buildings.

STREAMS, LAKES, & PONDS:

Yes ☐ No ☒ Are there any streams, lakes, ponds or other watercourses on the property? (If yes, please show on plot plan)

Yes ☐ No ☒ Will the project change any drainage patterns? (If yes, please explain – provide additional sheet if needed) _____

_____

Yes ☐ No ☒ Are there any gullies or areas of soil erosion? (If yes, please show on plot plan)

Yes ☐ No ☒ Do you plan to grade, disturb, or in any way change swales, drainages, ditches, gullies, ponds, low lying areas, seeps, springs, streams, creeks, river banks, or other area on the site that carries or holds water for any amount of time during the year? (If yes, please show areas to be graded on plot plan)

Please note: If the answer above is yes, you may be required to obtain authorization from other agencies such as the Corps of Engineers or California Department of Fish and Game.

STRUCTURES:

Yes ☒ **No** ☐ Are there structures on the site? (If yes, please show on plot plan. Show a relationship to property lines and other features of the site.

Yes ☒ **No** ☐ Will structures be moved or demolished? (If yes, indicate on plot plan.)

Yes ☒ **No** ☐ Do you plan to build new structures? (If yes, show location and size on plot plan.)

Yes ☐ **No** ☒ Are there buildings of possible Historical significance? (If yes, please explain and show location and size on plot plan.) _____

PROJECT SITE COVERAGE:

Existing Building Coverage: 312,285 Sq. Ft.

Proposed Building Coverage: 236,000 Sq. Ft.

Landscaped Area: 0 Sq. Ft.

Paved Surface Area: 256,070 Sq. Ft.

BUILDING CHARACTERISTICS:

Size of new structure(s) or building addition(s) in gross sq. ft.: (Provide additional sheets if necessary)

Three (3) new structures totaling 236,000 square feet.

Number of floors for each building: All proposed structures will be single story.

Building height in feet (measured from ground to highest point): (Provide additional sheets if necessary)

Maximum building heights will be approximately 25'.

Height of other appurtenances, excluding buildings, measured from ground to highest point (i.e., antennas, mechanical equipment, light poles, etc.): (Provide additional sheets if necessary)

There are no proposed non-building structures.

Proposed surface material for parking area: (Provide information addressing dust control measures if non-asphalt/concrete material to be used)

No new parking areas are proposed. Existing parking areas consist of asphalt concrete and portland cement concrete.

UTILITIES AND IRRIGATION FACILITIES:

Yes ☒ **No** ☐ Are there existing public or private utilities on the site? Includes telephone, power, water, etc. (If yes, show location and size on plot plan)

Who provides, or will provide the following services to the property?

Electrical: Turlock Irrigation District

Sewer*: Private on-site septic system

Telephone: AT&T

Gas/Propane: Suburban Propane

Water**: Private on-site well

Irrigation: Turlock Irrigation District

***Please Note: A "will serve" letter is required if the sewer service will be provided by City, Sanitary District, Community Services District, etc.**

****Please Note: A "will serve" letter is required if the water source is a City, Irrigation District, Water District, etc., and the water purveyor may be required to provide verification through an Urban Water Management Plan that an adequate water supply exists to service your proposed development.**

Will any special or unique sewage wastes be generated by this development other than that normally associated with resident or employee restrooms? Industrial, chemical, manufacturing, animal wastes? (Please describe:)

The dairy facility involves the generation of animal waste from the herd. Waste will be collected and managed by the existing collection and containment system. Details of the collection and management of waste are included in the facility's Waste Management Plan (WMP) and Nutrient Management Plan (NMP), copies of which are included with this application.

Please Note: Should any waste be generated by the proposed project other than that normally associated with a single family residence, it is likely that Waste Discharge Requirements will be required by the Regional Water Quality Control Board. Detailed descriptions of quantities, quality, treatment, and disposal may be required.

Yes ☒ **No** ☐ Are there existing irrigation, telephone, or power company easements on the property? (If yes, show location and size on plot plan.)

Yes ☐ **No** ☒ Do the existing utilities, including irrigation facilities, need to be moved? (If yes, show location and size on plot plan.)

Yes ☐ **No** ☒ Does the project require extension of utilities? (If yes, show location and size on plot plan.)

AFFORDABLE HOUSING/SENIOR:

Yes ☐ **No** ☒ Will the project include affordable or senior housing provisions? (If yes, please explain)

RESIDENTIAL PROJECTS: (Please complete if applicable – Attach additional sheets if necessary)

Total No. Lots:_____ Total Dwelling Units:_____ Total Acreage:_____

Net Density per Acre: _____ Gross Density per Acre: _____

(complete if applicable)	Single Family	Two Family Duplex	Multi-Family Apartments	Multi-Family Condominium/ Townhouse
Number of Units:				
Acreage:				

COMMERCIAL, INDUSTRIAL, MANUFACTURING, RETAIL, USE PERMIT, OR OTHER PROJECTS: (Please complete if applicable – Attach additional sheets if necessary)

Square footage of each existing or proposed building(s): See chart on Site Plan.

Type of use(s): Existing structures are for animal housing, milking, and feed storage. Proposed structures are for animal housing.

Days and hours of operation: Seven days per week, 20-24 hours per day (milk parlor will operate approximately 20 hours per day).

Seasonal operation (i.e., packing shed, huller, etc.) months and hours of operation: Operation is year-round and not seasonal.

Occupancy/capacity of building: Proposed buildings are for animal housing and not employees or customers.

Number of employees: (Maximum Shift): 6 (Minimum Shift): 6

Estimated number of daily customers/visitors on site at peak time: n/a

Other occupants: 2 other vendors or service providers might be on site at any given time (i.e., veterinarian, feed delivery, tallow service, etc.)

Estimated number of truck deliveries/loadings per day: 6 feed truck deliveries per week; 3 milk truck loads per day

Estimated hours of truck deliveries/loadings per day: 2 hours

Estimated percentage of traffic to be generated by trucks: 35%

Estimated number of railroad deliveries/loadings per day: There will be no railroad deliveries.

Square footage of:

Office area: _____ Warehouse area: _____

Sales area: _____ Storage area: _____

Loading area: _____ Manufacturing area: _____

Other: (explain type of area) see chart on Site Plan. sq. ft.; Equipment storage: 200 sq. ft.

Yes ☒ No ☐ Will the proposed use involve toxic or hazardous materials or waste? (Please explain)

The proposed use involves the use of small amounts of materials that may be considered hazardous, such as cleaning chemicals in the milk parlor and diesel and gasoline fuel for equipment. The use will not generate hazardous waste but will generate animal waste. The management of this waste is described in detail in the site's Waste Management Plan (WMP), a copy of which is included with this application.

ROAD AND ACCESS INFORMATION:

What County road(s) will provide the project's main access? (Please show all existing and proposed driveways on the plot plan)

Main access to the project is provided by South Central Avenue.

Yes ☒ No ☐ Are there private or public road or access easements on the property now? (If yes, show location and size on plot plan)

Yes ☐ No ☒ Do you require a private road or easement to access the property? (If yes, show location and size on plot plan)

Yes ☐ No ☒ Do you require security gates and fencing on the access? (If yes, show location and size on plot plan)

Please Note: Parcels that do not front on a County-maintained road or require special access may require approval of an Exception to the Subdivision Ordinance. Please contact staff to determine if an exception is needed and to discuss the necessary Findings.

STORM DRAINAGE:

How will your project handle storm water runoff? (Check one) ☒ Drainage Basin ☐ Direct Discharge ☐ Overland

☐ Other: (please explain) _____

If direct discharge is proposed, what specific waterway are you proposing to discharge to? _____

_____

Please Note: If direct discharge is proposed, you will be required to obtain a NPDES permit from the Regional Water Quality Control Board, and must provide evidence that you have contacted them regarding this proposal with your application.

EROSION CONTROL:

If you plan on grading any portion of the site, please provide a description of erosion control measures you propose to implement.

During construction of proposed strucures standard Best Management Practices will be implemented, such as

construction water for dust control; fiber rolls and gravel bags for sediment control; and stockpile management.

Please note: You may be required to obtain an NPDES Storm Water Permit from the Regional Water Quality Control Board and prepare a Storm Water Pollution Prevention Plan.

ADDITIONAL INFORMATION:

Please use this space to provide any other information you feel is appropriate for the County to consider during review of your application. (Attach extra sheets if necessary)

_____

_____

_____

_____

_____

_____

_____

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD - STORM WATER PERMIT REQUIREMENTS

Storm water discharges associated with construction activity are a potentially significant source of pollutants. The most common pollutant associated with construction is sediment. Sediment and other construction related wastes can degrade water quality in creeks, rivers, lakes, and other water bodies. In 1992, the State Water Resources Control Board adopted a statewide General Permit for all storm water discharges associated with construction activity that disturbs five or more acres of land. Effective March 10, 2003, all construction sites disturbing one or more acres of land will be required to obtain permit coverage. The General Permit is intended to ensure that construction activity does not impact water quality.

You need to obtain General Permit coverage if storm water discharges from your site and either of the following apply:

- Construction activities result in one or more acres of land disturbance, including clearing, grading, excavating, staging areas, and stockpiles or;
- The project is part of a larger common plan of development or sale (e.g., subdivisions, group of lots with or without a homeowner's association, some lot line adjustments) that result in one or more acres of land disturbance.

It is the applicants responsibility to obtain any necessary permit directly from the California Regional Water Quality Control Board. The applicant(s) signature on this application form signifies an acknowledgment that this statement has been read and understood.

STATE OF CALIFORNIA HAZARDOUS WASTE AND SUBSTANCES SITES LIST (C.G.C. § 65962.5)

Pursuant to California Government Code Section 65962.5(e), before a local agency accepts as complete an application for any development project, the applicant shall consult the latest State of California Hazardous Waste and Substances Sites List on file with the Planning Department and submit a signed statement indicating whether the project is located on a site which is included on the List. The List may be obtained on the California State Department of Toxic Substances Control web site (http://www.envirostor.dtsc.ca.gov/public).

The applicant(s) signature on this application form signifies that they have consulted the latest State of California Hazardous Waste and Substances List on file with the Planning Department, and have determined that the project site ☐ **is or** ☒ **is not** included on the List.

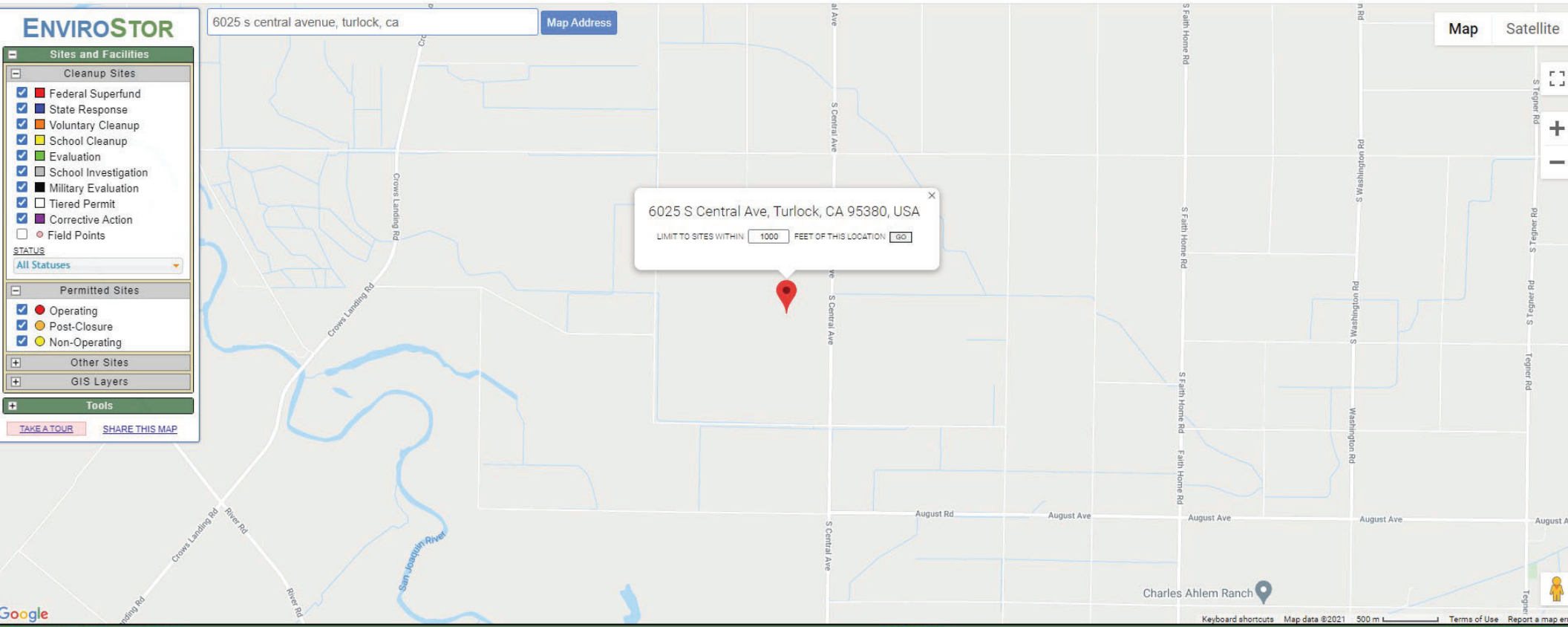
Date of List consulted: 8/11/2021

Source of the listing: CA Dept. of Toxic Substances Control Envirostor Database

(To be completed only if the site is included on the List)

ASSESSOR'S INFORMATION WAIVER

The property owner(s) signature on this application authorizes the Stanislaus County Assessor's Office to make any information relating to the current owners assessed value and pursuant to R&T Code Sec. 408, available to the Stanislaus County Department of Planning and Community Development.



SITES CURRENTLY VISIBLE ON MAP — 0 SITES LISTED — EXPORT THIS LIST TO EXCEL

PROJECT NAME	STATUS	PROJECT TYPE	ADDRESS	CITY

Waste Management Plan
For
Joe Jordao Dairy
Stanislaus County, CA

Prepared For:
Joe Jordao Dairy
6025 S. Central Avenue
Turlock, CA 95380

SOUSA
ENGINEERING
INFRASTRUCTURE-DEVELOPMENT-
AGRICULTURE

SOUSA
ENGINEERING
INFRASTRUCTURE-DEVELOPMENT-
AGRICULTURE

PO BOX 1613
OAKDALE, CA 95361
PHONE: (209)238-3151
www.sousaeng.com

WASTE MANAGEMENT PLAN
FOR
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

TABLE OF CONTENTS

1. NARRATIVE

INTRODUCTION

This Waste Management Plan (WMP) has been prepared at the request of the subject dairy's owner and/or operator to comply with Section H.1.b., *Waste Management Plan,* of Order No. R5-2013-0122, *Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies,* (Order) adopted by the California Regional Water Quality Control Board (CRWQCB) Central Valley Region. Per the requirements set forth by the aforementioned Order it is the intent of this plan to provide an evaluation of the existing milk cow facility's design, construction, operation, and maintenance for flood protection and waste containment and to determine whether the facility complies with Prohibition A.14, General Specifications B.1 through B.3, Pond Specifications C.1 through C.3, and Production Area Specifications D.1, D.4, and D.5. Should the evaluation provided by this plan determine that the existing facility does not comply with the requirements of the Order, then modifications will be proposed for the facility that will bring it into compliance and those modifications shall be made a part of this plan.

COMPLIANCE CRITERIA

As required by the Order this plan must evaluate the existing facility's compliance with Prohibition A.14, General Specifications B.1 through B.3, Pond Specifications C.1 through C.3, and Production Area Specifications D.1, D.4, and D.5. The criteria set forth by this Prohibition and General Specifications are as follows:

Prohibition A.14: *"The direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells is prohibited."*

The water, irrigation, and wastewater systems of this facility have been examined by a Registered Civil Engineer licensed in the State of California. It has been determined and hereby documented that there are no existing conditions on the project site that would allow for direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells.

General Specification B.1: *"The existing milk cow dairy shall have facilities that are designed, constructed, operated, and maintained to retain all facility process wastewater generated during the storage period (maximum period of time anticipated between land application of process wastewater), together with all precipitation on and drainage through manured areas, up to and including during a 25-year, 24-hour storm (see item II of Attachment B, which is attached to and made part of this Order)."*

Section 3.a. of this plan contains calculations that demonstrate the facility's ability to retain all process wastewater and precipitation generated by the 25-year, 24-hour storm. The tributary areas for storm drain runoff were determined by utilizing field measurements and aerial photography. The existing Wastewater Basins (WW) were field measured.

General Specification B.2: **"***In the Sacramento and San Joaquin River Basins, ponds and manured areas at existing milk cow dairies in operation on or before 27 November 1984 shall be protected from inundation or washout by overflow from any stream channel during 20-year peak stream flows. Existing milk cow dairies that were in operation on or before 27 November 1984 and that are protected against 100-year peak stream flows must continue to provide such protection. Existing milk cow dairies built or expanded after 27 November 1984 shall be protected against 100-year peak stream flows (Title 27 Section 22562(c))."*

The relevant Flood Zone Map published by the Federal Emergency Management Agency (FEMA) is Panel No. 06099C0800E. This map indicates that the existing dairy facility is in Zone X and is thus outside of the 1% annual chance, or 100-year, floodplain.

General Specification B.3: **"***In the Tulare Lake Basin, existing milk cow dairies that existed as of 25 July 1975 shall be protected from inundation or washout from overflow from any stream channel during 20-year peak stream flows and existing milk cow dairies constructed after 25 July 1975 shall be protected from 100-year peak stream flows. Existing milk cow dairies expanded after 8 December 1984 shall be protected from 100-year peak stream flows."*

As the facility is in the San Joaquin River Basin this specification is not applicable.

Pond Specification C.1: *"The level of waste in the process wastewater retention ponds shall be kept a minimum of two (2) feet from the top of each aboveground embankment and a minimum of one (1) foot from the ground surface of each belowground pond. Less freeboard may be approved by the Executive Officer when a Civil Engineer who is registered pursuant to California law, or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work, demonstrates that the structural integrity of the pond will be maintained with the proposed freeboard.*

2' of freeboard has been assigned to the wastewater retention ponds WWS1 and WWS2 as all have been constructed above grade.

Pond Specification C.2: *"Ponds shall be managed and maintained to prevent breeding of mosquitoes and other vectors. In particular,*

a. Small coves and irregularities shall not be allowed around the perimeter of the water surface;
b. Weeds shall be minimized through control of water depth, harvesting, or other appropriate method;
c. Dead algae, vegetation, and debris shall not accumulate on the water surface; and
d. Management shall be in accordance with the requirements of the Mosquito Abatement District."

An Operations and Maintenance Plan addressing these items has been included in Section 3.a. and is hereby made a part of this plan.

Pond Specification C.3: "*Ponds designated to contain the 25-year, 24-hour storm event runoff must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation from a 25-year, 24-hour storm event."*

A marker meeting this specification will be installed in all the facility's ponds by the compliance date.

Production Area Specification D.1: *"All dirt or unpaved corrals shall be graded to promote drainage. Cow washing areas shall be paved (concrete or equivalent) and sloped to a drain. Water troughs, permanent feed racks, and mangers shall have paved access, and water troughs shall have a drain to carry water away from the corrals. (Cal Code Regs., title 3, § 646.1.)."*

Dirt or unpaved areas are graded to promote drainage.

All cow washing areas are paved with Portland Cement Concrete (PCC) and sloped to a drain which conveys wastewater to the retention ponds.

Water troughs, feed racks, and mangers have access paved with PCC. Water troughs have drains which convey wastewater to the retention ponds.

Production Area Specification D.4: *"All roofs, buildings, and non-manured areas located in the production area of the existing milk cow dairy shall be constructed or otherwise designed so that clean rainwater is diverted away from manured areas and waste containment facilities, unless such drainage is fully contained in the wastewater retention ponds. (Title 27, § 22562(b).)."*

The production area is designed such that rainwater that is not diverted away from manured areas and waste containment facilities is collected and conveyed to the wastewater retention ponds.

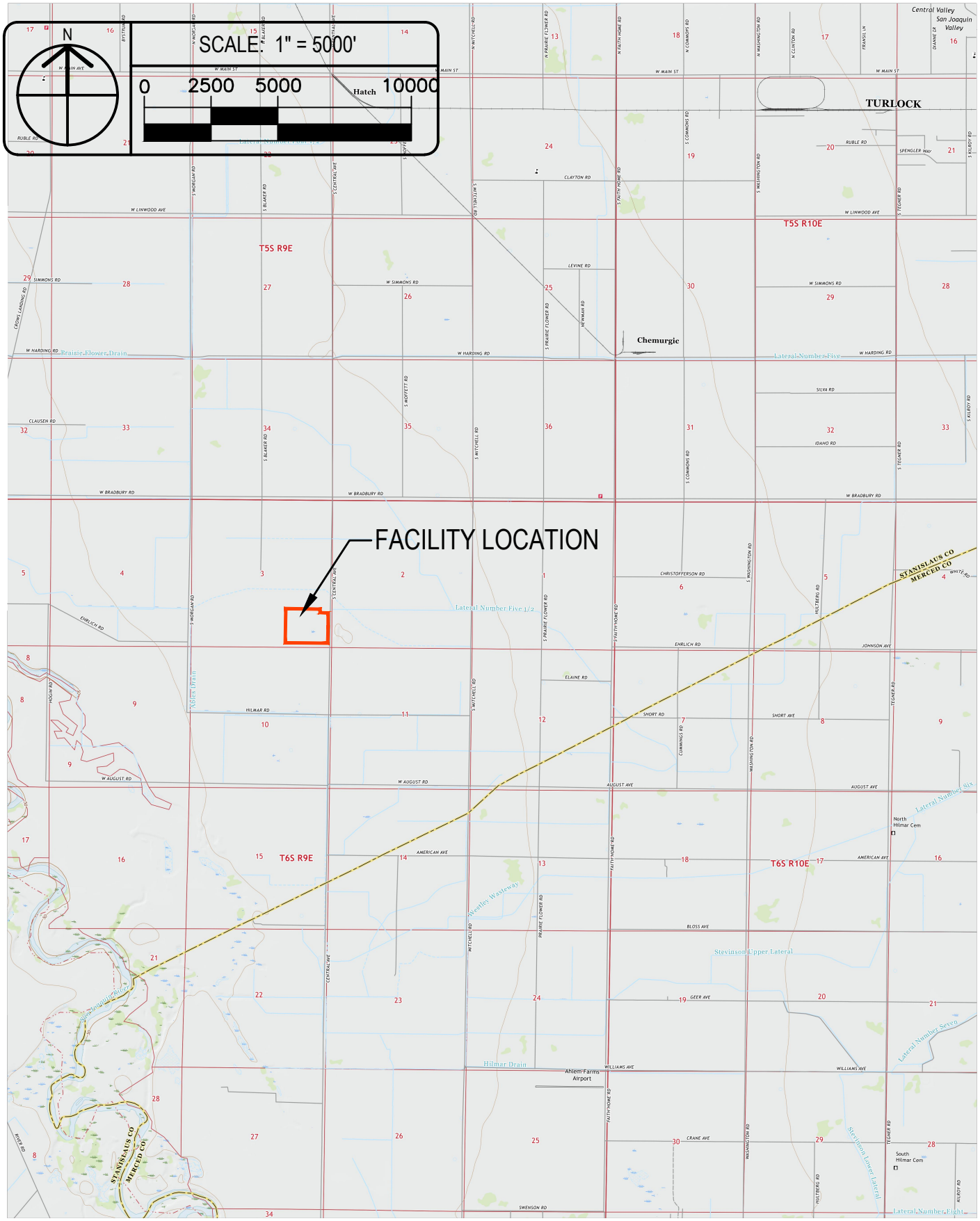
Production Area Specification D.5: *"Roof drainage from barns, milk houses, or shelters shall not drain into the corrals unless the corrals are properly graded and drained. (Cal Code Regs., title 3, § 661.)."*

Roof drainage is collected by gutters, downspouts, and drains and is conveyed to the wastewater retention ponds or diverted to adjacent fields as indicated in the calculations in Section 3.a.

RESULTS AND CONCLUSIONS

After conducting a visual inspection of the site, obtaining herd and facility information from the operator, performing the required measurements of facility improvements, and performing the calculations included in Section 3.a. it has been determined that the design, construction, operation, and waste containment of this facility are in compliance with Prohibition A.14 and General Specifications B.1 through B.3 and B.10 through B.16 of Order No. R5-2013-0122, *Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies.*

2. EXHIBITS



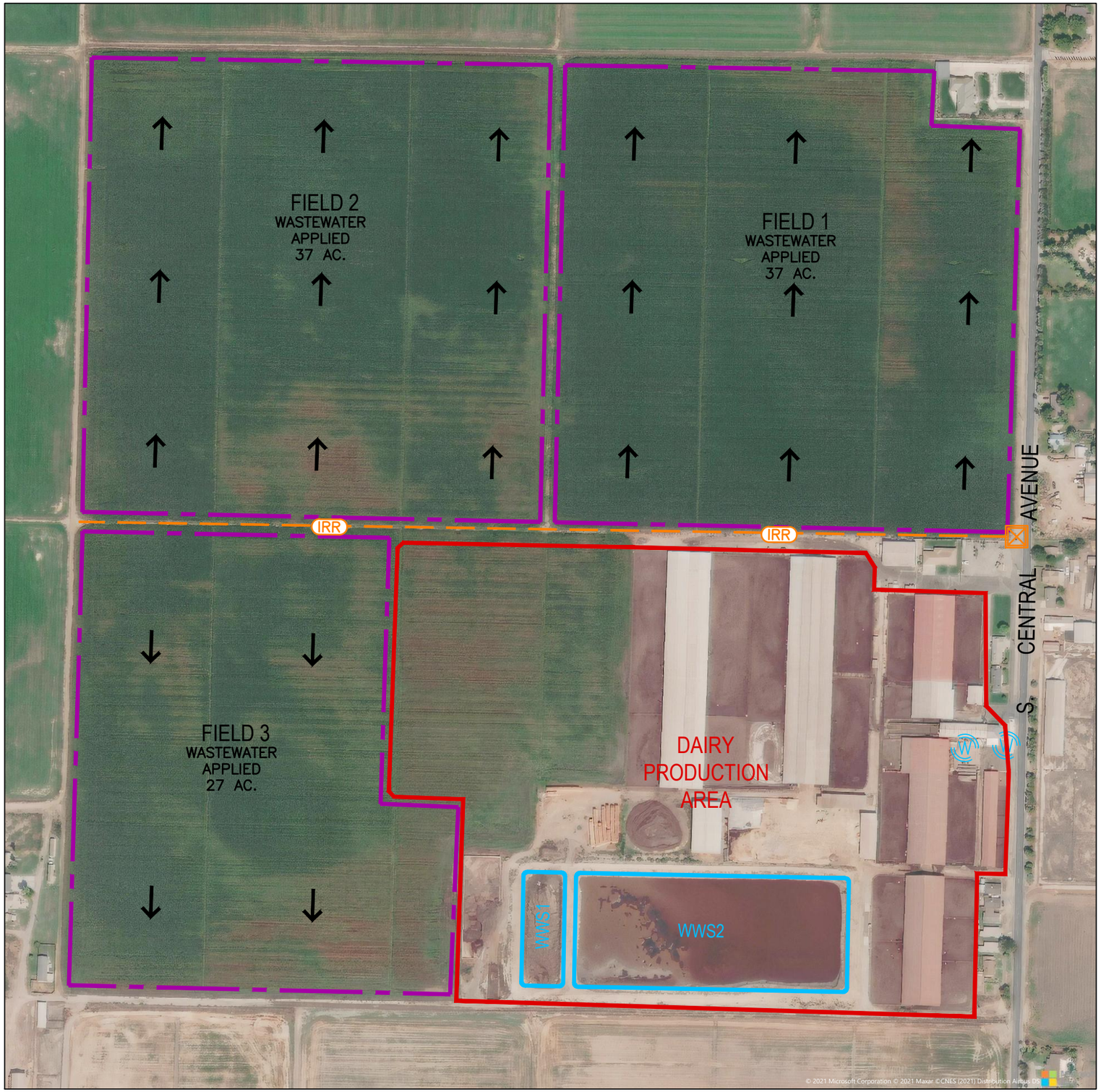
SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE

PO BOX 1613
OAKDALE, CA 95361

PH: (209)238-3151
WWW.SOUSAENG.COM

VICINITY MAP
JOE JORDAO DAIRY

STANISLAUS COUNTY, CA



LEGEND

- LAND APPLICATION AREA
- IRRIGATION LINE (IRR)
- IRRIGATION CONTROL BOX
- DOMESTIC WELL
- GENERAL SLOPE AND DIRECTION OF FLOW

DISCHARGE POINTS			
	LAND APP. AREA	LATITUDE	LONGITUDE
	FIELD 1	N37° 26' 22.14"	W120° 57' 38.83"
	FIELD 2	N37° 26' 22.50"	W120° 57' 54.70"
	FIELD 3	N37° 26' 09.80"	W120° 57' 57.30"

N

SCALE: 1" = 300'

0 150 300 600

SHEET 2 OF 8

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613 OAKDALE, CA 95361
PH: (209)238-3151 WWW.SOUSAENG.COM

SITE MAP
LAND APPLICATION AREAS
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 8/17/2021
FILE: 02_site.dwg
JOB NO.: 2021-026

SYMBOL	REVISIONS DESCRIPTION	APPD.

W. HARDING ROAD

CARPENTER ROAD

CROWS LANDING ROAD

SAN JOAQUIN RIVER

W. BRADBURY ROAD

CARPENTER
SOLID MANURE
APPLIED
260 AC.

CROWS
LANDING
SOLID MANURE
APPLIED
71 AC.

IRR

LEGEND

LAND APPLICATION AREA

IRRIGATION LINE

GENERAL SLOPE AND DIRECTION OF FLOW

DISCHARGE POINTS		
LAND APP. AREA	LATITUDE	LONGITUDE
CARPENTER	N37° 27' 23.40"	W121° 01' 32.71"
CROWS LANDING	N37° 26' 45.80"	W121° 00' 21.08"

N

SCALE: 1" = 800'

0 400 800 1600

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613
OAKDALE, CA 95361
PH: (209)238-3151
WWW.SOUSAENG.COM

SITE MAP
LAND APPLICATION AREAS
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 8/17/2021
FILE: 03_site.dwg
JOB NO.: 2021-026

REVISIONS		
SYMBOL	DESCRIPTION	APPD.

LEGEND

- LAND APPLICATION AREA
- IRRIGATION LINE
- IRRIGATION CONTROL BOX
- GENERAL SLOPE AND DIRECTION OF FLOW

DISCHARGE POINTS		
LAND APP. AREA	LATITUDE	LONGITUDE
HOGAIN SOUTH	N37° 24' 50.81"	W120° 59' 17.92"

N

SCALE: 1" = 800'

0 400 800 1600

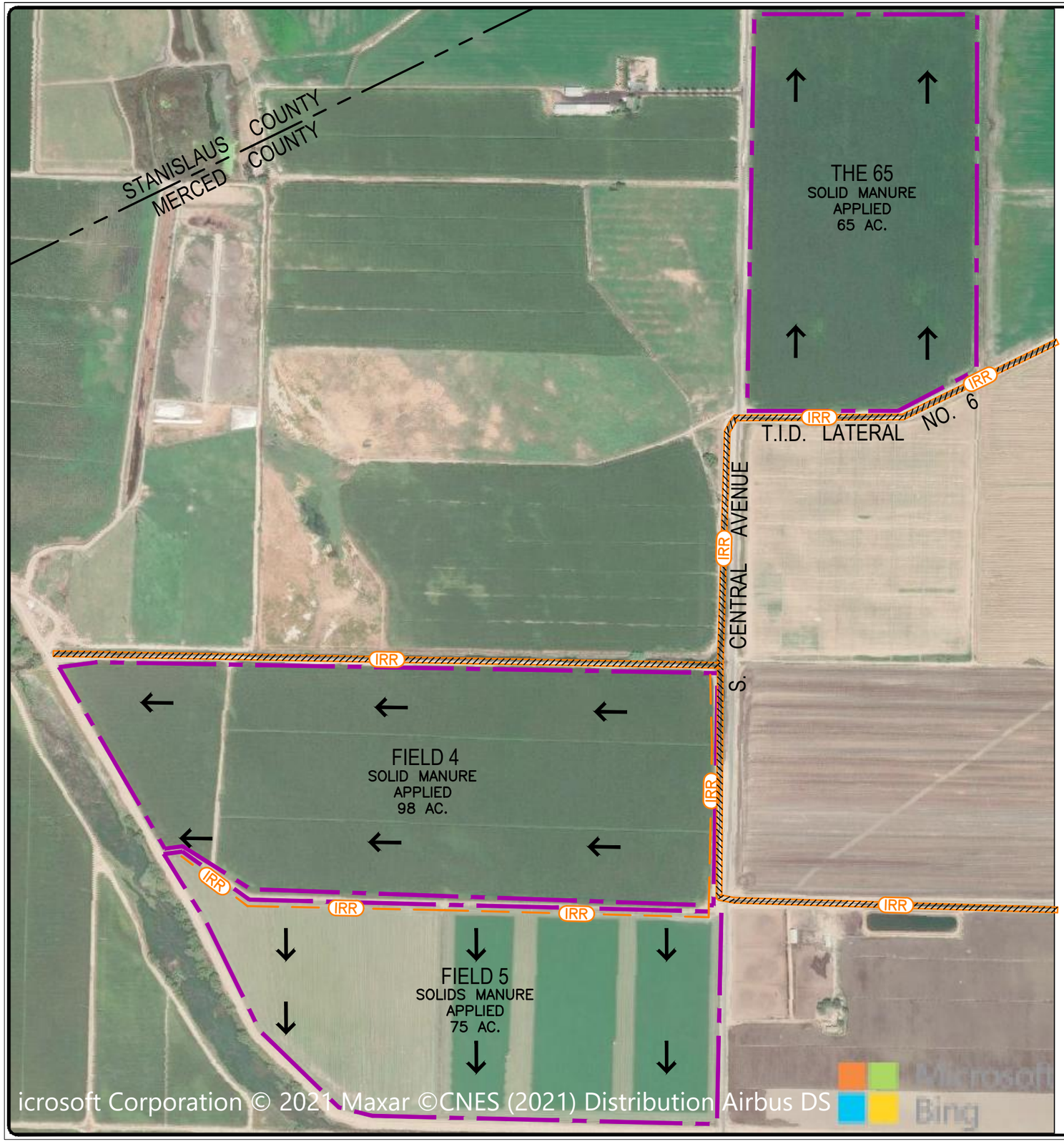
SHEET 4 OF 8

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PH: (209)238-3151
WWW.SOUSAENG.COM
PO BOX 1613
OAKDALE, CA 95361

SITE MAP
LAND APPLICATION AREAS
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 8/17/2021
FILE: 04_site.dwg
JOB NO.: 2021-026

REVISIONS		
SYMBOL	DESCRIPTION	APPD.



LEGEND

- LAND APPLICATION AREA
- IRRIGATION LINE
- IRRIGATION DITCH
- IRRIGATION CONTROL BOX
- GENERAL SLOPE AND DIRECTION OF FLOW

DISCHARGE POINTS			
	LAND APP. AREA	LATITUDE	LONGITUDE
	THE 65	N37° 24' 17.70"	W120° 57' 24.16"
	FIELD 4	N37° 23' 45.71"	W120° 57' 54.74"
	FIELD 5	N37° 23' 33.52"	W120° 57' 49.80"

N

SCALE: 1" = 600'

0 300 600 1200

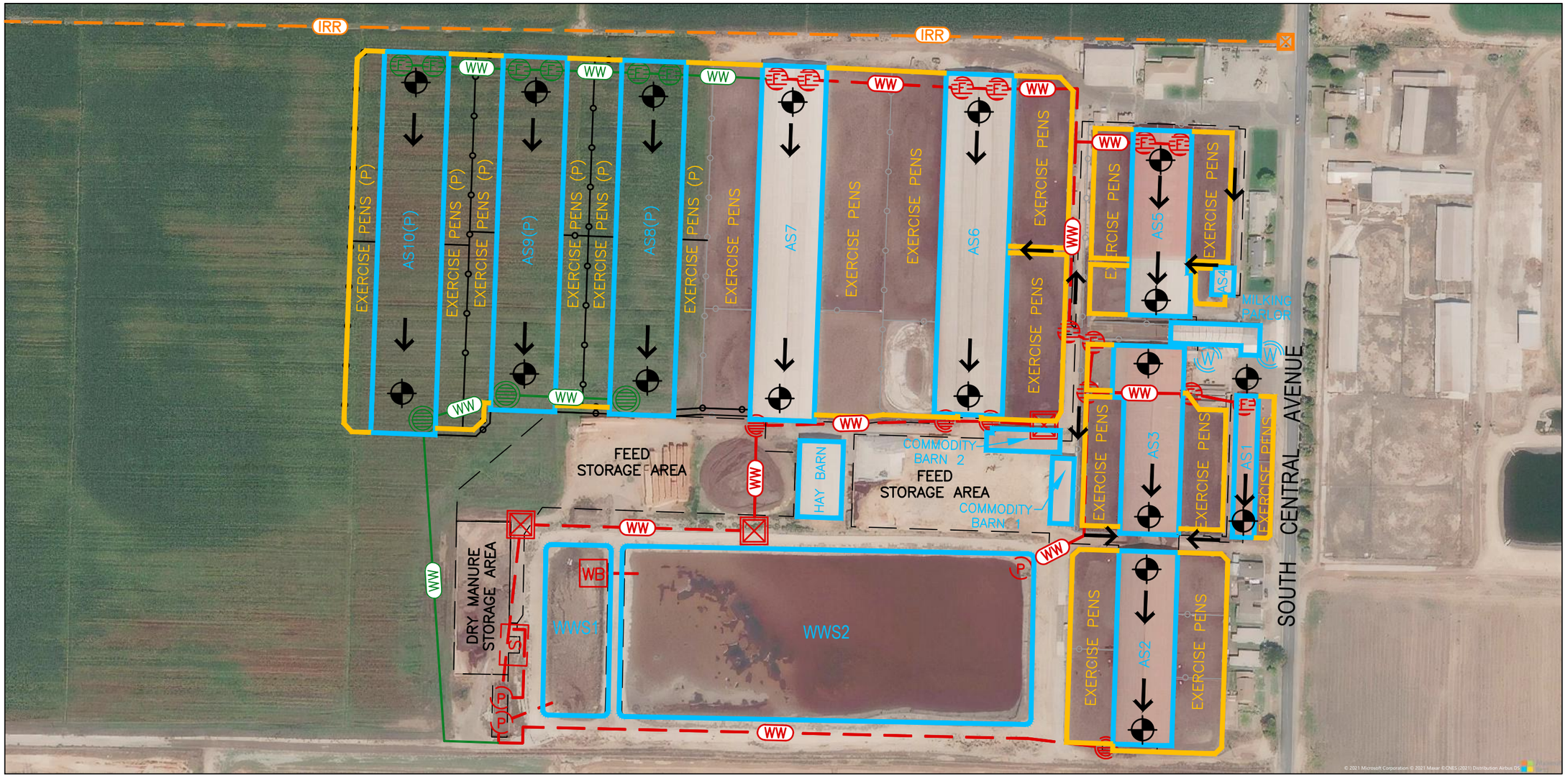
SHEET 5 OF 8

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613 OAKDALE, CA 95361
PH: (209)238-3151 WWW.SOUSAENG.COM

SITE MAP
LAND APPLICATION AREAS
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 8/17/2021
FILE: 05_site.dwg
JOB NO.: 2021-026

SYMBOL	REVISIONS DESCRIPTION	APPD.



LEGEND

- ROOF AREA
- (P) ROOF AREA (PROPOSED)
- EXERCISE PENS
- (P) EXERCISE PENS (PROPOSED)
- IRR IRRIGATION LINE
- WW WASTEWATER LINE
- WW WASTEWATER LINE (PROPOSED)
- P WASTEWATER SUMP WITH PUMP
- S MECHANICAL SEPARATOR
- FLUSH SYSTEM DRAIN INLET
- FLUSH SYSTEM DRAIN INLET (PROPOSED)
- FE FLUSH SYSTEM DISCHARGE VALVE
- FE FLUSH SYSTEM DISCHARGE VALVE (PROPOSED)
- W WELL
- GENERAL SLOPE AND DIRECTION OF FLOW
- INSPECTION POINT FOR MONITORING ANIMAL HOUSING AND FLUSH WATER CONVEYANCE SYSTEM

N

SCALE: 1" = 200'

0 100 200 400

SHEET 6 OF 8

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613
OAKDALE, CA 95361
PH: (209)238-3151
WWW.SOUSAENG.COM

SITE MAP - PRODUCTION AREA

JOE JORDAO DAIRY

STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 7/27/2021
FILE: 06_dpa.dwg
JOB NO.: 2021-026

SYMBOL	REVISIONS DESCRIPTION	APPD.

LEGEND

- ROOF AREA
- EARTHEN AREA
- IMPERVIOUS AREA

N

SCALE: 1" = 200'

0 100 200 400

SHEET 7 OF 8

SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PO BOX 1613
OAKDALE, CA 95361
PH: (209)238-3151
WWW.SOUSAENG.COM

PRODUCTION AREA HYDROLOGIC MAP

JOE JORDAO DAIRY

STANISLAUS COUNTY, CA

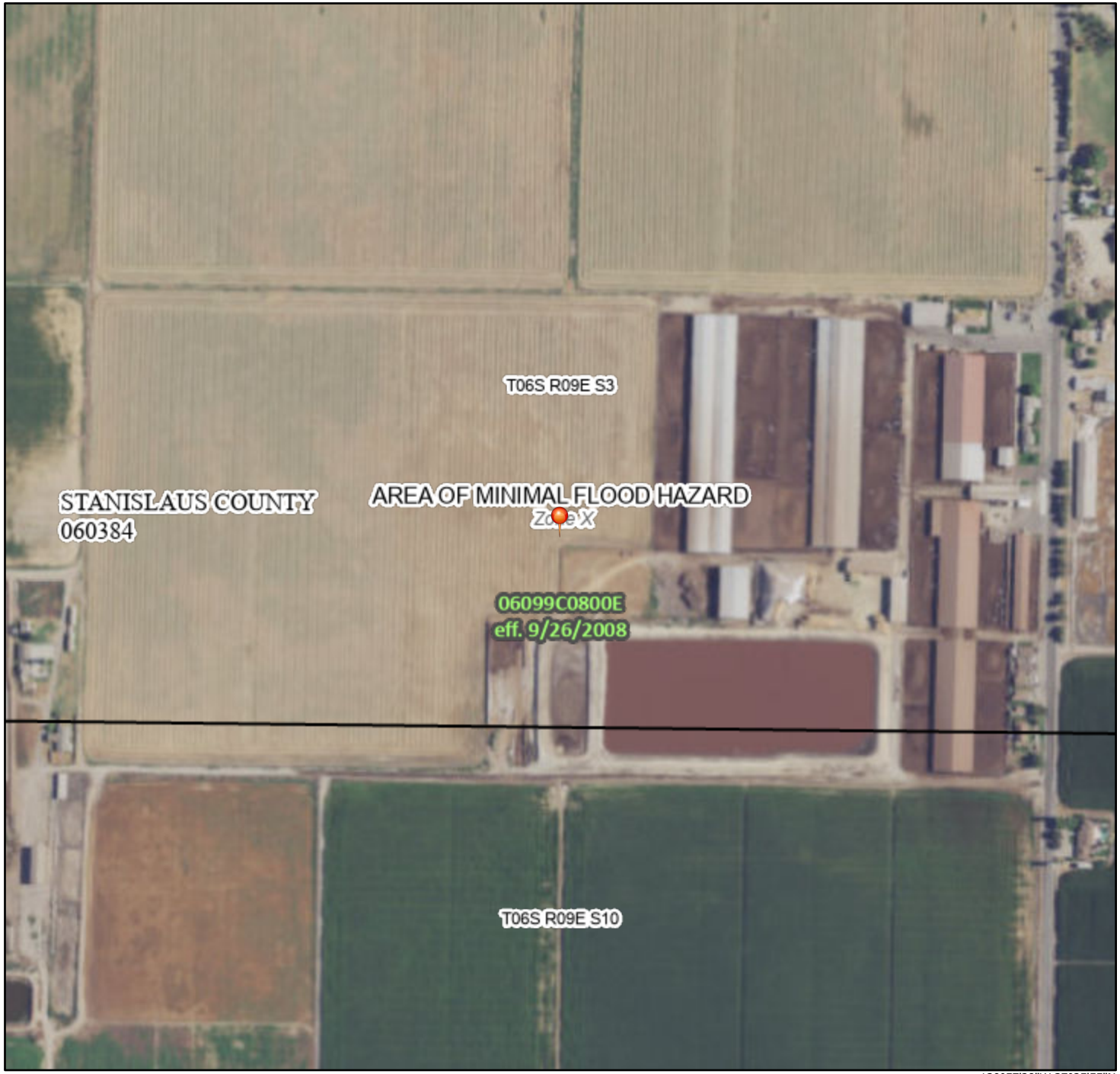
DRAWN BY: MS
DATE: 8/25/2021
FILE: 07_hydro.dwg
JOB NO.: 2021-026

SYMBOL	REVISIONS DESCRIPTION	APPD.

National Flood Hazard Layer FIRMette

FEMA

120°58'6"W 37°26'24"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

120°57'28"W 37°25'55"N

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 8/11/2021 at 6:46 PM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

3. DESIGN, CONSTRUCTION, OPERATION, AND MAINTENANCE DOCUMENTATION

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Joe Jordao Dairy

Physical address of dairy:

6025 S Central AVE	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

TRS Data and Coordinates:

6S	9E	3	Mt. Diablo	37° 26' 10.71" N	120° 57' 31.42" W
Township (T_)	Range (R_)	Section (S_)	Baseline meridian	Latitude (N)	Longitude (W)

Date facility was originally placed in operation: 04/01/2007

Regional Water Quality Control Board Basin Plan designation: San Joaquin River Basin

County Assessor Parcel Number(s) for dairy facility:

0057-0004-0013-0000

B. OPERATOR NAME: Jordao, Joe Telephone no.: (209) 656-8438 (Landline) (Cellular)

6025 S Central AVE	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

Operator should receive Regional Board correspondence (check): [X] Yes [ ] No

C. LEGAL OWNER NAME: Jordao, Joe Telephone no.: (209) 656-8438 (Landline) (Cellular)

6025 S Central AVE	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

Owner should receive Regional Board correspondence (check): [X] Yes [ ] No

D. CONTACT NAME: Sousa, Manny Telephone no.: (209) 238-3151 (Landline) (Cellular)

Title: Civil Engineer

P.O. Box 1613	Oakdale	CA	95361
Mailing Address Number and Street	City	State	Zip Code

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

HERD AND MILKING EQUIPMENT

A. HERD AND MILKING

The milk cow dairy is currently regulated under individual Waste Discharge Requirements.

Total number of milk and dry cows combined as a baseline value in response to the Report of Waste Discharge (ROWD) request of October, 2005:

2,500 milk and dry cows combined (regulatory review is required for any expansion)

Type of Animal	Present Count	Maximum Count	Daily Flush Hours	Avg Live Weight (lbs)
Milk Cows	2,000	2,000	22	1,400
Dry Cows	300	300	20	1,450
Bred Heifers (15-24 mo.)	500	500	20	900
Heifers (7-14 mo.)	800	800	20	600
Calves (4-6 mo.)	300	300	12	
Calves (0-3 mo.)	90	90	24	

Predominant milk cow breed: Jersey-Holstein Cross

Average milk production: 70 pounds per cow per day

Average number of milk cows per string sent to the milkbarn: 200 milk cows per string

Number of milkings per day: 2.0 milkings per day

Number of times milk tank is emptied/filled each day: 2.0 per day

Number of hours spent milking each day: 20.0 hours per day

B. MILKBARN EQUIPMENT AND FLOOR WASH

Bulk tank wash and sanitizing: 4.0 run cycles/wash

Bulk tank wash vat volume: 40 gallons/cycle

Bulk tank wash wastewater: 320.0 gallons/day

Pipeline wash and sanitizing: 4.0 run cycles/wash

Pipeline wash vat volume: 45 gallons/cycle

Pipeline wash wastewater: 360.0 gallons/day

Reused / recycled water is the source of parlor floor wash water: [X] Yes [ ] No

Milkbarn / parlor floor wash volume: 4,000 gallons/day

Plate coolers type: Well Water Cooled (Water Reused/Recycled)

Plate coolers volume: 32,558 gallons/day

Vacuum pumps / air compressors / chillers type: Well Water Cooled (Water Reused/Recycled)

Vacuum pumps / air compressors / chillers volume: 3,000 gallons/day

Milkbarn and equipment wastewater volume generated daily: 36,238 gallons/day

C. OTHER WATER USES

Reused/recycled water is the source of herd drinking water: [ ] Yes [X] No

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Bred Heifers (7-14 mo.)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number of cows drinking from reusable water:	0 *of 2,000*	0 *of 300*	0 *of 500*	0 *of 800*	0 *of 300*	0 *of 90*
Gallons per head per day:	0	0	0	0	0	0

Total reusable water consumed by herd: 0 gallons/day

Reused/recycled water is the source of sprinkler pen water: [X] Yes [ ] No

Number of sprinklers in the holding pen: 0 sprinklers

Duration of each sprinkler cycle: 0.1 minutes

Number of sprinkler pen runs/milking: 0 cycles/milking

Flow rate for each sprinkler head: 0.1 gallons/minute

Total sprinkler pen wastewater volume: 0 gallons/day

Total fresh water used in manure flush lane system(s): 0 gallons/day

D. MISCELLANEOUS EQUIPMENT

No miscellaneous equipment entered.

E. MILKBARN AND EQUIPMENT SUMMARY

Number of days in storage period: 120 days

Water available for reuse/recycle: 35,558 gallons/day

Recycled water reused: 4,000 gallons/day

Recycled water leaving system: 0 gallons/day

Reusable water balance: 31,558 gallons/day

Volume of milkbarn and equipment wastewater generated for storage period: 4,348,560 gallons/storage period

MANURE AND BEDDING SOLIDS

A. IMPORTED AND FACILITY GENERATED BEDDING

Bedding Type	Imported or Generated (tons)	Density (lbs/cu. ft.)	Applied Separation Efficiency (default)	Solids to Pond (cu. ft./period)
Facility generated bedding	290	40.0	50%	7,250
			Total:	7,250

B. SOLIDS SEPARATION PROCESS

Combined manure solids separation efficiency (weight basis): 40 %

Description of all solids separation equipment used in flushed lane manure management systems:

Sand Trap and Solid Manure Separator

C. MANURE AND BEDDING SOLIDS SUMMARY

	cubic feet		gallons	
	day	storage period	day	storage period
Manure generated by the herd (pre-separation):	6,093.80	731,257	45,584.82	5,470,179
Manure generated by the herd sent to pond(s):	4,684.61	562,153	35,043.31	4,205,197
Manure generated by the herd sent to dry lot(s):	666.33	79,960	4,984.50	598,140
Manure solids (herd) removed by separation:	359.62	43,154	2,690.13	322,815
Liquid component in separated solids not send to pond(s):	383.25	45,990	2,866.88	344,026
Imported and facility generated bedding sent to pond(s):	60.42	7,250	451.95	54,234
Total manure and bedding sent to pond(s):	4,745.03	569,403	35,495.26	4,259,431
Residual manure solids and bedding sent to pond(s) w/factor:	299.92	35,991	2,243.57	269,228
	cubic feet per year		gallons per year	
Residual manure solids and bedding sent to pond(s) w/factor:	109,471		818,903	

RAINFALL AND RUNOFF

A. RAINFALL ESTIMATES

Rainfall station nearest the facility: Turlock

25 year/24 hour storm event (default NOAA Atlas 2, 1973): 2.50 inches/storage period

25 year/24 hour storm event (user-override): _____ inches/storage period

Storage period rainfall (default DWR climate data): 8.56 inches/storage period

Storage period rainfall (user-override): _____ inches/storage period

Flood zone: Zone X

B. IMPERVIOUS AREAS

Name	Surface Area (sq. ft.)	Quantity	25yr/24hr Storm Runoff Coefficient	Storage Period Runoff Coefficient	Runoff Destination
Dry Manure Storage Area	28,600	1	0.95	0.50	Drains into pond(s).
Impervious Area 1 - IA1	111,800	1	0.95	0.50	Drains into pond(s).
Impervious Area 2 - IA2	1,200	1	0.95	0.50	Drains into pond(s).
Impervious Area 3 - IA3	3,700	1	0.95	0.50	Drains into pond(s).
Impervious Area 4 - IA4	105,900	1	0.95	0.50	Drains into pond(s).
Impervious Area 5 - IA5	1,650	1	0.95	0.50	Drains into pond(s).
Sand Trap	3,220	1	0.95	0.50	Drains into pond(s).

Surface area that does not run off into pond(s):	0	sq. ft.
Surface area that runs off into pond(s):	256,070	sq. ft.
Total surface area:	256,070	sq. ft.
Runoff from normal storage period rainfall:	683,208	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	1,024,812	gallons/storage period
25 year/24 hour storm event runoff:	379,117	gallons/storage period
Total surface area runoff:	1,062,325	gallons/storage period
Total surface area runoff with 1.5 factor:	1,403,929	gallons/storage period

C. ROOF AREAS

Name	Surface Area (sq. ft.)	Quantity	Runoff Destination
Animal Shelter 1 - AS1	10,400	1	Wastewater pond
Animal Shelter 10 - AS10	82,600	1	Adjacent Field
Animal Shelter 2 - AS2	38,340	1	Wastewater pond
Animal Shelter 3 - AS3	39,400	1	Wastewater pond
Animal Shelter 4 - AS4	2,000	1	Wastewater pond
Animal Shelter 5 - AS5	37,300	1	Wastewater pond
Animal Shelter 6 - AS6	78,125	1	Wastewater pond
Animal Shelter 7 - AS7	76,700	1	Wastewater pond
Animal Shelter 8 - AS8	76,700	1	Adjacent Field
Animal Shelter 9 - AS9	76,700	1	Adjacent field
Calf Hutches (Total)	3,500	1	Wastewater pond
Commodity Barn 1	4,800	1	Wastewater pond
Commodity Barn 2	5,320	1	Wastewater pond
Hay Barn	11,200	1	Wastewater pond
Milking Parlor	5,200	1	Wastewater pond

Surface area that does not run off into pond(s):	236,000	sq. ft.
Surface area that runs off into pond(s):	312,285	sq. ft.
Total surface area:	548,285	sq. ft.
Runoff from normal storage period rainfall:	1,666,385	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	2,499,578	gallons/storage period
25 year/24 hour storm event runoff:	486,678	gallons/storage period
Total surface area runoff:	2,153,063	gallons/storage period
Total surface area runoff with 1.5 factor:	2,986,256	gallons/storage period

D. EARTHEN AREAS

Name	Surface Area (sq. ft.)	Quantity	25yr/24 Storm Coefficient	Storage Period Coefficient	Runoff Destination
Earthen Area 1 - EA1	7,500	1	0.35	0.20	Drains into pond(s).
Earthen Area 10 - EA10	203,000	1	0.35	0.20	Drains into pond(s).
Earthen Area 11 - EA11	139,300	1	0.35	0.20	Drains into pond(s).
Earthen Area 12 - EA12	88,750	1	0.35	0.20	Drains into pond(s).
Earthen Area 13 - EA13	63,800	1	0.35	0.20	Drains into pond(s).
Earthen Area 14 - EA14	67,700	1	0.35	0.20	Drains into pond(s).
Earthen Area 15 - EA15	34,775	1	0.35	0.20	Drains into pond(s).
Earthen Area 2 - EA2	18,100	1	0.35	0.20	Drains into pond(s).
Earthen Area 3 - EA3	34,000	1	0.35	0.20	Drains into pond(s).
Earthen Area 4 - EA4	16,400	1	0.35	0.20	Drains into pond(s).
Earthen Area 5 - EA5	4,000	1	0.35	0.20	Drains into pond(s).
Earthen Area 6 - EA6	6,300	1	0.35	0.20	Drains into pond(s).
Earthen Area 7 - EA7	17,500	1	0.35	0.20	Drains into pond(s).
Earthen Area 8 - EA8	16,600	1	0.35	0.20	Drains into pond(s).
Earthen Area 9 - EA9	39,400	1	0.35	0.20	Drains into pond(s).

Surface area that does not run off into pond(s):	0	sq. ft.
Surface area that runs off into pond(s):	757,125	sq. ft.
Total surface area:	757,125	sq. ft.
Runoff from normal storage period rainfall:	808,020	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	1,212,029	gallons/storage period
25 year/24 hour storm event runoff:	412,977	gallons/storage period
Total surface area runoff:	1,220,997	gallons/storage period
Total surface area runoff with 1.5 factor:	1,625,007	gallons/storage period

E. TAILWATER MANAGEMENT

No fields with tailwater entered.

LIQUID STORAGE

A. POND OR BASIN DESCRIPTION: WWS1

Pond is rectangular in shape: [X] Yes [ ] No

Dimensions			
Earthen Length (EL):	115 ft.	Earthen Depth (ED):	13 ft.
Earthen Width (EW):	313 ft.	Side Slope (S):	3.0 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	1.0 ft.

Calculations			
Liquid Length (LL):	103 ft.	Storage Volume Adjusted for Dead Storage Loss:	200,830 cu. ft.
Liquid Width (LW):	301 ft.		
Pond Surface Area:	35,995 sq. ft.	Pond Marker Elevation:	10.0 ft.
Storage Volume:	210,353 cu. ft.	Evaporation Volume:	160,390 gals/period
		Adjusted Surface Area:	29,831 sq. ft.

POND OR BASIN DESCRIPTION: WWS2

Pond is rectangular in shape: [X] Yes [ ] No

Dimensions			
Earthen Length (EL):	751 ft.	Earthen Depth (ED):	13 ft.
Earthen Width (EW):	313 ft.	Side Slope (S):	3.0 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	1.0 ft.

Calculations			
Liquid Length (LL):	739 ft.	Storage Volume Adjusted for Dead Storage Loss:	1,924,390 cu. ft.
Liquid Width (LW):	301 ft.		
Pond Surface Area:	235,063 sq. ft.	Pond Marker Elevation:	10.1 ft.
Storage Volume:	2,085,281 cu. ft.	Evaporation Volume:	1,181,136 gals/period
		Adjusted Surface Area:	219,680 sq. ft.

Potential storage losses (due to dead storage): 170,414.0 cubic feet - or - 1,274,785.2 gallons

Liquid storage surface area: 253,442 sq. ft.

Rainfall onto retention pond(s): 1,446,394 gallons/storage period

Rainfall runoff into retention pond(s): 3,157,613 gallons/storage period

Normal rainfall onto retention pond(s) with 1.5 factor: 2,169,590 gallons/storage period

Normal rainfall runoff into retention pond(s) with 1.5 factor: 4,736,419 gallons/storage period

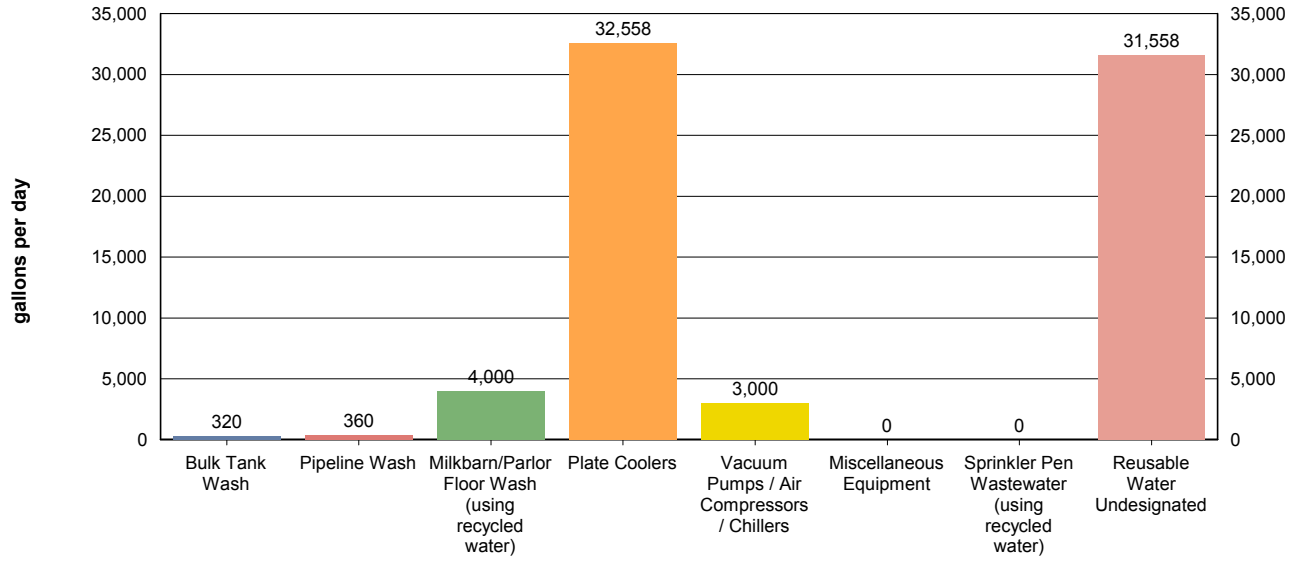
Storage period evaporation (default): 11.50 inches/storage period

Storage period evaporation (user-override): _____ inches/storage period

Storage period evaporation volume:	1,341,526	gallons/storage period
Manure and bedding sent to pond(s):	4,259,431	gallons/storage period
Milkbarn water sent to pond(s):	4,348,560	gallons/storage period
Fresh flush water for storage period:	0	gallons/storage period

CHARTS

A. MILKBARN WASTEWATER SENT TO POND(S)

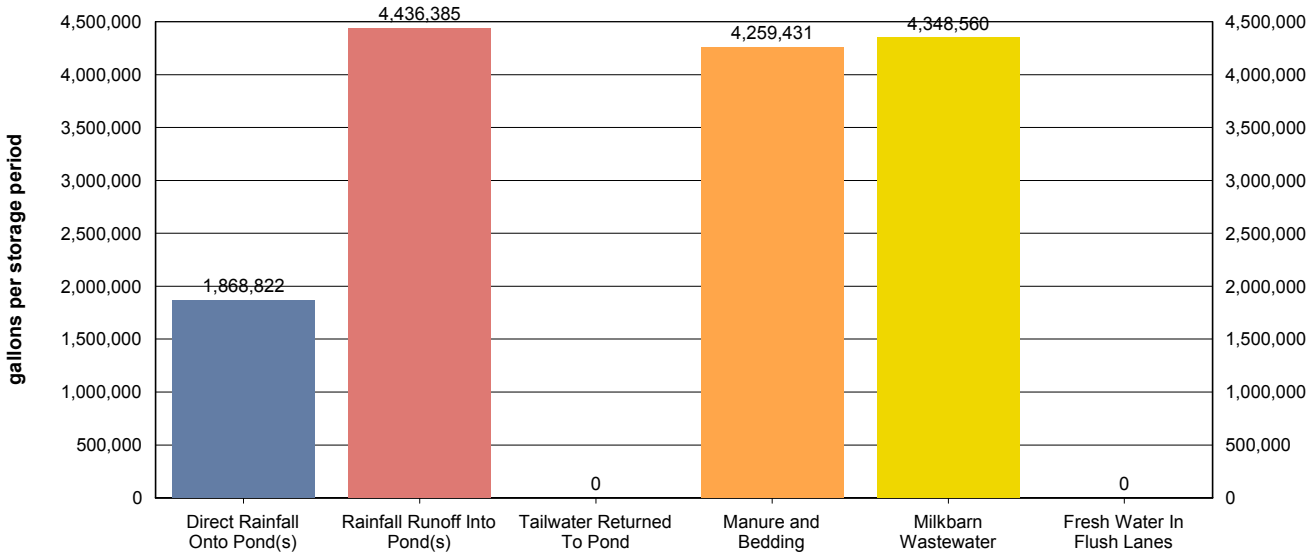


Values shown in chart are approximate values per day.

Total milkbarn wastewater generated daily: 36,238 gallons/day

Total milkbarn wastewater generated per period: 4,348,560 gallons/storage period

B. PROCESS WASTEWATER (NORMAL PRECIPITATION)

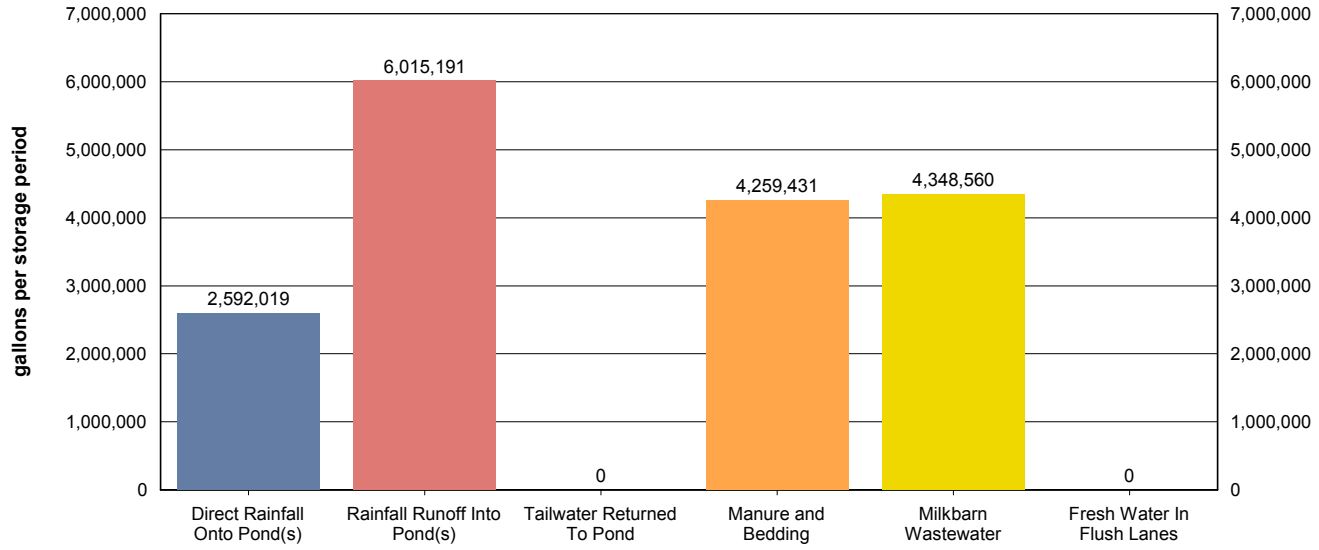


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	124,277	gallons/day
Total process wastewater generated per period:	14,913,197	gallons/storage period
Total process wastewater removed due to evaporation:	1,341,526	gallons/storage period
Total storage capacity required:	13,571,671	gallons
	1,814,269	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	15,897,750	gallons
	2,125,220	cu. ft.

Considering normal precipitation, existing capacity meets estimated storage needs: [X] Yes [ ] No

C. PROCESS WASTEWATER (NORMAL PRECIPITATION WITH 1.5 FACTOR)

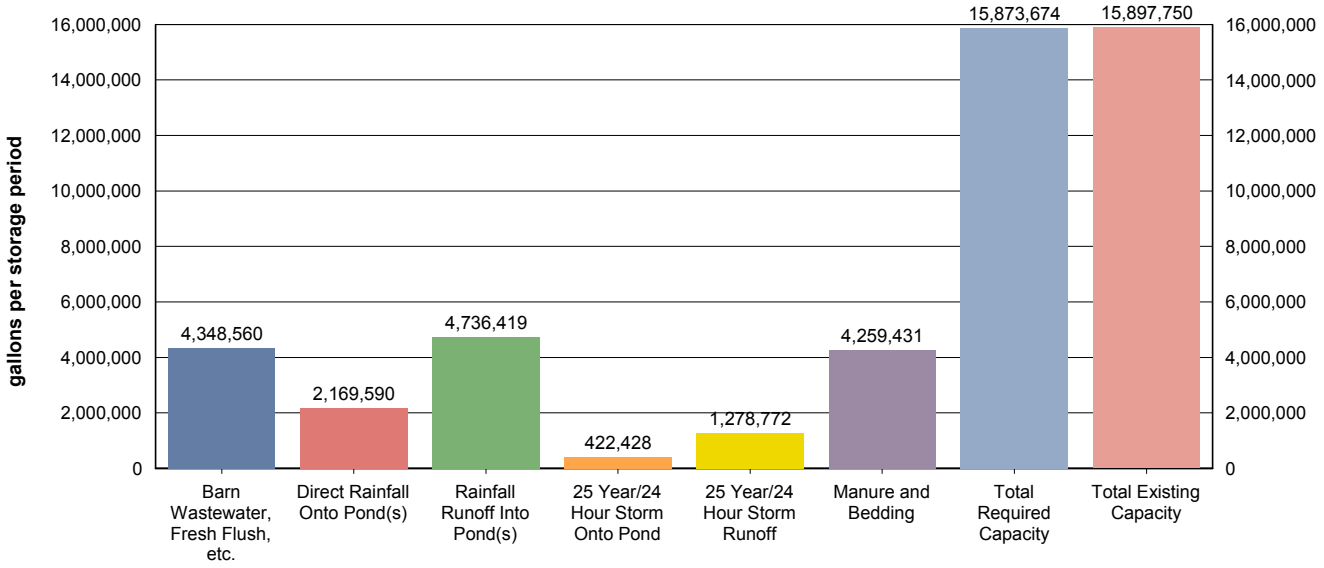


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	143,460	gallons/day
Total process wastewater generated per period:	17,215,200	gallons/storage period
Total process wastewater removed due to evaporation:	1,341,526	gallons/storage period
Total storage capacity required:	15,873,674	gallons
	2,122,002	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	15,897,750	gallons
	2,125,220	cu. ft.

Considering factored precipitation, existing capacity meets estimated storage needs: [X] Yes [ ] No

D. STORAGE VOLUME ASSESSMENT (NORMAL PRECIPITATION WITH 1.5 FACTOR)



Values shown in chart are approximate values for storage period.

Storage period:	120	days
Barn wastewater, fresh flush water, and tailwater:	4,348,560	gallons/storage period
Manure and bedding sent to pond:	4,259,431	gallons/storage period
Precipitation onto pond:	2,169,590	gallons/storage period
Precipitation runoff:	4,736,419	gallons/storage period
25 year/24 hour storm onto pond:	422,428	gallons/storage period
25 year/24 hour storm runoff:	1,278,772	gallons/storage period
Residual solids after liquids have been removed (liquid equivalent):	269,228	gallons/storage period
Total process wastewater removed due to evaporation:	1,341,526	gallons/storage period
Total required capacity:	15,873,674	gallons/storage period
Total existing capacity:	15,897,750	gallons/storage period
Existing capacity meets estimated storage needs:	[X] Yes [ ] No	

OPERATION AND MAINTENANCE PLAN

The goal of the Operation and Maintenance Plan is to eliminate discharges of waste or storm water to surface waters from the production area and the protection of underlying soils and ground water.

A. POND MAINTENANCE

i. FREEBOARD MONITORING

1. Freeboard will be monitored monthly from June 1 through September 1 (dry season) and weekly from October 1 through May 31 (wet season). The results will be recorded on a Dairy Production Area Visual Inspection Form.
2. Freeboard will be monitored during and after each significant storm event and the results recorded on a Production Area Significant Storm Event Inspection Form.
3. Ponds will be photographed on the first day of each month. Pond photos will be labeled and maintained with the dairy's monitoring records.

ii. PREPARATION FOR MAINTAINING WINTER STORAGE CAPACITY

1. The retention pond(s) will begin to be lowered to the minimum operating level on or before a designated date each year.
2. The minimum operating level will include the necessary storage volume as identified in Section II.A in Attachment B of the General Order.

iii. OTHER POND MONITORING

1. At the time of each monitoring for freeboard, the pond(s) will be inspected for evidence of excessive odors, mosquito breeding, algae, or equipment damage; and issues with berm integrity, including cracking, slumping, erosion, excess vegetation, animal burrows, and seepage. Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Other Pond Monitoring.
2. At the time of each monitoring during and after each significant storm event, the ponds will be inspected for evidence of any discharge and issues with berm integrity, including cracking, slumping, erosion, excess vegetation, animal burrows, and seepage. Any issues identified and corrective actions performed will be recorded on a Production Area Significant Storm Event Inspection Form.

iv. SOLIDS REMOVAL PROCEDURES

1. The average thickness of the solids accumulated on the bottom of the pond(s) will be measured on the designated interval using the owner, operator, and/or designer specified procedure.
2. Once solids/sludge on the bottom of the pond(s) reach the owner, operator, and/or designer specified critical thickness, solids/sludge will be removed so that adequate capacity is maintained.
3. When necessary, solids/sludge will be removed using the owner, operator, and/or designer specified methods for protecting any pond liner.

OPERATIONS AND MAINTENANCE PLAN FOR POND: WWS2

Dry season freeboard monitoring will occur on the 1st of each month.

Wet season freeboard monitoring will occur every Monday of each week.

Process wastewater pond contents will be lowered to the minimum operating level (elevation) of 1.0 feet above the pond invert beginning in October of each year.

Sludge accumulation will be measured annually.

The following method will be used to measure solids/sludge accumulation:

Solids will be measured manually after lowering of the liquid pond level.

When solids/sludge accumulate to a thickness of 2.0 feet, the following method will be used to maintain adequate storage capacity while protecting any pond liner:

Solids will be removed with an excavator.

OPERATIONS AND MAINTENANCE PLAN FOR POND: WWS1

Dry season freeboard monitoring will occur on the 1st of each month.

Wet season freeboard monitoring will occur every Monday of each week.

Process wastewater pond contents will be lowered to the minimum operating level (elevation) of 1.0 feet above the pond invert beginning in October of each year.

Sludge accumulation will be measured annually.

The following method will be used to measure solids/sludge accumulation:

Solids will be measured manually after lowering of the liquid pond level.

When solids/sludge accumulate to a thickness of 2.0 feet, the following method will be used to maintain adequate storage capacity while protecting any pond liner:

Solids will be removed with an excavator.

B. RAINFALL COLLECTION SYSTEM MAINTENANCE

i. Annually, rainfall collection systems will be assessed to ensure:

1. Conveyances are free of debris and operating within designer/manufacturer specifications.
2. Components are properly fastened according to designer/manufacturer specifications.
3. All downspouts and related infrastructure are connected to conveyances that divert water away from manured areas.
4. Water from the rainfall collection system(s) is diverted to an appropriate destination.

Buildings with rooftop rainfall collection systems	Quantity	Surface Area (sq. ft.)
Animal Shelter 1 - AS1	1	10,400
Animal Shelter 10 - AS10	1	82,600
Animal Shelter 2 - AS2	1	38,340
Animal Shelter 3 - AS3	1	39,400
Animal Shelter 4 - AS4	1	2,000
Animal Shelter 5 - AS5	1	37,300
Animal Shelter 6 - AS6	1	78,125
Animal Shelter 7 - AS7	1	76,700
Animal Shelter 8 - AS8	1	76,700
Animal Shelter 9 - AS9	1	76,700
Calf Hutches (Total)	1	3,500
Commodity Barn 1	1	4,800
Commodity Barn 2	1	5,320
Hay Barn	1	11,200
Milking Parlor	1	5,200

Assessment for buildings with rooftop rainfall collection systems will occur on or before: 1st of October

Assessment for other rainfall collections systems will occur on or before: 1st of October

Description of how rainfall collection systems will be assessed:

Gutters, downspouts, and all other collection and conveyance systems are to be inspected, cleaned, and/or repaired as required.

C. CORRAL MAINTENANCE

i. Monthly from June 1st through September 30th (dry season) and weekly from October 1st through May 31st (wet season), the perimeter of the corrals and pens will be assessed to ensure that runon and runoff controls such as berms are functioning correctly, and that all water that contacts waste is collected and diverted into the wastewater retention pond (s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Corrals.

ii. The corrals will be assessed by the designated date to determine:

1. Whether manure needs to be removed from the corrals based on the owner, operator, and/or designer specified conditions.

2. Whether there are depressions within the corrals that should be filled/groomed to prevent ponding.

iii. Removal of manure and/or regrading, when necessary, will be completed on or before the designated month/day of each year.

Day of the month dry season assessment will occur: 1st of each month

Day of the week wet season assessment will occur: Monday

Solid manure removal and regrading assessment will occur on or before: 1st of October

Conditions requiring manure removal and/or regrading:

Solids will be removed with scrapers and/or loaders. Regrading will be performed as necessary after solids removal to ensure proper drainage.

Solid manure removal and/or regrading will occur on or before: 1st of November

D. FEED STORAGE AREA MAINTENANCE

i. During the dry season and prior to the wet season, the perimeter of storage areas will be assessed to ensure all runon and runoff controls such as berms are functioning correctly and runoff and leachate from the areas are collected and diverted into the wastewater pond(s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Manure and Feed Storage Areas.

ii. During the wet season, feed storage area(s) will be assessed to determine if there are depressions within any feed storage area that should be filled or repaired to prevent ponding.

iii. Any necessary regrading/resurfacing and berm/conveyance maintenance will be completed on an annual basis.

Day of the month dry season assessment will occur: 1st of each month

Day of the week wet season assessment will occur: Monday

Regrading/resurfacing and berm maintenance assessment will occur on or before: 1st of October

Regrading/resurfacing and berm maintenance completion will occur on or before: 1st of November

E. SOLID MANURE STORAGE AREA MAINTENANCE

i. During the dry season and prior to the wet season, the perimeter of manure storage areas will be assessed to ensure all runon and runoff controls such as berms are functioning correctly and runoff and leachate from the areas are collected and diverted into the wastewater pond(s). Any issues identified and corrective actions performed will be recorded on a Dairy Production Area Visual Inspection Form - Manure and Feed Storage Areas.

ii. During the wet season, manure storage area(s) will be assessed to determine if there are depressions within any manure storage area that should be filled to prevent ponding.

iii. Any necessary regrading/resurfacing and berm/conveyance maintenance will be completed on an annual basis.

Day of the month dry season assessment will occur: 1st of each month

Day of the month wet season assessment will occur: Monday

Regrading/resurfacing and berm maintenance assessment will occur on or before: 1st of October

Regrading/resurfacing and berm maintenance completion will occur on or before: 1st of November

F. ANIMAL HOUSING AND FLUSH WATER CONVEYANCE SYSTEM MAINTENANCE

i. A map will be attached that identifies critical points for monitoring the animal housing and flush water conveyance system to verify that water is being managed as identified in this Waste Management Plan. These points will be maintained at owner, operator, and/or designer specified intervals.

Animal housing area assessment will occur on or before: 1st of October

Animal housing drainage system maintenance will occur on or before: 2nd of October

Animal housing area drainage system assessment and maintenance methods:

Flush and/or wastewater conveyance lanes are to be inspected and cleared of debris and/or other obstructions as required. Defects in said conveyance systems, such as failed concrete and/or pipes, shall be repaired as needed.

G. MORTALITY MANAGEMENT

i. Dead animals will be stored, removed, and disposed of properly.

Rendering company or landfill name: Sisk Tallow

Rendering company or landfill telephone number: (209) 667-1451

H. ANIMALS AND SURFACE WATER MANAGEMENT

i. A system will be in place, monitored, and maintained to prevent animals from entering any surface waters when a stream or other surface water crosses or adjoins the corral(s).

Does a stream or any other surface water cross or adjoin the corrals? [ ] Yes [X] No

I. MONITORING SALT IN ANIMAL RATIONS

i. The combined quantity of minerals as salt in animal drinking water and feed rations will be reviewed by a qualified nutritionist on a routine basis to verify that minerals are limited to the amount required to maintain animal health and optimum production. As feed rations change, mineral content may change.

Assessment interval: Annually

J. CHEMICAL MANAGEMENT

i. Chemicals and other contaminants handled at the facility will not be disposed of in any manure or process wastewater, storm water storage or treatment system unless specifically designed to treat such chemicals and other contaminants.

No chemicals entered.

REQUIRED ATTACHMENTS

The following list, based upon user selections and data entries, describes the minimum required attachments that must be submitted with the Waste Management Plan for the reporting schedule of 'July 1, 2010'.

A. SITE MAP(S)

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of the production area including the following in sufficient detail: structures used for animal housing, milk parlor, and other buildings; corrals and ponds; solids separation facilities (settling basins or mechanical separators); other areas where animal wastes are deposited or stored; feed storage areas; drainage flow directions and nearby surface waters; all water supply wells (domestic, irrigation, and barn wells) and groundwater monitoring wells.

Production area map reference number: Exhibit Sheet 4

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of all land application areas (land under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) including the following in sufficient detail: a field identification system (Assessor's Parcel Number; field by name or number; total acreage of each field; crops grown; indication if each field is owned, leased, or used pursuant to a formal agreement); indication of what type of waste is applied (solid manure only, wastewater only, or both solid manure and wastewater); drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems (including discharge points and lateral extent); irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field.

Application area map reference number: Exhibit Sheets 2 & 3

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of all cropland (land that is part of the dairy but not used for dairy waste application) including the following in sufficient detail: Assessor's Parcel Number, total acreage, crops grown, and information on who owns or leases the field. The Waste Management Plan shall indicate if such cropland is covered under the Conditional Waiver of Waste Discharge Requirements for Discharges from Irrigated Lands (Order No. R5-2006-0053 for Coalition Group or Order No. R5-2006-0054 for Individual Discharger, or updates thereto).

Non-application area map reference number: n/a

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of all off-property domestic wells within 600 feet of the production area or land application area(s) associated with the dairy and the location of all municipal supply wells within 1,500 feet of the production area or land application area(s) associated with the dairy.

Well area map reference number: Exhibit Sheets 2,3,4

Provide a site map (or maps) of appropriate scale to show property boundaries and a vicinity map, north arrow and the date the map was prepared. The map shall be drawn on a published base map (e.g., a topographic map or aerial photo) using an appropriate scale that shows sufficient details of all facilities.

Vicinity map reference number: Exhibit Sheet 1

B. PROCESS WASTEWATER MAP(S)

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of the production area including the following in sufficient detail: process wastewater conveyance structures, discharge points, and discharge /mixing points with irrigation water supplies; pumping facilities and flow meter locations; upstream diversion structures, drainage ditches and canals, culverts, drainage controls (berms/levees, etc.), and drainage easements; and any additional components of the waste handling and storage system.

Production infrastructure system area map reference number: Exhibit Sheet 4

Provide a site map (or maps) of appropriate scale to show property boundaries and the location of the features of all land application areas (land under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) including the following in sufficient detail: process wastewater conveyance structures, discharge points and discharge mixing points with irrigation water supplies; pumping facilities ; flow meter locations; drainage ditches and canals, culverts, drainage controls (berms, levees, etc.), and drainage easements.

Land application infrastructure system area map reference number: Exhibit Sheets 2 & 3

C. EXCESS PRECIPITATION CONTINGENCY REPORT

There were no attachment references entered or required for this attachment section.

D. OPERATION AND MAINTENANCE PLAN

Attach a map that identifies critical points for monitoring the system to verify that water is being managed as identified in this Waste Management Plan (see Attachment B, Pg B-7 V.F, V.G, and V.H for additional requirements).

Animal housing assessment map reference number: Exhibit Sheet 3

E. FLOOD PROTECTION / INUNDATION REPORT

Provide a published flood zone map that shows the facility is outside the relevant flood zones.

Flood zone map and/or document reference number: Exhibit Sheet 5

F. BACKFLOW PROTECTION

Attach documentation from a trained professional (i.e. a person certified by the American Backflow Prevention Association, an inspector from a state or local governmental agency who has experience and/or training in backflow prevention, or a consultant with such experience and/or training), as specified in Required Reports and Notices H.1 of Waste Discharge Requirements General Order No. R5-2007-0035, that there are no cross-connections that would allow the backflow of wastewater into a water supply well, irrigation well, or surface water as identified on the Site Map.

Backflow documentation reference number: WMP Section 1.b.

Waste Management Plan Report
General Order No. R5-2007-0035, Attachment B
July 1, 2010 deadline

CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Joe Jordao Dairy

Physical address of dairy:

6025 S Central AVE	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I have reviewed the portion of the waste management plan that is related to storage capacity facility and design specifications in accordance with Item II, Attachment B of the Waste Discharge Requirements General Order for Existing Milk Cow Dairies - Order No. R5-2007-0035 and certify that this plan was prepared by, or under the responsible charge of, and certified by a civil engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work.

Storage capacity is:

Insufficient

☐ Retrofitting Plan/Schedule/Design Criteria attached in accordance with Attachment B, II.B. 1-5 and Attachment B, II. C.

Sufficient

☒ Certification 1 - Certified in accordance with Attachment B, II. A. 1-8. (no contingency plan)

☐ Certification 2 - Certified in accordance with Attachment B, II. A. 1-8, II. C. (with contingency plan attached)

CIVIL ENGINEER'S WET STAMP

9/15/2021

SIGNATURE OF CIVIL ENGINEER DATE

Manny Sousa
PRINT OR TYPE NAME

P.O. Box 1613; Oakdale, CA 95361
MAILING ADDRESS

(209) 238-3151
PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE OF OWNER	SIGNATURE OF OPERATOR
Joe Jordao	
PRINT OR TYPE NAME	PRINT OR TYPE NAME
9-15-21	
DATE	DATE

SOUSA
ENGINEERING
INFRASTRUCTURE-DEVELOPMENT-
AGRICULTURE

PO BOX 1613
OAKDALE, CA 95361
PHONE: (209)238-3151
www.sousaeng.com

VECTOR CONTROL PLAN
FOR
JOE JORDAO DAIRY
STANISLAUS COUNTY, CA

TABLE OF CONTENTS

1. INTRODUCTION

Vector control is an important aspect of disease prevention and public health. Without proper management, agricultural production facilities can create or enhance opportunities for vectors to develop and proliferate. Certain land management practices can reduce vector populations thereby reducing long–term vector treatment costs, reducing the amount of pesticides used in vector control operations, helping to protect public health, and contributing to an integrated pest management (IPM) approach to vector control.

Integrated Pest Management is an approach that focuses on site–specific, scientifically sound decisions to manage pest populations by matching a wide variety of techniques with the conditions found on site. These techniques are commonly grouped into four categories:

1. Source reduction or physical control—environmental manipulation that results in a reduction of vector development sites.
2. Biological Control—use of biological agents to limit vector populations
3. Chemical Control—larvicides (materials that kill immature larval vectors and mosquitoes) and adulticides (materials that kill adult vectors and mosquitoes)
4. Cultural Control—change the behavior of people so that their actions prevent the development of vectors or the transmission of vector–borne disease.

Through the adoption of these policies and procedures, this Plan will provide an outline to effectively control vectors by physical, cultural, and biological means.

The Vector Reduction Best Management Practices (BMPs) referred to in this document are the recommended land management practices that can provide a reduction in vector populations by various means including: reducing or eliminating breeding areas, increasing the efficacy of biological controls, increasing the efficacy of chemical controls, and improving access for control operations.

While it is generally accepted that vector production from all sources may be reduced through the widespread implementation of vector Reduction BMPs, these policies specifically target the most severe vector problems with the greatest likelihood of responding through the use of BMPs.

2. BEST MANAGEMENT PRACTICES (BMPs)

a. Land Application Areas: for Land Application Areas, the following are areas of concern and recommended BMPs for vector control:

Common Vector Development Areas

- Vegetated ditches
- Seepage or flooding of fallow fields
- Irrigation tail water return sumps
- Blocked ditches or culverts
- Leaky water control structures
- Irrigated pastures
- Low areas caused by improper grading
- Broken or leaky irrigation pipes or valves

Special Concerns

Agricultural practices vary among growers, locations, and conventional or organic production methods. Pesticide regulations can affect the ability to use chemical control. The Best Management Practices below are offered as tools to balance the economic and agronomic requirements of the growers and land owners with the need for effective vector control.

General Vector Reduction Principles

1. Prevent or eliminate unnecessary standing water that stands for more than 72 –96 hours during mosquito season which can start as early as March and extend through October depending on weather.
2. Maintain access for Abatement District staff to monitor and treat mosquito breeding sources.
3. Minimize emergent vegetation and surface debris on the water.
4. Contact the County Department of Environmental Health or Mosquito Abatement District for technical guidance or assistance in implementing vector reduction BMPs.

Vector Reduction BMPs for Land Application Areas

Ditches and Drains

DD-1 Construct or improve ditches with at least 2:1 slopes and a minimum 4-foot bottom. Consider a 3:1 slope or greater to discourage burrowing animal damage, potential seepage problems, and prevent unwanted vegetation growth. Other designs may be approved by the MVCD based on special circumstances.

DD-2 Keep ditches clean and well–maintained. Periodically remove accumulated sediment and vegetation. Maintain ditch grade to prevent areas of standing water.

DD-3 Design irrigation systems to use water efficiently and drain completely to avoid standing water.

Irrigated Pastures

IP-1 Grade field to achieve efficient use of irrigation water. Use NRCS guidelines for irrigated pastures. Initial laser leveling and periodic maintenance to repair damaged areas are needed to maintain efficient water flow.

IP-2 Irrigate only as frequently as is needed to maintain proper soil moisture. Check soil moisture regularly until you know how your pasture behaves

IP-3 Do not over fertilize. Excess fertilizers can leach into irrigation tail water, making mosquito production more likely in ditches or further downstream

IP-4 Apply only enough water to wet the soil to the depth of rooting.

IP-5 Drain excess water from the pasture within 24 hours following each irrigation. This prevents scalding and reduces the number of weeds in the pasture. good check slopes are needed to achieve drainage. A drainage ditch may be used to remove water from the lower end of the field.

IP-6 Inspect fields for drainage and broken checks to see whether re–leveling or reconstruction of levees is needed. Small low areas that hold water can be filled and replanted by hand. Broken checks create cross–leakage that provide habitat for vectors.

IP-7 Keep animals off the pasture while the soil is soft. An ideal mosquito habitat is created in irrigated pastures when water collects in hoof prints of livestock that were run on wet fields or left in the field during irrigation. Keeping animals off wet fields until soils stiffen also protects the roots of the forage crop and prevents soil compaction that interferes with plant growth.

IP-8 Break up pastures into smaller fields so that the animals can be rotated from one field to another. This allows fields to dry between irrigations and provides a sufficient growth period between grazings. It also prevents hoof damage (pugging), increases production from irrigated pastures, and helps improve water penetration into the soil by promoting a better root system.

b. Dairy Production Area (DPA): for the Dairy Production Area, the following are areas of concern and recommended BMPs for vector control:

Common Vector Development Areas
- Wastewater lagoons
- Animal washing areas

- Drain ditches
- Sumps/ponds
- Watering troughs

Special Concerns
Dairy and associated agricultural practices vary; however, these practices need to consider mosquito and vector control issues. The Best Management Practices for Vector Reduction below offer options to balance the requirements of the dairy operators with the need for effective vector control.

General Vector Control Principles
1. Prevent or eliminate unnecessary standing water that remains for more than 72 –96 hours during mosquito season which can start as early as March and extend through October depending on weather.
2. Maintain access for Abatement District staff to monitor and treat mosquito breeding sources.
3. Minimize emergent vegetation and surface debris on the water.
4. Contact the County Department of Environmental Health or Mosquito Abatement District for technical guidance or assistance in implementing vector reduction BMPs.

Vector Reduction BMPs for Dairy Production Area

DA-1 All holding ponds should be surrounded by lanes of adequate width to allow safe passage of vector control equipment. This includes keeping the lanes clear of any materials or equipment (e.g. trees, calf pens, hay stacks, silage, tires, equipment, etc.).

DA-2 If fencing is used around the holding ponds, it should be placed on the outside of the lanes with gates provided for vehicle access.

DA-3 It is recommended that all interior banks of the holding ponds should have a grade of at least 2:1.

DA-4 An effective solids separation system should be utilized such as a mechanical separator or two or more solids separator ponds. If ponds are used, they should not exceed sixty feet in surface width.

DA-5 Drainage lines should not by–pass the separator ponds whenever possible, except those that provide for normal corral run–off and do not contain solids. All drain inlets must be sufficiently graded to prevent solids accumulation.

DA-6 Floating debris should be minimized in all ponds; mechanical agitators may be used to break up crusts.

DA-7 Vegetation should be controlled regularly to prevent emergent vegetation and barriers to access. This includes access lanes, interior pond embankments and any weed growth that might become established within the pond surface.

DA-8 Dairy wastewater discharged for irrigation purposes should be managed so that it does not stand for more than three days.

DA-9 All structures and water management practices should meet current California Regional Water Quality Control Board requirements.

DA-10 Tire sidewalls or other objects that will not hold water should be used to hold down tarps (e.g. on silage piles). Whole tires or other water–holding objects should be replaced.

3. CONTACT INFORMATION

a. Stanislaus County Department of Environmental Health
3800 Cornucopia Way, Suite C
Modesto, CA 95358
Phone: (209)525-6700

b. Turlock Mosquito Abatement District
4412 N. Washington Road
Turlock, CA 95380
Phone: (209) 634-1234

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Jordao Dairy

Physical address of dairy:

6025 S Central AVE	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Date facility was originally placed in operation: 04/01/2007

Regional Water Quality Control Board Basin Plan designation: San Joaquin River Basin

County Assessor Parcel Number(s) for dairy facility:

0045-0030-0013-0000 0045-0030-0022-0000 0057-0004-0013-0000 0057-0004-0014-0000

B. OPERATOR NAME: Jordao, Joe Telephone no.: (209) 656-8438 (Landline) (209) 678-1705 (Cellular)

6025 S Central AVE	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

Operator should receive Regional Board correspondence (check): [X] Yes [ ] No

C. LEGAL OWNER NAME: Jordao, Joe Telephone no.: (209) 656-8438 (Landline) (209) 678-1705 (Cellular)

6025 S Central AVE	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

Owner should receive Regional Board correspondence (check): [X] Yes [ ] No

D. CONTACT NAME: Machado, Patrick Telephone no.: (Landline) (209) 678-6720 (Cellular)

Title: CCA # 385124

7112 Metcalf WAY	Hughson	CA	95326
Mailing Address Number and Street	City	State	Zip Code

CONTACT NAME: Kashefi, Kion Telephone no.: (Landline) (209) 988-1724 (Cellular)

Title: CCA/Dairy Specialist

624 E Service RD	Modesto	CA	95358
Mailing Address Number and Street	City	State	Zip Code

AVAILABLE NUTRIENTS

A. HERD INFORMATION

The milk cow dairy is currently regulated under individual Waste Discharge Requirements.

Total number of milk and dry cows combined as a baseline value in response to the Report of Waste Discharge (ROWD) request of October, 2005:

2,500 *milk and dry cows combined (regulatory review is required for any expansion)*

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Present count	2,000	300	500	800	300	90
Maximum count	2,000	300	500	800	300	90
Avg live weight (lbs)	1,400	1,450	900	600		
Daily hours on flush	22	20	20	20	12	24

Predominant milk cow breed: Jersey-Holstein Cross

Average milk production: 70 *pounds per cow per day*

B. IRRIGATION SOURCES

Irrigation Source Name	Type	Nitrogen (mg/L)	Phosphorus (mg/L)	Potassium (mg/L)	Discharge Rate
River Pump	Surface water (canal, river)	0.10	0.00	0.00	3,400 *gpm*
TID Canal	Surface water (canal, river)	0.05	0.00	0.00	15 *cfs*

C. NUTRIENT IMPORTS

No nutrient imports entered.

D. NUTRIENT EXPORTS

No nutrient exports entered.

E. STORAGE PERIOD

Storage period is the maximum period of time anticipated between land application of process wastewater (from storage ponds/lagoons) to croplands. A qualified agronomist and civil engineer should collaborate and collectively consider predominant soil types, soil infiltration rates, maximum depth, available water, field capacity, permanent wilting point, allowable depletion, crop water use, evapotranspiration, precipitation, irrigation system capacity, water delivery constraints, crop nutrient requirements, soil nutrient adsorbtion/desorption, rooting depth, nutrient accumulation/availability for current and future crop needs, facility wide process wastewater storage capacity and other factors as deemed necessary across all croplands where process wastewater is applied in selecting a storage period. In many cases conflicts will arise between crop water demands, crop nutrient demands and insufficient process wastewater storage capacity. Process wastewater may not be the best choice as a source of either water and/or nutrients to meet crop demands throughout the year. Groundwater and surface water vulnerability has been considered.

The storage period selected in this Nutrient Management Plan is consistent with the storage period selected in the Waste Management Plan.

Storage period: 120 *days*

APPLICATION AREA

A. ASSESSOR PARCEL NUMBER: 0045-0002-0037-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0045-0004-0047-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0045-0030-0013-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0045-0030-0022-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0001-0010-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0004-0013-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0004-0014-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0025-0010-0000
Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0058-0023-0002-0000
Legal owner of parcel: Owned by Dairy

B. FIELD NAME: 1

Cropable acres: 37

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Returned to top of field

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Middle November	Late April	37
Corn, silage	Early May	Middle August	37
Sudangrass, silage	Late August	Middle October	37

FIELD NAME: 2

Cropable acres: 37

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Returned to top of field

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Middle November	Late April	37
Corn, silage	Early May	Middle August	37
Sudangrass, silage	Late August	Middle October	37

FIELD NAME: 3

Cropable acres: 39

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [X] Yes [ ] No

Tailwater management method: Returned to Pond if req'd

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Middle November	Late April	39
Corn, silage	Early May	Middle August	39

Sudangrass, silage	Late August	Middle October	39

FIELD NAME: 4

Cropable acres: 98

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Discharged to surface water (drainage ditch, creek, etc.)

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early October	Early April	98
Corn, silage	Late April	Middle August	98

FIELD NAME: 5

Cropable acres: 75

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Discharged to surface water (drainage ditch, creek, etc.)

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Alfalfa, hay	Late August	Late November	75

FIELD NAME: Carpenter

Cropable acres: 260

Predominant soil type: Loamy sand

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Early October	Late April	260
Corn, silage	Early May	Middle August	260

FIELD NAME: Crowslanding

Cropable acres: 71

Predominant soil type: Loamy sand

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Oats, silage-soft dough	Middle November	Late April	71
Corn, silage	Early May	Early September	71

FIELD NAME: Hogan South

Cropable acres: 150

Predominant soil type: Clay loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [X] Yes [ ] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle November	Late April	150
Corn, silage	Early May	Early September	150

FIELD NAME: The 65

Cropable acres: 65

Predominant soil type: Sandy loam

Do irrigation system head-to-head flow conditions exist on the field? [ ] Yes [X] No

Can fresh water for irrigation purposes be delived to the field year round? [ ] Yes [X] No

Can process wastewater be delivered to the field at agronomic rates and times? [ ] Yes [X] No

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Alfalfa, hay	Late August	Late November	65

C. LAND APPLICATION AREA FIELDS AND PARCELS

Field name	Cropable acres	Total harvests	Parcel number
1	37	3	0057-0004-00140000
2	37	3	0057-0004-00140000
3	39	3	0057-0004-00130000
4	98	2	0045-0030-00130000
5	75	8	0045-0030-00220000
Carpenter	260	2	0058-0023-00020000
Crowslanding	71	2	0057-0001-00100000
Hogan South	150	2	0057-0025-00100000
The 65	65	8	0045-0002-00370000 0045-0004-00470000
Land application area totals	897	41	

NUTRIENT BUDGET

A. NUTRIENT BUDGET FOR CROP: 1 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
In season irrigation (no fertilizer)	1	0.0	0.0	0.0	0.0
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

In season irrigation (with fertilizer)	1	160.0	30.0	360.0	160.0
Nutrient source: Retention pond (lagoon)		35%	50%	85%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	160.0	30.0	360.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	164.8	30.1	360.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	4.8	4.5	227.2
Applied to removal ratio	1.03	1.18	2.71

Fresh water applied: 0.67 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 1 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					

NUTRIENT BUDGET FOR CROP (CONTINUED): 1 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	4	0.0 0%	0.0 0%	0.0 0%	0.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	5	50.0 35%	10.0 50%	140.0 85%	250.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.4	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	250.0	50.0	700.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	255.1	50.1	700.0
Potential crop nutrient removal	256.0	48.0	211.2
Nutrient balance	-0.9	2.1	488.8
Applied to removal ratio	1.00	1.04	3.31

Fresh water applied: 3.02 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 1 / Sudangrass, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	55.0 35%	15.0 50%	100.0 35%	110.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	14.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	110.0	30.0	200.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	114.8	30.0	200.0
Potential crop nutrient removal	88.0	13.6	96.0
Nutrient balance	26.8	16.4	104.0
Applied to removal ratio	1.30	2.21	2.08

Fresh water applied: 0.94 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
In season irrigation (no fertilizer)	1	0.0	0.0	0.0	0.0
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

In season irrigation (with fertilizer)	1	160.0	30.0	360.0	160.0
Nutrient source: Retention pond (lagoon)		35%	50%	85%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0

Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	160.0	30.0	360.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	164.8	30.1	360.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	4.8	4.5	227.2
Applied to removal ratio	1.03	1.18	2.71

Fresh water applied: 0.67 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content *Nutrient source:* Soil *Application method:* Lab results	1	0.0 50%	0.1 50%	0.0 50%	0.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	4	0.0 0%	0.0 0%	0.0 0%	0.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	5	50.0 35%	10.0 50%	140.0 85%	250.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.4	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	250.0	50.0	700.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		

Nutrients applied	255.1	50.1	700.0
Potential crop nutrient removal	256.0	48.0	211.2
Nutrient balance	-0.9	2.1	488.8
Applied to removal ratio	1.00	1.04	3.31

Fresh water applied: 3.02 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Sudangrass, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	55.0 35%	15.0 50%	100.0 35%	110.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	14.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	110.0	30.0	200.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	114.8	30.0	200.0
Potential crop nutrient removal	88.0	13.6	96.0
Nutrient balance	26.8	16.4	104.0
Applied to removal ratio	1.30	2.21	2.08

Fresh water applied: 0.94 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content *Nutrient source:* Soil *Application method:* Lab results	1	0.0 50%	0.1 50%	0.0 50%	0.0

NUTRIENT BUDGET FOR CROP (CONTINUED): 3 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer)	1	0.0	0.0	0.0	0.1
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	12.0
	0.1	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer)	1	160.0	30.0	360.0	160.1
Nutrient source: Retention pond (lagoon)		35%	50%	85%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	12.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	160.0	30.0	360.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	164.8	30.1	360.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	4.8	4.5	227.2
Applied to removal ratio	1.03	1.18	2.71

Fresh water applied: 0.76 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					

NUTRIENT BUDGET FOR CROP (CONTINUED): 3 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	4	0.0 0%	0.0 0%	0.0 0%	0.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	5	50.0 35%	10.0 50%	140.0 85%	250.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	10.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.4	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	250.0	50.0	700.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	255.1	50.1	700.0
Potential crop nutrient removal	256.0	48.0	211.2
Nutrient balance	-0.9	2.1	488.8
Applied to removal ratio	1.00	1.04	3.31

Fresh water applied: 2.86 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Sudangrass, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	2	55.0 35%	15.0 50%	100.0 35%	110.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	14.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.0	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	0.0	0.0	0.0
Liquid manure	110.0	30.0	200.0
Other	0.0	0.0	0.0
Atmospheric deposition	4.7		
Nutrients applied	114.8	30.0	200.0
Potential crop nutrient removal	88.0	13.6	96.0
Nutrient balance	26.8	16.4	104.0
Applied to removal ratio	1.30	2.21	2.08

Fresh water applied: 0.89 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 4 / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	1	160.0	30.0	360.0	160.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
In season irrigation (no fertilizer)	1	0.0	0.0	0.0	0.1
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	40.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	160.0	30.0	360.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0

Atmospheric deposition	7.0		
Nutrients applied	167.1	30.1	360.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	7.1	4.5	227.2
Applied to removal ratio	1.04	1.18	2.71

Fresh water applied: 0.51 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 4 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	1	260.0	80.0	650.0	260.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
In season irrigation (no fertilizer)	7	0.0	0.0	0.0	0.4
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	35.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.4	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	260.0	80.0	650.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	267.4	80.1	650.0
Potential crop nutrient removal	248.0	46.5	204.6
Nutrient balance	19.4	33.6	445.4
Applied to removal ratio	1.08	1.72	3.18

Fresh water applied: 3.10 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 5 / Alfalfa, hay

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	2	300.0	100.0	800.0	600.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
In season irrigation (no fertilizer)	9	0.0	0.0	0.0	0.7
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	35.0
	0.1	0.0	0.0	

In season irrigation (with fertilizer)	1	50.0	0.0	0.0	50.1
Nutrient source: Commercial fertilizer		50%	0%	0%	
Application method: Pipeline					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	35.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.8	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	50.0	0.0	0.0
Dry manure	600.0	200.0	1,600.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	14.0		
Nutrients applied	664.8	200.1	1,600.0
Potential crop nutrient removal	600.0	54.0	420.0
Nutrient balance	64.8	146.1	1,180.0
Applied to removal ratio	1.11	3.71	3.81

Fresh water applied: 5.79 *feet* Total harvests: 8

NUTRIENT BUDGET FOR CROP: Carpenter / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)

NUTRIENT BUDGET FOR CROP (CONTINUED): Carpenter / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	1	200.0	45.0	260.0	200.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
In season irrigation (no fertilizer)	1	0.0	0.0	0.0	0.0
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	50.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	200.0	45.0	260.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	207.0	45.1	260.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	47.0	19.5	127.2
Applied to removal ratio	1.29	1.76	1.96

Fresh water applied: 0.24 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Carpenter / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	1	325.0	80.0	500.0	325.0
Nutrient source: Imported		25%	50%	85%	
Application method: Broadcast/incorporate					

NUTRIENT BUDGET FOR CROP (CONTINUED): Carpenter / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	9	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	20.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.1	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	325.0	80.0	500.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	332.1	80.1	500.0
Potential crop nutrient removal	248.0	46.5	204.6
Nutrient balance	84.1	33.6	295.4
Applied to removal ratio	1.34	1.72	2.44

Fresh water applied: 0.86 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Crowslanding / Oats, silage-soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content *Nutrient source:* Soil *Application method:* Lab results	1	0.0 50%	0.1 50%	0.0 50%	0.0
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	200.0 25%	45.0 50%	260.0 85%	200.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	1	0.0 0%	0.0 0%	0.0 0%	0.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	15.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.0	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	200.0	45.0	260.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	207.0	45.1	260.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	47.0	19.5	127.2
Applied to removal ratio	1.29	1.76	1.96

Fresh water applied: 0.26 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Crowslanding / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content *Nutrient source:* Soil *Application method:* Lab results	1	0.0 50%	0.1 50%	0.0 50%	0.0
Dry manure *Nutrient source:* Imported *Application method:* Broadcast/incorporate	1	325.0 25%	80.0 50%	500.0 85%	325.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	9	0.0 0%	0.0 0%	0.0 0%	0.4

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.0	0.0	0.0	20.0
	0.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.4	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	325.0	80.0	500.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		

Nutrients applied	332.4	80.1	500.0
Potential crop nutrient removal	248.0	46.5	204.6
Nutrient balance	84.4	33.6	295.4
Applied to removal ratio	1.34	1.72	2.44

Fresh water applied: 3.14 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Hogan South / Wheat, silage, soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content *Nutrient source:* Soil *Application method:* Lab results	1	0.0 50%	0.1 50%	0.0 50%	0.0
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	160.0 25%	30.0 50%	360.0 85%	160.0
Pre-irrigation prior to planting (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	1	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
River Pump	0.1	0.0	0.0	100.0
	0.1	0.0	0.0	

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	1	0.0 0%	0.0 0%	0.0 0%	0.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
River Pump	0.1	0.0	0.0	100.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.2	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	160.0	30.0	360.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	167.2	30.1	360.0
Potential crop nutrient removal	160.0	25.6	132.8
Nutrient balance	7.2	4.5	227.2
Applied to removal ratio	1.05	1.18	2.71

Fresh water applied: 0.83 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Hogan South / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	1	270.0	70.0	400.0	270.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
Pre-irrigation prior to planting (no fertilizer)	1	0.0	0.0	0.0	0.1
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
River Pump	0.1	0.0	0.0	100.0
	0.1	0.0	0.0	

In season irrigation (no fertilizer)	5	0.0	0.0	0.0	0.7
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
River Pump	0.1	0.0	0.0	120.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.8	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	0.0	0.0	0.0
Dry manure	270.0	70.0	400.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	277.8	70.1	400.0
Potential crop nutrient removal	248.0	46.5	204.6
Nutrient balance	29.8	23.6	195.4
Applied to removal ratio	1.12	1.51	1.96

Fresh water applied: 2.92 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: The 65 / Alfalfa, hay

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Existing soil nutrient content	1	0.0	0.1	0.0	0.0
Nutrient source: Soil		50%	50%	50%	
Application method: Lab results					
Dry manure	2	300.0	100.0	800.0	600.0
Nutrient source: From dairy		25%	50%	85%	
Application method: Broadcast/incorporate					
In season irrigation (no fertilizer)	9	0.0	0.0	0.0	0.8
Nutrient source: Water only		0%	0%	0%	
Application method: Surface					

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	35.0
	0.1	0.0	0.0	

In season irrigation (with fertilizer)	1	50.0	0.0	0.0	50.1
Nutrient source: Commercial fertilizer		50%	0%	0%	
Application method: Pipeline					

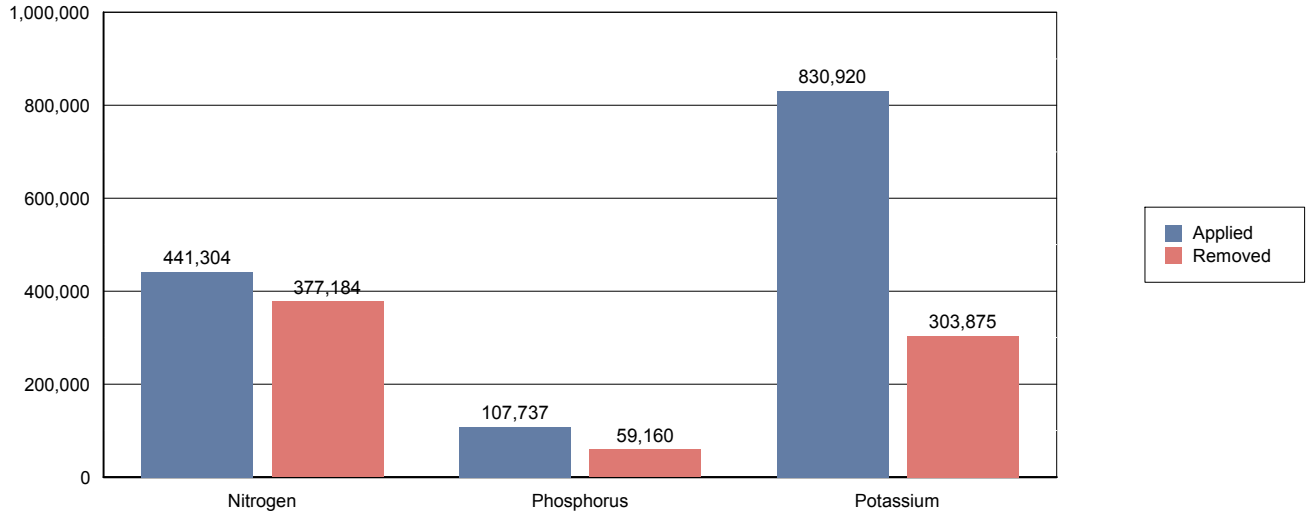
Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.1	0.0	0.0	35.0
	0.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	0.9	0.0	0.0
Existing soil nutrient content	0.0	0.1	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	50.0	0.0	0.0
Dry manure	600.0	200.0	1,600.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	14.0		
Nutrients applied	664.9	200.1	1,600.0
Potential crop nutrient removal	600.0	54.0	420.0
Nutrient balance	64.9	146.1	1,180.0
Applied to removal ratio	1.11	3.71	3.81

Fresh water applied: 6.68 *feet* Total harvests: 8

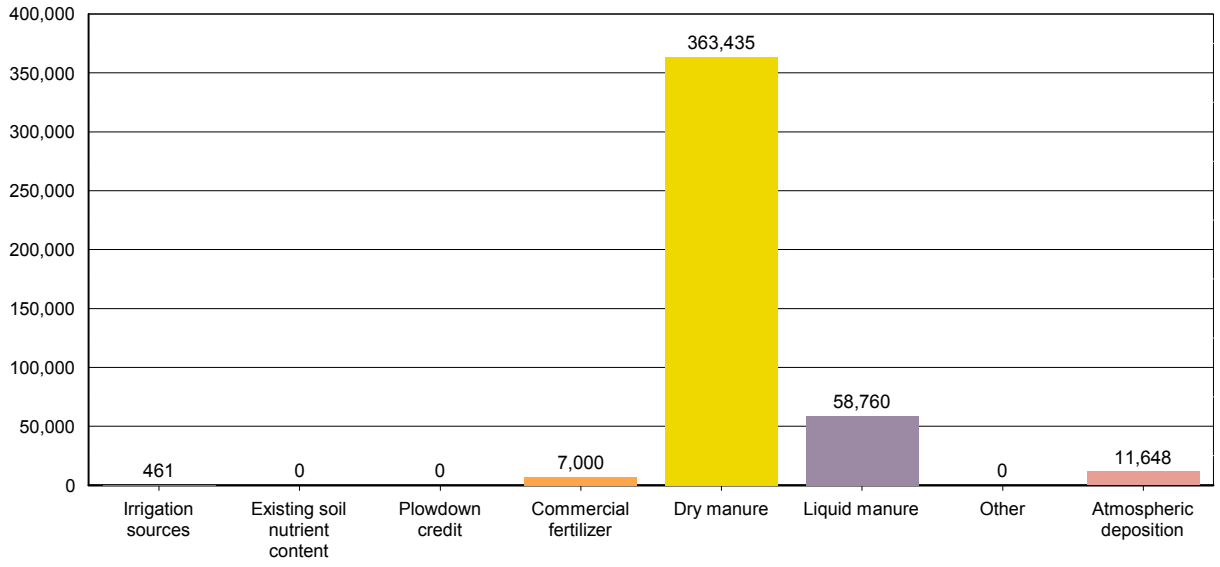
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

A. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL POTENTIAL



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	461.3	0.0	0.0
Existing soil nutrient content	0.0	152.4	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	7,000.0	0.0	0.0
Dry manure	363,435.0	95,155.0	688,540.0
Liquid manure	58,760.0	12,430.0	142,380.0
Other	0.0	0.0	0.0
Atmospheric deposition	11,648.0		
Nutrients applied to all crops	441,304.3	107,737.4	830,920.0
Potential crop nutrient removal	377,184.0	59,159.5	303,874.6
Nutrient balance	64,120.3	48,577.9	527,045.4
Applied to removal ratio	1.17	1.82	2.73

B. POUNDS OF NITROGEN APPLIED BY NUTRIENT SOURCE



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	461.3	0.0	0.0
Existing soil nutrient content	0.0	152.4	0.0
Plowdown credit	0.0	0.0	0.0
Commercial fertilizer	7,000.0	0.0	0.0
Dry manure	363,435.0	95,155.0	688,540.0
Liquid manure	58,760.0	12,430.0	142,380.0
Other	0.0	0.0	0.0
Atmospheric deposition	11,648.0		
Nutrients applied to all crops	441,304.3	107,737.4	830,920.0
Potential crop nutrient removal	377,184.0	59,159.5	303,874.6
Nutrient balance	64,120.3	48,577.9	527,045.4
Applied to removal ratio	1.17	1.82	2.73

NUTRIENT BALANCE

A. WHOLE FARM BALANCE

	Total N (lbs)	Total P (lbs)	Total K (lbs)
Nutrients in storage from herd*			
Daily gross	2,380.3	392.0	1,049.4
Annual gross	868,809.2	143,069.9	383,018.5
Net to pond storage after ammonia losses (30% loss applied)	542,892.6	128,380.8	351,100.2
Net to drylot storage after ammonia losses (30% loss applied)	65,273.8	14,689.2	51,993.2
Net in storage (30% loss applied)	608,166.4	143,069.9	403,093.5
Irrigation sources	461.3	0.0	0.0
Atmospheric deposition	11,648.0		
Imports	0.0	0.0	0.0
Exports	0.0	0.0	0.0
Potential crop nutrient removal	377,184.0	59,159.5	303,874.6
Nutrient balance	243,091.8	83,910.4	99,218.9
Nutrient balance ratio	1.64	2.42	1.33

* Potassium excretion from milk cows and dry cows only.

SAMPLING AND ANALYSIS PLAN

A. MANURE SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Each offsite export of manure	For each manure source exported, a composite sample "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For each manure source exported, a scaled weight by truckload will be recorded.	List individual manure sources, e.g.: Corral solids Settling basin solids Freestall scrapings	Date exported and total weight (tons) exported	Percent moisture
Each application to each land application area	For each applied manure source, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For each applied manure source, a scaled weight by truckload will be recorded.	List individual manure sources, e.g.: Corral solids Settling basin solids Freestall scrapings	Date applied and total weight (tons) applied	Percent moisture

A. MANURE SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Annually	Annual estimation for total manure dry weight applied to each field will be quantified using the following: Dry weight applied from a source to a crop per application event = weight applied * (1 - (percent moisture / 100)) Dry weight applied to crop per application event = sum of dry weights applied from each source Dry weight applied to a crop = sum of dry weights applied during each application Dry weight applied to a field = sum of dry weights applied to each crop Annual estimation for total manure dry weight exported will be quantified using the following: Dry weight exported from a source per event = weight exported * (1 - (percent moisture / 100)) Dry weight exported per event = sum of dry weights exported from each source Dry weight exported to any offsite destination = sum of dry weights exported per event	List individual manure sources, e.g.: Corral solids Settling basin solids Freestall scrapings	Total dry weight (tons) manure applied annually to each land application area, and total dry weight (tons) manure exported offsite annually	None required

A. MANURE SAMPLING AND ANALYSIS PLAN (CONTINUED)

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Twice per year	For each manure source, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Corral solids Settling basin solids Freestall scrapings	None required	Total nitrogen, total phosphorus, total potassium, and percent moisture
Each offsite export of manure	For each manure source exported, a composite sample "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For each manure source exported, a scaled weight by truckload will be recorded.	Corral solids Settling basin solids Freestall scrapings	Date exported and total weight (tons) exported	Percent moisture

B. PROCESS WASTEWATER SAMPLING AND ANALYSIS PLAN

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Anually	A composite or grab sample prior to blending with irrigation water per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Lagoon	None required	pH, total dissolved solids, electrical conductivity, nitrate-nitrogen, ammonion-nitrogen, total Kjeldahl nitrogen, total phosphorus, and total potassium

B. PROCESS WASTEWATER SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Once every two years (biennially)	For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Lagoon	None required	General minerals, including: calcium, magnesium, sodium, bicarbonate, carbonate, sulfate, and chloride
Each application	For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Lagoon	Date applied and volume (gallons or acre-inches) applied	None required
Quarterly during one application event	For field measurement: For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. For laboratory analyses: For each pond, a composite or grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	Lagoon	Date applied and electrical conductivity	Nitrate-nitrogen (only when pond is aerated), un-ionized ammonia-nitrogen, total Kjeldahl nitrogen, total phosphorus, total potassium, and total dissolved solids

C. SOIL SAMPLING AND ANALYSIS PLAN

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Once every five years for each land application area (may be distributed over a 5-year period by sampling 20% of the land application areas annually)	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	Soluble phosphorus
Fall pre-plant for each crop	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	0 to 1 foot: Electrical conductivity, nitrate-nitrogen, soluble phosphorus, potassium, and organic matter 1 to 2 feet: Nitrate-nitrogen
Spring pre-plant for each crop	For each field, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected.	See LAA Table	None required	0 to 1 foot: Nitrate-nitrogen and organic matter 1 to 2 foot: Nitrate-nitrogen

D. PLANT TISSUE SAMPLING AND ANALYSIS PLAN

Frequency	Sampling Methods	Source	Minimum data collection requirements	
			Field Analytes	Lab Analytes
Each crop harvest from each land application area	For each field and crop, a composite sample per the “Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies” will be collected. For each field and crop, a scaled weight by truckload will be recorded.	See LAA Table	Date harvested and total weight (tons) of harvested material removed from each land application area	Percent wet weight of harvested plant removed Laboratory analyses for total nitrogen, total phosphorus, total potassium (expressed on a dry weight basis), fixed solids (ash), and percent moisture

D. PLANT TISSUE SAMPLING AND ANALYSIS PLAN (CONTINUED)

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Mid-season, as necessary to assess need for additional nitrogen fertilizer during the growing season (only required if Discharger wants to add fertilizer in excess of 1.4 times the nitrogen expected to be removed by the harvested portion of the crop)	For each field and crop, a composite sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected.	See LAA Table.	None required	Total nitrogen, expressed on a dry weight basis

E. IRRIGATION WATER SAMPLING AND ANALYSIS PLAN

			Minimum data collection requirements	
Frequency	Sampling Methods	Source	Field Analytes	Lab Analytes
Each fresh water irrigation event for each land application area	List individual irrigation sources and the measurement method, e.g.: Irrigation Well 1 - inline totalizing flow meter Irrigation Well 2 - flow rate multiplied by runtime Canal 1 - flow rate multiplied by runtime	TID Canal River Pump	Date applied and volume (gallons or acre-inches) applied	None required
One irrigation event during each irrigation season during actual irrigation events – for each irrigation water source (well and canal)	For each irrigation source, a grab sample per the "Approved Sampling Procedures for Nutrient and Groundwater Monitoring at Existing Milk Cow Dairies" will be collected. In lieu of sampling the irrigation water, the Discharger may provide equivalent data from the local irrigation district.	TID Canal River Pump	None required	Electrical conductivity, total dissolved solids, and total nitrogen

NUTRIENT MANAGEMENT PLAN REVIEW

A. NUTRIENT MANAGEMENT PLAN REVIEW

Person who created the NMP:	Machado, Patrick	*See above for contact information.*
Date the NMP was drafted:	09/10/2021	
Person who approved the final NMP:	Machado, Patrick	*See above for contact information.*
Date of NMP implementation:	09/10/2021	

ATTACHED MAP AND DOCUMENTATION REFERENCES

The following list, based upon user selections and data entries, describes the minimum required attachments that must be submitted with the Nutrient Management Plan for the reporting schedule of 'July 1, 2009'.

A. PRELIMINARY DAIRY FACILITY ASSESSMENT

The NMP will include the initial Preliminary Dairy Facility Assessment (Attachment A) and the annual updates as required by Monitoring and Reporting Program No. R5-2007-0035. Copies of these assessments shall be maintained for 10 years.

B. LAND AREA MAP(S)

Identify each land application area (under the Discharger's control, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient recycling) on a single published base map

1. A field identification system (Assessor's Parcel Number; land application area; crops grown); indication if each land application is owned, rented, or leased by the Discharger; indication of what type of waste is applied (solid manure only, wastewater only, or both solid manure and wastewater); drainage flow direction in each field, nearby surface waters, and storm water discharge points; tailwater and storm water drainage controls; subsurface (tile) drainage systems (including discharge points and lateral extent); irrigation supply wells and groundwater monitoring wells; sampling locations for discharges of storm water and tailwater to surface water from the field.

2. Process wastewater conveyance structures, discharge points and discharge mixing points with irrigation water supplies; pumping facilities; flow meter locations; drainage ditches and canals, culverts, draining controls (berms, levees, etc.), and drainage easements.

Application area map reference number: LAP

Setbacks, Buffers, and Other Alternatives to Protect Surface Water (see Technical Standard VII):

1. Identify all potential surface waters or conduits to surface water that are within 100 feet of any land application area.
2. For each land application area that is within 100 feet of a surface water or a conduit to surface water, identify the setback, vegetated buffer, or other alternative practice that will be implemented to protect surface water (Technical Standard VII).

Setbacks and buffers map reference number: LAP

C. PROCESS WASTEWATER WRITTEN AGREEMENTS

Provide copies of written agreements with third parties that receive process wastewater for their own use from the Discharger's dairy (Technical Standards V.A.1 and V.A.3).

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

SAMPLING AND ANALYSIS PLAN CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Jordao Dairy

Physical address of dairy:

6025 S Central AVE	Turlock	Stanislaus	95380
Physical Address Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I certify that I meet the requirements as a certified specialist in developing nutrient management plans as described in Attachment C of Waste Discharge Requirements General Order No. R5-2007-0035 and that I prepared the Sampling and Analysis plan.

CCA # 385124

TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST

9/10/2021

SIGNATURE OF TRAINED PROFESSIONAL — DATE

Patrick Machado

PRINT OR TYPE NAME

7112 Metcalf WAY; Hughson, CA 95326

MAILING ADDRESS

(209) 678-6720

PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE OF OWNER OF FACILITY	SIGNATURE OF OPERATOR OF FACILITY
Joe Jordao	
PRINT OR TYPE NAME	PRINT OR TYPE NAME
9-15-21	
DATE	DATE

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

NUTRIENT BUDGET CERTIFICATION

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Jordao Dairy

Physical address of dairy:

6025 S Central AVE	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

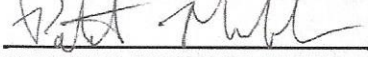
Street and nearest cross street (if no address):

B. DOCUMENTATION OF QUALIFICATIONS AND PLAN DEVELOPMENT

I certify that I meet the requirements as a certified specialist in developing nutrient management plans as described in Attachment C of Waste Discharge Requirements General Order No. R5-2007-0035 and that I prepared the Nutrient Budget plan.

CCA # 385124

TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST



SIGNATURE OF TRAINED PROFESSIONAL — DATE: 9/10/2021

Patrick Machado

PRINT OR TYPE NAME

7112 Metcalf WAY; Hughson, CA 95326

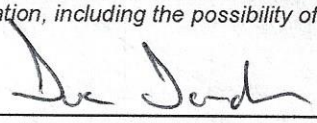
MAILING ADDRESS

(209) 678-6720

PHONE NUMBER

C. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Joe Jordao

PRINT OR TYPE NAME

PRINT OR TYPE NAME

9-15-21

DATE

DATE

Nutrient Management Plan Report
General Order No. R5-2007-0035, Attachment C
July 1, 2009 deadline

STATEMENTS OF COMPLETION

Waste Discharge Requirements General Order No. R5-2007-0035 for Existing Milk Cow Dairies (General Order) requires owners and operators of existing milk cow dairies (Dischargers) to develop and implement a Nutrient Management Plan for their land application areas (land under control of the Discharger, whether it is owned, rented, or leased, to which manure or process wastewater from the production area is or may be applied for nutrient cycling). The Discharger is required to maintain the NMP at the dairy, make the NMP available to Central Valley Water Board staff during their inspections, and submit the NMP to the Executive Officer upon request.

The General Order requires the Discharger to submit two Statements of Completion during development of the NMP. The Discharger may use this form to comply with the General Order requirement to submit one or both of these Statements of Completion. Parts A and E must be completed for each Statement of Completion. Parts B, C and D are to be completed for the Statements of Completion due by 1 July 2008, 31 December 2008 and 1 July 2009, respectively. Both the owner and the operator of the dairy must sign this form in Part E below.

A. DAIRY FACILITY INFORMATION

Name of dairy or business operating the dairy: Jordao Dairy

6025 S Central AVE	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Operator name: _____ Telephone no.: _____ _____
Landline Cellular

_____ _____ _____ _____
Mailing Address Number and Street City State Zip Code

Legal owner name: Jordao, Joe Telephone no.: (209) 656-8438 (209) 678-1705
Landline Cellular

6025 S Central AVE	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

B. STATEMENT OF COMPLETION DUE 1 JULY 2008

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 1 July 2008:

☒ **Item I.A.1 Land Application Information**
Identification of land used for manure application and needed information on a facility map.

☒ **Item I.B Land Application Information**
Information list for information provided on map above.

☒ **Item I.C Land Application Information**
Copies of written third-party process wastewater agreements.

☒ **Item I.D Land Application Information**
Identification of fields under control of the discharger within five miles of the dairy where neither process wastewater nor manure is applied.

☒ **Item II Sampling and Analysis Plan**

☒ **Item IV Setbacks, Buffers, and Other Alternatives to Protect Surface Water**
Identification of all potential surface waters or conduits to surface waters within 100 feet of land application areas and appropriate protection.

☒ **Item VI Record-Keeping Requirements**
Identification of monitoring records that will be maintained as required in the production and land application areas.

Has Item II (Sampling and Analysis Plan) of the Nutrient Management Plan been certified by a Certified Nutrient Management Specialist as required in the General Order?

☒ Yes ☐ No

C. STATEMENT OF COMPLETION DUE 31 DECEMBER 2008

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 31 December 2008:

☒ **Item V Field Risk Assessment**
Evaluation of the effectiveness of management practices used to control the discharge of waste constituents from land application areas by assessing the water quality monitoring results of discharges of manure, process wastewater, tailwater, subsurface (tile) drainage, or storm water from the land application areas.

D. STATEMENT OF COMPLETION DUE 1 JULY 2009

I have completed the following items of the Nutrient Management Plan (check the boxes of completed sections), which are due 1 July 2009:

☒ **Item I.A.2 Land Application Area Information**
Identification of process wastewater conveyance, mixing and drainage information for each land application area on a facility map.

☒ **Item III Nutrient Budget**
Established planned rates of nutrient applications by crop based on nutrient monitoring results for each land application area.

Has Item III (Nutrient Budget) of the Nutrient Management Plan been certified by a Certified Nutrient Management Specialist as required in the General Order?

☒ Yes ☐ No

E. CERTIFICATION STATEMENT

I certify under penalty of law that I have completed the items of the Nutrient Management Plan that are checked in Parts B, C and/or D above for the dairy identified in Part A above and that the appropriate certified nutrient management specialist has certified the items requiring such certification as noted in part B and/or D above and that I have personally examined and am familiar with the information submitted in Parts A, B, C and D of this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Joe Jordao

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Joe Jordao

PRINT OR TYPE NAME

PRINT OR TYPE NAME

9-15-21

DATE

DATE