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: **July 8, 2021**

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

From: **Emily Basnight, Assistant Planner**
Planning and Community Development

Subject: **USE PERMIT APPLICATION NO. PLN2021-0030 – SILVA'S HOLSTEINS DAIRY**

Respond By: **July 23, 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: **Adrian Silva dba Silva's Holsteins Diary**

Project Location: **6706 Elaine Road and 6612 S Faith Home Road, south of Ehrlich Road, northwest of the Stanislaus and Merced County border.**

APN: **057-013-019 and 057-022-012**

Williamson Act Contract: **APN: 057-013-019: 1977-2676**
APN: 057-022-012: 1971-0410

General Plan: **Agriculture**

Current Zoning: **A-2-40**

Project Description: **Request to expand the herd of an existing dairy facility located on two parcels across a total of 124± acres, in the A-2-40 (General Agriculture) zoning district. The applicant proposes to expand the herd from 1,076 to 2,200 mature cows, which includes an increase of 1,020 milk and 85 dry cows. Under this request, the applicant also proposes to increase support stock numbers by 1,280 for a total of 1,900 heifers. The increase to support stock will consist of 600 heifers 15-24 months old; 600 heifers 7-14 months; 350 calves 4-6 months old; and 350 calves 0-3 months. Additionally, the applicant proposes to construct two shade barns on APN: 057-013-019 and two free stall barns on APN 057-022-012 totaling 146,650 square-feet of building space within the existing dairy production area boundary. The applicant anticipates an increase of 3,135 cubic feet of additional manure per day generated from the proposed herd**

expansion, for a total of 5,889 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 as well as two parcels located to the north and east of the dairy that are not owned by the dairy property owner. Hours of operation are 24-hours a day, seven days a week. There are currently four single-family dwellings onsite which are occupied by employees. The proposed request is expected to increase the number of employees by one for a total of six employees on a maximum shift. No additional housing is proposed as part of this request. The applicant does not anticipate any customers onsite. The dairy currently receives three visits for tallow and veterinary services every two weeks, and a combined total of four milk and feed truck trips per day. The proposed request is expected to increase the number of feed truck trips from one to two per day, and milk truck trips from three to six per day for a new combined total of eight feed and milk truck trips per day. The existing facility is currently improved with 306,674± square feet of dairy and residential building space and approximately 26± acres of corrals, storage ponds, and feed storage. Both parcels used for the dairy are served by private wells and septic systems. APN 057-013-019 has access to County-maintained Elaine Road and APN 057-022-012 has access by way of South Faith Home Road, a County-maintained road. Confined Animal Facilities (CAF), which include dairies, are considered to be permitted agricultural uses; 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

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Building Phone: (209) 525-6557 Fax: (209) 525-7759

USE PERMIT APPLICATION NO. PLN2021-0030 – SILVA'S HOLSTEINS DAIRY
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 LAND OWNERS
	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: CHATOM UNION		USDA NRCS
X	SCHOOL DIST 2: TURLOCK UNIFIED		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. PLN2021-0030 – SILVA'S HOLSTEINS DAIRY**

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:

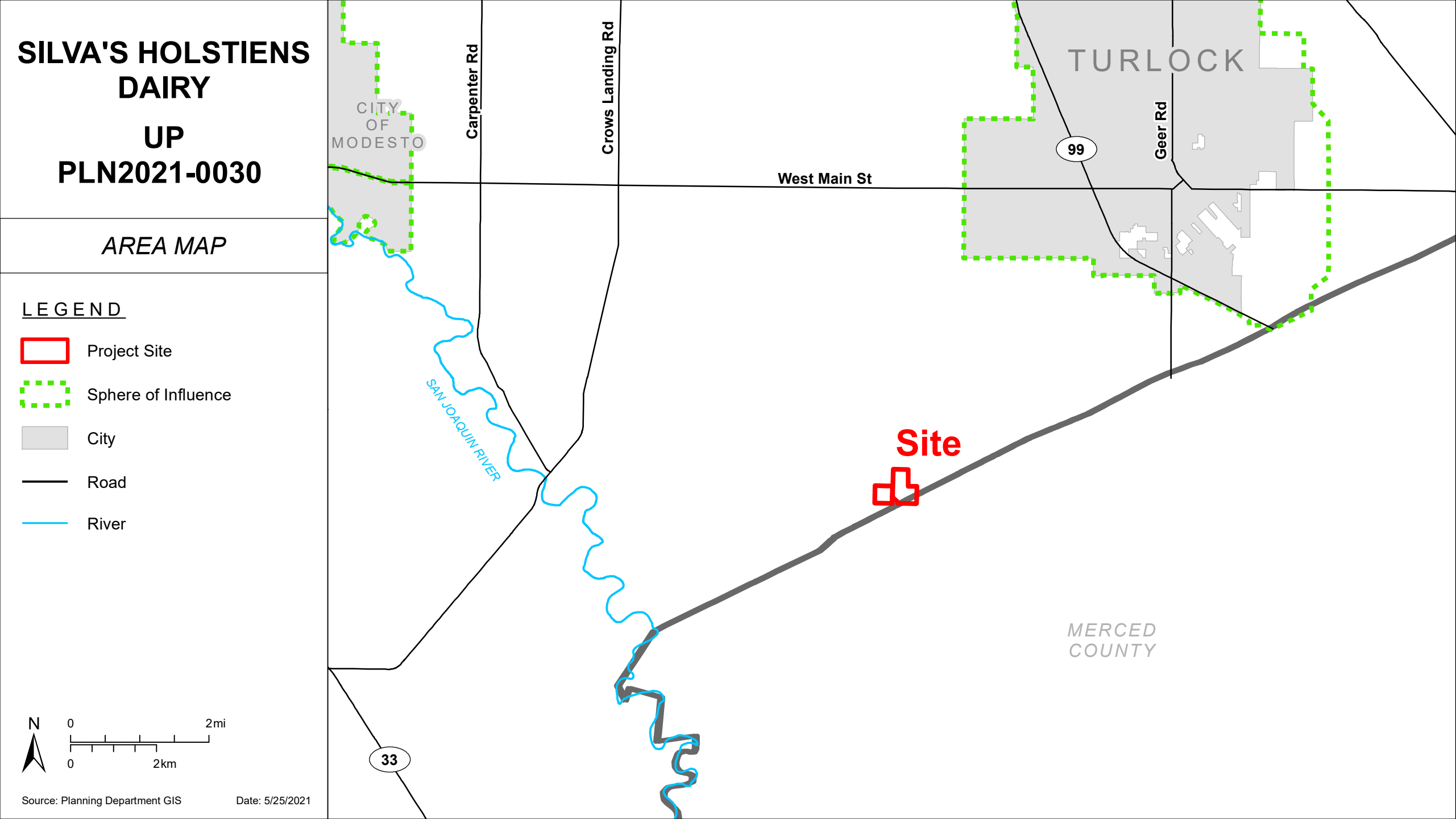
_____

Name Title Date

SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

AREA MAP



SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

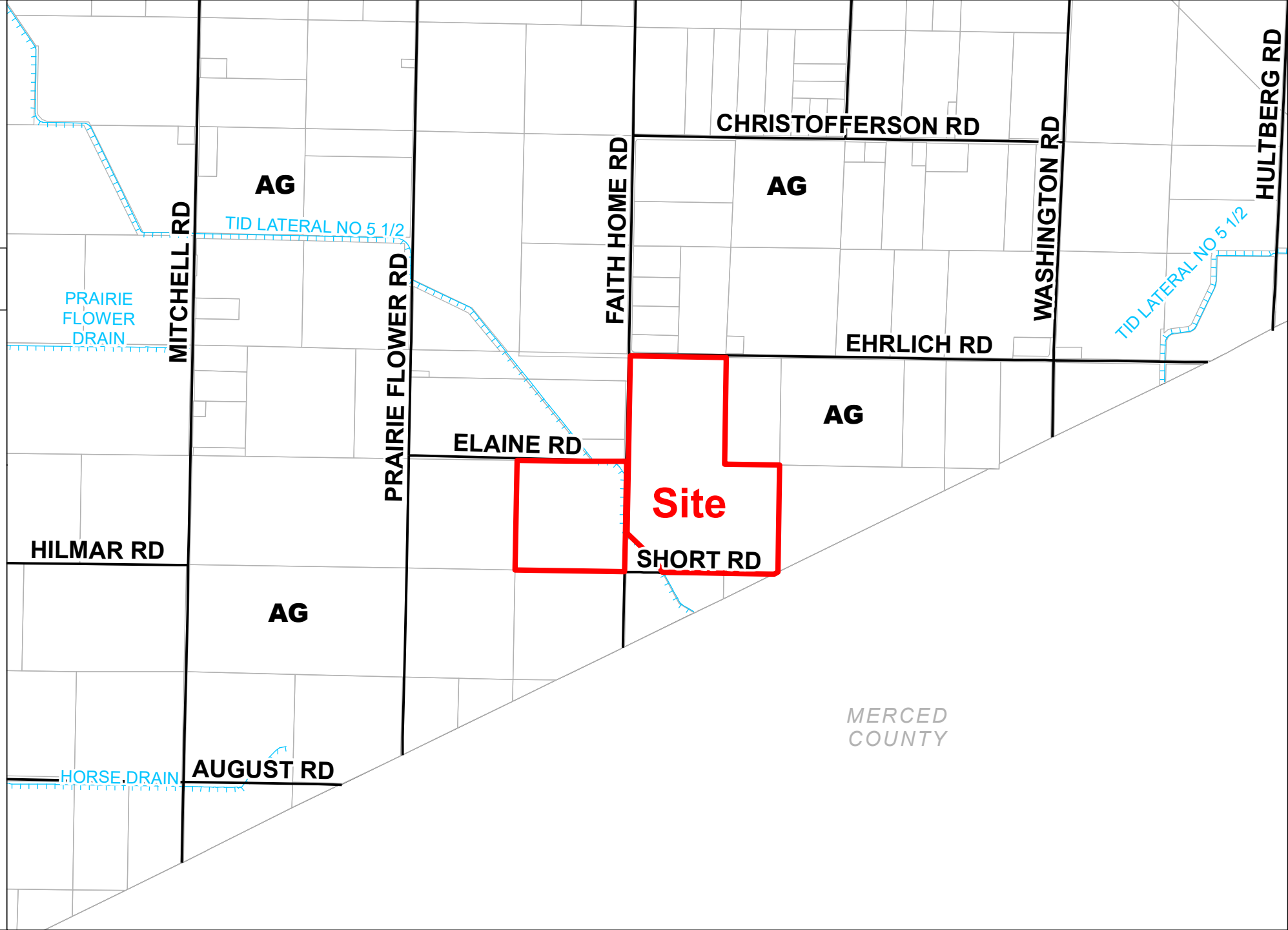
GENERAL PLAN MAP

LEGEND

- Project Site
- Parcel
- Road
- Canal

General Plan

- Agriculture



N

0 1,500 ft

0 300 m

Source: Planning Department GIS

Date: 5/25/2021

SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

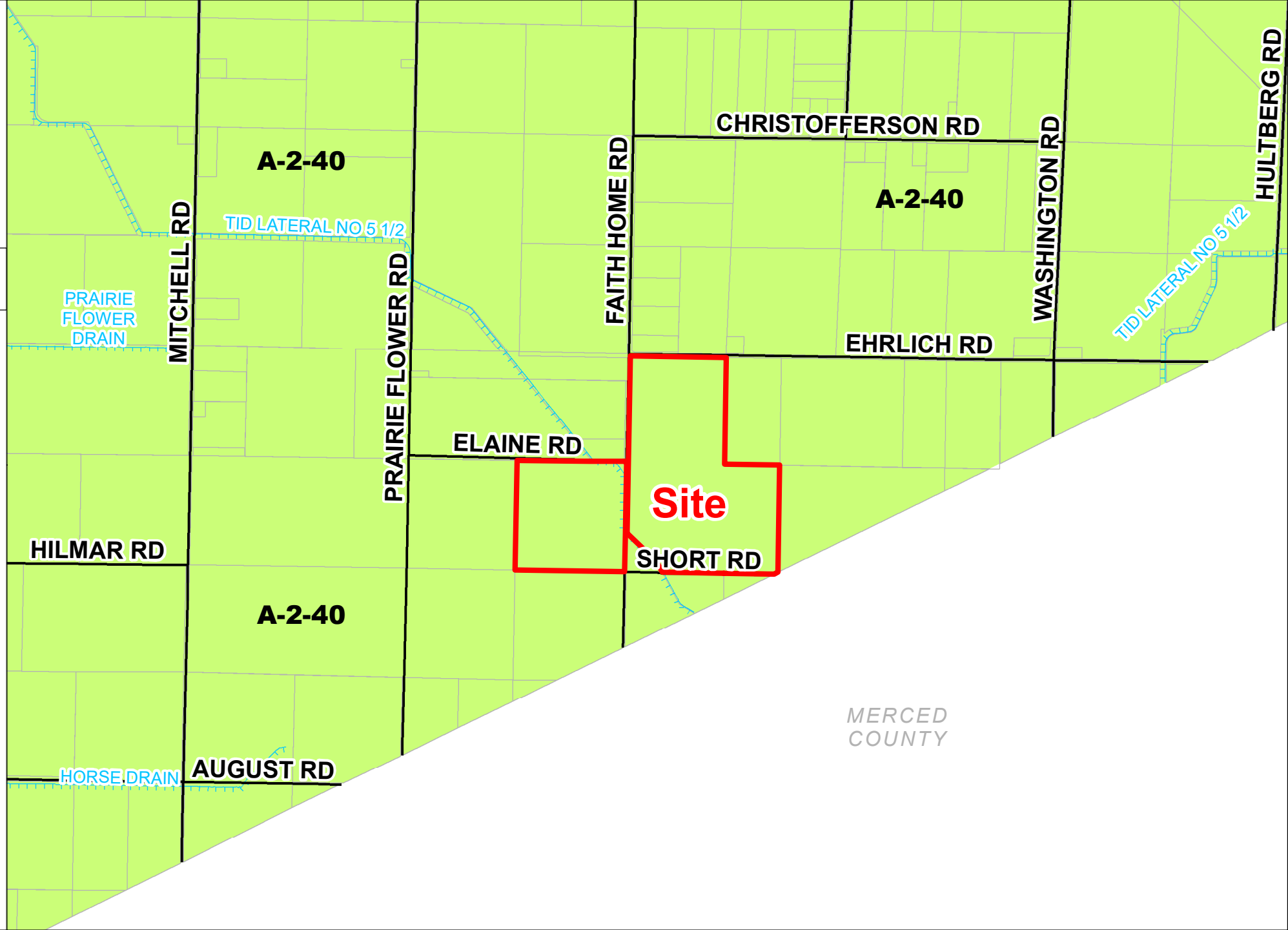
ZONING MAP

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: 5/25/2021

SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

2017 AERIAL AREA MAP

LEGEND

- Project Site
- Road
- Canal

N

0 1,500 ft

0 300 m

Source: Planning Department GIS

Date: 5/25/2021

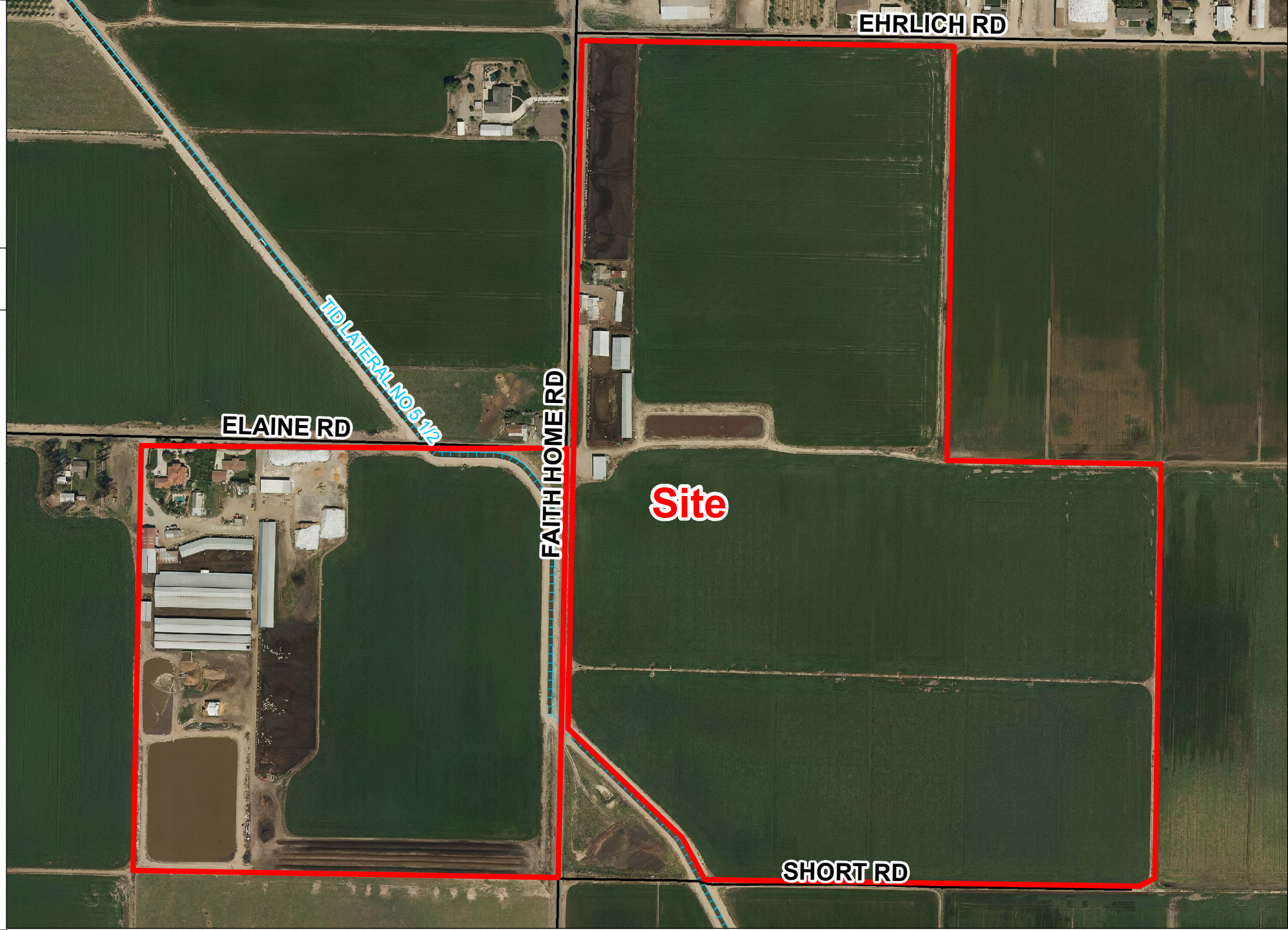
SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

2017 AERIAL SITE MAP

LEGEND

- Project Site
- Road
- Canal



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0 400 ft

0 100 m

Source: Planning Department GIS

Date: 5/25/2021

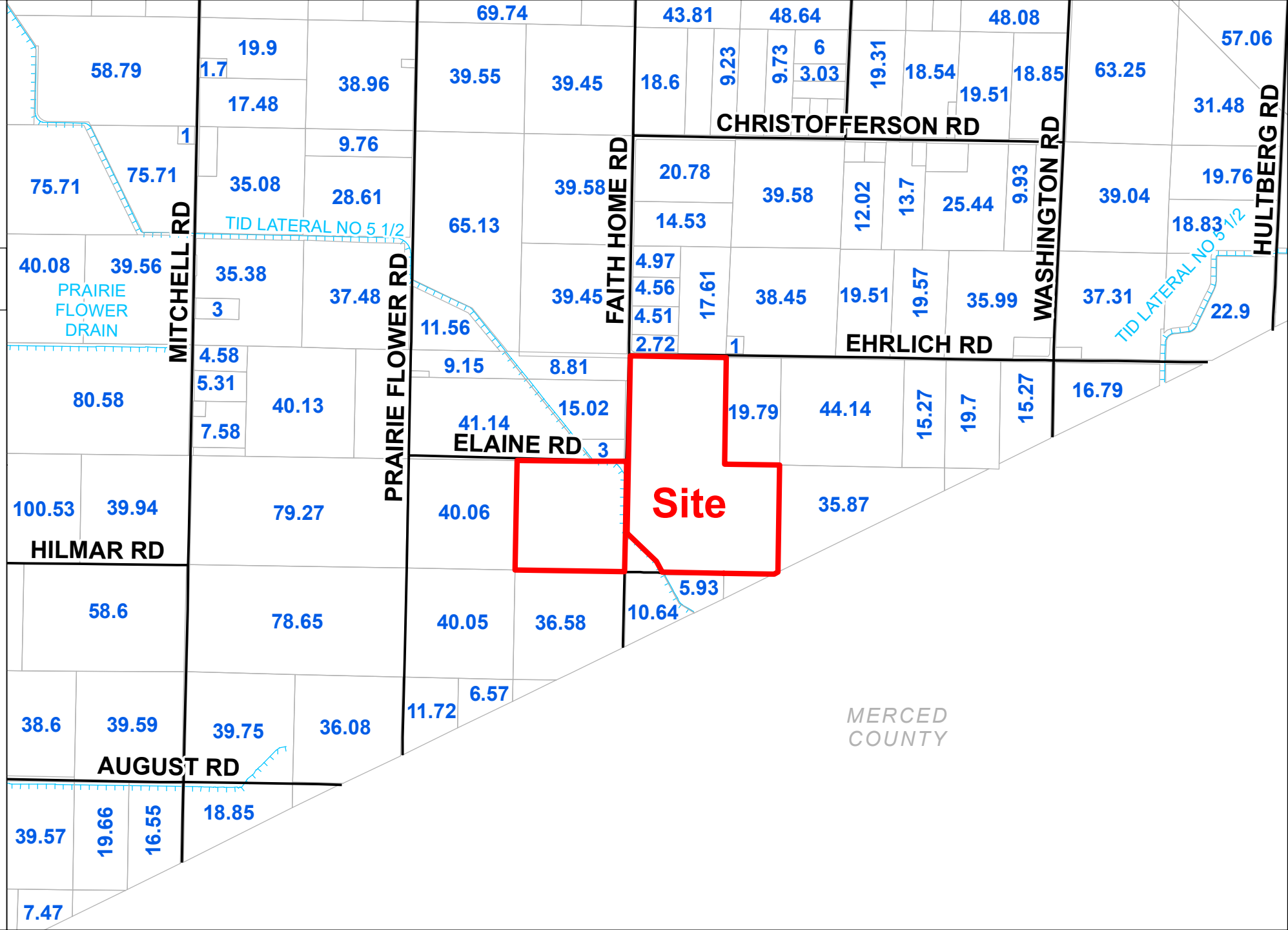
SILVA'S HOLSTIENS DAIRY

UP PLN2021-0030

ACREAGE MAP

LEGEND

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



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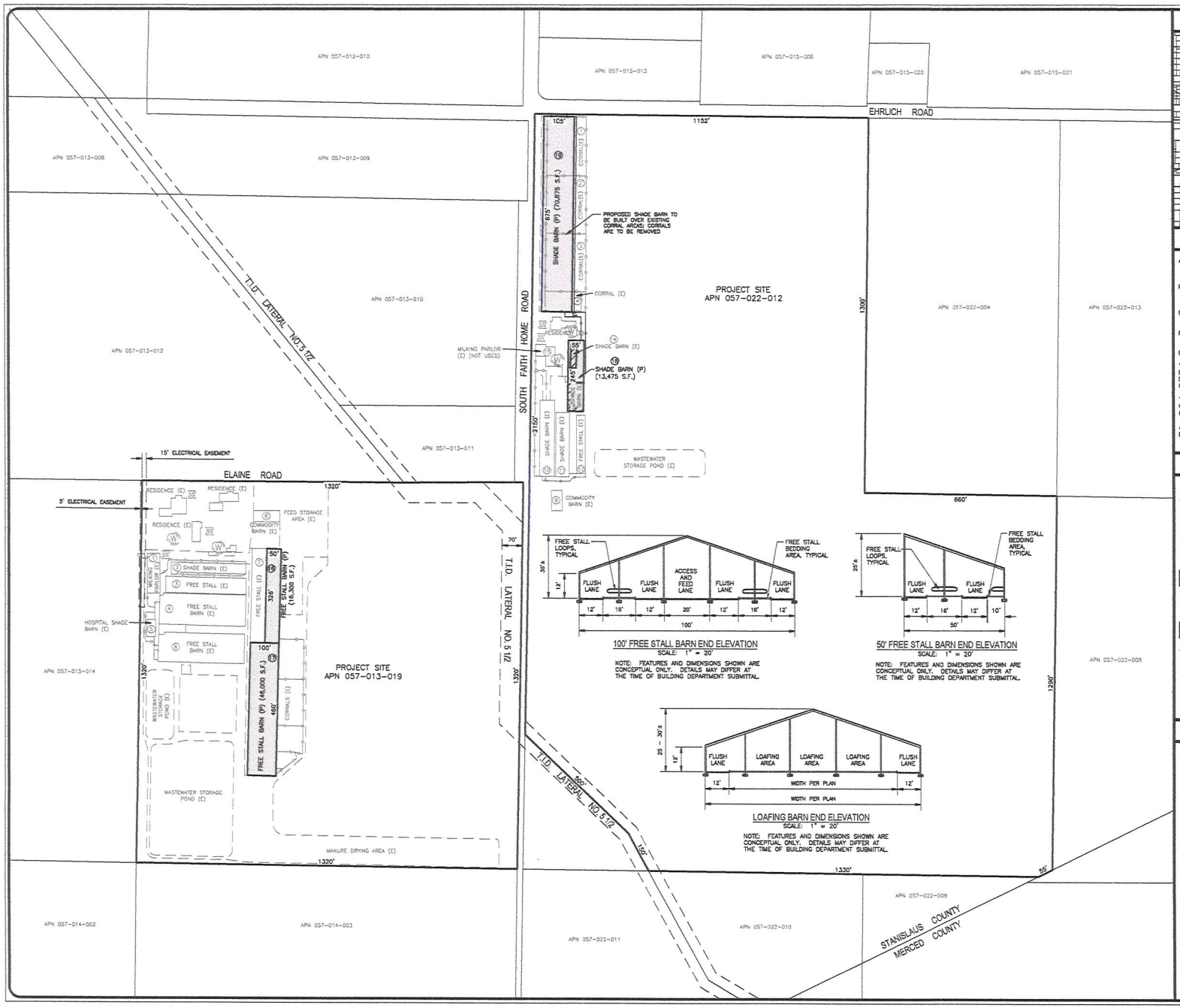
0 1,500 ft

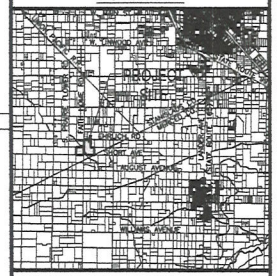
0 300 m

Source: Planning Department GIS

Date: 5/25/2021



VICINITY MAP



PROJECT SITE INFORMATION

APPLICANT: SILVAS HOLSTEINS DAIRY
6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY OWNER: MANUEL SILVA
6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY ADDRESS: 6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY ASSESSOR'S PARCEL NUMBER: 057-013-019, 057-022-012

PROPOSED BUILDING SQUARE FOOTAGE: 59,475 S.F.

THE PROJECT SITE IS LOCATED IN ZONE X PER FEMA FLOOD INSURANCE RATE MAP 06099C0850E. ZONE X IS DEFINED AS AN AREA DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.

THE PROJECT SITE IS LOCATED BETWEEN THE 70' AND 80' CONTOURS ACCORDING TO USGS TOPOGRAPHIC MAPS (NAVD88 DATUM).

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

LEGEND

- CORRAL (E) — EXISTING FACILITY IMPROVEMENT
- EXISTING FENCE
- (W) — EXISTING WELL
- SS — APPROXIMATE LOCATION OF EXISTING SEPTIC TANK AND LEACH FIELD
- (WT) — EXISTING WATER TANK
- (3) — EXISTING BUILDING NUMBER
- FREE STALL BARN (E) — EXISTING STRUCTURE OR IMPROVEMENT TO BE REMOVED
- (17) — PROPOSED BUILDING NUMBER
- CORRAL (P) — PROPOSED FACILITY IMPROVEMENT
- FREE STALL BARN (P) — PROPOSED STRUCTURE OR IMPROVEMENT
- PROPOSED FENCE

FACILITY BUILDING DIMENSIONS

BUILDING NO.	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. FT.)
1	138	44	6,072
2	264	35	9,240
3	280	56	15,680
4	300	108	32,400
5	60	32	1,920
6	300	102	30,600
7	326	50	16,300
8	92	40	3,680
9	70	37	2,590
10	262	51	13,362
11	220	47	10,340
12	200	30	6,000
13	100	55	5,500
14	93	20	1,860
15	IRREGULAR	IRREG.	3,590
16	326	50	16,300
17	460	100	46,000
18	245	55	13,475
19	675	105	70,875

N

SCALE: 1" = 150'
0 75 150 300

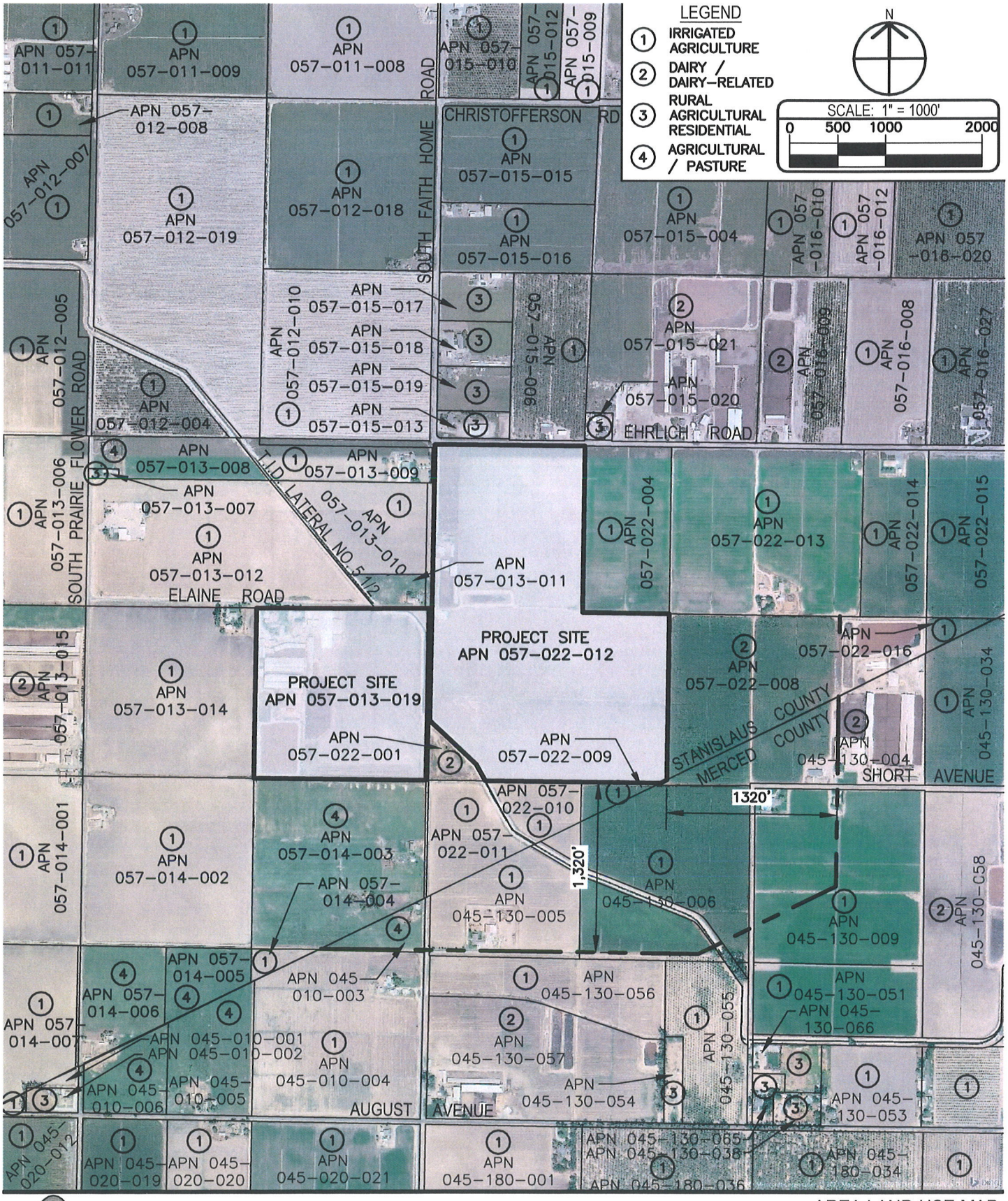
SHEET 1 OF 1

SOUSA ENGINEERING
INFRASTRUCTURE + DEVELOPMENT - AGRICULTURE
PH (209)239-3151
WWW.SOUSAENG.COM
PO BOX 1513
OAKDALE, CA 95361

SITE PLAN
TO ACCOMPANY USE PERMIT APPLICATION
SILVA'S HOLSTEINS
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 3/15/2021
FILE: 01_24.dwg
JOB NO.: 2021-003

SYMBOL	DESCRIPTION	APPD.
	REVISIONS	



SOUSA
ENGINEERING
INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE

PO BOX 1613
OAKDALE, CA 95361

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

AREA LAND USE MAP
SILVA'S HOLSTEINS DAIRY

STANISLAUS COUNTY, CA

VICINITY MAP

PROJECT SITE INFORMATION

APPLICANT: SILVAS HOLSTEINS DAIRY
6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY OWNER: MANUEL SILVA
6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY ADDRESS: 6706 ELAINE ROAD
TURLOCK, CA 95380

PROPERTY ASSESSOR'S PARCEL NUMBER: 057-013-019, 057-022-012

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LEGEND

- CORRAL (E) — EXISTING FACILITY IMPROVEMENT
- EXISTING FENCE
- (W) — EXISTING WELL
- 55 — APPROXIMATE LOCATION OF EXISTING SEPTIC TANK AND LEACH FIELD
- (WT) — EXISTING WATER TANK
- (3) — EXISTING BUILDING NUMBER
- FREE STALL BARN (E) — EXISTING STRUCTURE OR IMPROVEMENT TO BE REMOVED
- (7) — PROPOSED BUILDING NUMBER
- CORRAL (P) — PROPOSED FACILITY IMPROVEMENT
- FREE STALL BARN (P) — PROPOSED STRUCTURE OR IMPROVEMENT
- PROPOSED FENCE

100' FREE STALL BARN END ELEVATION
SCALE: 1" = 20'

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

50' FREE STALL BARN END ELEVATION
SCALE: 1" = 20'

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

LOAFING BARN END ELEVATION
SCALE: 1" = 20'

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

FACILITY BUILDING DIMENSIONS

BUILDING NO.	LENGTH (FT.)	WIDTH (FT.)	AREA (SQ. FT.)
1	138	44	6,072
2	264	35	9,240
3	280	56	15,680
4	300	108	32,400
5	60	32	1,920
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7	326	50	16,300
8	92	40	3,680
9	70	37	2,590
10	262	51	13,362
11	220	47	10,340
12	200	30	6,000
13	100	55	5,500
14	93	20	1,860
15	IRREGULAR	IRREG.	3,590
16	326	50	16,300
17	460	100	46,000
18	245	55	13,475
19	675	105	70,875

SHEET 1 OF 1

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INFRASTRUCTURE - DEVELOPMENT - AGRICULTURE
PH: (209)238-3151
WWW.SOUSAENG.COM
PO BOX 1513
OAKDALE, CA 95361

SITE PLAN
TO ACCOMPANY USE PERMIT APPLICATION
SILVA'S HOLSTEINS

STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 3/15/2021
FILE: 01_site.dwg
JOB NO.: 2021-003

SYMBOL	DESCRIPTION	APPD.
	REVISIONS	

RECEIVED
MAR 25 2021

Stanislaus County

APPLICATION QUESTIONNAIRE

Please Check all applicable boxes **APPLICATION FOR:** *Staff is available to assist you with determining which applications are necessary*		**PLANNING STAFF USE ONLY:**
☐ General Plan Amendment	☐ Subdivision Map	Application No(s): PLN 2021-0030
☐ Rezone	☐ Parcel Map	Date: 3/25/2021
☒ Use Permit	☐ Exception	S 12 T 6 R 9
☐ Variance	☐ Williamson Act Cancellation	GP Designation: Ag
☐ Historic Site Permit	☐ Other _____	Zoning: A-2-40
		Fee: $4,761.00
		Receipt No. #559638
		Received By: EB
		Notes: UP w/WA

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 1,076 combined milk and dry cows to 2,200 combined milk and dry cows. The project will involve the construction of four (4) new animal housing structures totaling 146,650 square feet within the existing dairy production area boundary.

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** 013 **Parcel** 019

Additional parcel numbers: 057-022-012

Project Site Address or Physical Location: 6706 Elaine Road, Turlock, CA 95380

Property Area: Acres: 124.0 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 since 1970.

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: Irrigated Agriculture / Dairy

West: Rural Residential / Irrigated Agriculture / Dairy

North: Rural Residential / Irrigated Agriculture

South: Rural Residential / Irrigated Agriculture / Dairy

WILLIAMSON ACT CONTRACT:

Yes ☒ **No** ☐

Is the property currently under a Williamson Act Contract?
Contract Number: 1976-2676 ;1970-71-0410

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

Date Filed: n/a

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 5,400 cubic yards and 3.4 acres are expected to be disturbed during construction of the proposed buildings.

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: 159,134 Sq. Ft. (7,360 sq. ft. to be removed)

Landscaped Area: 0 Sq. Ft.

Proposed Building Coverage: 146,650 Sq. Ft.

Paved Surface Area: 163,550 Sq. Ft. (existing and proposed)

Existing building area to be removed: 7,360 sq. ft.

BUILDING CHARACTERISTICS:

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

Four (4) new structures totaling 146,650 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 30'.

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) New fencing is proposed within existing corral areas where new animal housing structures will be constructed.

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: Kamps Propane Service

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 Site Plan for existing buildings; four (4) proposed buildings of totaling 146,650 square feet.

Type of use(s): All 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 22 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: The site is not retail and has no customers or visitors.

Other occupants: Veterinarian 1 visit every 2 weeks; tallow service 1 visit per week

Estimated number of truck deliveries/loadings per day: 2 feed trucks / day; 6 milk truck trips/day

Estimated hours of truck deliveries/loadings per day: 3 hours / day

Estimated percentage of traffic to be generated by trucks: 50%

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

Square footage of:

Office area: n/a

Warehouse area: n/a

Sales area: n/a

Storage area: feed storage 62,600 sq. ft.

Loading area: milk truck loading 530 sq. ft.

Manufacturing area: n/a

Other: (explain type of area) Animal housing: 282,492 sq. ft; Feed barns: 6,270 sq. ft.; Milk Parlors: 9,662

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 Elaine Road and South Faith Home Road.

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? No direct discharge is proposed.

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 the proposed strucure 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)

Waste Management Plan
For
Silva's Holsteins Dairy
Stanislaus County, CA

Prepared For:
Silva's Holsteins Dairy
6706 Elaine Road
Turlock, CA 95380

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WASTE MANAGEMENT PLAN
FOR
SILVA'S HOLSTEINS 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 in order 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 facility is in the San Joaquin River Basin and was constructed before 27 November 1984. However, the facility has been expanded since 27 November 1984 and thus must have protection against the 100-year storm event.

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, WWS2, and WWS3 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. Any areas requiring improvement are noted on Exhibit Sheets 3 and 4 and in Section 3.b.

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.

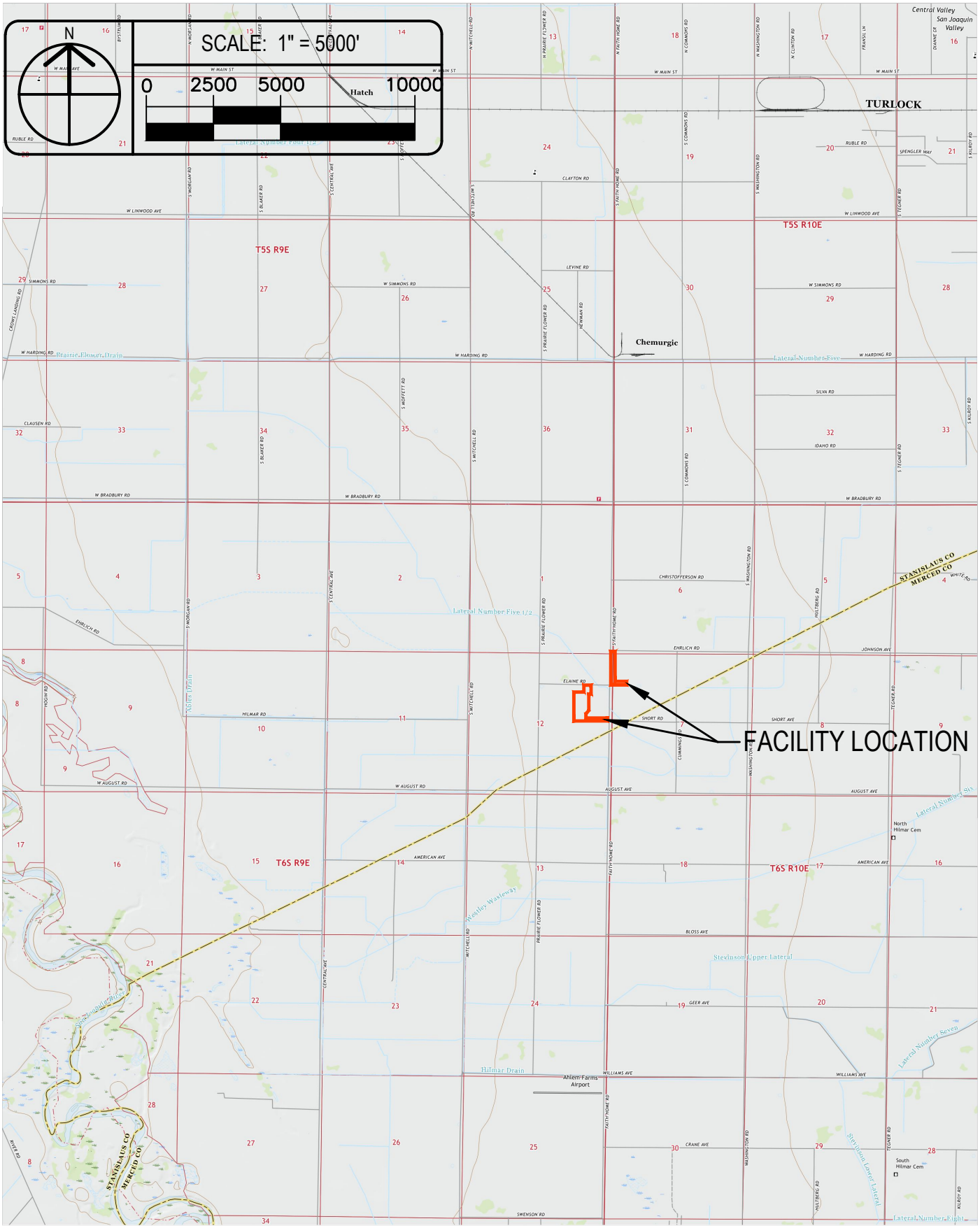
Production Area Specification D.5: *"Roof drainage from barns, milk houses, or shelters shall not drain into the corrals unless the corrals are properly graded and drained. (Cal Code Regs., title 3, § 661.)."*

Most roof drainage is collected by gutters, downspouts, and drains and is conveyed to the wastewater retention ponds or to adjacent fields. Roofs without gutters drain directly to adjacent fields or to flush lanes which convey the runoff to the wastewater retention ponds.

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



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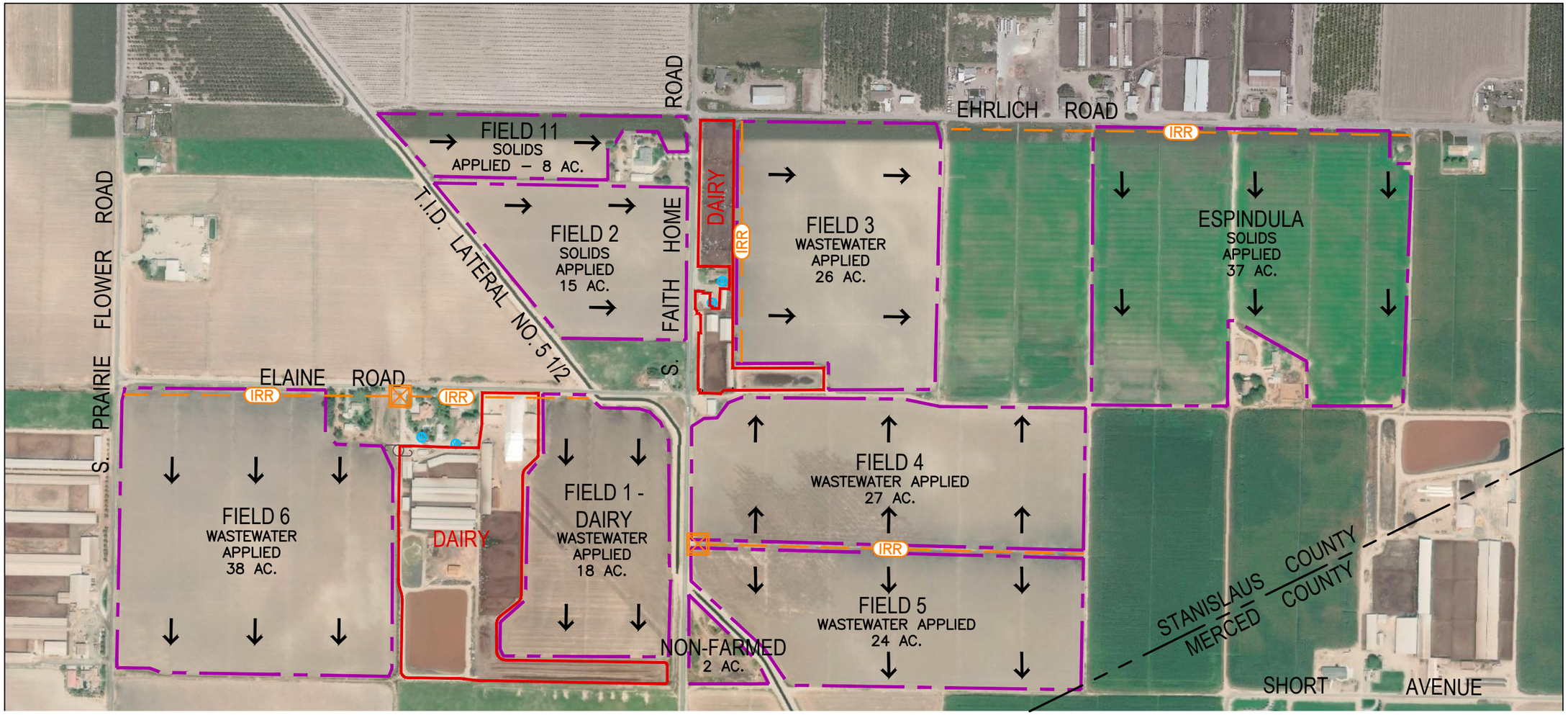
VICINITY MAP
SILVA'S HOLSTEINS DAIRY

STANISLAUS COUNTY, CA



LEGEND

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

N

SCALE: 1" = 500'

0 250 500 1000

DISCHARGE POINTS		
LAND APP. AREA	LATITUDE	LONGITUDE
NON–FARMED	N37° 25' 36.96"	W120° 55' 17.77"
FIELD 1–DAIRY	N37° 25' 42.05"	W120° 55' 25.25"
FIELD 2	N37° 25' 55.03"	W120° 55' 25.62"
FIELD 3	N37° 25' 54.82"	W120° 55' 11.21"
FIELD 4	N37° 25' 45.20"	W120° 55' 08.26"
FIELD 5	N37° 25' 38.54"	W120° 55' 08.46"
FIELD 6	N37° 25' 42.68"	W120° 55' 45.26"
FIELD 11	N37° 26' 00.43"	W120° 55' 29.68"
ESPINDULA	N37° 25' 55.83"	W120° 54' 48.41"

SHEET 2 OF 6

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SITE MAP
LAND APPLICATION AREAS
SILVAS HOLSTEINS DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 3/8/2021
FILE: 02_1aa.dwg
JOB NO.: 2021-003

SYMBOL	REVISIONS DESCRIPTION	APPD.

DISCHARGE POINTS		
LAND APP. AREA	LATITUDE	LONGITUDE
FIELD 9	N37° 27' 29.31"	W120° 53' 36.46"
FIELD 10	N37° 27' 29.18"	W120° 53' 44.40"

LEGEND

LAND APPLICATION AREA

N

SCALE: 1" = 200'

0 100 200 400

SHEET 3 OF 6

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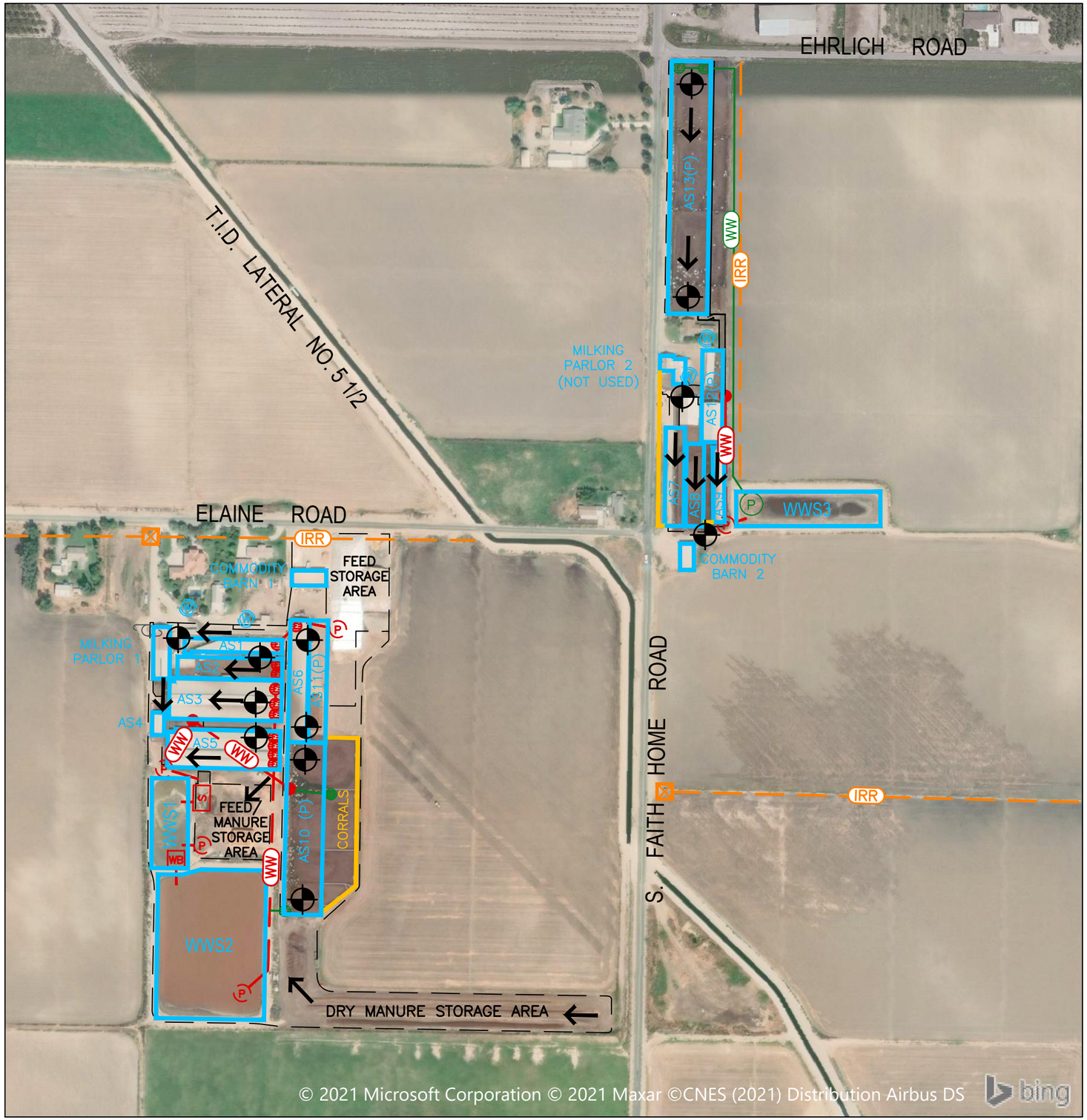
SITE MAP
LAND APPLICATION AREAS
SILVAS HOLSTEINS DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 3/8/2021
FILE: 03_sa.dwg
JOB NO.: 2021-003

SYMBOL	REVISIONS DESCRIPTION	APPD.



LEGEND

- ROOF AREA
- (P) ROOF AREA (PROPOSED)
- CORRAL AREA
- IRR IRRIGATION LINE
- WW WASTEWATER LINE
- WW WASTEWATER LINE (PROPOSED)
- P WASTEWATER SUMP WITH PUMP
- FLUSH SYSTEM DRAIN INLET
- FLUSH SYSTEM DRAIN INLET (PROPOSED)
- FS FLUSH SYSTEM DISCHARGE VALVE
- FS 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" = 300'

0 150 300 600

SHEET 4 OF 6

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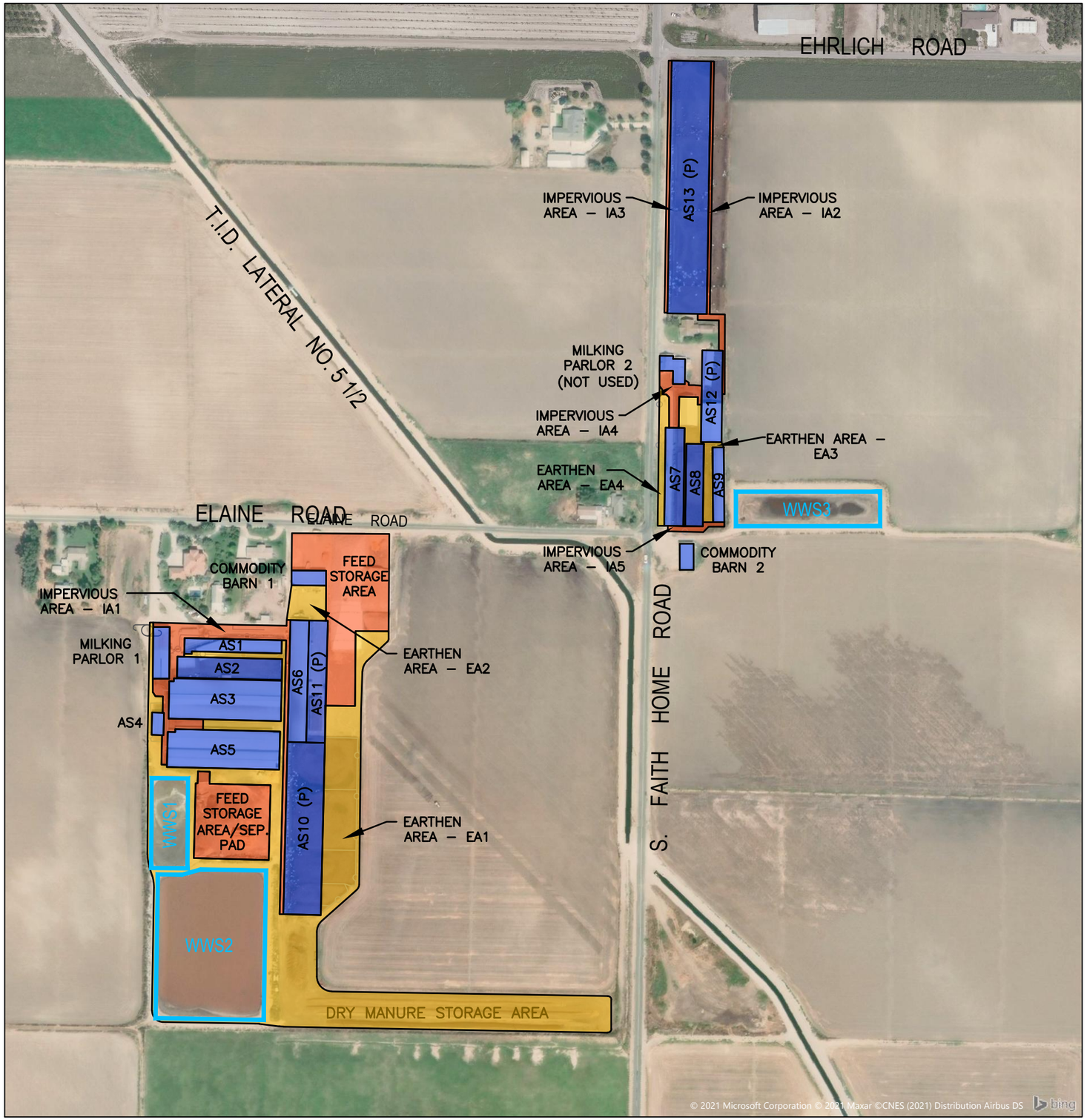
SITE MAP - PRODUCTION AREA

SILVAS HOLSTEINS DAIRY

STANISLAUS COUNTY, CA

DRAWN BY: MS
DATE: 3/8/2021
FILE: 04_dpa.dwg
JOB NO.: 2021-003

SYMBOL	REVISIONS DESCRIPTION	APPD.



LEGEND

- ROOF AREA
- EARTHEN AREA
- IMPERVIOUS AREA

N

SCALE: 1" = 300'

0 150 300 600

SHEET 5 OF 6

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PRODUCTION AREA
HYDROLOGIC MAP
SILVAS HOLSTEINS DAIRY
STANISLAUS COUNTY, CA

DRAWN BY: 3/9/2021
DATE: 12/27/2018
FILE: 05_hydro.dwg
JOB NO.: 2021-003

SYMBOL	REVISIONS DESCRIPTION	APPD.

National Flood Hazard Layer FIRMette

FEMA

120°55'51"W 37°26'3"N

120°55'14"W 37°25'34"N

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

1:6,000

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 / 17.5 Cross Sections with 1% Annual Chance / Water Surface Elevation
- Coastal Transect
- 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 2/13/2021 at 5:53 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: Silva's Holsteins Dairy

Physical address of dairy:

6706 Elaine RD	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

TRS Data and Coordinates:

6S	9E	12	Mt. Diablo	37° 25' 46.10" N	120° 55' 35.90" W
Township (T_)	Range (R_)	Section (S_)	Baseline meridian	Latitude (N)	Longitude (W)

Date facility was originally placed in operation: 01/01/1970

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

County Assessor Parcel Number(s) for dairy facility:

0057-0013-0019-0000 0057-0022-0012-0000

B. OPERATOR NAME: Silva, Adrian J Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine RD	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: Silva, Manuel M Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine RD	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:

2,200 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	1,900	1,900	20	1,400
Dry Cows	300	300	20	1,450
Bred Heifers (15-24 mo.)	600	600	18	900
Heifers (7-14 mo.)	600	600	18	600
Calves (4-6 mo.)	350	350	0	
Calves (0-3 mo.)	350	350	0	

Predominant milk cow breed: Holstein

Average milk production: 70 pounds per cow per day

Average number of milk cows per string sent to the milkbarn: 190 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: 18.0 hours per day

B. MILKBARN EQUIPMENT AND FLOOR WASH

Bulk tank wash and sanitizing: 3.0 run cycles/wash

Bulk tank wash vat volume: 40 gallons/cycle

Bulk tank wash wastewater: 240.0 gallons/day

Pipeline wash and sanitizing: 3.0 run cycles/wash

Pipeline wash vat volume: 50 gallons/cycle

Pipeline wash wastewater: 300.0 gallons/day

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

Milkbarn / parlor floor wash volume: 2,000 gallons/day

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

Plate coolers volume: 30,930 gallons/day

Vacuum pumps / air compressors / chillers type: Mechanically/Air Cooled

Vacuum pumps / air compressors / chillers volume: 0 gallons/day

Milkbarn and equipment wastewater volume generated daily: 31,470 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 1,900*	0 *of 300*	0 *of 600*	0 *of 600*	0 *of 350*	0 *of 350*
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: 1 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: 30,930 gallons/day

Recycled water reused: 2,000 gallons/day

Recycled water leaving system: 0 gallons/day

Reusable water balance: 28,930 gallons/day

Volume of milkbarn and equipment wastewater generated for storage period: 3,776,400 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	150	40.0	50%	3,750
			Total:	3,750

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:

Processing pit and mechanical separator

C. MANURE AND BEDDING SOLIDS SUMMARY

	cubic feet		gallons	
	day	storage period	day	storage period
Manure generated by the herd (pre-separation):	5,889.31	706,718	44,055.13	5,286,615
Manure generated by the herd sent to pond(s):	4,015.49	481,859	30,037.94	3,604,553
Manure generated by the herd sent to dry lot(s):	1,242.47	149,096	9,294.29	1,115,314
Manure solids (herd) removed by separation:	305.64	36,677	2,286.34	274,361
Liquid component in separated solids not send to pond(s):	325.72	39,087	2,436.56	292,388
Imported and facility generated bedding sent to pond(s):	31.25	3,750	233.77	28,052
Total manure and bedding sent to pond(s):	4,046.74	485,609	30,271.71	3,632,605
Residual manure solids and bedding sent to pond(s) w/factor:	244.85	29,383	1,831.64	219,796
	cubic feet per year		gallons per year	
Residual manure solids and bedding sent to pond(s) w/factor:	89,372		668,548	

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
Feed Storage Area	68,200	1	0.95	0.50	Drains into pond(s).
Feed Storage Area / Separator Pad	41,000	1	0.95	0.50	Drains into pond(s).
Impervious Area 1 - IA1	31,050	1	0.95	0.50	Drains into pond(s).
Impervious Area 2 - IA2	8,500	1	0.95	0.50	Drains into pond(s).
Impervious Area 3 - IA3	5,400	1	0.95	0.50	Drains into pond(s).
Impervious Area 4 - IA4	7,200	1	0.95	0.50	Drains into pond(s).
Impervious Area 5 - IA5	2,200	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):	163,550	sq. ft.
Total surface area:	163,550	sq. ft.
Runoff from normal storage period rainfall:	436,360	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	654,540	gallons/storage period
25 year/24 hour storm event runoff:	242,139	gallons/storage period
Total surface area runoff:	678,499	gallons/storage period
Total surface area runoff with 1.5 factor:	896,679	gallons/storage period

C. ROOF AREAS

Name	Surface Area (sq. ft.)	Quantity	Runoff Destination
Animal Shelter 1 - AS1	9,240	1	Wastewater pond
Animal Shelter 10 - AS10	46,000	1	Field 1 - Dairy
Animal Shelter 11 - AS11	16,300	1	Field 1 - Dairy
Animal Shelter 12 - AS12	13,475	1	Field 3
Animal Shelter 13 - AS13	70,875	1	Field 3
Animal Shelter 2 - AS2	15,680	1	Wastewater pond
Animal Shelter 3 - AS3	32,400	1	Field 6
Animal Shelter 4 - AS4	1,920	1	Wastewater pond
Animal Shelter 5 - AS5	30,600	1	Field 6
Animal Shelter 6 - AS6	16,300	1	Wastewater pond
Animal Shelter 7 - AS7	13,362	1	Wastewater pond
Animal Shelter 8 - AS8	10,340	1	Wastewater pond
Animal Shelter 9 - AS9	6,000	1	Wastewater pond
Commodity Barn 1	3,680	1	Wastewater pond
Commodity Barn 2	2,590	1	Adjacent field
Milking Parlor 1	6,072	1	Field 6
Milking Parlor 2 (not used)	3,590	1	Wastewater pond

Surface area that does not run off into pond(s):	218,312	sq. ft.
Surface area that runs off into pond(s):	80,112	sq. ft.
Total surface area:	298,424	sq. ft.
Runoff from normal storage period rainfall:	427,486	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	641,229	gallons/storage period
25 year/24 hour storm event runoff:	124,850	gallons/storage period
Total surface area runoff:	552,336	gallons/storage period
Total surface area runoff with 1.5 factor:	766,079	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	244,600	1	0.35	0.20	Drains into pond(s).
Earthen Area 2 - EA2	9,175	1	0.35	0.20	Drains into pond(s).
Earthen Area 3 - EA3	13,500	1	0.35	0.20	Drains into pond(s).
Earthen Area 4 - EA4	7,100	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):	274,375	sq. ft.
Total surface area:	274,375	sq. ft.
Runoff from normal storage period rainfall:	292,819	gallons/storage period
Runoff from normal storage period rainfall with 1.5 factor:	439,228	gallons/storage period
25 year/24 hour storm event runoff:	149,659	gallons/storage period
Total surface area runoff:	442,478	gallons/storage period
Total surface area runoff with 1.5 factor:	588,887	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):	240 ft.	Earthen Depth (ED):	12 ft.
Earthen Width (EW):	97 ft.	Side Slope (S):	1.0 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	0.0 ft.

Calculations			
Liquid Length (LL):	236 ft.	Storage Volume Adjusted for Dead Storage Loss:	187,913 cu. ft.
Liquid Width (LW):	93 ft.		
Pond Surface Area:	23,280 sq. ft.	Pond Marker Elevation:	9.3 ft.
Storage Volume:	187,913 cu. ft.	Evaporation Volume:	116,862 gals/period
		Adjusted Surface Area:	21,735 sq. ft.

POND OR BASIN DESCRIPTION: WWS2

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

Dimensions			
Earthen Length (EL):	396 ft.	Earthen Depth (ED):	12 ft.
Earthen Width (EW):	285 ft.	Side Slope (S):	1.0 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	1.0 ft.

Calculations			
Liquid Length (LL):	392 ft.	Storage Volume Adjusted for Dead Storage Loss:	937,827 cu. ft.
Liquid Width (LW):	281 ft.		
Pond Surface Area:	112,860 sq. ft.	Pond Marker Elevation:	9.4 ft.
Storage Volume:	1,035,553 cu. ft.	Evaporation Volume:	589,983 gals/period
		Adjusted Surface Area:	109,731 sq. ft.

POND OR BASIN DESCRIPTION: WWS3

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

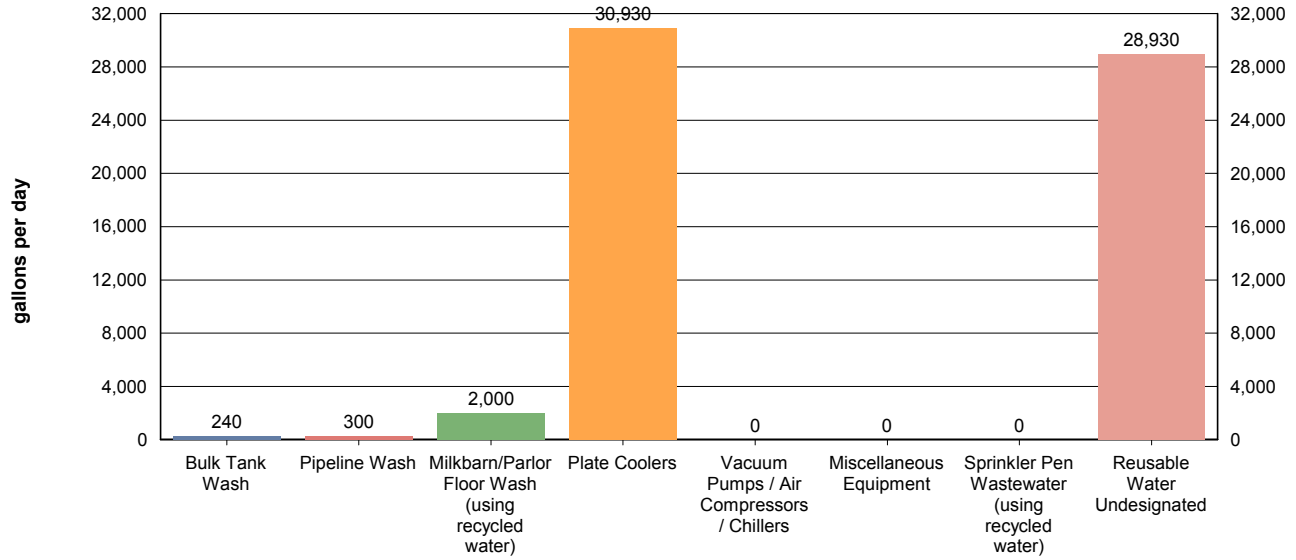
Dimensions			
Earthen Length (EL):	385 ft.	Earthen Depth (ED):	12 ft.
Earthen Width (EW):	92 ft.	Side Slope (S):	1.0 ft. (h:1v)
Free Board (FB):	2 ft.	Dead Storage Loss (DS):	0.0 ft.

Calculations			
Liquid Length (LL):	381 ft.	Storage Volume Adjusted for Dead Storage Loss:	289,713 cu. ft.
Liquid Width (LW):	88 ft.		
Pond Surface Area:	35,420 sq. ft.	Pond Marker Elevation:	9.3 ft.
Storage Volume:	289,713 cu. ft.	Evaporation Volume:	178,642 gals/period
		Adjusted Surface Area:	33,226 sq. ft.

Potential storage losses (due to dead storage):	97,726.0 cubic feet - or -	731,041.2 gallons
Liquid storage surface area:	165,628	sq. ft.
Rainfall onto retention pond(s):	915,462	gallons/storage period
Rainfall runoff into retention pond(s):	1,156,665	gallons/storage period
Normal rainfall onto retention pond(s) with 1.5 factor:	1,373,193	gallons/storage period
Normal rainfall runoff into retention pond(s) with 1.5 factor:	1,734,997	gallons/storage period
Storage period evaporation (default):	11.50	inches/storage period
Storage period evaporation (user-override):		inches/storage period
Storage period evaporation volume:	885,487	gallons/storage period
Manure and bedding sent to pond(s):	3,632,605	gallons/storage period
Milkbarn water sent to pond(s):	3,776,400	gallons/storage period
Fresh flush water for storage period:	0	gallons/storage period

CHARTS

A. MILKBARN WASTEWATER SENT TO POND(S)

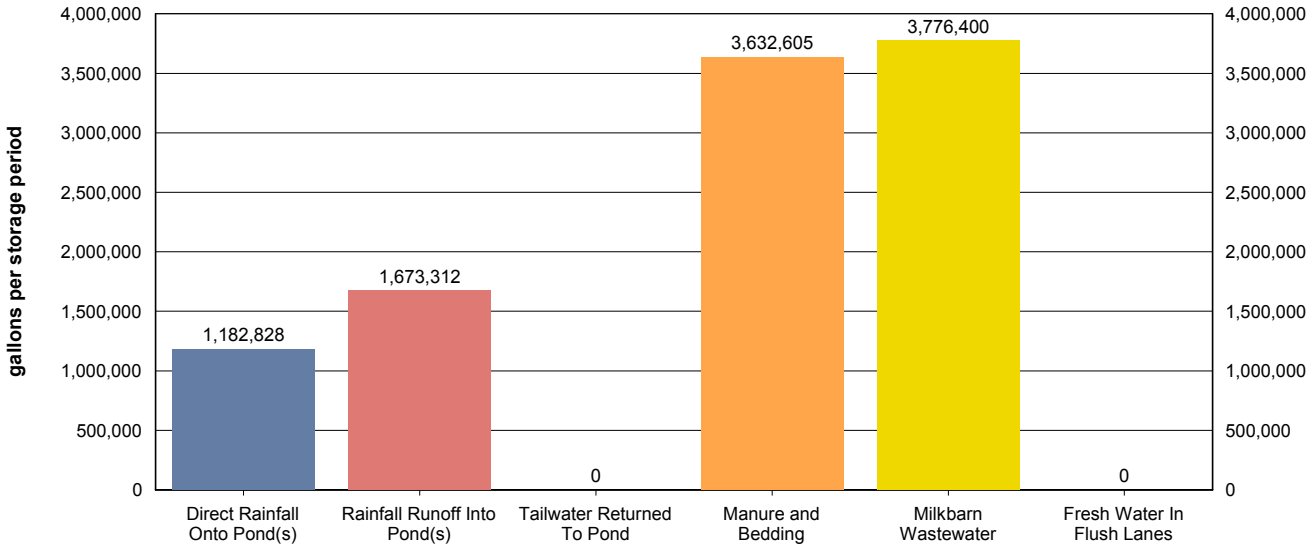


Values shown in chart are approximate values per day.

Total milkbarn wastewater generated daily: 31,470 gallons/day

Total milkbarn wastewater generated per period: 3,776,400 gallons/storage period

B. PROCESS WASTEWATER (NORMAL PRECIPITATION)

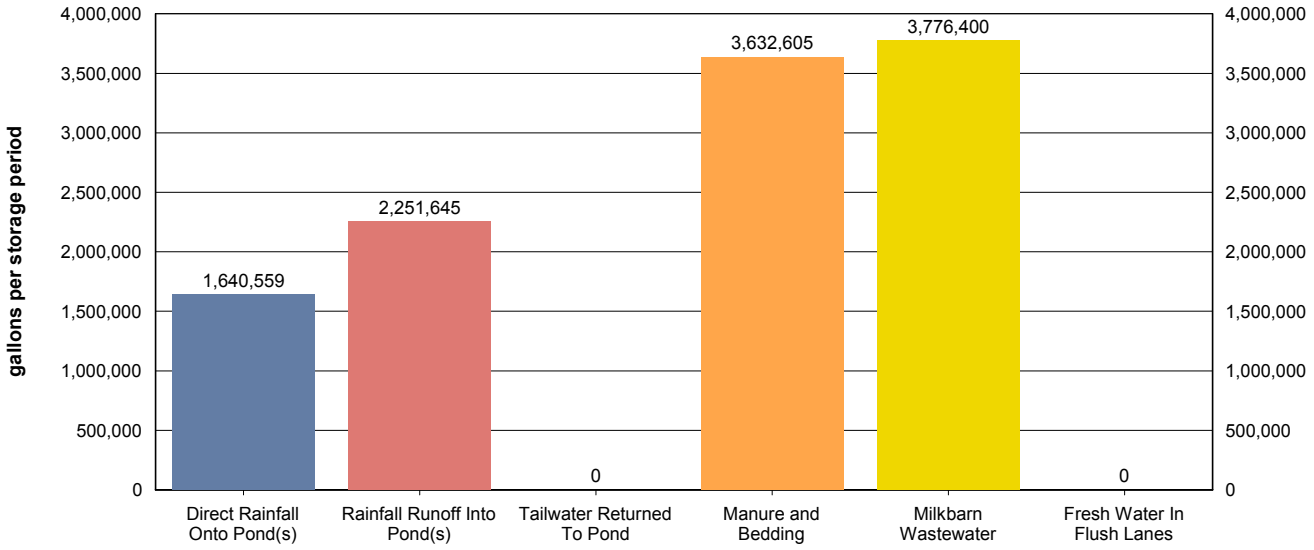


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	85,543	gallons/day
Total process wastewater generated per period:	10,265,145	gallons/storage period
Total process wastewater removed due to evaporation:	885,487	gallons/storage period
Total storage capacity required:	9,379,658	gallons
	1,253,878	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	10,588,324	gallons
	1,415,453	cu. ft.

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

C. PROCESS WASTEWATER (NORMAL PRECIPITATION WITH 1.5 FACTOR)

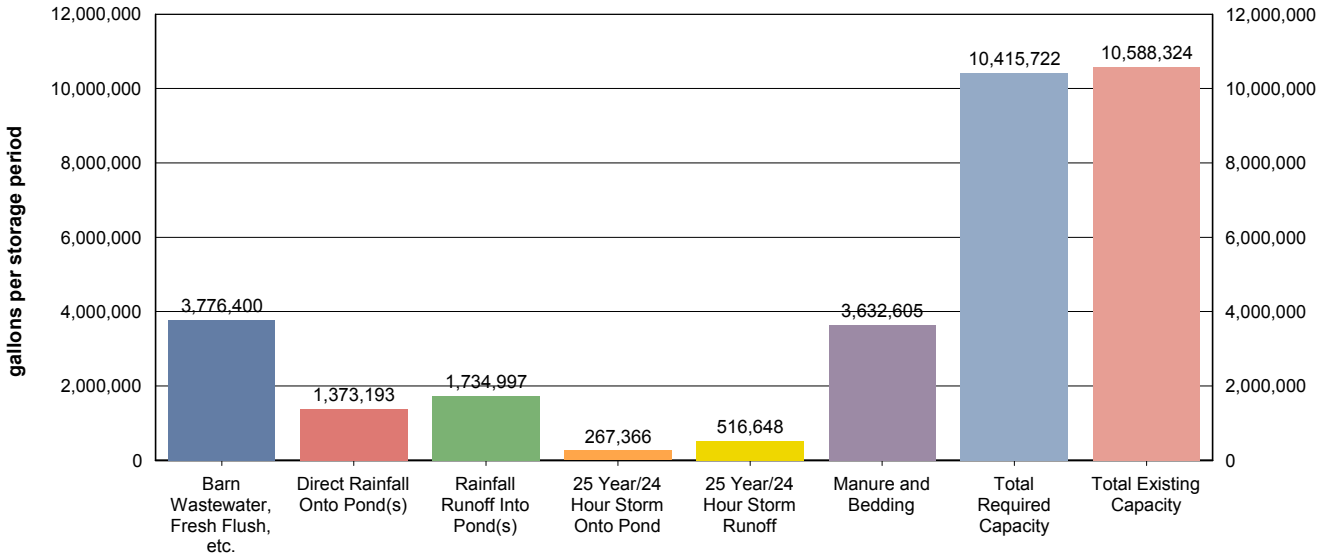


Values shown in chart are approximate values for storage period.

Storage period:	120	days
Total process wastewater generated daily:	94,177	gallons/day
Total process wastewater generated per period:	11,301,209	gallons/storage period
Total process wastewater removed due to evaporation:	885,487	gallons/storage period
Total storage capacity required:	10,415,722	gallons
	1,392,379	cu. ft.
Existing storage capacity (adjusted for dead storage loss):	10,588,324	gallons
	1,415,453	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:	3,776,400	gallons/storage period
Manure and bedding sent to pond:	3,632,605	gallons/storage period
Precipitation onto pond:	1,373,193	gallons/storage period
Precipitation runoff:	1,734,997	gallons/storage period
25 year/24 hour storm onto pond:	267,366	gallons/storage period
25 year/24 hour storm runoff:	516,648	gallons/storage period
Residual solids after liquids have been removed (liquid equivalent):	219,796	gallons/storage period
Total process wastewater removed due to evaporation:	885,487	gallons/storage period
Total required capacity:	10,415,722	gallons/storage period
Total existing capacity:	10,588,324	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: WWS3

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 0.0 feet above the pond invert beginning in August 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 1.0 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 0.0 feet above the pond invert beginning in August 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 1.0 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: 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 August 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 1.0 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	9,240
Animal Shelter 10 - AS10	1	46,000
Animal Shelter 11 - AS11	1	16,300
Animal Shelter 12 - AS12	1	13,475

Animal Shelter 13 - AS13	1	70,875
Animal Shelter 2 - AS2	1	15,680
Animal Shelter 3 - AS3	1	32,400
Animal Shelter 4 - AS4	1	1,920
Animal Shelter 5 - AS5	1	30,600
Animal Shelter 6 - AS6	1	16,300
Animal Shelter 7 - AS7	1	13,362
Commodity Barn 1	1	3,680
Commodity Barn 2	1	2,590
Milking Parlor 1	1	6,072
Milking Parlor 2 (not used)	1	3,590
Buildings without rooftop rainfall collection systems	Quantity	Surface Area (sq. ft.)
Animal Shelter 8 - AS8	1	10,340
Animal Shelter 9 - AS9	1	6,000

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, inlets, and drainage piping will be inspected for proper operation. Repairs will be made as needed prior to the rain season.

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: 1st of October

Animal housing area drainage system assessment and maintenance methods:

Animal housing drainage systems will be inspected for proper operation. Repairs will be made as soon as possible after identification of damaged facilities.

G. MORTALITY MANAGEMENT

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

Rendering company or landfill name: Darling International

Rendering company or landfill telephone number: (559) 268-5325

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.

Chemical Name	Quantity	Units	Frequency	Usage Area	Destination (Used Chemical / Container)	Disposal Company		Collection Frequency
						Name	Phone	
Acid	360	gallons	year	Milking Parlor	Picked up by distributor			
Chlorine	360	gallons	year	Milking Parlor	Picked up by distributor			
CIP Detergent	360	gallons	year	Milking Parlor	Picked up by distributor			
Iodine	5,000	gallons	year	Milking Parlor	Picked up by distributor			

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 4

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 6

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: Silva's Holsteins Dairy

Physical address of dairy:

6706 Elaine RD	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

3/17/2021

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.

Manuel M Silva	
SIGNATURE OF OWNER	SIGNATURE OF OPERATOR
Manuel M Silva	Adrian J Silva
PRINT OR TYPE NAME	PRINT OR TYPE NAME
3/16/2021	3/16/2021
DATE	DATE

SOUSA
ENGINEERING
INFRASTRUCTURE-DEVELOPMENT-
AGRICULTURE

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

VECTOR CONTROL PLAN
FOR
SILVA'S HOLSTEINS 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-PROPOSED

MARCH 2021

PREPARED FOR:

SILVA HOLSTEINS DAIRY

6706 ELAINE RD

TURLOCK CA 95380

NOTES:

Prepared to reflect proposed conditions

PREPARED BY:

CAS
CARDOSO AG SERVICES

MARIANN PEDROSO
PO BOX 906
NEWMAN CA 95360

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: Silvas Holsteins Dairy

Physical address of dairy:

6706 Elaine Rd	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: 01/01/1970

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

County Assessor Parcel Number(s) for dairy facility:

0057-0013-0019-0000 0057-0022-0012-0000

B. OPERATOR NAME: Silva, Adrian J Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine Rd	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: Silva, Manuel M Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine Rd	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

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

D. CONTACT NAME: Pedroso, Mariann Telephone no.: (209) 862-4291 (Landline) (209) 277-2817 (Cellular)

Title: Technical Service Provider

P.O. Box 906	Newman	CA	95360
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:

2,200 *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	1,900	300	600	600	350	350
Maximum count	1,900	300	600	600	350	350
Avg live weight (lbs)	1,400	1,450	900	600		
Daily hours on flush	20	20	18	18	0	0

Predominant milk cow breed: Holstein

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
TID Canal	Surface water (canal, river)	0.90	0.00	0.00	15 *cfs*

C. NUTRIENT IMPORTS

No nutrient imports entered.

D. NUTRIENT EXPORTS

Nutrient Type/Name	Quantity	Moisture	Nitrogen	Phosphorus (as P2O5)	Potassium (as K2O)
Corral solids	9,000.00 *ton*	40.0%	1.820%	0.470%	1.260%
Separator solids	9,000.00 *ton*	69.0%	2.450%	1.950%	1.650%
Separator solids	9,000.00 *ton*	69.0%	2.450%	1.950%	1.650%

Total nitrogen exported: 469,980.00 *lbs*

Total phosphorus exported: 117,282.06 *lbs*

Total potassium exported: 265,782.60 *lbs*

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: 0044-0041-0008-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0044-0041-0009-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0013-0009-0000

Legal owner of parcel: Barreiro, Jonine Telephone no.: Landline (209) 556-7185 Cellular

6419 Faith Home Ave	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

ASSESSOR PARCEL NUMBER: 0057-0013-0010-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0013-0014-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0013-0019-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0022-0001-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0022-0012-0000

Legal owner of parcel: Owned by Dairy

ASSESSOR PARCEL NUMBER: 0057-0022-0013-0000

Legal owner of parcel: Espindula, George Telephone no.: Landline (209) 678-0558 Cellular

5542 Ehrlich Rd	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

B. FIELD NAME: 10

Cropable acres: 19

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? [ ] 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
Almond, in shell	Middle January	Early October	19

FIELD NAME: 11

Cropable acres: 8

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? [ ] 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
Wheat, silage, soft dough	Middle October	Late April	8
Corn, silage	Late May	Late September	8

FIELD NAME: 1-Dairy

Cropable acres: 18

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? [ ] Yes [X] No

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

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle October	Late April	18
Corn, silage	Late May	Late September	18

FIELD NAME: 2

Cropable acres: 15

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? [ ] 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
Wheat, silage, soft dough	Middle October	Late April	15
Corn, silage	Late May	Late September	15

FIELD NAME: 3

Cropable acres: 26

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? [ ] Yes [X] No

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

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle October	Late April	26
Corn, silage	Late May	Late September	26

FIELD NAME: 4

Cropable acres: 27

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? [ ] Yes [X] No

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

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle October	Late April	27
Corn, silage	Late May	Late September	27

FIELD NAME: 5

Cropable acres: 24

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? [ ] Yes [X] No

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

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle October	Late April	24
Corn, silage	Late May	Late September	24

FIELD NAME: 6

Cropable acres: 38

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? [ ] Yes [X] No

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

Tailwater management method: Bermed

Crops grown and rotation:

Crop Type	Plant Date	Harvest Date	Acres Planted
Wheat, silage, soft dough	Middle October	Late April	38
Corn, silage	Late May	Late September	38

FIELD NAME: 9

Cropable acres: 13

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
Almond, in shell	Middle January	Early October	13

FIELD NAME: Espindula

Cropable acres: 37

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? [ ] 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
Wheat, silage, soft dough	Middle October	Late April	37
Corn, silage	Late May	Late September	37

FIELD NAME: Non Application Area

Cropable acres: 2

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? [ ] Yes [X] No

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

Tailwater management method: Non farmed

No crop entered for this field.

C. LAND APPLICATION AREA FIELDS AND PARCELS

Field name	Cropable acres	Total harvests	Parcel number
10	19	1	0044-0041-00090000
11	8	2	0057-0013-00090000
1-Dairy	18	2	0057-0013-00190000
2	15	2	0057-0013-00100000
3	26	2	0057-0022-00120000
4	27	2	0057-0022-00120000
5	24	2	0057-0022-00120000
6	38	2	0057-0013-00140000
9	13	1	0044-0041-00080000
Espindula	37	2	0057-0022-00130000
Non Application Area	2	0	0057-0022-00010000
Land application area totals	227	18	

NUTRIENT BUDGET

A. NUTRIENT BUDGET FOR CROP: 10 / Almond, in shell

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	250.0 50%	42.0 80%	207.0 80%	250.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	18	0.0 0%	0.0 0%	0.0 0%	8.6

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.5	0.0	0.0	3.0
	0.5	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	8.6	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	250.0	42.0	207.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	14.0		
Nutrients applied	272.6	42.0	207.0
Potential crop nutrient removal	195.0	30.0	148.5
Nutrient balance	77.6	12.0	58.5
Applied to removal ratio	1.40	1.40	1.39

Fresh water applied: 3.52 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 11 / Wheat, silage, soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	268.0 50%	42.0 80%	209.0 80%	268.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	3	0.0 0%	0.0 0%	0.0 0%	2.3

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.8	0.0	0.0	2.0
	0.8	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.3	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	268.0	42.0	209.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	277.3	42.0	209.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	79.3	11.4	59.6
Applied to removal ratio	1.40	1.37	1.40

Fresh water applied: 0.93 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 11 / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	320.0 50%	63.0 80%	277.0 80%	320.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	9	0.0 0%	0.0 0%	0.0 0%	8.5

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.9	0.0	0.0	2.5
	0.9	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	8.5	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	320.0	63.0	277.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	335.5	63.0	277.0

Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	95.5	18.0	79.0
Applied to removal ratio	1.40	1.40	1.40

Fresh water applied: 3.49 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 1-Dairy / Wheat, 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	3	89.0 50%	14.0 80%	69.0 80%	269.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	4.0
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.0	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	267.0	42.0	207.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	276.0	42.0	207.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	78.0	11.4	57.6
Applied to removal ratio	1.39	1.37	1.39

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

NUTRIENT BUDGET FOR CROP: 1-Dairy / 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	5	0.0 0%	0.0 0%	0.0 0%	5.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	6.0
	1.0	0.0	0.0	

NUTRIENT BUDGET FOR CROP (CONTINUED): 1-Dairy / 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	4	80.0 50%	15.0 80%	69.0 80%	324.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	6.0
	1.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.1	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	320.0	60.0	276.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.1	60.0	276.0
Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	96.1	15.0	78.0
Applied to removal ratio	1.40	1.33	1.39

Fresh water applied: 3.72 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 2 / Wheat, silage, soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	268.0 50%	42.0 80%	209.0 80%	268.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	3	0.0 0%	0.0 0%	0.0 0%	2.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	3.5
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.1	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	268.0	42.0	209.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	277.1	42.0	209.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	79.1	11.4	59.6
Applied to removal ratio	1.40	1.37	1.40

Fresh water applied: 0.87 *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)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	320.0 50%	63.0 80%	277.0 80%	320.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	9	0.0 0%	0.0 0%	0.0 0%	9.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	5.0
	1.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.1	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	320.0	63.0	277.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.1	63.0	277.0
Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	96.1	18.0	79.0
Applied to removal ratio	1.40	1.40	1.40

Fresh water applied: 3.72 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 3 / Wheat, 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	3	89.0 50%	14.0 80%	69.0 80%	269.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	6.0
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.1	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	267.0	42.0	207.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	276.1	42.0	207.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	78.1	11.4	57.6
Applied to removal ratio	1.39	1.37	1.39

Fresh water applied: 0.86 *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)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	5	0.0 0%	0.0 0%	0.0 0%	5.3

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.1	0.0	0.0	9.0
	1.1	0.0	0.0	

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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	4	80.0 50%	15.0 80%	69.0 80%	324.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.1	0.0	0.0	9.0
	1.1	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.5	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	320.0	60.0	276.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.5	60.0	276.0
Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	96.5	15.0	78.0
Applied to removal ratio	1.40	1.33	1.39

Fresh water applied: 3.86 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 4 / Wheat, 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	3	89.0 50%	14.0 80%	69.0 80%	269.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	6.0
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.0	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	267.0	42.0	207.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	276.0	42.0	207.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	78.0	11.4	57.6
Applied to removal ratio	1.39	1.37	1.39

Fresh water applied: 0.83 *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)
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	5	0.0 0%	0.0 0%	0.0 0%	5.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	9.0
	1.0	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	4	80.0 50%	15.0 80%	69.0 80%	324.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	9.0
	1.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.1	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	320.0	60.0	276.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.1	60.0	276.0
Potential crop nutrient removal	240.0	45.0	198.0

Nutrient balance	96.1	15.0	78.0
Applied to removal ratio	1.40	1.33	1.39

Fresh water applied: 3.72 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 5 / Wheat, 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	3	89.0 50%	14.0 80%	69.0 80%	269.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	5.5
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.1	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	267.0	42.0	207.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	276.1	42.0	207.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	78.1	11.4	57.6
Applied to removal ratio	1.39	1.37	1.39

Fresh water applied: 0.85 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 5 / 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	5	0.0 0%	0.0 0%	0.0 0%	5.1

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	8.0
	1.0	0.0	0.0	

NUTRIENT BUDGET FOR CROP (CONTINUED): 5 / 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	4	80.0 50%	15.0 80%	69.0 80%	324.0

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	8.0
	1.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.1	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	320.0	60.0	276.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.1	60.0	276.0
Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	96.1	15.0	78.0
Applied to removal ratio	1.40	1.33	1.39

Fresh water applied: 3.72 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 6 / Wheat, 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 (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	3	89.0 50%	14.0 80%	69.0 80%	269.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	9.0
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.2	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	267.0	42.0	207.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	276.2	42.0	207.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	78.2	11.4	57.6
Applied to removal ratio	1.39	1.37	1.39

Fresh water applied: 0.88 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 6 / 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	5	0.0 0%	0.0 0%	0.0 0%	5.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	13.0
	1.0	0.0	0.0	

In season irrigation (with fertilizer) *Nutrient source:* Retention pond (lagoon) *Application method:* Pipeline	4	80.0 50%	15.0 80%	69.0 80%	324.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	13.0
	1.0	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.3	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	320.0	60.0	276.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.3	60.0	276.0
Potential crop nutrient removal	240.0	45.0	198.0

Nutrient balance	96.3	15.0	78.0
Applied to removal ratio	1.40	1.33	1.39

Fresh water applied: 3.82 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: 9 / Almond, in shell

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	250.0 50%	42.0 80%	207.0 80%	250.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	18	0.0 0%	0.0 0%	0.0 0%	8.4

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.5	0.0	0.0	2.0
	0.5	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	8.4	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	250.0	42.0	207.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	14.0		
Nutrients applied	272.4	42.0	207.0
Potential crop nutrient removal	195.0	30.0	148.5
Nutrient balance	77.4	12.0	58.5
Applied to removal ratio	1.40	1.40	1.39

Fresh water applied: 3.43 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Espindula / Wheat, silage, soft dough

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	268.0 50%	42.0 80%	209.0 80%	268.0

NUTRIENT BUDGET FOR CROP (CONTINUED): Espindula / Wheat, 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) *Nutrient source:* Water only *Application method:* Surface	3	0.0 0%	0.0 0%	0.0 0%	2.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	0.7	0.0	0.0	9.0
	0.7	0.0	0.0	

	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	2.2	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	268.0	42.0	209.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	277.2	42.0	209.0
Potential crop nutrient removal	198.0	30.6	149.4
Nutrient balance	79.2	11.4	59.6
Applied to removal ratio	1.40	1.37	1.40

Fresh water applied: 0.90 *feet* Total harvests: 1

NUTRIENT BUDGET FOR CROP: Espindula / Corn, silage

Activity / Event	# of Events	N (lbs/acre) % avail.	P (lbs/acre) % avail.	K (lbs/acre) % avail.	Total N (lbs/acre)
Dry manure *Nutrient source:* From dairy *Application method:* Broadcast/incorporate	1	320.0 50%	63.0 80%	277.0 80%	320.0
In season irrigation (no fertilizer) *Nutrient source:* Water only *Application method:* Surface	9	0.0 0%	0.0 0%	0.0 0%	9.2

Irrigation Source	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Runtime (hrs)
TID Canal	1.0	0.0	0.0	12.5
	1.0	0.0	0.0	

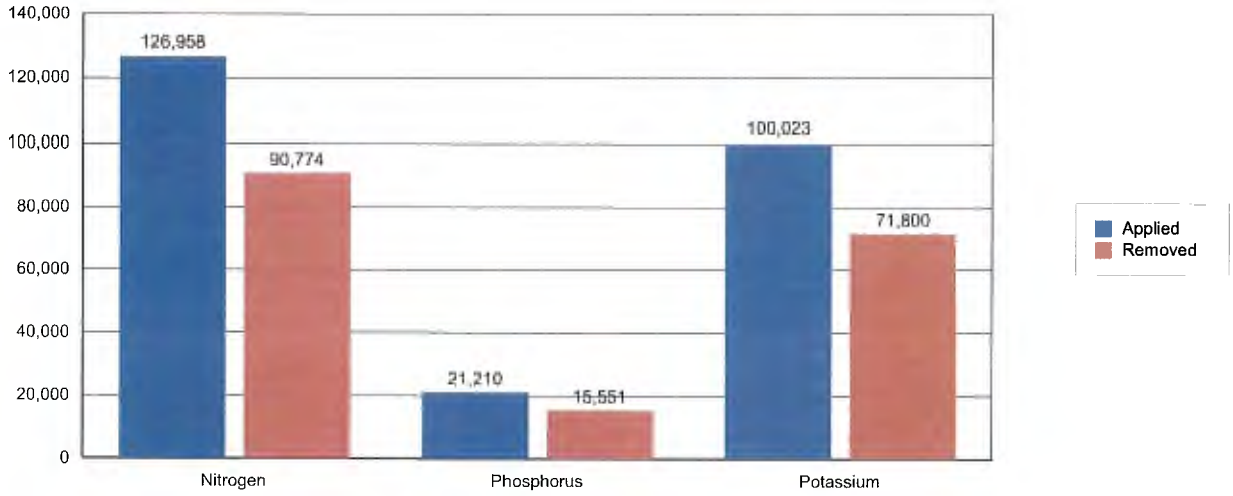
	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)
Irrigation sources	9.2	0.0	0.0

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	320.0	63.0	277.0
Liquid manure	0.0	0.0	0.0
Other	0.0	0.0	0.0
Atmospheric deposition	7.0		
Nutrients applied	336.2	63.0	277.0
Potential crop nutrient removal	240.0	45.0	198.0
Nutrient balance	96.2	18.0	79.0
Applied to removal ratio	1.40	1.40	1.40

Fresh water applied: 3.77 *feet* Total harvests: 1

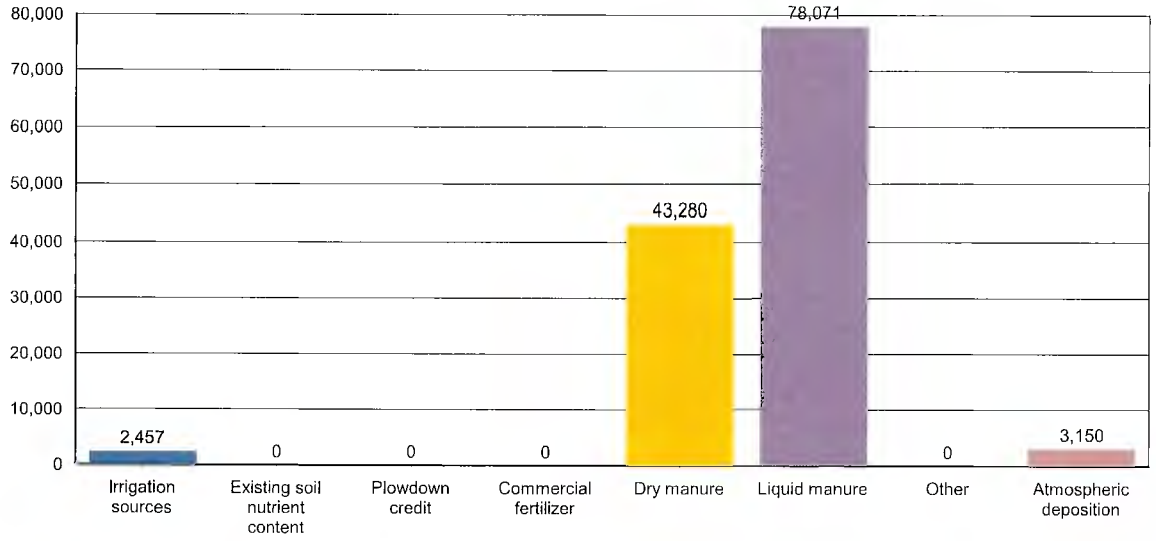
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

A. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL POTENTIAL



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	2,457.4	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	43,280.0	7,644.0	35,784.0
Liquid manure	78,071.0	13,566.0	64,239.0
Other	0.0	0.0	0.0
Atmospheric deposition	3,150.0		
Nutrients applied to all crops	126,958.4	21,210.0	100,023.0
Potential crop nutrient removal	90,774.0	15,550.8	71,800.2
Nutrient balance	36,184.4	5,659.2	28,222.8
Applied to removal ratio	1.40	1.36	1.39

B. POUNDS OF NITROGEN APPLIED BY NUTRIENT SOURCE



	Total N (lbs)	Total P (lbs)	Total K (lbs)
Irrigation sources	2,457.4	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	43,280.0	7,644.0	35,784.0
Liquid manure	78,071.0	13,566.0	64,239.0
Other	0.0	0.0	0.0
Atmospheric deposition	3,150.0		
Nutrients applied to all crops	126,958.4	21,210.0	100,023.0
Potential crop nutrient removal	90,774.0	15,550.8	71,800.2
Nutrient balance	36,184.4	5,659.2	28,222.8
Applied to removal ratio	1.40	1.36	1.39

NUTRIENT BALANCE

A. WHOLE FARM BALANCE

	Total N (lbs)	Total P (lbs)	Total K (lbs)
Nutrients in storage from herd*			
Daily gross	2,305.8	375.1	996.9
Annual gross	841,622.2	136,906.3	363,867.5
Net to pond storage after ammonia losses (30% loss applied)	463,437.4	110,374.7	303,222.9
Net to drylot storage after ammonia losses (30% loss applied)	125,698.1	26,531.6	60,644.6
Net in storage (30% loss applied)	589,135.5	136,906.3	363,867.5
Irrigation sources	2,457.4	0.0	0.0
Atmospheric deposition	3,150.0		
Imports	0.0	0.0	0.0
Exports	469,980.0	117,282.1	265,782.6
Potential crop nutrient removal	90,774.0	15,550.8	71,800.2
Nutrient balance	33,989.0	4,073.5	26,284.7
Nutrient balance ratio	1.37	1.26	1.37

* Potassium excretion from milk cows and dry cows only.

SAMPLING AND ANALYSIS PLAN

A. SAMPLING AND ANALYSIS PLAN

No sampling and analysis plan entered. An alternative sampling and analysis plan must be attached to the Nutrient Management Plan.

NUTRIENT MANAGEMENT PLAN REVIEW

A. NUTRIENT MANAGEMENT PLAN REVIEW

Person who created the NMP:	Pedroso, Mariann	*See above for contact information.*
Date the NMP was drafted:	03/01/2021	
Person who approved the final NMP:	Pedroso, Mariann	*See above for contact information.*
Date of NMP implementation:	11/01/2022	

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: Land Application Map

Identify each field under control of the Discharger and within five miles of the dairy where neither process wastewater nor manure is applied. Each field shall be identified on a single published base map at an appropriate scale by the following:

1. Assessor's Parcel Number.
2. Total acreage.
3. Information on who owns or leases the field

Non-application area map reference number: Land Application Map

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: Land Application Map

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: Silvas Holsteins Dairy

Physical address of dairy:

6706 Elaine Rd	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.

Technical Service Provider
TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST

SIGNATURE OF TRAINED PROFESSIONAL — DATE: 3/15/2021

Mariann Pedroso
PRINT OR TYPE NAME

P.O. Box 906; Newman, CA 95360
MAILING ADDRESS

(209) 862-4291
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
Manuel M Silva	Adrian J Silva
PRINT OR TYPE NAME	PRINT OR TYPE NAME
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: Silvas Holsteins Dairy

Physical address of dairy:

6706 Elaine Rd	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.

Technical Service Provider
TITLE/QUALIFICATIONS OF CERTIFIED NUTRIENT MANAGEMENT SPECIALIST

SIGNATURE OF TRAINED PROFESSIONAL — DATE: 3/15/2021

Mariann Pedroso
PRINT OR TYPE NAME

P.O. Box 906; Newman, CA 95360
MAILING ADDRESS

(209) 862-4291
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
Manuel M Silva	Adrian J Silva
PRINT OR TYPE NAME	PRINT OR TYPE NAME
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: Silvas Holsteins Dairy

6706 Elaine Rd	Turlock	Stanislaus	95380
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Operator name: Silva, Adrian J — Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine Rd	Turlock	CA	95380
Mailing Address Number and Street	City	State	Zip Code

Legal owner name: Silva, Manuel M — Telephone no.: (209) 632-1223 (Landline) (209) 595-1846 (Cellular)

6706 Elaine Rd	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.

Manuel M Silva	
SIGNATURE OF OWNER OF FACILITY	SIGNATURE OF OPERATOR OF FACILITY
Manuel M Silva	Adrian J Silva
PRINT OR TYPE NAME	PRINT OR TYPE NAME
DATE	DATE

Legend:

- Field Boundary
- Flow Direction
- Wastewater Pipeline
- Freshwater Pipeline
- Irrigation Pipeline
- Canal
- Berms
- Pump

CAS
CARDOSO AG SERVICES

1276 Ft.
Scale

Project No.

Silva Holsteins Dairy
6706 Elaine Road
Turlock CA 95380

Date:	Drawn By:	App By:
02/05/2020	MD	MP

Field Map #1

Legend:

Field Boundary

CARDOSO AG SERVICES

482 Ft.

Scale

Project No.

Silva Holsteins Dairy
6706 Elaine Road
Turlock CA 95380

Date:	Drawn By:	App By:
02/05/2020	MD	MP

Field Map #2

CARDOSO AG SERVICES

LAND APPLICATION AREA INFORMATION

DAIRY NAME: SILVA HOLSTEINS DAIRY
DAIRY ADDRESS: 6706 ELAINE ROAD TURLOCK CA 95380

APN	FIELD ID	ACRES	CROPS	OP/OW	NUTRIENTS APPLIED
0057-0013-0019-0000	1	18	WHEAT/CORN	OP/OW	WW
0057-0013-0010-0000	2	15	WHEAT/CORN	OP/OW	SM
0057-0022-0012-0000	3	26	WHEAT/CORN	OP/OW	WW
0057-0022-0012-0000	4	27	WHEAT/CORN	OP/OW	WW
0057-0022-0012-0000	5	24	WHEAT/CORN	OP/OW	WW
0057-0013-0014-0000	6	38	WHEAT/CORN	OP/OW	WW
0044-0041-0008-0000	9	13	ALMONDS	OP/OW	SM
0044-0041-0009-0000	10	19	ALMONDS	OP/OW	SM
0057-0013-0009-0000	11	8	WHEAT/CORN	OP	SM
0057-0022-0013-0000	ESPINDULA	37	WHEAT/CORN	OP	SM
	TOTAL:	225			