DELLAVALLE™
LABORATORY INC

California Regional Water Quality Control Board
Central Valley Region
1885 E Street
Fresno, CA 93706

June 24, 2024

Dear CRWQCB,

This folder contains the 2023 Annual Report for;

Tiemersma Dairy located at 29981 Road 60 in Visalia, California.

This document has been prepared by Dellavalle Laboratory, Inc. in accordance with WDR General Order R5-2007-0035. This report was compiled using data provided by the owners and operators of the dairy. Please find the following documents included;

- The Annual Report
- Manure Tracking Manifest
- Corrective Actions Documents
- Well Monitoring Analysis

Every effort has been made to maintain clear and accurate records. All records are held on-site and at Dellavalle Laboratory, Inc. in both electronic and hard copy form. These records will be kept for five years. Copies of every item in this folder have been made and are kept by the dairyman and Dellavalle Laboratory.

1910 W. McKinley, Suite 110 Fresno CA 93728-1298 (559) 233-6129

DELLAVALLE™
LABORATORY INC

Annual Report

1910 W. McKinley, Suite 110 Fresno CA 93728-1298 (559) 233-6129

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: Tiemersma Dairy

Physical address of dairy:

29981 Road 60	Visalia	Tulare	93291
Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Date facility was originally placed in operation: 09/01/1971

Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

0073-0130-0010-0000	0073-0130-0019-0000	0073-0130-0020-0000	0073-0180-0001-0000	0073-0180-0002-0000	0073-0180-0003-0000
0073-0180-0007-0000	0073-0180-0024-0000				

B. OPERATORS

Tiemersma, Peter P

Operator name: Tiemersma, Peter P

Telephone no.: Landline: ; Cellular: (559) 786-6707

29981 Road 60	Visalia	CA	93291
Mailing Address Number and Street	City	State	Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Tiemersma, Peter P

Legal owner name: Tiemersma, Peter P

Telephone no.: Landline: ; Cellular: (559) 786-6707

29981 Road 60	Visalia	CA	93291
Mailing Address Number and Street	City	State	Zip Code

This owner is responsible for paying permit fees.

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	0	0	0	0	0	0
Number under roof	0	0	700	650	0	0
Maximum number	0	0	700	650	0	0
Average number	0	0	700	650	0	0
Avg live weight (lbs)	0	0	1,100	800		

Predominant milk cow breed: Holstein

Average milk production: 1 *pounds per cow per day*

B. MANURE GENERATED

Total manure excreted by the herd: 13,915.20 *tons per reporting period*

Total nitrogen from manure: 128,115.00 *lbs per reporting period*

After ammonia losses (30% loss applied): 89,680.50 *lbs per reporting period*

Total phosphorus from manure: 21,681.00 *lbs per reporting period*

Total potassium from manure: 1.00 *lbs per reporting period*

Total salt from manure: 0.00 *lbs per reporting period*

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 38,038,000 *gallons*

Total nitrogen generated: 89,633.94 *lbs*

Total phosphorus generated: 36,414.13 *lbs*

Total potassium generated: 77,252.65 *lbs*

Total salt generated: 630,689.81 *lbs*

	38,038,000	*gallons applied*
+	0	*gallons exported*
-	0	*gallons imported*
=	38,038,000	*gallons generated*

D. FRESH WATER SOURCES

Source Description	Type
Well #1	Ground water
Well #2	Ground water
Well #3	Ground water

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 (%)
04/22/2023	Corral solids	1,520.00 *ton*	As-is	51.4		4,700.00	3,000.00	10,400.00		0.00
06/02/2023	Corral solids	1,120.00 *ton*	As-is	51.4		4,700.00	3,000.00	10,400.00		0.00

No liquid nutrient exports entered.

Material type	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Dry manure	24,816.00	15,840.00	54,912.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Total exports for all materials	24,816.00	15,840.00	54,912.00	0.00

APPLICATION AREA

A. LIST OF LAND APPLICATION AREAS

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
20 Acres	18	18	2	process wastewater	0073-0180-0024-0000
35 Acres	35	35	2	process wastewater	0073-0130-0010-0000 0073-0130-0019-0000 0073-0130-0020-0000
60 Acres	58	58	2	process wastewater	0073-0180-0001-0000 0073-0180-0002-0000
80 Acres	78	78	2	process wastewater	0073-0180-0007-0000
Totals for areas that were used for application	189	189	8		
Totals for areas that were not used for application					
Land application area totals	189	189	8		

B. CROPS AND HARVESTS

20 Acres

Field name: 20 Acres

11/22/2022: Triticale, soft dough

Crop: Triticale, soft dough Acres planted: 18 Plant date: 11/22/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/25/2023	378.00 *ton*	As-is		46.4	6,800.00	1,600.00	11,300.00		9.10

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	22.00	220.00	83.60	198.00	0.00
Total actual harvest content	21.00	285.60	67.20	474.60	2,048.59

20 Acres

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 18 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	389.90 *ton*	As-is		65.1	4,800.00	1,000.00	4,300.00		6.10

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	105.00	240.00	0.00
Total actual harvest content	21.66	207.95	43.32	186.29	922.29

35 Acres

Field name: 35 Acres

10/26/2022: Triticale, soft dough

Crop: Triticale, soft dough Acres planted: 35 Plant date: 10/26/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/27/2023	646.10 *ton*	As-is		73.7	5,700.00	1,400.00	10,600.00		10.80

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	22.00	220.00	83.60	198.00	0.00
Total actual harvest content	18.46	210.44	51.69	391.35	1,048.68

05/23/2023: Corn, silage

Crop: Corn, silage Acres planted: 35 Plant date: 05/23/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/04/2023	720.00 *ton*	As-is		69.1	4,700.00	1,100.00	6,700.00		8.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	105.00	240.00	0.00
Total actual harvest content	20.57	193.37	45.26	275.66	1,131.47

60 Acres

Field name: 60 Acres

10/29/2022: Triticale, soft dough

Crop: Triticale, soft dough Acres planted: 58 Plant date: 10/29/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/27/2023	1,173.60 *ton*	As-is		73.7	5,400.00	1,300.00	10,700.00		10.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	22.00	220.00	83.60	198.00	0.00
Total actual harvest content	20.23	218.53	52.61	433.02	1,160.12

05/20/2023: Corn, silage

Crop: Corn, silage Acres planted: 58 Plant date: 05/20/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/05/2023	1,367.40 *ton*	As-is		63.7	5,200.00	1,300.00	6,200.00		6.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	105.00	240.00	0.00
Total actual harvest content	23.58	245.19	61.30	292.34	1,146.78

80 Acres

Field name: 80 Acres

11/21/2022: Triticale, soft dough

Crop: Triticale, soft dough Acres planted: 78 Plant date: 11/21/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/15/2023	1,582.40 *ton*	As-is		63.5	7,200.00	1,100.00	8,200.00		10.30

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	22.00	220.00	83.60	198.00	0.00
Total actual harvest content	20.29	292.14	44.63	332.71	1,525.39

80 Acres

06/27/2023: Corn, silage

Crop: Corn, silage Acres planted: 78 Plant date: 06/27/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	1,746.40 *ton*	As-is		63.7	5,200.00	1,100.00	3,600.00		4.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	105.00	240.00	0.00
Total actual harvest content	22.39	232.85	49.26	161.21	747.73

NUTRIENT BUDGET

A. LAND APPLICATIONS

20 Acres - 11/22/2022: Triticale, soft dough

Field name: 20 Acres

Crop: Triticale, soft dough — Plant date: 11/22/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/07/2022	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	Process wastewater	93.52	18.58	222.44	1,275.83	1,196,500.00 *gal*
Well #2	Ground water	2.21	0.00	0.00	62.56	2,076,000.00 *gal*
Well #3	Ground water	4.30	0.00	0.00	86.73	1,599,000.00 *gal*
Application event totals		100.04	18.58	222.44	1,425.13	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
02/05/2023	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
Well #2	Ground water	7.26	0.00	0.00	205.04	6,804,000.00 *gal*
Application event totals		7.26	0.00	0.00	205.04	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
03/15/2023	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	Process wastewater	137.29	44.60	27.74	1,542.10	1,196,500.00 *gal*
Well #2	Ground water	2.16	0.00	0.00	61.14	2,029,000.00 *gal*
Well #3	Ground water	1.93	0.00	0.00	38.95	718,000.00 *gal*
Application event totals		141.39	44.60	27.74	1,642.19	

20 Acres - 06/29/2023: Corn, silage

Field name: 20 Acres

Crop: Corn, silage — Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following

20 Acres - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
06/11/2023	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	Process wastewater	27.23	9.95	14.15	103.51	572,500.00 *gal*
Well #2	Ground water	2.83	0.00	0.00	79.86	2,650,000.00 *gal*
Well #3	Ground water	4.92	0.00	0.00	99.32	1,831,000.00 *gal*
Application event totals		34.98	9.95	14.15	282.69	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
07/25/2023	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
Well #2	Ground water	3.33	0.00	0.00	94.05	3,121,000.00 *gal*
Well #3	Ground water	7.34	0.00	0.00	148.08	2,730,000.00 *gal*
Application event totals		10.67	0.00	0.00	242.13	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
08/29/2023	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
Well #2	Ground water	3.14	0.00	0.00	88.84	2,948,000.00 *gal*
Well #3	Ground water	5.08	0.00	0.00	102.57	1,891,000.00 *gal*
Application event totals		8.23	0.00	0.00	191.41	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
09/25/2023	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	Process wastewater	200.55	111.48	133.77	371.58	572,500.00 *gal*
Well #2	Ground water	4.68	0.00	0.00	132.20	4,387,000.00 *gal*
Well #3	Ground water	7.82	0.00	0.00	157.68	2,907,000.00 *gal*
Application event totals		213.04	111.48	133.77	661.47	

35 Acres - 10/26/2022: Triticale, soft dough

Field name: 35 Acres

Crop: Triticale, soft dough

Plant date: 10/26/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following

35 Acres - 10/26/2022: Triticale, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/16/2022	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	Process wastewater	93.50	18.58	222.39	1,275.55	2,326,000.00 *gal*
Well #2	Ground water	2.05	0.00	0.00	57.93	3,738,000.00 *gal*
Well #3	Ground water	3.98	0.00	0.00	80.29	2,878,000.00 *gal*
Application event totals		99.53	18.58	222.39	1,413.76	

02/07/2023	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
Well #2	Ground water	7.26	0.00	0.00	205.04	13,230,000.00 *gal*
Application event totals		7.26	0.00	0.00	205.04	

03/17/2023	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	Process wastewater	137.26	44.59	27.73	1,541.75	2,326,000.00 *gal*
Well #2	Ground water	1.82	0.00	0.00	51.45	3,320,000.00 *gal*
Well #3	Ground water	1.79	0.00	0.00	36.07	1,293,000.00 *gal*
Application event totals		140.87	44.59	27.73	1,629.27	

35 Acres - 05/23/2023: Corn, silage

Field name: 35 Acres

Crop: Corn, silage

Plant date: 05/23/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
05/07/2023	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	Process wastewater	26.97	9.86	14.01	102.52	1,102,500.00 *gal*
Well #2	Ground water	2.90	0.00	0.00	81.95	5,288,000.00 *gal*
Well #3	Ground water	3.87	0.00	0.00	78.11	2,800,000.00 *gal*
Application event totals		33.74	9.86	14.01	262.58	

35 Acres - 05/23/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
07/03/2023	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
Well #2	Ground water	3.97	0.00	0.00	112.11	7,234,000.00 *gal*
Well #3	Ground water	7.42	0.00	0.00	149.61	5,363,000.00 *gal*
Application event totals		11.38	0.00	0.00	261.72	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
08/13/2023	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	Process wastewater	198.62	110.40	132.49	368.01	1,102,500.00 *gal*
Well #2	Ground water	3.08	0.00	0.00	87.08	5,619,000.00 *gal*
Well #3	Ground water	6.80	0.00	0.00	137.08	4,914,000.00 *gal*
Application event totals		208.50	110.40	132.49	592.18	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
09/09/2023	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
Well #2	Ground water	2.91	0.00	0.00	82.22	5,305,000.00 *gal*
Well #3	Ground water	4.71	0.00	0.00	94.93	3,403,000.00 *gal*
Application event totals		7.62	0.00	0.00	177.15	

60 Acres - 10/29/2022: Triticale, soft dough

Field name: 60 Acres

Crop: Triticale, soft dough

Plant date: 10/29/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/09/2022	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	Process wastewater	94.92	18.86	225.76	1,294.90	3,913,000.00 *gal*
Well #2	Ground water	2.13	0.00	0.00	60.20	6,437,000.00 *gal*
Well #3	Ground water	4.14	0.00	0.00	83.45	4,957,000.00 *gal*
Application event totals		101.19	18.86	225.76	1,438.54	

60 Acres - 10/29/2022: Triticale, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
02/09/2023	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
Well #2	Ground water	7.25	0.00	0.00	205.03	21,923,000.00 *gal*
Application event totals		7.25	0.00	0.00	205.03	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
03/19/2023	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	Process wastewater	139.34	45.27	28.15	1,565.14	3,913,000.00 *gal*
Well #2	Ground water	1.89	0.00	0.00	53.48	5,719,000.00 *gal*
Well #3	Ground water	1.86	0.00	0.00	37.47	2,226,000.00 *gal*
Application event totals		143.09	45.27	28.15	1,656.10	

60 Acres - 05/20/2023: Corn, silage

Field name: 60 Acres

Crop: Corn, silage

Plant date: 05/20/2023

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	Process wastewater	29.94	10.94	15.55	113.80	2,028,000.00 *gal*
Well #2	Ground water	2.98	0.00	0.00	84.20	9,003,000.00 *gal*
Well #3	Ground water	3.98	0.00	0.00	80.25	4,767,000.00 *gal*
Application event totals		36.89	10.94	15.55	278.24	

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
06/24/2023	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
Well #2	Ground water	4.10	0.00	0.00	115.98	12,401,000.00 *gal*
Well #3	Ground water	7.67	0.00	0.00	154.74	9,192,000.00 *gal*
Application event totals		11.77	0.00	0.00	270.71	

60 Acres - 05/20/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
08/01/2023	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	Process wastewater	220.47	122.55	147.06	408.50	2,028,000.00 *gal*
Well #2	Ground water	3.20	0.00	0.00	90.50	9,677,000.00 *gal*
Well #3	Ground water	7.06	0.00	0.00	142.48	8,464,000.00 *gal*
Application event totals		230.74	122.55	147.06	641.48	

09/03/2023	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
Well #2	Ground water	3.02	0.00	0.00	85.46	9,138,000.00 *gal*
Well #3	Ground water	4.89	0.00	0.00	98.66	5,861,000.00 *gal*
Application event totals		7.91	0.00	0.00	184.12	

80 Acres - 11/21/2022: Triticale, soft dough

Field name: 80 Acres

Crop: Triticale, soft dough

Plant date: 11/21/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/01/2022	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	Process wastewater	93.59	18.60	222.60	1,276.74	5,188,500.00 *gal*
Well #2	Ground water	2.10	0.00	0.00	59.21	8,514,000.00 *gal*
Well #3	Ground water	4.07	0.00	0.00	82.06	6,556,000.00 *gal*
Application event totals		99.75	18.60	222.60	1,418.01	

02/11/2023	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
Well #2	Ground water	7.25	0.00	0.00	205.02	29,482,000.00 *gal*
Application event totals		7.25	0.00	0.00	205.02	

80 Acres - 11/21/2022: Triticale, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
03/21/2023	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	Process wastewater	137.39	44.63	27.76	1,543.19	5,188,500.00 *gal*
Well #2	Ground water	1.82	0.00	0.00	51.31	7,379,000.00 *gal*
Well #3	Ground water	1.83	0.00	0.00	36.85	2,944,000.00 *gal*
Application event totals		141.03	44.63	27.76	1,631.35	

80 Acres - 06/27/2023: Corn, silage

Field name: 80 Acres

Crop: Corn, silage

Plant date: 06/27/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
06/02/2023	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	Process wastewater	29.55	10.80	15.35	112.32	2,692,000.00 *gal*
Well #2	Ground water	2.61	0.00	0.00	73.73	10,602,000.00 *gal*
Well #3	Ground water	4.55	0.00	0.00	91.70	7,326,000.00 *gal*
Application event totals		36.70	10.80	15.35	277.75	

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
Well #2	Ground water	3.15	0.00	0.00	89.00	12,798,000.00 *gal*
Well #3	Ground water	6.95	0.00	0.00	140.12	11,194,000.00 *gal*
Application event totals		10.10	0.00	0.00	229.12	

08/18/2023	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
Well #2	Ground water	2.97	0.00	0.00	84.05	12,086,000.00 *gal*
Well #3	Ground water	4.81	0.00	0.00	97.04	7,752,000.00 *gal*
Application event totals		7.78	0.00	0.00	181.08	

80 Acres - 06/27/2023: Corn, silage

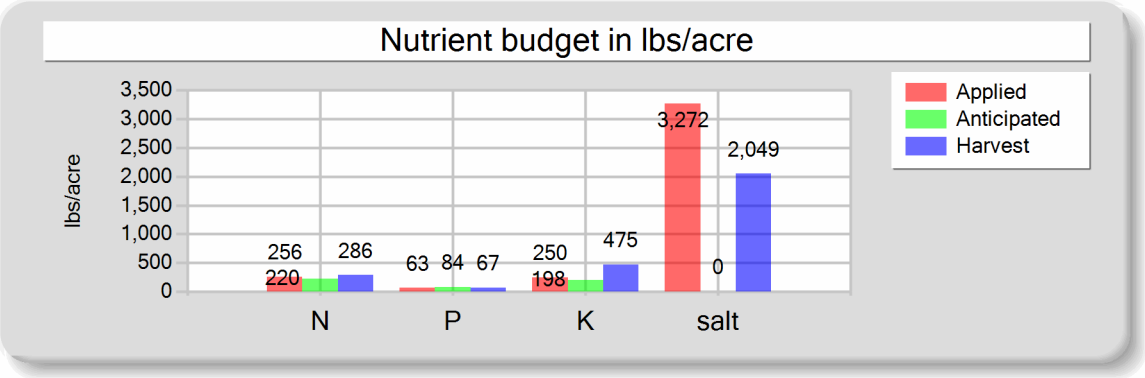
Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
09/12/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation

Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	217.62	120.96	145.16	403.21	2,692,000.00 *gal*
Well #2	Ground water	4.32	0.00	0.00	122.02	17,546,000.00 *gal*
Well #3	Ground water	7.22	0.00	0.00	145.58	11,630,000.00 *gal*
Application event totals		229.15	120.96	145.16	670.81	

B. NUTRIENT BUDGET

20 Acres - 11/22/2022: Triticale, soft dough

Field name: 20 Acres Crop: Triticale, soft dough Plant date: 11/22/2022



	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	230.82	63.18	250.17	2,817.93
Fresh water	17.86	0.00	0.00	454.42
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	255.68	63.18	250.17	3,272.35
Anticipated crop nutrient removal	220.00	83.60	198.00	0.00
Actual crop nutrient removal	285.60	67.20	474.60	2,048.59
Nutrient balance	-29.92	-4.02	-224.43	1,223.76
Applied to removed ratio	0.90	0.94	0.53	1.60

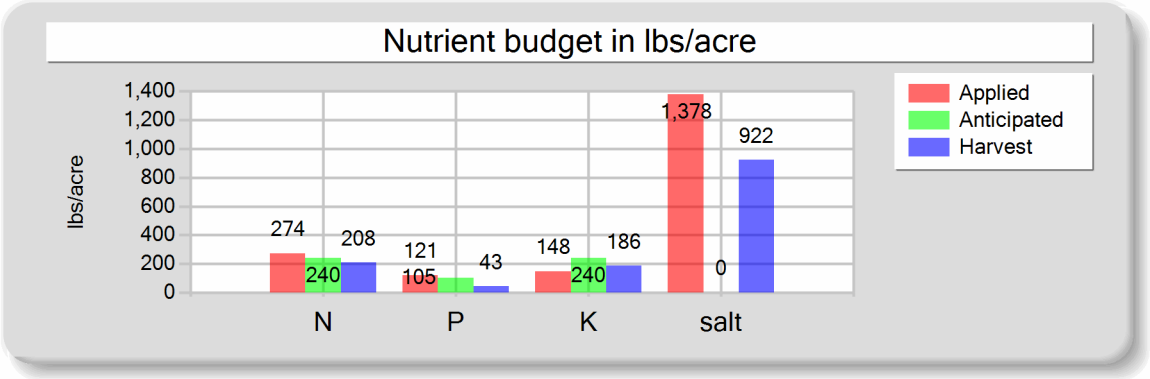
Fresh water applied	
13,226,000.00	*gallons*
487.07	*acre-inches*
27.06	*inches/acre*

Process wastewater applied	
2,393,000.00	*gallons*
88.13	*acre-inches*
4.90	*inches/acre*

Total harvests for the crop	
1	*harvests*

20 Acres - 06/29/2023: Corn, silage

Field name: 20 Acres | Crop: Corn, silage | Plant date: 06/29/2023



	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	227.78	121.43	147.92	475.10
Fresh water	39.14	0.00	0.00	902.60
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	273.92	121.43	147.92	1,377.70
Anticipated crop nutrient removal	240.00	105.00	240.00	0.00
Actual crop nutrient removal	207.95	43.32	186.29	922.29
Nutrient balance	65.98	78.11	-38.37	455.41
Applied to removed ratio	1.32	2.80	0.79	1.49

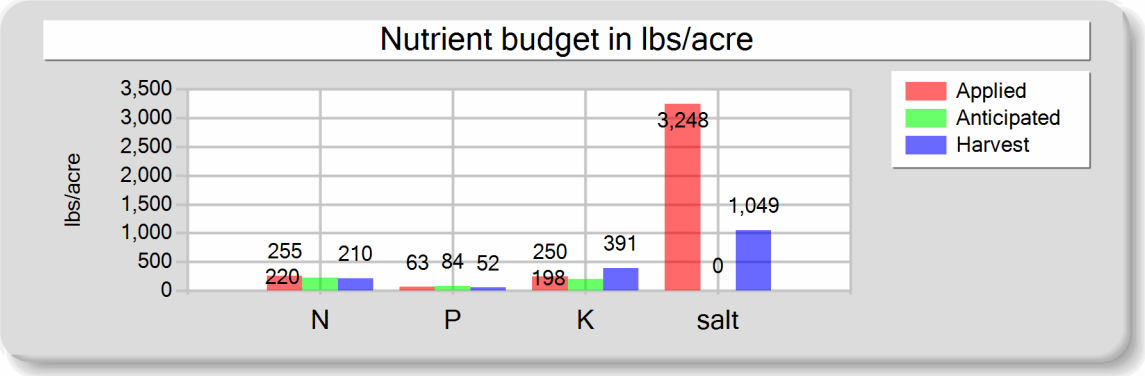
Fresh water applied	
22,465,000.00	*gallons*
827.31	*acre-inches*
45.96	*inches/acre*

Process wastewater applied	
1,145,000.00	*gallons*
42.17	*acre-inches*
2.34	*inches/acre*

Total harvests for the crop	
1	*harvests*

35 Acres - 10/26/2022: Triticale, soft dough

Field name: 35 Acres Crop: Triticale, soft dough Plant date: 10/26/2022



	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	230.76	63.17	250.12	2,817.29
Fresh water	16.89	0.00	0.00	430.78
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	254.66	63.17	250.12	3,248.07
Anticipated crop nutrient removal	220.00	83.60	198.00	0.00
Actual crop nutrient removal	210.44	51.69	391.35	1,048.68
Nutrient balance	44.21	11.48	-141.23	2,199.39
Applied to removed ratio	1.21	1.22	0.64	3.10

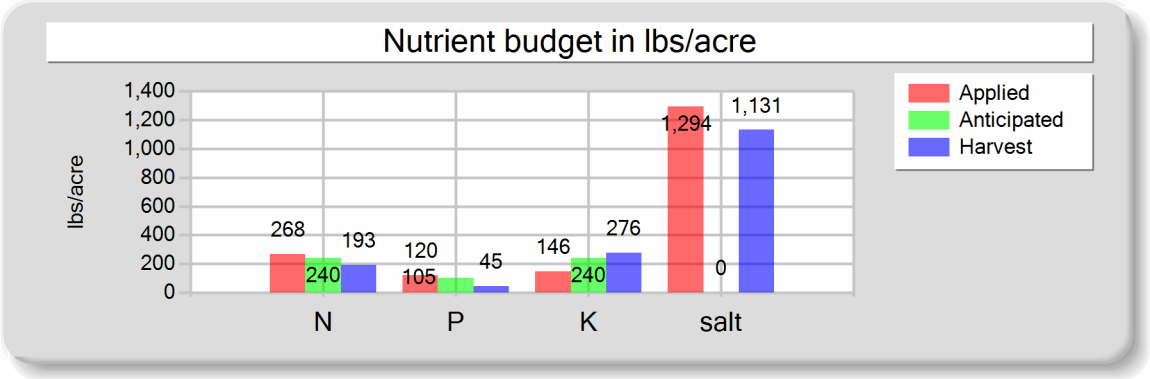
Fresh water applied	
24,459,000.00	*gallons*
900.74	*acre-inches*
25.74	*inches/acre*

Process wastewater applied	
4,652,000.00	*gallons*
171.32	*acre-inches*
4.89	*inches/acre*

Total harvests for the crop	
1	*harvests*

35 Acres - 05/23/2023: Corn, silage

Field name: 35 Acres Crop: Corn, silage Plant date: 05/23/2023



	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	225.59	120.26	146.50	470.53
Fresh water	35.65	0.00	0.00	823.09
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	268.24	120.26	146.50	1,293.62
Anticipated crop nutrient removal	240.00	105.00	240.00	0.00
Actual crop nutrient removal	193.37	45.26	275.66	1,131.47
Nutrient balance	74.87	75.00	-129.16	162.15
Applied to removed ratio	1.39	2.66	0.53	1.14

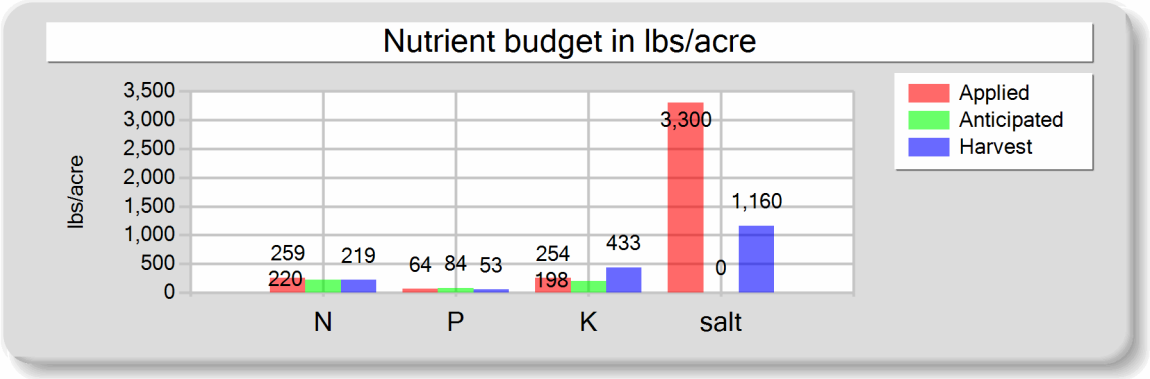
Fresh water applied	
39,926,000.00	*gallons*
1,470.34	*acre-inches*
42.01	*inches/acre*

Process wastewater applied	
2,205,000.00	*gallons*
81.20	*acre-inches*
2.32	*inches/acre*

Total harvests for the crop	
1	*harvests*

60 Acres - 10/29/2022: Triticale, soft dough

Field name: 60 Acres | Crop: Triticale, soft dough | Plant date: 10/29/2022



	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	234.26	64.13	253.91	2,860.04
Fresh water	17.27	0.00	0.00	439.63
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	258.54	64.13	253.91	3,299.67
Anticipated crop nutrient removal	220.00	83.60	198.00	0.00
Actual crop nutrient removal	218.53	52.61	433.02	1,160.12
Nutrient balance	40.00	11.52	-179.11	2,139.54
Applied to removed ratio	1.18	1.22	0.59	2.84

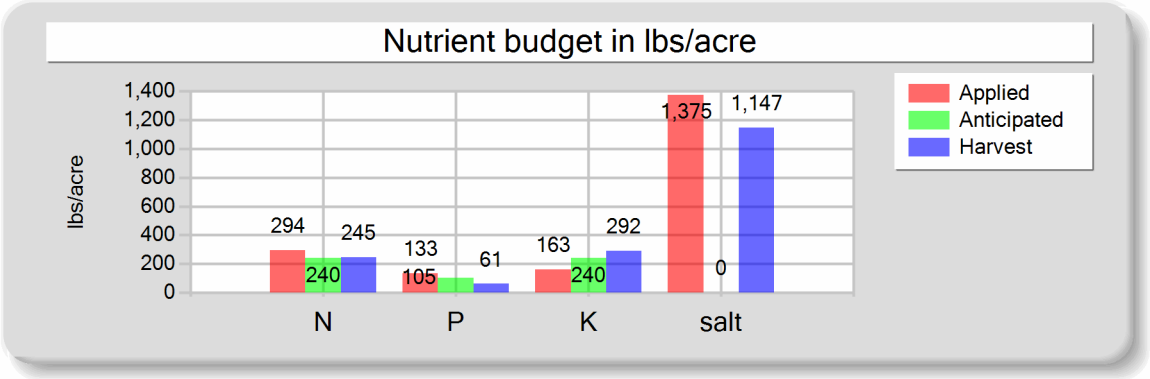
Fresh water applied	
41,262,000.00	*gallons*
1,519.54	*acre-inches*
26.20	*inches/acre*

Process wastewater applied	
7,826,000.00	*gallons*
288.20	*acre-inches*
4.97	*inches/acre*

Total harvests for the crop	
1	*harvests*

60 Acres - 05/20/2023: Corn, silage

Field name: 60 Acres Crop: Corn, silage Plant date: 05/20/2023



	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	250.41	133.49	162.61	522.30
Fresh water	36.91	0.00	0.00	852.26
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	294.32	133.49	162.61	1,374.56
Anticipated crop nutrient removal	240.00	105.00	240.00	0.00
Actual crop nutrient removal	245.19	61.30	292.34	1,146.78
Nutrient balance	49.14	72.20	-129.73	227.79
Applied to removed ratio	1.20	2.18	0.56	1.20

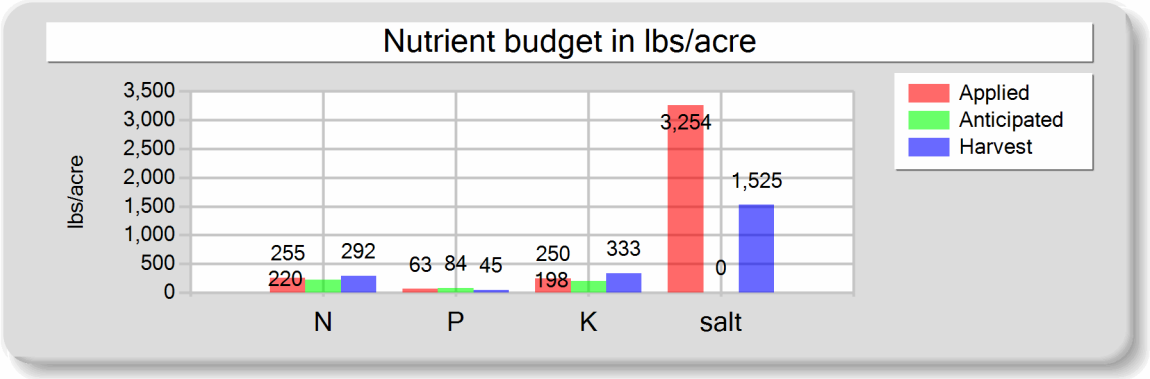
Fresh water applied	
68,503,000.00	*gallons*
2,522.73	*acre-inches*
43.50	*inches/acre*

Process wastewater applied	
4,056,000.00	*gallons*
149.37	*acre-inches*
2.58	*inches/acre*

Total harvests for the crop	
1	*harvests*

80 Acres - 11/21/2022: Triticale, soft dough

Field name: 80 Acres | Crop: Triticale, soft dough | Plant date: 11/21/2022



	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	230.98	63.23	250.35	2,819.92
Fresh water	17.06	0.00	0.00	434.46
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	255.04	63.23	250.35	3,254.38
Anticipated crop nutrient removal	220.00	83.60	198.00	0.00
Actual crop nutrient removal	292.14	44.63	332.71	1,525.39
Nutrient balance	-37.10	18.59	-82.36	1,728.99
Applied to removed ratio	0.87	1.42	0.75	2.13

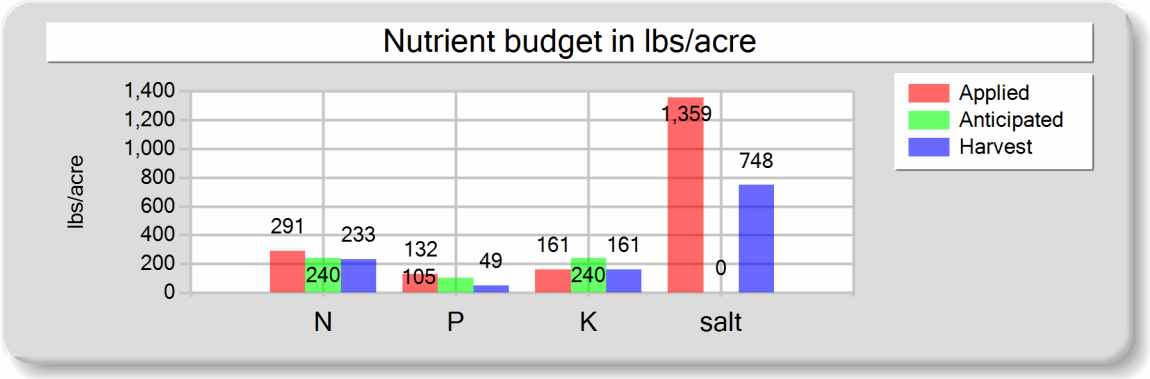
Fresh water applied	
54,875,000.00	*gallons*
2,020.86	*acre-inches*
25.91	*inches/acre*

Process wastewater applied	
10,377,000.00	*gallons*
382.15	*acre-inches*
4.90	*inches/acre*

Total harvests for the crop	
1	*harvests*

80 Acres - 06/27/2023: Corn, silage

Field name: 80 Acres Crop: Corn, silage Plant date: 06/27/2023



	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	247.17	131.76	160.51	515.54
Fresh water	36.57	0.00	0.00	843.23
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	290.74	131.76	160.51	1,358.77
Anticipated crop nutrient removal	240.00	105.00	240.00	0.00
Actual crop nutrient removal	232.85	49.26	161.21	747.73
Nutrient balance	57.89	82.51	-0.70	611.04
Applied to removed ratio	1.25	2.68	1.00	1.82

Fresh water applied	
90,934,000.00	*gallons*
3,348.79	*acre-inches*
42.93	*inches/acre*

Process wastewater applied	
5,384,000.00	*gallons*
198.27	*acre-inches*
2.54	*inches/acre*

Total harvests for the crop	
1	*harvests*

NUTRIENT ANALYSES

A. MANURE ANALYSES

Coral Manure - 23D1569

Sample and source description: Coral Manure - 23D1569

Sample date: 04/26/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 51.4 %

	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	4,700.00	3,000.00	10,400.00							
DL	100.00	100.00	30.00							

Coral Manure - 23I1710

Sample and source description: Coral Manure - 23I1710

Sample date: 09/25/2023 Material type: Separator solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 17.2 %

	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	7,000.00	4,400.00	18,100.00							
DL	100.00	100.00	30.00							

B. PROCESS WASTEWATER ANALYSES

2022 4th Qtr - 22J0890

Sample and source description: 2022 4th Qtr - 22J0890

Sample date: 10/11/2022 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.70

	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	168.00	131.00	0.00	0.60	33.50	401.00								5,480.00	2,300
DL	0.70	0.20	0.01	0.01	0.02	0.20								1.00	10

2023 1st Qtr - 23B0948

Sample and source description: 2023 1st Qtr - 23B0948

Sample date: 02/23/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.70

	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	247.00	179.00	0.00	0.50	80.40	50.00								6,860.00	2,780
DL	0.70	0.20	0.01	0.01	0.02	0.20								1.00	10

2023 2nd Qtr - 23F1916

Sample and source description: 2023 2nd Qtr - 23F1916

Sample date: 06/20/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.60

	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	98.00	16.00	0.00	4.60	37.50	53.30								977.00	390
DL	0.70	0.20	0.01	0.01	0.02	0.20								1.00	10

2023 3rd Qtr - 23H0792

Sample and source description: 2023 3rd Qtr - 23H0792

Sample date: 08/07/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.40

	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	755.00	119.00	0.00	0.60	420.00	504.00								3,280.00	1,400
DL	0.70	0.20	0.01	0.01	0.02	0.20								1.00	10

2023 4th Qtr - Average

Sample and source description: 2023 4th Qtr - Average

Sample date: 10/01/2023 Material type: Process wastewater Source of analysis: Other/estimated pH: 7.60

	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	367.00	105.00	0.00	1.90	179.00	382.40								3,706.00	1,523
DL	0.70	0.20	0.01	0.01	0.02	0.20								1.00	10

C. FRESH WATER ANALYSES

Well #1

23F1915

Sample description: 23F1915

Sample date: 06/20/2023 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		0.00	22.20	56.50	2.10	46.00	100.00	0.00	31.20	23.20	561.00	323
DL		0.20	0.01	0.05	0.40	0.10	3.00	0.90	0.01	0.03	1.00	10

Well #2

23F1915

Sample description: 23F1915

Sample date: 06/20/2023 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		0.00	2.30	3.60	0.00	22.00	28.50	7.00	6.40	5.20	126.00	65
DL		0.20	0.01	0.05	0.40	0.10	3.00	0.90	0.01	0.03	1.00	10

Well #3

23F1915

Sample description: 23F1915

Sample date: 06/20/2023 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		0.00	5.80	11.00	0.00	30.00	39.30	0.00	14.70	12.90	214.00	117
DL		0.20	0.01	0.05	0.40	0.10	3.00	0.90	0.01	0.03	1.00	10

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

20 Acres - 11/22/2022: Triticale, soft dough

23E2316

Sample and source description: 23E2316

Sample date: 05/25/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 46.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,800.00	1,600.00	11,300.00		9.10
DL	100.00	10.00	30.00		0.01

20 Acres - 06/29/2023: Corn, silage

23J1114

Sample and source description: 23J1114

Sample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 65.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	4,800.00	1,000.00	4,300.00		6.10
DL	100.00	100.00	30.00		0.01

35 Acres - 10/26/2022: Triticale, soft dough

35 Acres - 10/26/2022: Triticale, soft dough

23D1672

Sample and source description: 23D1672

Sample date: 04/27/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 73.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,700.00	1,400.00	10,600.00		10.80
DL	100.00	100.00	30.00		0.01

35 Acres - 05/23/2023: Corn, silage

23I0378

Sample and source description: 23I0378

Sample date: 09/05/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 69.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	4,700.00	1,100.00	6,700.00		8.90
DL	100.00	100.00	30.00		0.01

60 Acres - 10/29/2022: Triticale, soft dough

23D1672

Sample and source description: 23D1672

Sample date: 04/27/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 73.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,400.00	1,300.00	10,700.00		10.90
DL	100.00	100.00	30.00		0.01

60 Acres - 05/20/2023: Corn, silage

23I0378

Sample and source description: 23I0378

Sample date: 09/05/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 63.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,200.00	1,300.00	6,200.00		6.70
DL	100.00	100.00	30.00		0.01

80 Acres - 11/21/2022: Triticale, soft dough

23E1392

Sample and source description: 23E1392

Sample date: 05/15/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 63.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	7,200.00	1,100.00	8,200.00		10.30
DL	100.00	100.00	30.00		0.01

80 Acres - 06/27/2023: Corn, silage

23J1114

Sample and source description: 23J1114

Sample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 63.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,200.00	1,100.00	3,600.00		4.60
DL	100.00	100.00	30.00		0.01

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

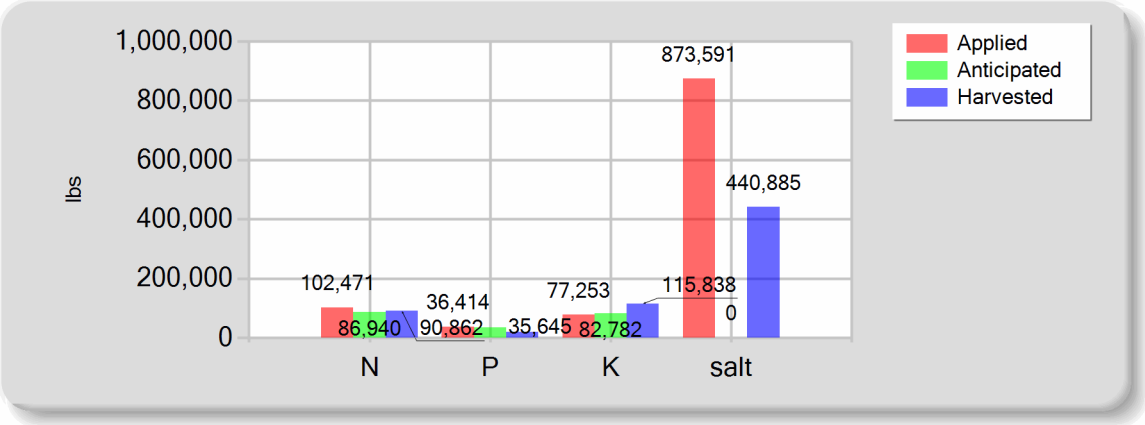
No subsurface (tile) drainage analyses entered.

NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

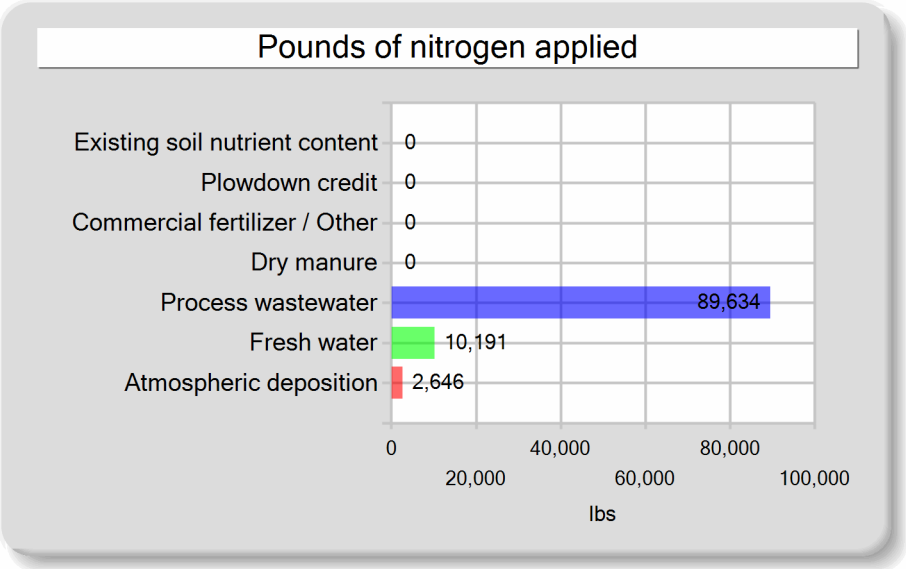
A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

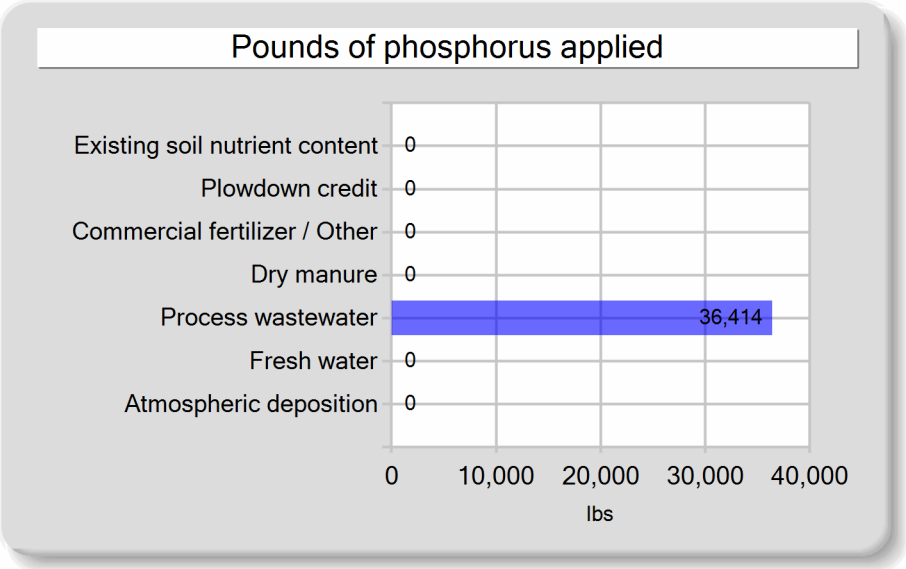
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	89,633.94	36,414.13	77,252.65	630,689.81
Fresh water	10,190.76	0.00	0.00	242,901.60
Atmospheric deposition	2,646.00	0.00	0.00	0.00
Total nutrients applied	102,470.70	36,414.13	77,252.65	873,591.42
Anticipated crop nutrient removal	86,940.00	35,645.40	82,782.00	0.00
Actual crop nutrient removal	90,862.34	19,312.44	115,837.50	440,884.59
Nutrient balance	11,608.36	17,101.69	-38,584.85	432,706.83
Applied to removed ratio	1.13	1.89	0.67	1.98

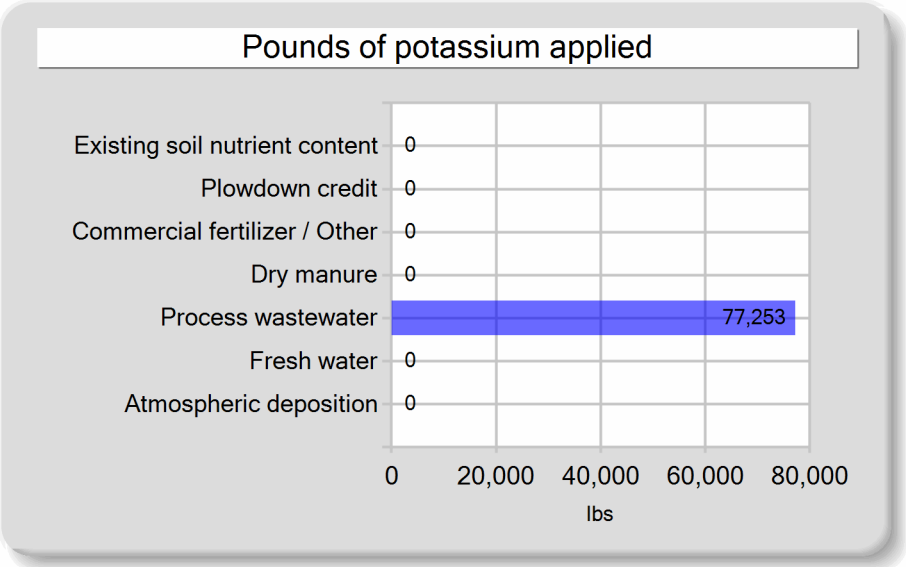
B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

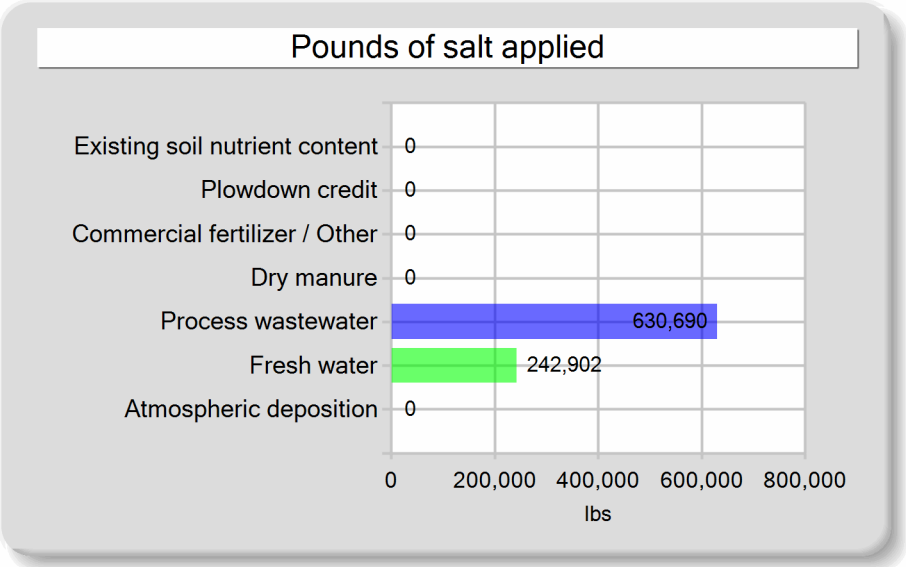


C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE









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?	Yes
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

ADDITIONAL NOTES

A. NOTES

All data entered in this 2023 Annual Report is correct as submitted by the owner/operator and has been confirmed by the owner/operator to be accurate.

All fields returned acceptable total nitrogen ratios below the 1.65 total nitrogen ratio limit.

During the reporting period, the owner/operator made the decision to sell the milking herd. The herd was sold and the facility vacated by March 1, 2023. On June 1, 2023 a lease agreement was started with an outside operator and the facility began operating as a heifer ranch. There are no milking cows on the facility, however the facility will remain part of the Dairy General Order rather than move to the Bovine Order. This gives the owner/operator the option to resume a milking herd in the future should the opportunity arise. The outside operator is utilizing the production areas only and the owner/operator retains use of all land application areas. Per the lease agreement, the outside operator retains ownership of and exports all solid manure produced in the corrals whereas any liquid manure produced and collected in the wastewater retention ponds is to be utilized by the owner/operator for agronomic purposes.

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.

SIGNATURE OF OWNER OF FACILITY	SIGNATURE OF OPERATOR OF FACILITY
Peter P Tiemersma	SAME AS OWNER
PRINT OR TYPE NAME	PRINT OR TYPE NAME
6·26·24	
DATE	DATE

ATTACHMENTS

A. REQUIRED ATTACHMENTS

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

Annual Dairy Facility Assessment
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
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
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
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
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.

Manure Tracking Manifest

1910 W. McKinley, Suite 110 Fresno CA 93728-1298 (559) 233-6129

Manure/Process Wastewater Tracking Manifest for Existing Milk Cow Dairies

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination**.
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

Operator Information: Name of Operator: Gutierrez Pete

Name of Dairy Facility: Tiemersma Dairy

Facility Address: 29981 Road 60 (Number and Street) Visalia (City) CA 93291 (Zip Code)

Contact Person Name and Phone Number: Pete (Name) 559-786-6707 (Phone Number)

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: Gutierrez

Address of Hauling Company /Person: 3612 Ave. 236 (Number and Street) Tulare (City) 93274 (Zip Code)

Contact Person: Jesse (Name) 559-280-3719 (Phone Number)

Destination Information: Composting Facility / Broker / Farmer / Other (please circle one)

Contact information of Composting Facility, Broker, Farmer, or Other:

Moons (Name) 4974 Ave 272 (Number and Street) Visalia (City) CA 93291 (Zip Code) (Phone Number)

Manure/Process Wastewater Destination Address or Assessor's Parcel Number:

4974 Ave 272 (Number and Street) Visalia (City) 93291 (Zip Code) 118-040-021 (Assessor's Parcel Number)

Dates Hauled: 4-21-2023, 4-22-2023

Amount Hauled:

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

Manure: 1,520 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: _____

10 tons per truck load

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

Process Wastewater: _____ Gallons

Method used to determine volume of process wastewater: _____

_____

Written Agreement:
Does the Operator have a written agreement (in compliance with Land Application Specification C.2 of Waste Discharge Requirements General Order No. R5-2007-0035) with any party that receives process wastewater from the Operator for its own use? (please check one)

____ Yes ___✓___ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after **31 December 2007** to such party. _____
(Operator shall provide initials here to acknowledge this requirement).

Certification:
I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, 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 a fine and imprisonment for knowing violations.

Operator's Signature: _____ Date: 4-30-2023

Hauler's Signature: Jesse Lang Date: 4-30-2023

Lab ID = 23D1569

Manure/Process Wastewater Tracking Manifest for Existing Milk Cow Dairies

Instructions:

1) Complete one manifest for each hauling event, for each destination. A hauling event may last for several days, as long as the manure is being hauled to the same destination.
2) If there are multiple destinations, **complete a separate form for each destination**.
3) The operator must obtain the signature of the hauler upon completion of each manure-hauling event.
4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

Operator Information: Name of Operator: Pete

Name of Dairy Facility: Tiemersma Dairy

Facility Address: 29981 Road 60 (Number and Street) Visalia (City) 93291 (Zip Code)

Contact Person Name and Phone Number: Pete (Name) 559-786-6707 (Phone Number)

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: Gutierrez Spreading LLC.

Address of Hauling Company /Person: 3612 Ave. 236 (Number and Street) Tulare (City) 93274 (Zip Code)

Contact Person: Jesse Gutierrez (Name) 559-280-3719 (Phone Number)

Destination Information: Composting Facility / Broker / Farmer / Other (please circle one)

Contact information of Composting Facility, Broker, Farmer, or Other:

Austin - Martin (Name) (Number and Street) (City) (Zip Code) 559-901-5683 (Phone Number)

Manure/Process Wastewater Destination Address or Assessor's Parcel Number:

4974 Ave 272 (Number and Street) Visalia (City) 93291 (Zip Code) area Farmland (Assessor's Parcel Number)

Dates Hauled: 6-1-2023 , 6-2-2023

Amount Hauled:

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

Manure: 1,120 Tons or Cubic Yards (indicate which units used)

Manure Solids Content (if amount reported in tons): _____

Manure Density (if amount reported in cubic yards): _____

Method used to determine amount of manure: Avg wt. of truck load

10 tons / load

07 Manure Tracking Manifest 06-02-2023

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

Process Wastewater: _____ Gallons

Method used to determine volume of process wastewater: _____

_____

Written Agreement:
Does the Operator have a written agreement (in compliance with Land Application Specification C.2 of Waste Discharge Requirements General Order No. R5-2007-0035) with any party that receives process wastewater from the Operator for its own use? (please check one)

____ Yes ____✓____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after **31 December 2007** to such party. _____
(Operator shall provide initials here to acknowledge this requirement).

Certification:
I declare under the penalty of law that I personally examined and am familiar with the information submitted in this document, 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 a fine and imprisonment for knowing violations.

Operator's Signature: _____ Date: 6-30-2023

Hauler's Signature: _____ Date: 6-30-2023

Corrective Actions Documents

No corrective actions were reported during the time period.

Well Monitoring

2023 Well Water Summary

Tiemersma Dairy

Well/Canal Name	Sample Name	Date	Lab	EC	EC	NO_3-N	Field NH_4-N	Total NH_4-N	TDS	CO_3 as $CaCO_3$	HCO_3 as $CaCO_3$	Cl	SO_4	Ca	Mg	Na	pH at 25°C
			analysis	EC	EC	NO_3-N	NH_4-N	NH_4-N	TDS	CO_3 as $CaCO_3$	HCO_3 as $CaCO_3$	Cl	SO_4	Ca	Mg	Na	pH
			units	µmhos/cm	mmhos/cm	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	mg/L	at 25°C
			DL	1	0.001	0.01		0.2	10	0.9	3	0.03	0.01	0.05	0.4	0.1	
	Well #1 (hose bib)	6/20/23	23F1915	561	0.56	22.2	ND		323	ND	100	23.2	31.2	56.5	2.1	46	7.2
	Well #2 (hose bib)	6/20/23	23F1915	126	0.13	2.3	ND		65	7	28.5	5.2	6.4	3.6	ND	22	9.1
	Well #3 (hose bib)	6/20/23	23F1915	214	0.21	5.8	ND		117	ND	39.3	12.9	14.7	11	0.1	30	8.2

06/21/23 06:53 23F1915

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

WATER WORK REQUEST

Bill To: Acct No. 14210 Cons. 08

Purchase Order No. Results Needed By

Client: Tiemersma Dairy
Address: 29981 Road 60
City, State, Zip: Visalia, CA 93291
Email: tiemersmadairy@reagan.com

Copy to: 0

Requested by/Cell: Pete (559) 786-6707

Facility: 29981 Rd 60 Visalia

Date sampled: 6/20/23

Sampled by: Client

☑ QA/QC Document ☑ Copy of Chain ☐ RWQCB

No. of Samples: 3 No. Bottles:

Water Type: ☐ Drinking ☐ Wastewater ☑ Ag Water ☐ Ground Water ☐ Mon. Well ☐ Supply Water ☐ Other

Analysis and Bottles Required: *(Please Indicate Analysis)*

☐ DWW1: (EC, pH, NO_3-N, **NH_4-N Field Test)**
(1) l L plastic, unpreserved (white)

☑ DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS)
(1) l L plastic, unpreserved (white)

☐ DCW1: (EC, NO_3-N, TDS)
(1) l L plastic, unpreserved (white)

☐ DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK)
(1) l L plastic, unpreserved (white)

☐ DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl)
(1) l L plastic, unpreserved (white)

☐ Other

DESCRIPTION OF SAMPLES		Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
1. Well #1	Sampled From: hose bib ~~spigot~~	6/20	10:00	0	0.6
2. Well #2	Sampled From: "	"	10:05	0	0.4
3. Well #3	Sampled From: "	"	10:10	0	0.8
4.	Sampled From:				
5.	Sampled From:				
6.	Sampled From:				
7.	Sampled From:				
8.	Sampled From:				
9.	Sampled From:				
10.	Sampled From:				

R Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 6/30/2023
Location: Laboratory

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	Client			6/20/23 11:00
Second	CH	DLI	6/20/23 11:00	6/20/23 11:04
Third	BS	PMS	" 6:35pm	8:35pm
Fourth	MM	DLI	6/21/23 6:53	

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a dated damage fee of 2% per month (annually 24 %) or $5.00 per month whichever is greater.
If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternative to Litigation, Inc. (cal). If the dispute is not resolved in mediation, then the dispute will be submitted to binding arbitration through cal under its Rules and Procedures. The prties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then debtor will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorneys' fees of Dellavalle Laboratory.

Invoicing Information:
Price List 2023
Sampling Hrs ____ Miles ____ Consulting ____
Amt Paid ____ Rec By ____ Check No. ____

Shipping
$ ____ In
$ ____ Out
Date ____

Signature ____

Sample received in cooler with ice?
[ ] Yes [ ] No

ctt:update 2020