

Annual Report - General Order No. R5-2007-0035

Reporting period 01/01/2023 to 12/31/2023.

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: Alfred O. Soares Dairy

Physical address of dairy:

21282 Road 6 RD

Number and Street

Chowchilla

Madera

93610

City

County

Zip Code

Street and nearest cross street (if no address):

Date facility was originally placed in operation: 12/05/1950

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

County Assessor Parcel Number(s) for dairy facility:

X021-X040-X008-XXXX X021-X040-X009-XXXX

B. OPERATORS

Soares, Alfred

Operator name: Soares, Alfred

Telephone no.: (123) 000-0000

Landline

Cellular

21282 Road 6 RD

Chowchilla

CA

93610

Mailing Address Number and Street

City

State

Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Soares, Alfred

Legal owner name: Soares, Alfred

Telephone no.: (123) 000-0000

Landline

Cellular

21282 Road 6 RD

Chowchilla

CA

93610

Mailing Address Number and Street

City

State

Zip Code

This owner is responsible for paying permit fees.

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AVAILABLE NUTRIENTS**A. HERD INFORMATION**

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	653	140	750	610	430	0
Number under roof	287	0	0	0	0	0
Maximum number	940	140	750	630	450	0
Average number	940	140	750	610	430	0
Avg live weight (lbs)	1,250	1,250	1,050	800		

Predominant milk cow breed: Holstein

Average milk production: 60 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 40,365.81 tons per reporting period

Total nitrogen from manure: 477,420.37 lbs per reporting period

After ammonia losses (30% loss applied): 334,194.26 lbs per reporting period

Total phosphorus from manure: 77,487.01 lbs per reporting period

Total potassium from manure: 173,842.87 lbs per reporting period

Total salt from manure: 474,792.00 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 3,090,000 gallons

Total nitrogen generated: 5,757.05 lbs

Total phosphorus generated: 1,518.52 lbs

Total potassium generated: 6,457.03 lbs

Total salt generated: 31,393.89 lbs

3,090,000 gallons applied
+ 0 gallons exported
- 0 gallons imported
= 3,090,000 gallons generated

D. FRESH WATER SOURCES

Source Description	Type
Ag Well	Ground water
Canal Water	Surface water
Domestic Well R1	Ground water
Domestic Well R2	Ground water

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E. SUBSURFACE (TILE) DRAINAGE SOURCES*No subsurface (tile) drainage sources entered.***F. NUTRIENT IMPORTS***No dry manure nutrient imports entered.**No process wastewater nutrient imports entered.**No commercial or other nutrient imports entered.***G. NUTRIENT EXPORTS**

Date	Material type	Quantity	Reporting basis	Moisture (%)	Density (lbs/cu ft)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
02/05/2023	Separator solids	3,600.00 ton	Dry-weight	74.7		0.00	0.00	0.00		0.00
07/02/2023	Separator solids	3,500.00 ton	Dry-weight	53.7		0.00	0.00	0.00		0.00
08/04/2023	Separator solids	1,947.00 ton	Dry-weight	33.7		0.00	0.00	0.00		0.00
11/07/2023	Separator solids	2,000.00 ton	Dry-weight	33.7		0.00	0.00	0.00		0.00
11/11/2023	Separator solids	3,150.00 ton	Dry-weight	33.7		0.00	0.00	0.00		0.00

No liquid nutrient exports entered.

Material type	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Total exports for all materials	0.00	0.00	0.00	0.00

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APPLICATION AREA**A. LIST OF LAND APPLICATION AREAS**

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
R-1	40	40	2	process wastewater	X021-X040-X009-XXXX
R-2	50	50	3	process wastewater	X021-X040-X008-XXXX
Totals for areas that were used for application	90	90	5		
Totals for areas that were not used for application					
Land application area totals	90	90	5		

B. CROPS AND HARVESTS

R-1

Field name: R-1

05/29/2023: Sudangrass, silage

Crop: Sudangrass, silage Acres planted: 40 Plant date: 05/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/01/2023	450.00 ton	Dry-weight		63.4	34,600.00	2,630.00	28,300.00		17.00
10/19/2023	450.00 ton	Dry-weight		62.8	34,100.00	3,200.00	13,400.00		9.06

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	8.00	88.00	13.60	96.00	0.00
Total actual harvest content	22.50	570.35	48.44	345.21	2,158.27

R-2

Field name: R-2

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R-2**10/09/2022: Winter Forage**Crop: Winter Forage Acres planted: 50 Plant date: 10/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/25/2023	600.00 <i>ton</i>	Dry-weight		70.5	9,720.00	763.00	6,920.00		12.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	16.00	160.00	25.60	132.80	0.00
Total actual harvest content	12.00	68.82	5.40	48.99	899.16

05/29/2023: Sudangrass, silageCrop: Sudangrass, silage Acres planted: 50 Plant date: 05/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/01/2023	500.00 <i>ton</i>	Dry-weight		66.5	23,100.00	2,360.00	13,800.00		11.70
10/20/2023	500.00 <i>ton</i>	Dry-weight		62.8	34,100.00	3,200.00	13,400.00		9.06

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	8.00	88.00	13.60	96.00	0.00
Total actual harvest content	20.00	408.47	39.62	192.16	1,457.96

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NUTRIENT BUDGET**A. LAND APPLICATIONS**

R-1 - 05/29/2023: Sudangrass, silage

Field name: R-1

Crop: Sudangrass, silage Plant date: 05/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/01/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	8.81	3.39	8.61	58.52	330,000.00 gal
Ag Well	Ground water	0.45	0.00	0.00	371.77	594,000.00 gal
Application event totals		9.26	3.39	8.61	430.29	
06/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	8.01	3.08	7.82	53.20	300,000.00 gal
Ag Well	Ground water	0.41	0.00	0.00	337.97	540,000.00 gal
Application event totals		8.42	3.08	7.82	391.17	
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	8.01	3.08	7.82	53.20	300,000.00 gal
Ag Well	Ground water	0.41	0.00	0.00	337.97	540,000.00 gal
Application event totals		8.42	3.08	7.82	391.17	
07/13/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	8.01	3.08	7.82	53.20	300,000.00 gal
Ag Well	Ground water	0.30	0.00	0.00	253.48	405,000.00 gal
Application event totals		8.32	3.08	7.82	306.68	

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R-1 - 05/29/2023: Sudangrass, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/09/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	25.99	4.51	26.74	97.64	180,000.00 gal
Ag Well	Ground water	0.24	0.00	0.00	202.78	324,000.00 gal
Application event totals		26.23	4.51	26.74	300.42	
10/13/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	21.66	3.76	22.28	81.36	150,000.00 gal
Ag Well	Ground water	0.20	0.00	0.00	168.99	270,000.00 gal
Application event totals		21.86	3.76	22.28	250.35	

R-2 - 10/09/2022: Winter Forage

Field name:	R-2	Plant date:	10/09/2022			
Crop:	Winter Forage					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
11/14/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	20.63	2.08	34.85	110.15	120,000.00 gal
Ag Well	Ground water	0.13	0.00	0.00	108.15	216,000.00 gal
Application event totals		20.76	2.08	34.85	218.31	

R-2 - 05/29/2023: Sudangrass, silage

Field name:	R-2	Plant date:	05/29/2023	
Crop:	Sudangrass, silage			
Application date	Application method	Precipitation 24 hours prior	Precipitation during application	

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R-2 - 05/29/2023: Sudangrass, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/18/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	7.69	2.96	7.51	51.07	360,000.00 gal
Canal Water	Surface water	0.28	0.00	0.00	37.85	1,080,000.00 gal
Application event totals		7.97	2.96	7.51	88.92	
05/28/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	7.69	2.96	7.51	51.07	360,000.00 gal
Canal Water	Surface water	0.29	0.00	0.00	40.38	1,152,000.00 gal
Application event totals		7.98	2.96	7.51	91.45	
06/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	7.05	2.71	6.88	46.82	330,000.00 gal
Canal Water	Surface water	0.29	0.00	0.00	40.38	1,152,000.00 gal
Application event totals		7.34	2.71	6.88	87.19	
06/19/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	3.85	1.48	3.76	25.54	180,000.00 gal
Canal Water	Surface water	0.22	0.00	0.00	30.28	864,000.00 gal
Application event totals		4.07	1.48	3.76	55.82	
07/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water	Process wastewater	3.85	1.48	3.76	25.54	180,000.00 gal
Canal Water	Surface water	0.22	0.00	0.00	30.28	864,000.00 gal
Application event totals		4.07	1.48	3.76	55.82	

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R-2 - 05/29/2023: Sudangrass, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/14/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal Water	Surface water	0.22	0.00	0.00	30.28	864,000.00 gal
Canal Water	Surface water	0.22	0.00	0.00	30.28	864,000.00 gal
Application event totals		0.44	0.00	0.00	60.56	

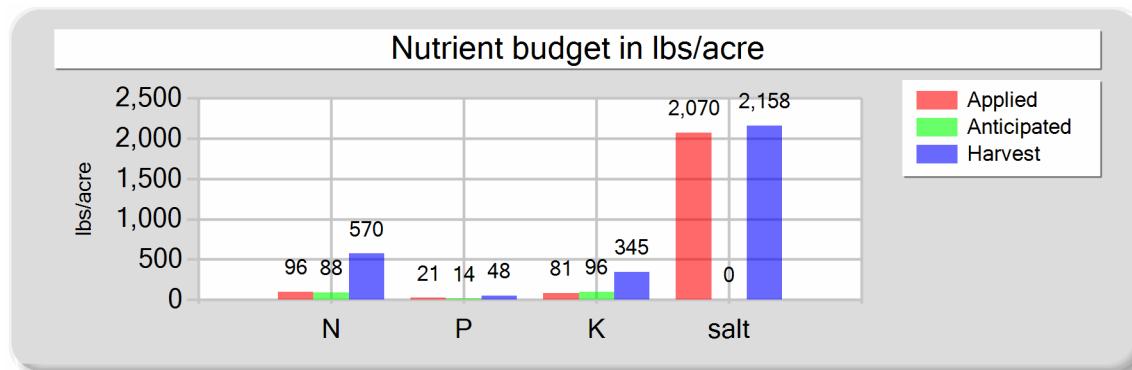
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B. NUTRIENT BUDGET

R-1 - 05/29/2023: Sudangrass, silage

Field name: R-1 Crop: Sudangrass, silage Plant date: 05/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	80.49	20.89	81.09	397.12
Fresh water	2.01	0.00	0.00	1,672.96
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	96.50	20.89	81.09	2,070.08
Anticipated crop nutrient removal	88.00	13.60	96.00	0.00
Actual crop nutrient removal	570.35	48.44	345.21	2,158.27
Nutrient balance	-473.85	-27.56	-264.11	-88.19
Applied to removed ratio	0.17	0.43	0.23	0.96

Fresh water applied
2,673,000.00 gallons
98.44 acre-inches
2.46 inches/acre
Process wastewater applied
1,560,000.00 gallons
57.45 acre-inches
1.44 inches/acre
Total harvests for the crop
2 harvests

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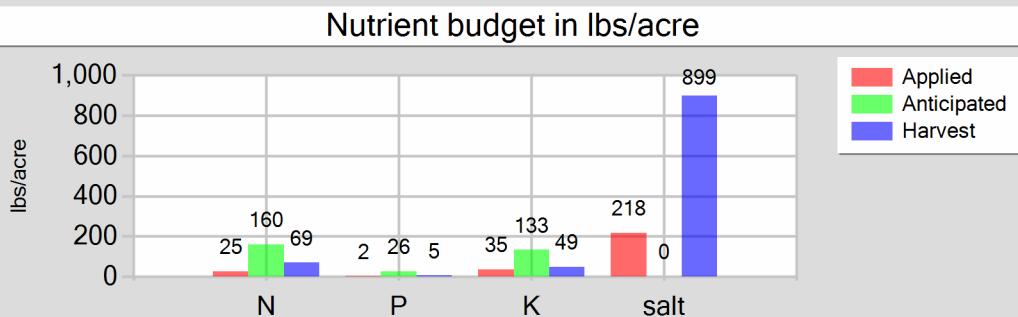
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R-2 - 10/09/2022: Winter Forage

Field name: R-2

Crop: Winter Forage

Plant date: 10/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	20.63	2.08	34.85	110.15
Fresh water	0.13	0.00	0.00	108.15
Atmospheric deposition	4.67	0.00	0.00	0.00
Total nutrients applied	25.43	2.08	34.85	218.31
Anticipated crop nutrient removal	160.00	25.60	132.80	0.00
Actual crop nutrient removal	68.82	5.40	48.99	899.16
Nutrient balance	-43.39	-3.32	-14.14	-680.85
Applied to removed ratio	0.37	0.39	0.71	0.24

Fresh water applied

216,000.00 gallons
7.95 acre-inches
0.16 inches/acre

Process wastewater applied

120,000.00 gallons
4.42 acre-inches
0.09 inches/acre

Total harvests for the crop

1 harvests

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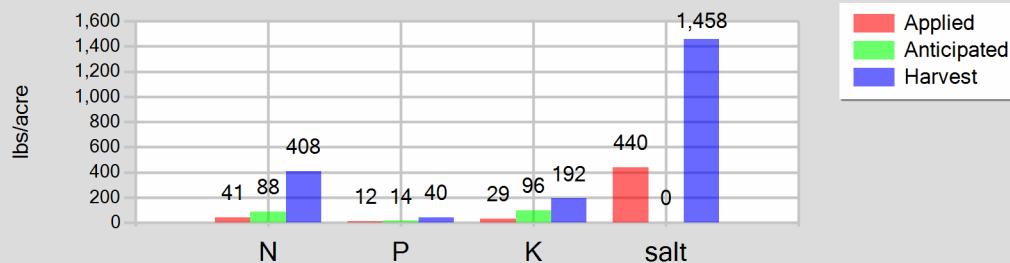
R-2 - 05/29/2023: Sudangrass, silage

Field name: R-2

Crop: Sudangrass, silage

Plant date: 05/29/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	30.12	11.58	29.42	200.03
Fresh water	1.75	0.00	0.00	239.74
Atmospheric deposition	9.33	0.00	0.00	0.00
Total nutrients applied	41.20	11.58	29.42	439.76
Anticipated crop nutrient removal	88.00	13.60	96.00	0.00
Actual crop nutrient removal	408.47	39.62	192.16	1,457.96
Nutrient balance	-367.27	-28.04	-162.74	-1,018.20
Applied to removed ratio	0.10	0.29	0.15	0.30

Fresh water applied

6,840,000.00 gallons
251.89 acre-inches
5.04 inches/acre

Process wastewater applied

1,410,000.00 gallons
51.93 acre-inches
1.04 inches/acre

Total harvests for the crop

2 harvests

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NUTRIENT ANALYSES**A. MANURE ANALYSES**

Manure/Export 2304417-01

Sample and source description: Manure/Export 2304417-01

Sample date: 04/27/2023 Material type: Separator solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 74.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value										
DL										

Manure/Export 2307231-01

Sample and source description: Manure/Export 2307231-01

Sample date: 07/16/2023 Material type: Separator solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 53.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value										
DL										

Manure/Export 2310017-02

Sample and source description: Manure/Export 2310017-02

Sample date: 09/29/2023 Material type: Separator solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 33.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value										
DL										

B. PROCESS WASTEWATER ANALYSES

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Lagoon Water 2302055-01

Sample and source description: Lagoon Water 2302055-01

Sample date: 01/31/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	1,030.00	1,030.00			104.00	1,740.00								8,150.00	5,500
DL	0.60	0.60			0.10	10.00								1.00	1

Lagoon Water 2303397-01

Sample and source description: Lagoon Water 2303397-01

Sample date: 03/27/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	721.00	721.00			72.30	922.00								5,980.00	3,500
DL	0.60	10.00			0.10	10.00								1.00	1

Lagoon Water 2307233-01

Sample and source description: Lagoon Water 2307233-01

Sample date: 07/16/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	128.00	100.00			49.20	125.00								1,780.00	850
DL	0.60	0.60			0.10	10.00								1.00	1

Lagoon Water 2310017-01

Sample and source description: Lagoon Water 2310017-01

Sample date: 09/30/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	692.00	354.00			120.00	712.00								5,180.00	2,600
DL	1.20	0.60			0.10	10.00								1.00	1

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C. FRESH WATER ANALYSES

Ag Well

2312552-03

Sample description: 2312552-03

Sample date: 12/29/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	3.60										407.00	3,000
DL	1.40										1.00	1

Canal Water

2312552-04

Sample description: 2312552-04

Sample date: 12/29/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	1.53										297.00	210
DL	0.40										1.00	1

Domestic Well R1

2312552-01

Sample description: 2312552-01

Sample date: 12/29/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	9.83										504.00	
DL	0.40										1.00	

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Domestic Well R2

2312552-02

Sample description: 2312552-02Sample date: 12/29/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	9.23										465.00	
DL	0.40										1.00	

D. SOIL ANALYSES*No soil analyses entered.***E. PLANT TISSUE ANALYSES**

R-1 - 05/29/2023: Sudangrass, silage

2308483-01

Sample and source description: 2308483-01Sample date: 08/30/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 63.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	34,600.00	2,630.00	28,300.00		17.00
DL	2.50	0.50	0.50		0.10

2310418-01

Sample and source description: 2310418-01Sample date: 10/22/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 66.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	31,400.00	2,870.00	13,100.00		8.65
DL	1.00	0.50	0.50		0.10

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R-2 - 05/29/2023: Sudangrass, silage

2308483-02

Sample and source description: 2308483-02

Sample date: 08/30/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	23,100.00	2,360.00	13,800.00		11.70
DL	0.50	0.50	0.50		0.10

2310418-02

Sample and source description: 2310418-02

Sample date: 10/22/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 62.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	34,100.00	3,200.00	13,400.00		9.06
DL	0.50	0.50	0.50		0.10

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

No subsurface (tile) drainage analyses entered.

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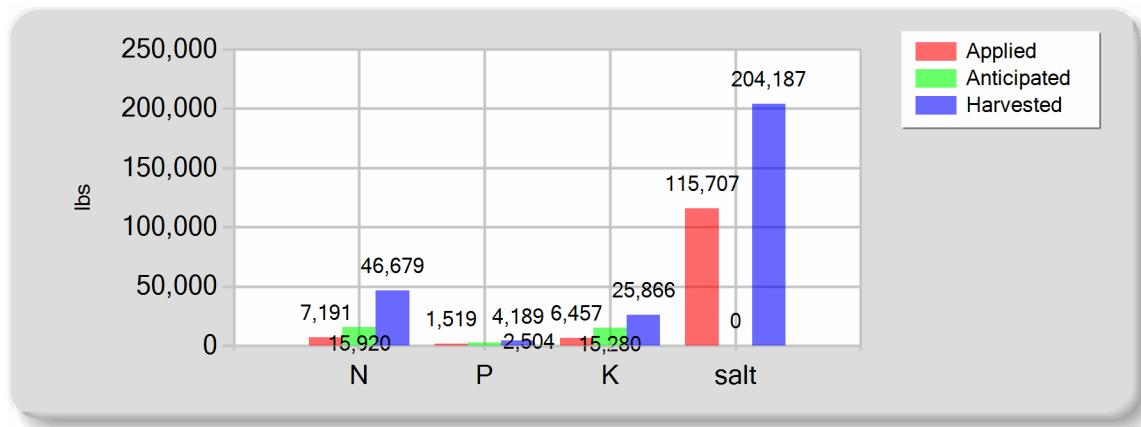
Reporting period 01/01/2023 to 12/31/2023.

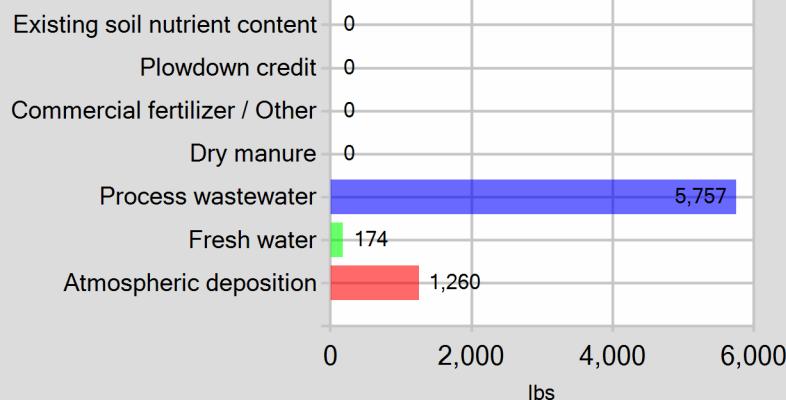
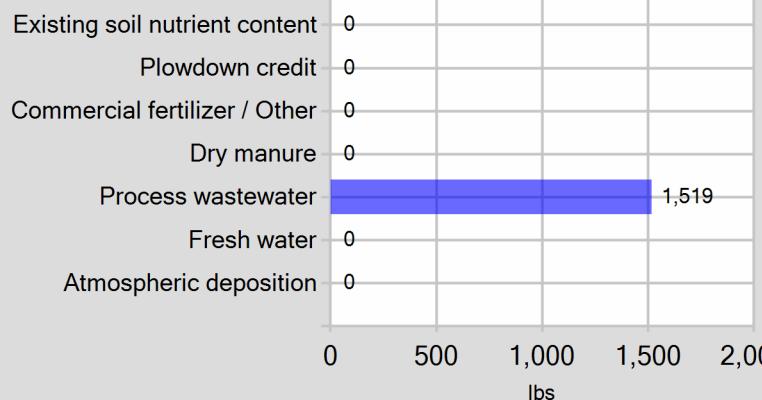
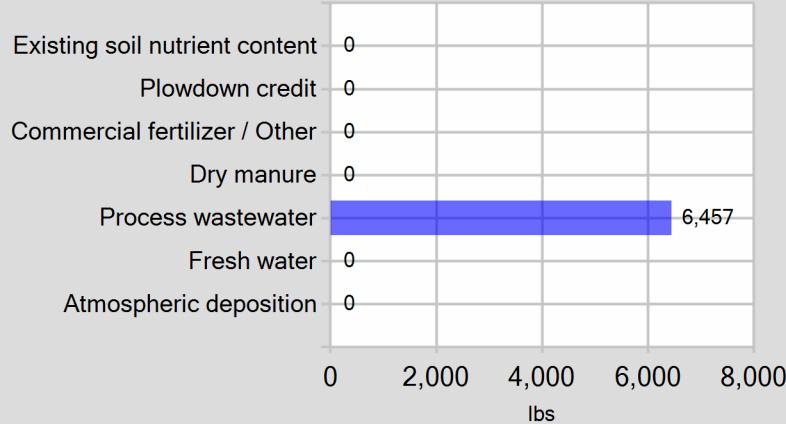
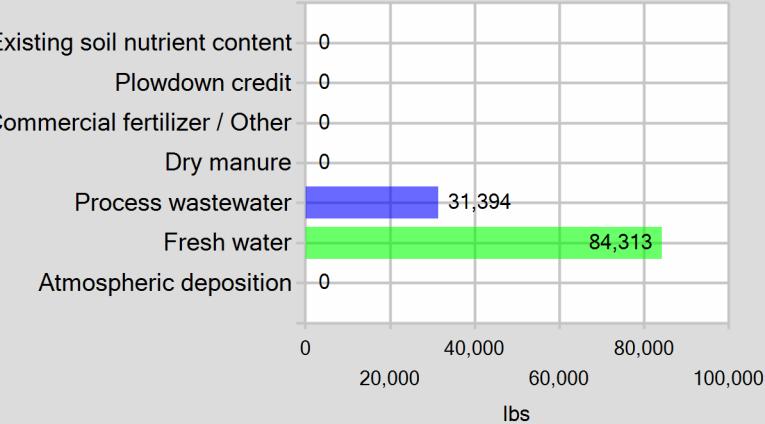
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	5,757.05	1,518.52	6,457.03	31,393.89
Fresh water	174.12	0.00	0.00	84,312.87
Atmospheric deposition	1,260.00	0.00	0.00	0.00
Total nutrients applied	7,191.17	1,518.52	6,457.03	115,706.76
Anticipated crop nutrient removal	15,920.00	2,504.00	15,280.00	0.00
Actual crop nutrient removal	46,678.50	4,188.78	25,865.82	204,187.08
Nutrient balance	-39,487.33	-2,670.26	-19,408.79	-88,480.32
Applied to removed ratio	0.15	0.36	0.25	0.57

B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL



C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE**Pounds of nitrogen applied****Pounds of phosphorus applied****Pounds of potassium applied****Pounds of salt applied**

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EXCEPTION REPORTING

A. MANURE, PROCESS WASTEWATER, AND OTHER DAIRY WASTE DISCHARGES

The following is a summary of all manure and process wastewater discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan.

No manure or process wastewater discharges occurred during the reporting period.

B. STORM WATER DISCHARGES

The following is a summary of all storm water discharges from the production area to surface water during the reporting period when not in accordance with the facility's Nutrient Management Plan.

No stormwater discharges occurred during the reporting period.

C. LAND APPLICATION AREA TO SURFACE WATER DISCHARGES

The following is a summary of all discharges from the land application area to surface water that have occurred during the reporting period when not in accordance with the facility's Nutrient Management Plan.

No land application area to surface water discharges occurred during the reporting period.

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

Was the facility's NMP updated in the reporting period? No

Was the facility's NMP developed by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? Yes

Was the facility's NMP approved by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? Yes

B. EXPORT AGREEMENT STATEMENT

Are there any written agreements with third parties to receive manure or process wastewater that are new or were revised within the reporting period? No

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ADDITIONAL NOTES

A. NOTES

No notes entered for this annual report.

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CERTIFICATION

A. 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.

 *Alfred O. Soares*

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Alfred Soares

SAME AS OWNER

PRINT OR TYPE NAME

PRINT OR TYPE NAME

 *6-28-24*

DATE

DATE

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ATTACHMENTS

A. REQUIRED ATTACHMENTS

The following lists the required documents that should be attached to the Annual Report when submitted .

Annual Dairy Facility Assessment	N/A
Provide an Annual Dairy Facility Assessment (an update to the Preliminary Dairy Facility Assessment in Attachment A) for each reporting period. On the PDFA Final page, click on the ADFA Report button to generate an ADFA report after updating information as needed.	
Manure/Process Wastewater Tracking Manifests	See Attachments
Provide copies of all manure/process wastewater tracking manifests for the reporting period, signed by both the owner/operator and the hauler.	
Corrective Actions Documents	N/A
Provide records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements of the General Order. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.	
Groundwater Monitoring	N/A
Dischargers that monitor supply wells or subsurface (tile) drainage systems, or that have monitoring well systems must submit monitoring results as directed in the General Order, Groundwater Reporting Section starting on page MRP-13.	
Storm Water Monitoring	N/A
Dischargers that are required to monitor storm water more frequently than required in the General Order must submit monitoring results as directed in the General Order, Storm Water Reporting Section on page MRP-14.	