

**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:** J&F Martins Dairy #2

Physical address of dairy:

541 East Wood AVE

Number and Street

Laton

City

Kings

County

93242

Zip Code

Street and nearest cross street (if no address): \_\_\_\_\_

Date facility was originally placed in operation: 05/01/1991Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

X055-X450-X045-XXXX**B. OPERATORS**

Martins, Joe

Operator name: Martins, JoeTelephone no.: (559) 303-4244

Landline

Cellular

541 East Wood AVE

Mailing Address Number and Street

Laton

City

CA

State

93242

Zip Code

**This operator is responsible for paying permit fees.****C. OWNERS**

Martins, Joe

Legal owner name: Martins, JoeTelephone no.: (559) 303-4244

Landline

Cellular

541 East Wood AVE

Mailing Address Number and Street

Laton

City

CA

State

93242

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	435	35	270	180	0	0
Number under roof	0	0	0	0	0	0
Maximum number	445	40	290	225	0	0
Average number	435	35	270	180	0	0
Avg live weight (lbs)	1,400	1,450	1,000	750		

Predominant milk cow breed: Jersey-Holstein Cross

Average milk production: 75 pounds per cow per day

**B. MANURE GENERATED**

Total manure excreted by the herd: 16,482.86 tons per reporting period

Total nitrogen from manure: 198,320.29 lbs per reporting period

After ammonia losses (30% loss applied): 138,824.20 lbs per reporting period

Total phosphorus from manure: 33,382.17 lbs per reporting period

Total potassium from manure: 84,735.49 lbs per reporting period

Total salt from manure: 212,868.00 lbs per reporting period

**C. PROCESS WASTEWATER GENERATED**

Process wastewater generated: 38,016,847 gallons

Total nitrogen generated: 67,825.59 lbs

Total phosphorus generated: 9,282.93 lbs

Total potassium generated: 66,265.82 lbs

Total salt generated: 357,139.16 lbs

38,016,847 gallons applied
+ 0 gallons exported
- 0 gallons imported
= 38,016,847 gallons generated

**D. FRESH WATER SOURCES**

Source Description	Type
Ag 1	Ground water
Ag 2	Ground water
Ag 3	Ground water
Ag 4	Ground water
Ag 5	Ground water

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Source Description	Type
Ag 6	Ground water
Ag 7	Ground water
DW 10	Ground water
House	Ground water
Laguna I.D.	Surface 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***No solid nutrient exports entered.**No liquid nutrient exports entered.*

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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
1	15	15	2	both	X055-X450-X015-XXXX X055-X450-X016-XXXX X055-X450-X017-XXXX
10	50	49	1	none	X055-X260-X49S-XXXX
11	19	15	2	both	X055-X450-X038-XXXX
2	39	39	2	both	X055-X450-X08S-XXXX
3	10	10	2	both	X055-X450-X045-XXXX
4	19	19	2	both	X055-X450-X20S-XXXX
5	10	10	2	both	X055-X450-X033-XXXX
6	17	15	2	both	X055-X450-X013-XXXX
7	16	15	2	both	X055-X450-X042-XXXX
8	37	36	2	both	X055-X003-X016-XXXX
9	28	27	2	both	X055-X003-X010-XXXX
Totals for areas that were used for application	210	201	20		
Totals for areas that were not used for application	50	49	1		
Land application area totals	260	250	21		

## B. CROPS AND HARVESTS

1																				
Field name: 1																				
11/10/2022: Wheat, silage, soft dough																				
Crop: Wheat, silage, soft dough Acres planted: 15 Plant date: 11/10/2022																				
<table><tr><th>Harvest date</th><th>Yield</th><th>Reporting basis</th><th>Density (lbs/cu ft)</th><th>Moisture (%)</th><th>N (mg/kg)</th><th>P (mg/kg)</th><th>K (mg/kg)</th><th>Salt (mg/kg)</th><th>TFS (%)</th></tr><tr><td>04/11/2023</td><td>300.00 ton</td><td>Dry-weight</td><td></td><td>73.5</td><td>17,800.00</td><td>4,600.00</td><td>26,000.00</td><td></td><td>14.20</td></tr></table>	Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)	04/11/2023	300.00 ton	Dry-weight		73.5	17,800.00	4,600.00	26,000.00		14.20
Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)											
04/11/2023	300.00 ton	Dry-weight		73.5	17,800.00	4,600.00	26,000.00		14.20											
<table><tr><th></th><th>Yield (tons/acre)</th><th>Total N (lbs/acre)</th><th>Total P (lbs/acre)</th><th>Total K (lbs/acre)</th><th>Salt (lbs/acre)</th></tr><tr><td>Anticipated harvest content</td><td>18.00</td><td>198.00</td><td>30.60</td><td>149.40</td><td>1,494.00</td></tr><tr><td>Total actual harvest content</td><td>20.00</td><td>188.68</td><td>48.76</td><td>275.60</td><td>1,505.20</td></tr></table>		Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)	Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00	Total actual harvest content	20.00	188.68	48.76	275.60	1,505.20		
	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)															
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00															
Total actual harvest content	20.00	188.68	48.76	275.60	1,505.20															

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1

04/20/2023: Corn, silage

Crop: Corn, silage Acres planted: 15 Plant date: 04/20/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/02/2023	435.00 ton	Dry-weight		61.9	12,300.00	1,900.00	5,400.00		4.87

	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	45.00	198.00	1,500.00
Total actual harvest content	29.00	271.81	41.99	119.33	1,076.17

10

Field name: 10

03/01/2021: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 49 Plant date: 03/01/2021

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
11/06/2023	416.00 ton	Dry-weight		9.3	37,900.00	3,100.00	22,700.00		16.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	8.00	480.00	43.20	336.00	1,600.00
Total actual harvest content	8.49	583.68	47.74	349.59	2,556.48

11

Field name: 11

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11

11/26/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 15 Plant date: 11/26/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/05/2023	305.00 ton	Dry-weight		65.0	11,300.00	2,700.00	11,200.00		7.01

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	20.33	160.84	38.43	159.41	997.76

05/20/2023: Corn, silage

Crop: Corn, silage Acres planted: 15 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 (%)
08/02/2023	378.00 ton	Dry-weight		59.9	11,100.00	2,100.00	4,900.00		3.90

	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	45.00	198.00	1,500.00
Total actual harvest content	25.20	224.34	42.44	99.03	788.21

2

Field name: 2

11/15/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 39 Plant date: 11/15/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/12/2023	830.00 ton	Dry-weight		66.7	14,200.00	2,700.00	15,000.00		6.86

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	21.28	201.27	38.27	212.61	972.33

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2

06/05/2023: Corn, silage

Crop: Corn, silage Acres planted: 39 Plant date: 06/05/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/27/2023	1,092.00 ton	Dry-weight		71.1	10,200.00	22,000.00	9,100.00		6.61

	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	45.00	198.00	1,500.00
Total actual harvest content	28.00	165.08	356.05	147.27	1,069.76

3

Field name: 3

11/25/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 10 Plant date: 11/25/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/05/2023	200.00 ton	Dry-weight		67.0	13,900.00	3,000.00	16,800.00		7.18

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	20.00	183.48	39.60	221.76	947.76

05/25/2023: Corn, silage

Crop: Corn, silage Acres planted: 10 Plant date: 05/25/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/01/2023	280.00 ton	Dry-weight		70.7	10,100.00	1,900.00	9,500.00		5.53

	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	45.00	198.00	1,500.00
Total actual harvest content	28.00	165.72	31.18	155.88	907.36

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4

Field name: 4

11/25/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 19 Plant date: 11/25/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/05/2023	391.00 ton	Dry-weight		67.2	13,200.00	2,800.00	14,400.00		6.88

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	20.58	178.20	37.80	194.40	928.79

05/25/2023: Corn, silage

Crop: Corn, silage

Acres planted: 19 Plant date: 05/25/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/01/2023	551.00 ton	Dry-weight		70.2	9,100.00	1,900.00	9,000.00		5.14

	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	45.00	198.00	1,500.00
Total actual harvest content	29.00	157.28	32.84	155.56	888.40

5

Field name: 5

11/25/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 10 Plant date: 11/25/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/05/2023	214.00 ton	Dry-weight		64.5	11,900.00	2,800.00	11,600.00		6.97

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	21.40	180.81	42.54	176.25	1,059.02



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5

05/25/2023: Corn, silage

Crop: Corn, silage Acres planted: 10 Plant date: 05/25/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/01/2023	280.00 ton	Dry-weight		70.7	9,800.00	1,900.00	8,500.00		5.06

	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	45.00	198.00	1,500.00
Total actual harvest content	28.00	160.80	31.18	139.47	830.24

6

Field name: 6

10/26/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 15 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 (%)
05/05/2023	320.00 ton	Dry-weight		65.3	12,400.00	3,000.00	13,800.00		6.38

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	21.33	183.59	44.42	204.31	944.58

05/26/2023: Corn, silage

Crop: Corn, silage Acres planted: 15 Plant date: 05/26/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/02/2023	378.00 ton	Dry-weight		60.1	12,000.00	2,100.00	5,200.00		4.25

	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	45.00	198.00	1,500.00
Total actual harvest content	25.20	241.32	42.23	104.57	854.66

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7

Field name: 7

10/26/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 15 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 (%)
05/12/2023	307.00 ton	Dry-weight		67.0	14,900.00	2,900.00	16,000.00		7.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	20.47	201.27	39.17	216.13	1,026.61

05/28/2023: Corn, silage

Crop: Corn, silage

Acres planted: 15 Plant date: 05/28/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/01/2023	435.00 ton	Dry-weight		70.2	8,700.00	1,800.00	8,000.00		4.79

	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	45.00	198.00	1,500.00
Total actual harvest content	29.00	150.37	31.11	138.27	827.90

8

Field name: 8

10/27/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 36 Plant date: 10/27/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/12/2023	756.00 ton	Dry-weight		66.9	13,400.00	2,800.00	16,500.00		7.67

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	21.00	186.29	38.93	229.38	1,066.28

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05/28/2023: Corn, silage

Crop: Corn, silage Acres planted: 36 Plant date: 05/28/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/01/2023	1,026.00 ton	Dry-weight		70.0	8,200.00	1,900.00	9,100.00		5.34

	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	45.00	198.00	1,500.00
Total actual harvest content	28.50	140.22	32.49	155.61	913.14

9

Field name: 9

10/28/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 27 Plant date: 10/28/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/12/2023	567.00 ton	Dry-weight		66.9	12,400.00	2,700.00	13,300.00		7.47

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	198.00	30.60	149.40	1,494.00
Total actual harvest content	21.00	172.38	37.54	184.90	1,038.48

06/01/2023: Corn, silage

Crop: Corn, silage Acres planted: 27 Plant date: 06/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/27/2023	770.00 ton	Dry-weight		69.5	10,900.00	2,200.00	7,800.00		5.09

	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	45.00	198.00	1,500.00
Total actual harvest content	28.52	189.62	38.27	135.69	885.47

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## NUTRIENT BUDGET

## A. LAND APPLICATIONS

1 - 11/10/2022: Wheat, silage, soft dough

Field name: 1

Crop: Wheat, silage, soft dough

Plant date: 11/10/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/17/2022	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	136.59	18.87	110.86	860.57	550,483.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.64	2,455,229.00 <i>gal</i>
Application event totals		136.59	18.87	110.86	915.21	
03/01/2023	Surface (irrigation)	No precipitation	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	Process wastewater	87.16	16.64	99.16	596.69	525,754.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.83	2,643,770.00 <i>gal</i>
Application event totals		87.16	16.64	99.16	655.52	

1 - 04/20/2023: Corn, silage

Field name: 1

Crop: Corn, silage

Plant date: 04/20/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
04/12/2023	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral	Corral solids	171.67	62.42	248.78	3,001.86	75.00 <i>ton</i>
Application event totals		171.67	62.42	248.78	3,001.86	

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

## 1 - 04/20/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/03/2023	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
Lagoon	Process wastewater	38.52	4.58	37.84	169.94	407,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	57.02	2,562,311.00 <i>gal</i>
Application event totals		38.52	4.58	37.84	226.96	
05/15/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	55.29	2,484,499.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	55.29	
06/01/2023	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	45.49	5.40	44.68	200.67	480,942.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	62.06	2,788,663.00 <i>gal</i>
Application event totals		45.49	5.40	44.68	262.73	
06/22/2023	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	53.93	6.41	52.98	237.92	570,213.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	59.52	2,674,499.00 <i>gal</i>
Application event totals		53.93	6.41	52.98	297.44	
07/13/2023	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	38.52	4.58	37.84	169.94	407,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	64.33	2,890,852.00 <i>gal</i>
Application event totals		38.52	4.58	37.84	234.27	

## 10 - 03/01/2021: Alfalfa, hay

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

10 - 03/01/2021: Alfalfa, hay

Field name: 10

Crop: Alfalfa, hay

Plant date: 03/01/2021

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
04/10/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	51.65	7,581,634.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	51.65	
05/09/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	52.89	7,764,684.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	52.89	
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
Laguna I.D.	Surface water	0.00	0.00	0.00	52.86	7,759,932.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	52.86	
07/05/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	53.63	7,872,982.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	53.63	
08/04/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	54.41	7,986,882.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	54.41	
09/04/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	53.00	7,780,783.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	53.00	

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

11 - 11/26/2022: Wheat, silage, soft dough

Field name: 11

Crop: Wheat, silage, soft dough

Plant date: 11/26/2022

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following	
10/31/2022	Broadcast/incorporate	No precipitation		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure		Corral solids	121.03	37.67	100.44	1,642.19	45.00 <i>ton</i>
Application event totals			121.03	37.67	100.44	1,642.19	
11/02/2022	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
Laguna I.D.		Surface water	0.00	0.00	0.00	52.57	2,362,311.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	52.57	
03/05/2023	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
Lagoon		Process wastewater	87.78	16.76	99.86	600.92	529,483.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	55.29	2,484,499.00 <i>gal</i>
Application event totals			87.78	16.76	99.86	656.21	
04/03/2023	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
Laguna I.D.		Surface water	0.00	0.00	0.00	53.48	2,403,040.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	53.48	

11 - 05/20/2023: Corn, silage

Field name: 11

Crop: Corn, silage

Plant date: 05/20/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Reporting period 01/01/2023 to 12/31/2023.

## 11 - 05/20/2023: Corn, silage

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	55.68	6.62	54.70	245.66	588,754.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	50.76	2,280,852.00 <i>gal</i>
Application event totals		55.68	6.62	54.70	296.41	
06/09/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	56.19	2,525,229.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	56.19	
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
Lagoon	Process wastewater	65.21	7.75	64.06	287.69	689,483.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	61.95	2,783,770.00 <i>gal</i>
Application event totals		65.21	7.75	64.06	349.63	
07/07/2023	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	57.78	6.87	56.76	254.92	610,942.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	57.10	2,565,958.00 <i>gal</i>
Application event totals		57.78	6.87	56.76	312.02	
07/18/2023	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	Process wastewater	53.93	6.41	52.98	237.92	570,213.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.57	2,362,311.00 <i>gal</i>
Application event totals		53.93	6.41	52.98	290.49	

## 2 - 11/15/2022: Wheat, silage, soft dough



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

2 - 11/15/2022: Wheat, silage, soft dough

Field name: 2

Crop: Wheat, silage, soft dough

Plant date: 11/15/2022

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
11/10/2022	Broadcast/incorporate		No precipitation	No precipitation			No precipitation
	Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
	Solid Manure	Corral solids	121.03	37.67	100.44	1,642.19	117.00 <i>ton</i>
	Application event totals		121.03	37.67	100.44	1,642.19	
11/18/2022	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	77.03	10.64	62.52	485.33	807,174.00 <i>gal</i>
	Laguna I.D.	Surface water	0.00	0.00	0.00	51.66	6,036,112.00 <i>gal</i>
	Application event totals		77.03	10.64	62.52	536.99	
03/10/2023	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	Process wastewater	57.58	11.00	65.51	394.20	903,070.00 <i>gal</i>
	Laguna I.D.	Surface water	0.00	0.00	0.00	53.43	6,242,009.00 <i>gal</i>
	Application event totals		57.58	11.00	65.51	447.62	
04/04/2023	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
	Laguna I.D.	Surface water	0.00	0.00	0.00	49.75	5,812,525.00 <i>gal</i>
	Application event totals		0.00	0.00	0.00	49.75	

2 - 06/05/2023: Corn, silage

Field name: 2

Crop: Corn, silage

Plant date: 06/05/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Reporting period 01/01/2023 to 12/31/2023.

2 - 06/05/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/17/2023	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	42.59	5.06	41.84	187.88	1,170,760.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	55.02	6,427,905.00 <i>gal</i>
Application event totals		42.59	5.06	41.84	242.90	
06/27/2023	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	56.56	6.72	55.56	249.53	1,554,864.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	56.04	6,547,905.00 <i>gal</i>
Application event totals		56.56	6.72	55.56	305.57	
07/12/2023	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	63.69	7.57	62.56	280.96	1,750,760.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.58	6,143,802.00 <i>gal</i>
Application event totals		63.69	7.57	62.56	333.55	
07/27/2023	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	45.65	5.42	44.84	201.38	1,254,864.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.36	6,117,905.00 <i>gal</i>
Application event totals		45.65	5.42	44.84	253.74	
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
Laguna I.D.	Surface water	0.00	0.00	0.00	52.57	6,142,009.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	52.57	

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

## 2 - 06/05/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
09/01/2023	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
Laguna I.D.		Surface water	0.00	0.00	0.00	50.76	5,930,215.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	50.76	

## 3 - 11/25/2022: Wheat, silage, soft dough

Field name: 3

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
11/18/2022	Broadcast/incorporate		No precipitation	No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure		Corral solids	121.03	37.67	100.44	1,642.19	30.00 <i>ton</i>
Application event totals			121.03	37.67	100.44	1,642.19	
11/28/2022	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	50.53	6.98	41.01	318.36	135,765.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	52.62	1,576,333.00 <i>gal</i>
Application event totals			50.53	6.98	41.01	370.98	
03/07/2023	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	71.04	13.57	80.82	486.34	285,683.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	51.86	1,553,486.00 <i>gal</i>
Application event totals			71.04	13.57	80.82	538.20	

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

## 3 - 11/25/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
04/06/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	50.76	1,520,568.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	50.76	

## 3 - 05/25/2023: Corn, silage

Field name: 3

Crop: Corn, silage

Plant date: 05/25/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/08/2023	Broadcast/incorporate	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	42.37	5.03	41.62	186.94	298,683.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	56.96	1,706,333.00 <i>gal</i>
Application event totals		42.37	5.03	41.62	243.90	
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	Process wastewater	50.28	5.97	49.40	221.84	354,448.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	55.24	1,654,874.00 <i>gal</i>
Application event totals		50.28	5.97	49.40	277.08	
06/28/2023	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	Process wastewater	39.74	4.72	39.04	175.33	280,142.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.38	1,629,180.00 <i>gal</i>
Application event totals		39.74	4.72	39.04	229.72	

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## 3 - 05/25/2023: Corn, silage

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
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		Process wastewater	40.65	4.83	39.93	179.33	286,530.00 <i>gal</i>	
Laguna I.D.		Surface water	0.00	0.00	0.00	51.09	1,530,568.00 <i>gal</i>	
Application event totals			40.65	4.83	39.93	230.42		
07/26/2023	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	35.62	4.23	34.99	157.14	251,071.00 <i>gal</i>	
Laguna I.D.		Surface water	0.00	0.00	0.00	44.13	1,322,027.00 <i>gal</i>	
Application event totals			35.62	4.23	34.99	201.27		
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	
Laguna I.D.		Surface water	0.00	0.00	0.00	52.57	1,574,874.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	52.57		

## 4 - 11/25/2022: Wheat, silage, soft dough

Field name: 4

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
11/18/2022	Broadcast/incorporate	No precipitation	No precipitation	No precipitation			
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Corral		Corral solids	121.03	37.67	100.44	1,642.19	57.00 <i>ton</i>
Application event totals			121.03	37.67	100.44	1,642.19	

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

## 4 - 11/25/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/29/2022	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	61.73	8.53	50.10	388.93	315,135.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.60	3,050,670.00 <i>gal</i>
Application event totals		61.73	8.53	50.10	442.53	
03/09/2023	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	Process wastewater	53.13	10.14	60.44	363.69	405,907.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.15	3,025,442.00 <i>gal</i>
Application event totals		53.13	10.14	60.44	416.84	
04/07/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	49.23	2,802,260.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	49.23	

## 4 - 05/25/2023: Corn, silage

Field name: 4

Crop: Corn, silage

Plant date: 05/25/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/09/2023	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	Process wastewater	29.11	3.46	28.60	128.42	389,860.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	50.81	2,892,261.00 <i>gal</i>
Application event totals		29.11	3.46	28.60	179.24	

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## 4 - 05/25/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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	45.58	5.42	44.78	201.09	610,451.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	57.17	3,253,851.00 <i>gal</i>
Application event totals		45.58	5.42	44.78	258.25	
07/02/2023	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	37.77	4.49	37.10	166.63	505,860.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.68	3,055,442.00 <i>gal</i>
Application event totals		37.77	4.49	37.10	220.31	
07/15/2023	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	31.89	3.79	31.32	140.67	427,042.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	43.08	2,452,261.00 <i>gal</i>
Application event totals		31.89	3.79	31.32	183.75	
07/27/2023	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	31.26	3.71	30.71	137.90	418,633.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	48.92	2,784,307.00 <i>gal</i>
Application event totals		31.26	3.71	30.71	186.82	
08/15/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	56.47	3,214,307.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	56.47	

## 5 - 11/25/2022: Wheat, silage, soft dough

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

5 - 11/25/2022: Wheat, silage, soft dough

Field name: 5

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/18/2022	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure	Corral solids	121.03	37.67	100.44	1,642.19	30.00 <i>ton</i>
Application event totals		121.03	37.67	100.44	1,642.19	
11/30/2022	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	67.23	9.29	54.57	423.61	180,647.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.19	1,563,486.00 <i>gal</i>
Application event totals		67.23	9.29	54.57	475.80	
03/04/2023	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	52.60	10.04	59.84	360.10	211,530.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.29	1,746,333.00 <i>gal</i>
Application event totals		52.60	10.04	59.84	418.40	
04/03/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	51.66	1,547,721.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	51.66	

5 - 05/25/2023: Corn, silage

Field name: 5

Crop: Corn, silage

Plant date: 05/25/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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5 - 05/25/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/10/2023	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	Process wastewater	34.63	4.11	34.01	152.76	244,071.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	44.27	1,326,333.00 <i>gal</i>
Application event totals		34.63	4.11	34.01	197.03	
06/09/2023	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	Process wastewater	38.44	4.57	37.77	169.61	270,989.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.14	1,622,027.00 <i>gal</i>
Application event totals		38.44	4.57	37.77	223.75	
06/25/2023	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	35.68	4.24	35.05	157.43	251,530.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	50.76	1,520,639.00 <i>gal</i>
Application event totals		35.68	4.24	35.05	208.19	
07/06/2023	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	35.51	4.22	34.88	156.65	250,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	51.86	1,553,486.00 <i>gal</i>
Application event totals		35.51	4.22	34.88	208.51	
07/19/2023	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	46.22	5.49	45.41	203.93	325,836.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.63	1,756,333.00 <i>gal</i>
Application event totals		46.22	5.49	45.41	262.56	

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## 5 - 05/25/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/05/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	55.43	1,660,568.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	55.43	

## 6 - 10/26/2022: Wheat, silage, soft dough

Field name: 6

Crop: Wheat, silage, soft dough

Plant date: 10/26/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/26/2022	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure	Corral solids	121.03	37.67	100.44	1,642.19	45.00 <i>ton</i>
Application event totals		121.03	37.67	100.44	1,642.19	
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	70.79	9.78	57.46	446.00	285,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.37	2,443,040.00 <i>gal</i>
Application event totals		70.79	9.78	57.46	500.37	
03/03/2023	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
Lagoon	Process wastewater	48.96	9.35	55.69	335.14	295,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	60.90	2,736,688.00 <i>gal</i>
Application event totals		48.96	9.35	55.69	396.04	

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6 - 10/26/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
04/01/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	46.82	2,103,775.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	46.82	

6 - 05/26/2023: Corn, silage

Field name: 6

Crop: Corn, silage

Plant date: 05/26/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/10/2023	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	Process wastewater	59.19	7.03	58.14	261.13	625,836.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.45	2,626,688.00 <i>gal</i>
Application event totals		59.19	7.03	58.14	319.58	
06/09/2023	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	Process wastewater	62.30	7.40	61.20	274.87	658,754.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.62	2,454,499.00 <i>gal</i>
Application event totals		62.30	7.40	61.20	329.49	
06/22/2023	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	60.45	7.18	59.39	266.71	639,213.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.39	2,623,770.00 <i>gal</i>
Application event totals		60.45	7.18	59.39	325.10	

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**6 - 05/26/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following	
07/02/2023	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	60.79	7.22	59.72	268.19	642,755.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	47.37	2,128,852.00 <i>gal</i>
Application event totals			60.79	7.22	59.72	315.56	
07/13/2023	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	50.08	5.95	49.19	220.93	529,483.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	59.25	2,662,311.00 <i>gal</i>
Application event totals			50.08	5.95	49.19	280.17	

**7 - 10/26/2022: Wheat, silage, soft dough**

Field name: 7

Crop: Wheat, silage, soft dough

Plant date: 10/26/2022

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
08/20/2022	Broadcast/incorporate		No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Solid Manure		Corral solids	121.03	37.67	100.44	1,642.19	45.00 <i>ton</i>	
Application event totals			121.03	37.67	100.44	1,642.19		
09/25/2022	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	79.63	11.00	64.64	501.73	320,942.00 <i>gal</i>	
Laguna I.D.		Surface water	0.00	0.00	0.00	61.26	2,753,040.00 <i>gal</i>	
Application event totals			79.63	11.00	64.64	562.99		

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7 - 10/26/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
03/09/2023	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		Process wastewater	67.22	12.84	76.47	460.18	405,471.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	46.85	2,105,229.00 <i>gal</i>
Application event totals			67.22	12.84	76.47	507.03	
04/10/2023	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
Laguna I.D.		Surface water	0.00	0.00	0.00	47.22	2,121,946.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	47.22	

7 - 05/28/2023: Corn, silage

Field name: 7

Crop: Corn, silage

Plant date: 05/28/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/14/2023	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
Lagoon	Process wastewater	46.16	5.48	45.34	203.63	488,024.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.94	2,423,770.00 <i>gal</i>
Application event totals		46.16	5.48	45.34	257.56	
06/18/2023	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	Process wastewater	43.06	5.12	42.30	189.97	455,295.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.64	2,455,229.00 <i>gal</i>
Application event totals		43.06	5.12	42.30	244.61	

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## 7 - 05/28/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/01/2023	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	55.20	10.65	54.41	374.08	470,213.00 <i>gal</i>
Ag 3	Ground water	0.00	0.00	0.00	338.53	2,765,958.00 <i>gal</i>
Application event totals		55.20	10.65	54.41	712.62	
07/18/2023	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	Process wastewater	47.02	5.59	46.19	207.46	497,213.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.51	2,404,499.00 <i>gal</i>
Application event totals		47.02	5.59	46.19	260.97	
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
Laguna I.D.	Surface water	0.00	0.00	0.00	48.80	2,193,040.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	48.80	
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
Laguna I.D.	Surface water	0.00	0.00	0.00	55.29	2,484,499.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	55.29	

## 8 - 10/27/2022: Wheat, silage, soft dough

Field name: 8

Crop: Wheat, silage, soft dough

Plant date: 10/27/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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## 8 - 10/27/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
09/05/2022	Broadcast/incorporate	No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure		Corral solids	121.03	37.67	100.44	1,642.19	108.00 <i>ton</i>
Application event totals			121.03	37.67	100.44	1,642.19	
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	60.17	8.31	48.84	379.10	582,006.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	55.63	5,999,546.00 <i>gal</i>
Application event totals			60.17	8.31	48.84	434.73	
03/10/2023	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		Process wastewater	66.00	12.60	75.09	451.84	955,508.00 <i>gal</i>
Laguna I.D.		Surface water	0.00	0.00	0.00	53.36	5,755,050.00 <i>gal</i>
Application event totals			66.00	12.60	75.09	505.21	
04/09/2023	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
Laguna I.D.		Surface water	0.00	0.00	0.00	52.86	5,700,550.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	52.86	

## 8 - 05/28/2023: Corn, silage

Field name: 8

Crop: Corn, silage

Plant date: 05/28/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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8 - 05/28/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/15/2023	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	38.84	4.61	38.15	171.33	985,508.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.88	5,702,799.00 <i>gal</i>
Application event totals		38.84	4.61	38.15	224.21	
06/15/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	53.83	5,805,048.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	53.83	
07/01/2023	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	47.62	5.66	46.78	210.10	1,208,511.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	50.71	5,469,546.00 <i>gal</i>
Application event totals		47.62	5.66	46.78	260.82	
07/14/2023	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
Lagoon	Process wastewater	41.75	4.96	41.02	184.20	1,059,514.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	53.87	5,809,548.00 <i>gal</i>
Application event totals		41.75	4.96	41.02	238.07	
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	50.12	5.95	49.23	221.10	1,271,760.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	313.05	5,001,796.00 <i>gal</i>
Application event totals		50.12	5.95	49.23	534.15	



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

**8 - 05/28/2023: Corn, 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
Laguna I.D.	Surface water	0.00	0.00	0.00	51.55	5,559,546.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	51.55	

**9 - 10/28/2022: Wheat, silage, soft dough**

Field name: 9

Crop: Wheat, silage, soft dough

Plant date: 10/28/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/15/2022	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure	Corral solids	121.03	37.67	100.44	1,642.19	81.00 <i>ton</i>
Application event totals		121.03	37.67	100.44	1,642.19	
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	62.45	8.63	50.69	393.49	453,070.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	51.58	4,172,160.00 <i>gal</i>
Application event totals		62.45	8.63	50.69	445.07	
03/08/2023	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	46.96	8.97	53.42	321.46	509,848.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	63.12	5,105,412.00 <i>gal</i>
Application event totals		46.96	8.97	53.42	384.58	

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

9 - 10/28/2022: Wheat, silage, soft dough

Application date	Application method		Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
04/11/2023	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
Laguna I.D.		Surface water	0.00	0.00	0.00	38.39	3,105,473.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	38.39	

9 - 06/01/2023: Corn, silage

Field name: 9

Crop: Corn, silage

Plant date: 06/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/16/2023	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	43.25	5.14	42.49	190.81	823,131.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.57	4,252,160.00 <i>gal</i>
Application event totals		43.25	5.14	42.49	243.38	
06/20/2023	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	45.35	5.39	44.55	200.06	863,070.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	54.79	4,432,099.00 <i>gal</i>
Application event totals		45.35	5.39	44.55	254.86	
07/05/2023	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
Lagoon	Process wastewater	50.08	5.95	49.19	220.93	953,070.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	52.36	4,235,473.00 <i>gal</i>
Application event totals		50.08	5.95	49.19	273.29	

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

9 - 06/01/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/21/2023	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	51.48	6.12	50.57	227.11	979,757.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	49.44	3,998,847.00 <i>gal</i>
Application event totals		51.48	6.12	50.57	276.55	
08/10/2023	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	Process wastewater	51.80	6.15	50.88	228.53	985,848.00 <i>gal</i>
Laguna I.D.	Surface water	0.00	0.00	0.00	58.83	4,758,816.00 <i>gal</i>
Application event totals		51.80	6.15	50.88	287.36	
09/01/2023	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
Laguna I.D.	Surface water	0.00	0.00	0.00	54.75	4,428,786.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	54.75	

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

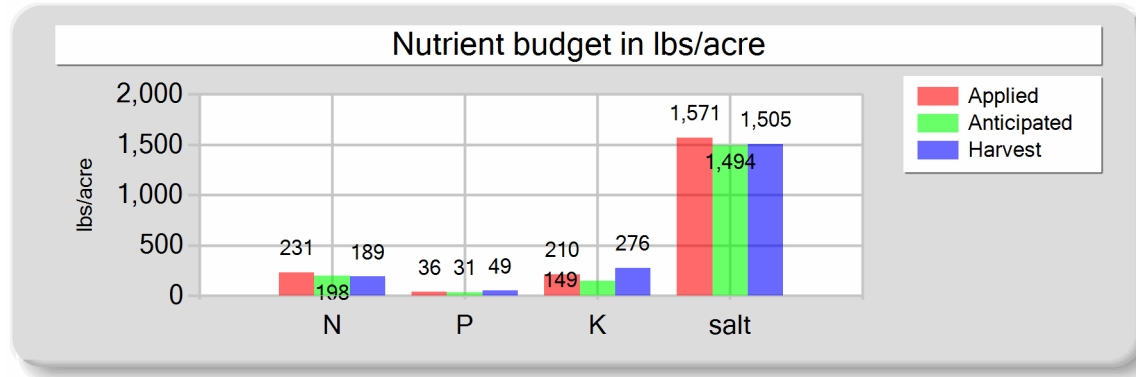
## B. NUTRIENT BUDGET

1 - 11/10/2022: Wheat, silage, soft dough

Field name: 1

Crop: Wheat, silage, soft dough

Plant date: 11/10/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	5,098,999.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	187.78 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	12.52 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	223.75	35.51	210.02	1,457.26	Process wastewater applied
Fresh water	0.00	0.00	0.00	113.47	1,076,237.00 gallons
Atmospheric deposition	7.00	0.00	0.00	0.00	39.63 acre-inches
Total nutrients applied	230.75	35.51	210.02	1,570.73	2.64 inches/acre
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00	
Actual crop nutrient removal	188.68	48.76	275.60	1,505.20	Total harvests for the crop
Nutrient balance	42.07	-13.25	-65.58	65.53	1 harvests
Applied to removed ratio	1.22	0.73	0.76	1.04	

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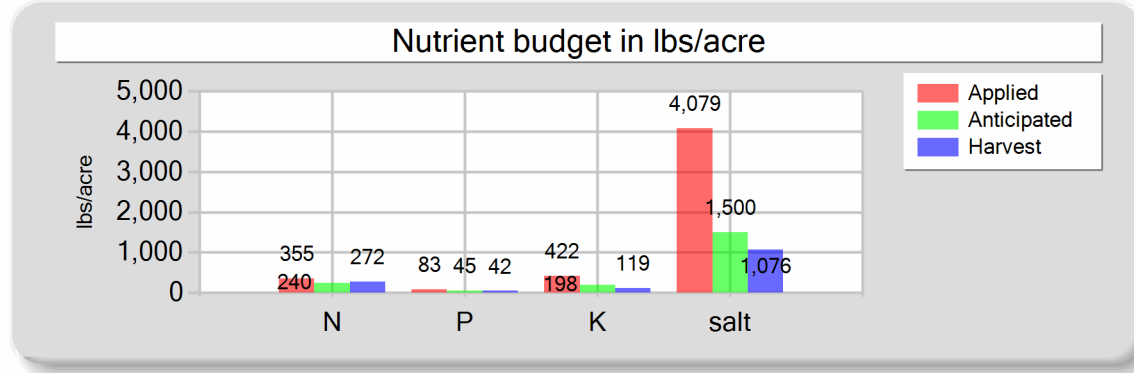
Reporting period 01/01/2023 to 12/31/2023.

1 - 04/20/2023: Corn, silage

Field name: 1

Crop: Corn, silage

Plant date: 04/20/2023



	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	171.67	62.42	248.78	3,001.86
Process wastewater	176.46	20.97	173.34	778.48
Fresh water	0.00	0.00	0.00	298.21
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	355.12	83.39	422.12	4,078.56
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	271.81	41.99	119.33	1,076.17
Nutrient balance	83.32	41.40	302.79	3,002.38
Applied to removed ratio	1.31	1.99	3.54	3.79

Fresh water applied
13,400,824.00 <i>gallons</i>
493.51 <i>acre-inches</i>
32.90 <i>inches/acre</i>

Process wastewater applied
1,865,745.00 <i>gallons</i>
68.71 <i>acre-inches</i>
4.58 <i>inches/acre</i>

Total harvests for the crop
1 <i>harvests</i>

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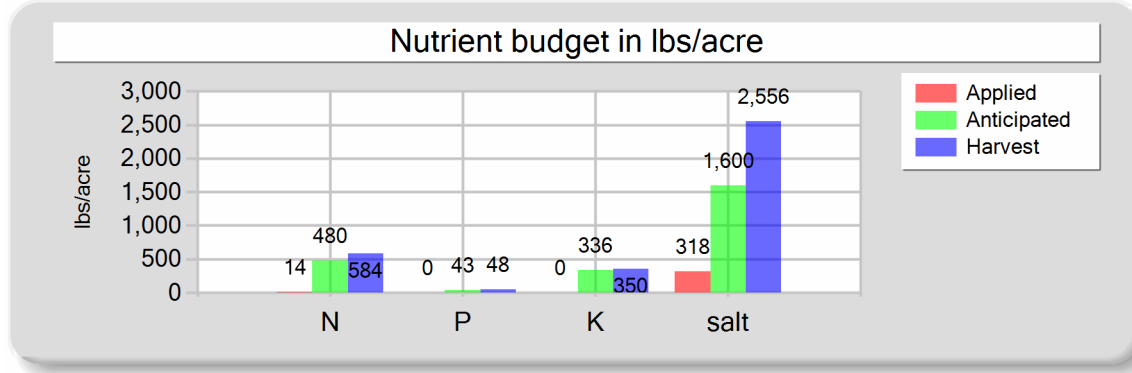
Reporting period 01/01/2023 to 12/31/2023.

10 - 03/01/2021: Alfalfa, hay

Field name: 10

Crop: Alfalfa, hay

Plant date: 03/01/2021



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	46,746,897.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	1,721.53 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	35.13 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	0.00	0.00	0.00	318.45	
Atmospheric deposition	14.00	0.00	0.00	0.00	
Total nutrients applied	14.00	0.00	0.00	318.45	
Anticipated crop nutrient removal	480.00	43.20	336.00	1,600.00	
Actual crop nutrient removal	583.68	47.74	349.59	2,556.48	
Nutrient balance	-569.68	-47.74	-349.59	-2,238.03	
Applied to removed ratio	0.02	0.00	0.00	0.12	
					Process wastewater applied
					0.00 gallons
					0.00 acre-inches
					0.00 inches/acre
					Total harvests for the crop
					1 harvests

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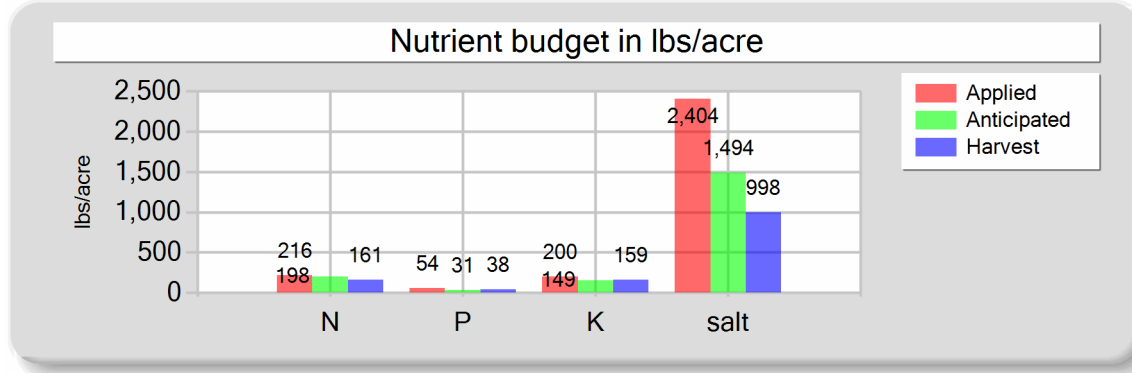
Reporting period 01/01/2023 to 12/31/2023.

11 - 11/26/2022: Wheat, silage, soft dough

Field name: 11

Crop: Wheat, silage, soft dough

Plant date: 11/26/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	87.78	16.76	99.86	600.92
Fresh water	0.00	0.00	0.00	161.33
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	215.81	54.43	200.30	2,404.45
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	160.84	38.43	159.41	997.76
Nutrient balance	54.98	16.00	40.89	1,406.69
Applied to removed ratio	1.34	1.42	1.26	2.41

Fresh water applied
7,249,850.00 gallons
266.99 acre-inches
17.80 inches/acre

Process wastewater applied
529,483.00 gallons
19.50 acre-inches
1.30 inches/acre

Total harvests for the crop
1 harvests

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

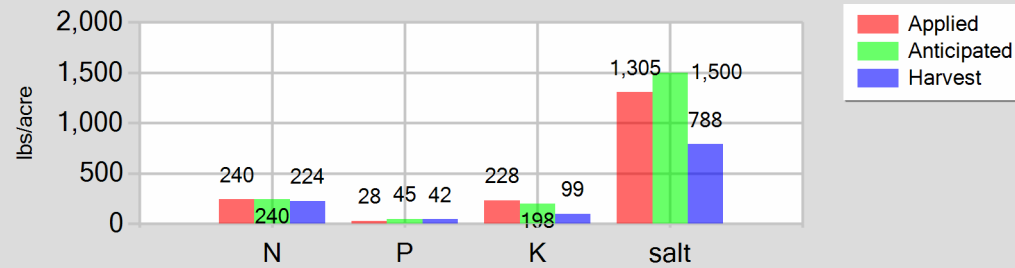
11 - 05/20/2023: Corn, silage

Field name: 11

Crop: Corn, silage

Plant date: 05/20/2023

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	232.60	27.64	228.50	1,026.18
Fresh water	0.00	0.00	0.00	278.57
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	239.60	27.64	228.50	1,304.75
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	224.34	42.44	99.03	788.21
Nutrient balance	15.27	-14.80	129.47	516.55
Applied to removed ratio	1.07	0.65	2.31	1.66

Fresh water applied
12,518,120.00 gallons
461.00 acre-inches
30.73 inches/acre
Process wastewater applied
2,459,392.00 gallons
90.57 acre-inches
6.04 inches/acre
Total harvests for the crop
1 harvests



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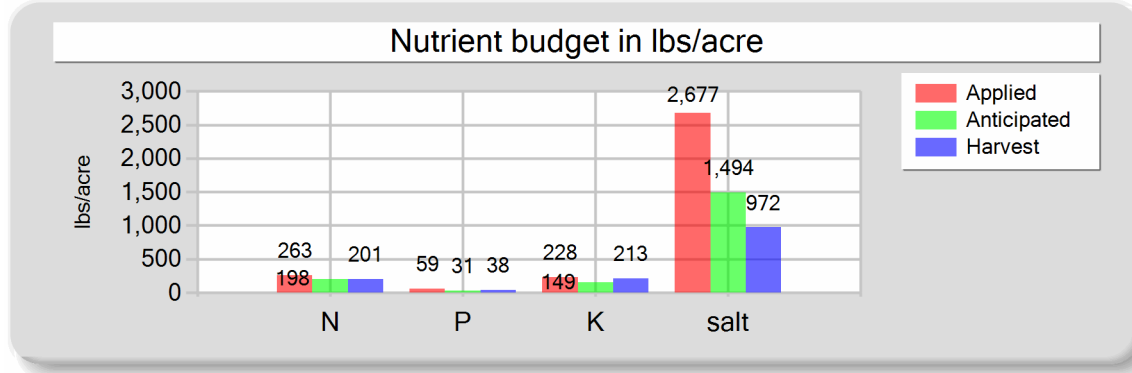
Reporting period 01/01/2023 to 12/31/2023.

2 - 11/15/2022: Wheat, silage, soft dough

Field name: 2

Crop: Wheat, silage, soft dough

Plant date: 11/15/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	134.61	21.63	128.03	879.52
Fresh water	0.00	0.00	0.00	154.84
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	262.64	59.30	228.47	2,676.56
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	201.27	38.27	212.61	972.33
Nutrient balance	61.38	21.03	15.86	1,704.23
Applied to removed ratio	1.30	1.55	1.07	2.75

Fresh water applied
18,090,646.00 <i>gallons</i>
666.22 <i>acre-inches</i>
17.08 <i>inches/acre</i>

Process wastewater applied
1,710,244.00 <i>gallons</i>
62.98 <i>acre-inches</i>
1.61 <i>inches/acre</i>

Total harvests for the crop
1 <i>harvests</i>

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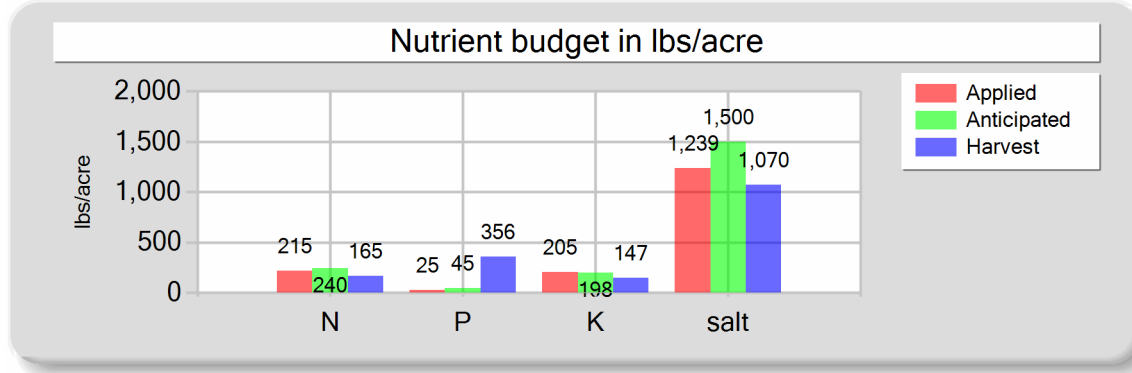
Reporting period 01/01/2023 to 12/31/2023.

2 - 06/05/2023: Corn, silage

Field name: 2

Crop: Corn, silage

Plant date: 06/05/2023



	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	208.48	24.77	204.80	919.76
Fresh water	0.00	0.00	0.00	319.33
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	215.48	24.77	204.80	1,239.09
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	165.08	356.05	147.27	1,069.76
Nutrient balance	50.40	-331.28	57.52	169.33
Applied to removed ratio	1.31	0.07	1.39	1.16

Fresh water applied
37,309,741.00 <i>gallons</i>
1,373.99 <i>acre-inches</i>
35.23 <i>inches/acre</i>

Process wastewater applied
5,731,248.00 <i>gallons</i>
211.06 <i>acre-inches</i>
5.41 <i>inches/acre</i>

Total harvests for the crop
1 <i>harvests</i>

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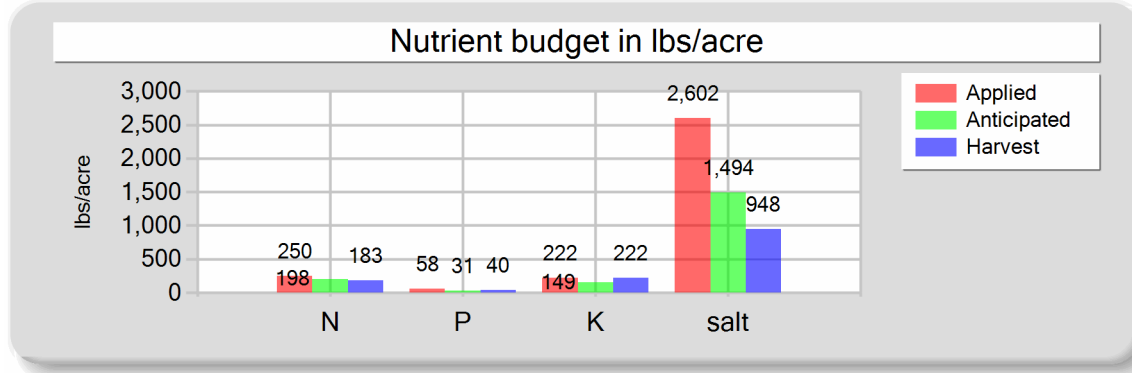
Reporting period 01/01/2023 to 12/31/2023.

3 - 11/25/2022: Wheat, silage, soft dough

Field name: 3

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	121.57	20.54	121.83	804.70
Fresh water	0.00	0.00	0.00	155.23
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	249.60	58.21	222.27	2,602.13
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	183.48	39.60	221.76	947.76
Nutrient balance	66.12	18.61	0.51	1,654.37
Applied to removed ratio	1.36	1.47	1.00	2.75

Fresh water applied
4,650,387.00 gallons
171.26 acre-inches
17.13 inches/acre

Process wastewater applied
421,448.00 gallons
15.52 acre-inches
1.55 inches/acre

Total harvests for the crop
1 harvests

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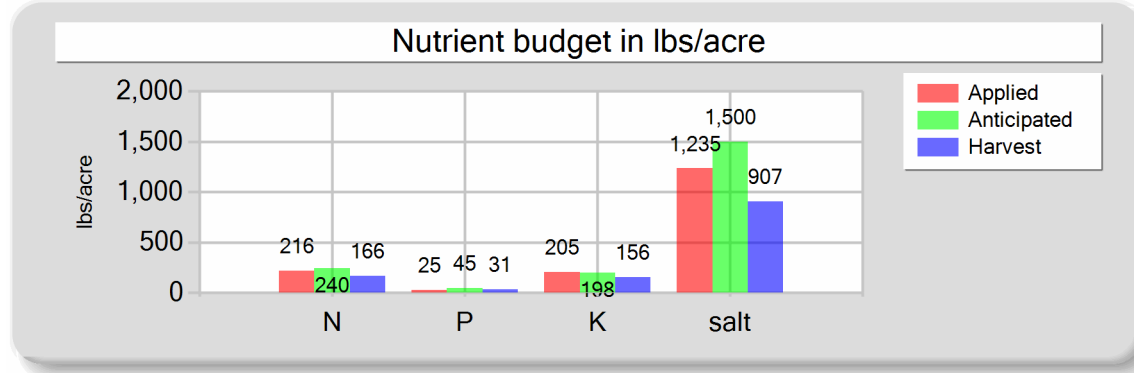
Reporting period 01/01/2023 to 12/31/2023.

3 - 05/25/2023: Corn, silage

Field name: 3

Crop: Corn, silage

Plant date: 05/25/2023



	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	208.67	24.79	204.98	920.58
Fresh water	0.00	0.00	0.00	314.37
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	215.67	24.79	204.98	1,234.95
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	165.72	31.18	155.88	907.36
Nutrient balance	49.94	-6.38	49.11	327.59
Applied to removed ratio	1.30	0.80	1.32	1.36

Fresh water applied
9,417,856.00 gallons
346.83 acre-inches
34.68 inches/acre

Process wastewater applied
1,470,874.00 gallons
54.17 acre-inches
5.42 inches/acre

Total harvests for the crop
1 harvests

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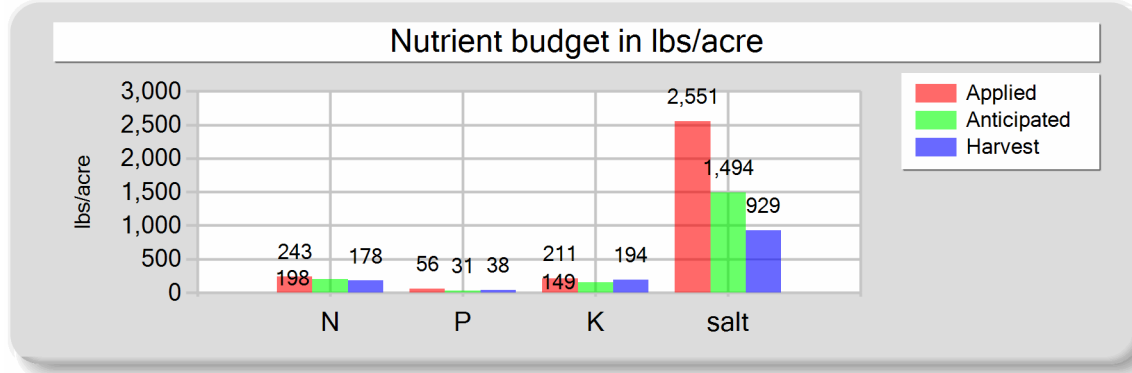
Reporting period 01/01/2023 to 12/31/2023.

4 - 11/25/2022: Wheat, silage, soft dough

Field name: 4

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	114.86	18.67	110.54	752.62
Fresh water	0.00	0.00	0.00	155.98
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	242.89	56.34	210.98	2,550.80
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	178.20	37.80	194.40	928.79
Nutrient balance	64.69	18.54	16.58	1,622.01
Applied to removed ratio	1.36	1.49	1.09	2.75

Fresh water applied
8,878,372.00 gallons
326.96 acre-inches
17.21 inches/acre

Process wastewater applied
721,042.00 gallons
26.55 acre-inches
1.40 inches/acre

Total harvests for the crop
1 harvests

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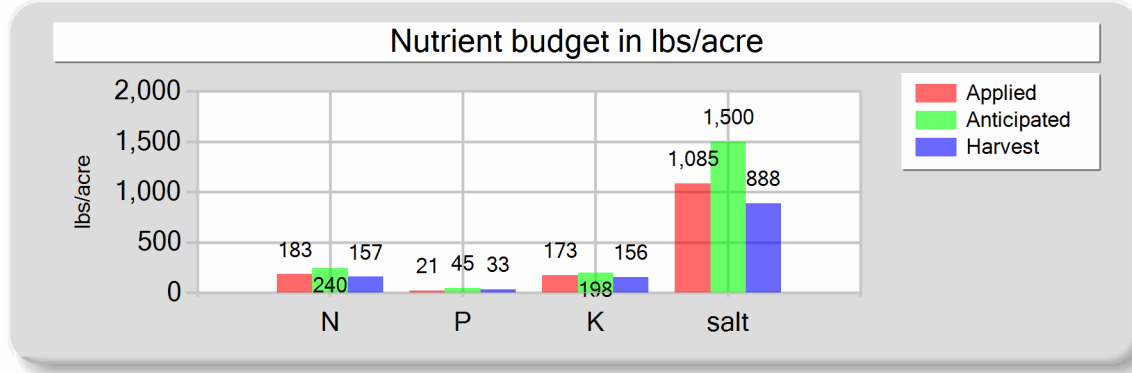
Reporting period 01/01/2023 to 12/31/2023.

4 - 05/25/2023: Corn, silage

Field name: 4

Crop: Corn, silage

Plant date: 05/25/2023



	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	175.60	20.87	172.50	774.72
Fresh water	0.00	0.00	0.00	310.13
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	182.60	20.87	172.50	1,084.84
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	157.28	32.84	155.56	888.40
Nutrient balance	25.32	-11.97	16.95	196.44
Applied to removed ratio	1.16	0.64	1.11	1.22

Fresh water applied
17,652,429.00 gallons
650.08 acre-inches
34.21 inches/acre

Process wastewater applied
2,351,846.00 gallons
86.61 acre-inches
4.56 inches/acre

Total harvests for the crop
1 harvests

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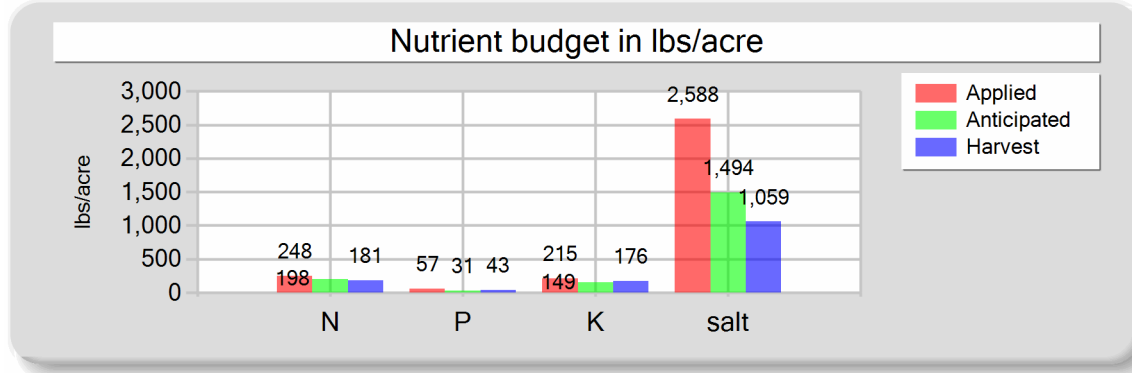
Reporting period 01/01/2023 to 12/31/2023.

5 - 11/25/2022: Wheat, silage, soft dough

Field name: 5

Crop: Wheat, silage, soft dough

Plant date: 11/25/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	119.84	19.33	114.41	783.71
Fresh water	0.00	0.00	0.00	162.14
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	247.87	57.00	214.85	2,588.05
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	180.81	42.54	176.25	1,059.02
Nutrient balance	67.06	14.45	38.60	1,529.03
Applied to removed ratio	1.37	1.34	1.22	2.44

Fresh water applied
4,857,540.00 gallons
178.89 acre-inches
17.89 inches/acre

Process wastewater applied
392,177.00 gallons
14.44 acre-inches
1.44 inches/acre

Total harvests for the crop
1 harvests

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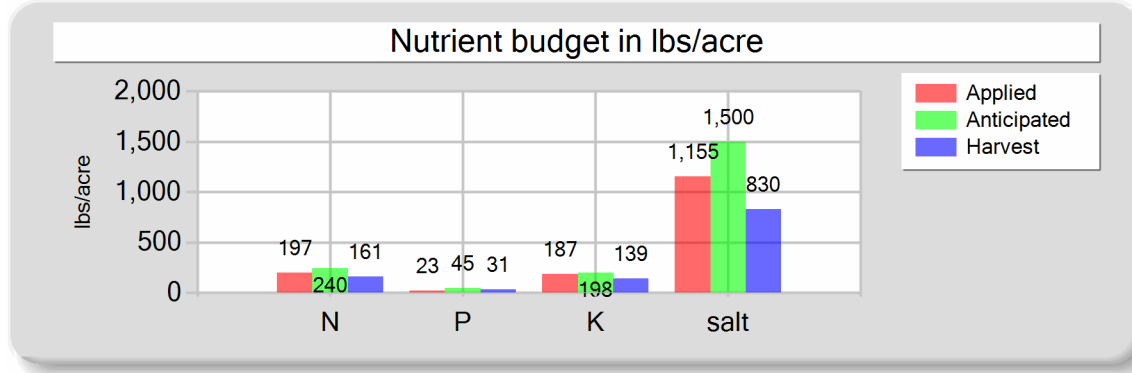
Reporting period 01/01/2023 to 12/31/2023.

5 - 05/25/2023: Corn, silage

Field name: 5

Crop: Corn, silage

Plant date: 05/25/2023



	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	190.49	22.63	187.12	840.38
Fresh water	0.00	0.00	0.00	315.09
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	197.49	22.63	187.12	1,155.46
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	160.80	31.18	139.47	830.24
Nutrient balance	36.69	-8.54	47.66	325.22
Applied to removed ratio	1.23	0.73	1.34	1.39

Fresh water applied
9,439,386.00 gallons
347.62 acre-inches
34.76 inches/acre

Process wastewater applied
1,342,721.00 gallons
49.45 acre-inches
4.94 inches/acre

Total harvests for the crop
1 harvests



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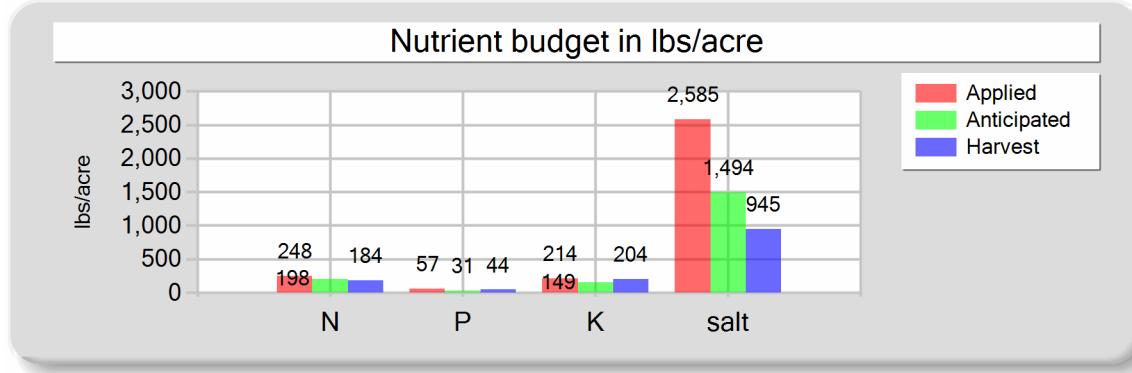
Reporting period 01/01/2023 to 12/31/2023.

6 - 10/26/2022: Wheat, silage, soft dough

Field name: 6

Crop: Wheat, silage, 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	121.03	37.67	100.44	1,642.19
Process wastewater	119.74	19.12	113.15	781.14
Fresh water	0.00	0.00	0.00	162.08
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	247.78	56.79	213.59	2,585.41
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	183.59	44.42	204.31	944.58
Nutrient balance	64.19	12.37	9.27	1,640.83
Applied to removed ratio	1.35	1.28	1.05	2.74

Fresh water applied
7,283,503.00 gallons
268.23 acre-inches
17.88 inches/acre

Process wastewater applied
580,590.00 gallons
21.38 acre-inches
1.43 inches/acre

Total harvests for the crop
1 harvests

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

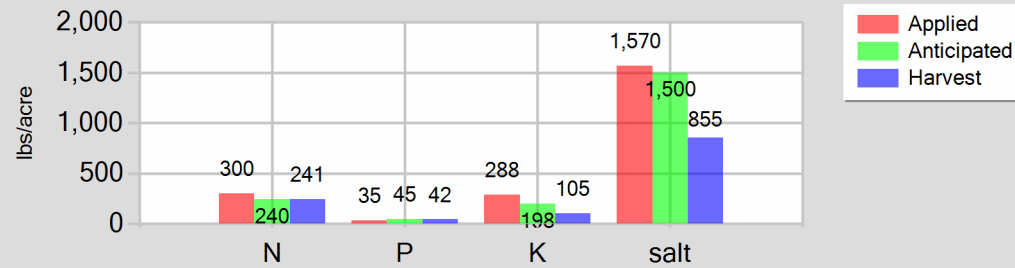
6 - 05/26/2023: Corn, silage

Field name: 6

Crop: Corn, silage

Plant date: 05/26/2023

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	292.81	34.79	287.65	1,291.82
Fresh water	0.00	0.00	0.00	278.08
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	299.81	34.79	287.65	1,569.90
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	241.32	42.23	104.57	854.66
Nutrient balance	58.50	-7.44	183.08	715.25
Applied to removed ratio	1.24	0.82	2.75	1.84

Fresh water applied
12,496,120.00 gallons
460.19 acre-inches
30.68 inches/acre
Process wastewater applied
3,096,041.00 gallons
114.02 acre-inches
7.60 inches/acre
Total harvests for the crop
1 harvests

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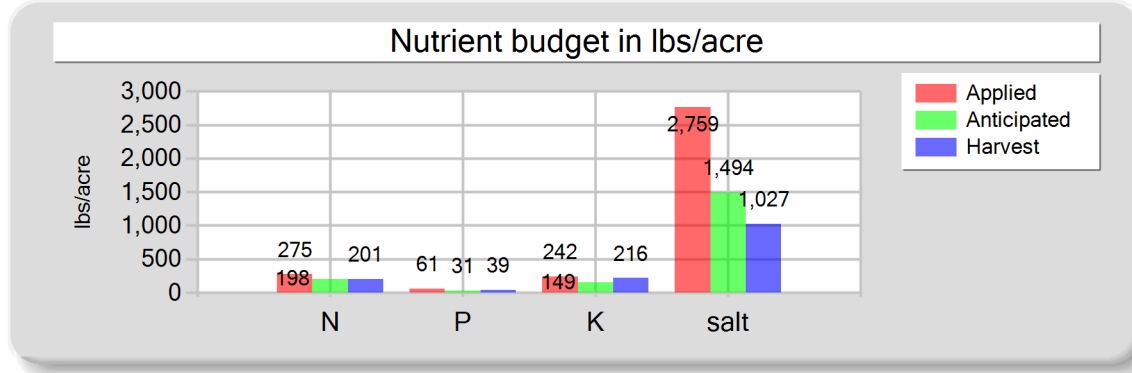
Reporting period 01/01/2023 to 12/31/2023.

7 - 10/26/2022: Wheat, silage, soft dough

Field name: 7

Crop: Wheat, silage, 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	121.03	37.67	100.44	1,642.19
Process wastewater	146.86	23.83	141.11	961.90
Fresh water	0.00	0.00	0.00	155.33
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	274.89	61.50	241.55	2,759.43
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	201.27	39.17	216.13	1,026.61
Nutrient balance	73.62	22.33	25.42	1,732.82
Applied to removed ratio	1.37	1.57	1.12	2.69

Fresh water applied
6,980,215.00 gallons
257.06 acre-inches
17.14 inches/acre

Process wastewater applied
726,413.00 gallons
26.75 acre-inches
1.78 inches/acre

Total harvests for the crop
1 harvests

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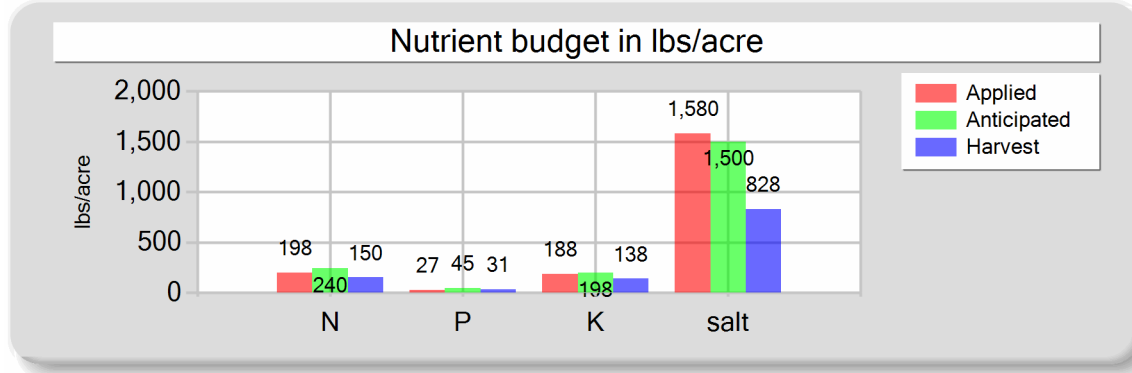
Reporting period 01/01/2023 to 12/31/2023.

7 - 05/28/2023: Corn, silage

Field name: 7

Crop: Corn, silage

Plant date: 05/28/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	14,726,995.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	542.35 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	36.16 <i>inches/acre</i>
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	191.44	26.84	188.25	975.14	Process wastewater applied
Fresh water	0.00	0.00	0.00	604.71	1,910,745.00 <i>gallons</i>
Atmospheric deposition	7.00	0.00	0.00	0.00	70.37 <i>acre-inches</i>
Total nutrients applied	198.44	26.84	188.25	1,579.85	4.69 <i>inches/acre</i>
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00	
Actual crop nutrient removal	150.37	31.11	138.27	827.90	Total harvests for the crop
Nutrient balance	48.07	-4.28	49.98	751.95	1 <i>harvests</i>
Applied to removed ratio	1.32	0.86	1.36	1.91	

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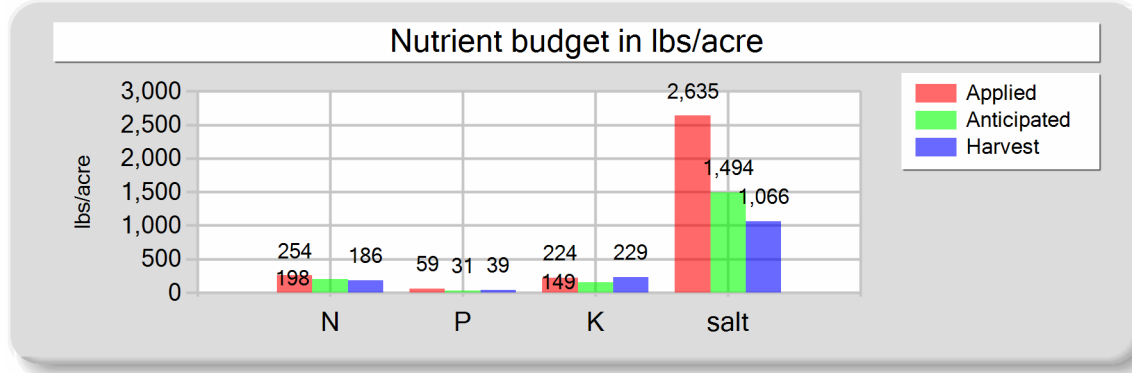
Reporting period 01/01/2023 to 12/31/2023.

8 - 10/27/2022: Wheat, silage, soft dough

Field name: 8

Crop: Wheat, silage, soft dough

Plant date: 10/27/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	126.18	20.91	123.92	830.95
Fresh water	0.00	0.00	0.00	161.85
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	254.21	58.58	224.36	2,634.99
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	186.29	38.93	229.38	1,066.28
Nutrient balance	67.92	19.65	-5.02	1,568.71
Applied to removed ratio	1.36	1.50	0.98	2.47

Fresh water applied
17,455,146.00 gallons
642.81 acre-inches
17.86 inches/acre

Process wastewater applied
1,537,514.00 gallons
56.62 acre-inches
1.57 inches/acre

Total harvests for the crop
1 harvests

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

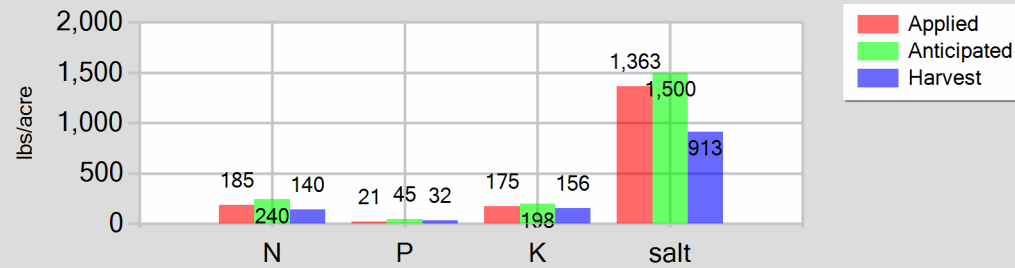
8 - 05/28/2023: Corn, silage

Field name: 8

Crop: Corn, silage

Plant date: 05/28/2023

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	178.33	21.19	175.18	786.74
Fresh water	0.00	0.00	0.00	575.88
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	185.33	21.19	175.18	1,362.63
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	140.22	32.49	155.61	913.14
Nutrient balance	45.11	-11.30	19.57	449.49
Applied to removed ratio	1.32	0.65	1.13	1.49

Fresh water applied
33,348,283.00 gallons
1,228.10 acre-inches
34.11 inches/acre

Process wastewater applied
4,525,293.00 gallons
166.65 acre-inches
4.63 inches/acre

Total harvests for the crop
1 harvests

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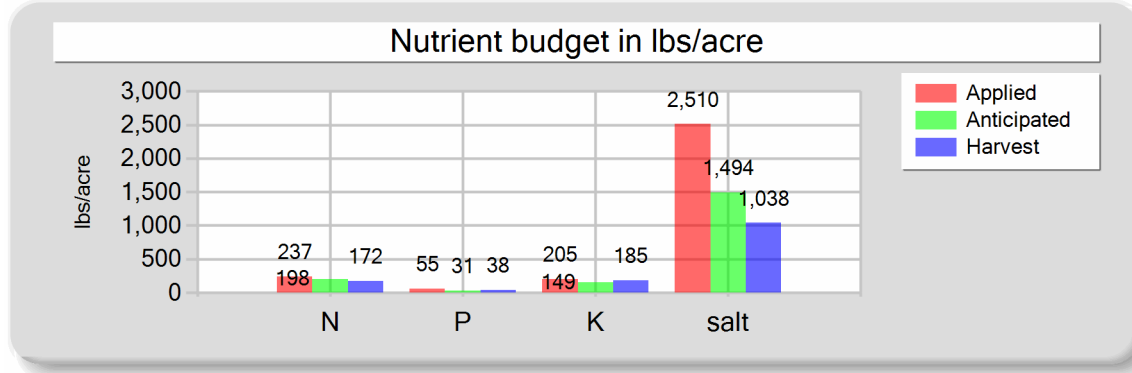
Reporting period 01/01/2023 to 12/31/2023.

9 - 10/28/2022: Wheat, silage, soft dough

Field name: 9

Crop: Wheat, silage, soft dough

Plant date: 10/28/2022



	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	121.03	37.67	100.44	1,642.19
Process wastewater	109.41	17.59	104.11	714.96
Fresh water	0.00	0.00	0.00	153.09
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	237.44	55.26	204.55	2,510.24
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	172.38	37.54	184.90	1,038.48
Nutrient balance	65.06	17.72	19.65	1,471.76
Applied to removed ratio	1.38	1.47	1.11	2.42

Fresh water applied
12,383,045.00 <i>gallons</i>
456.03 <i>acre-inches</i>
16.89 <i>inches/acre</i>

Process wastewater applied
962,918.00 <i>gallons</i>
35.46 <i>acre-inches</i>
1.31 <i>inches/acre</i>

Total harvests for the crop
1 <i>harvests</i>

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

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

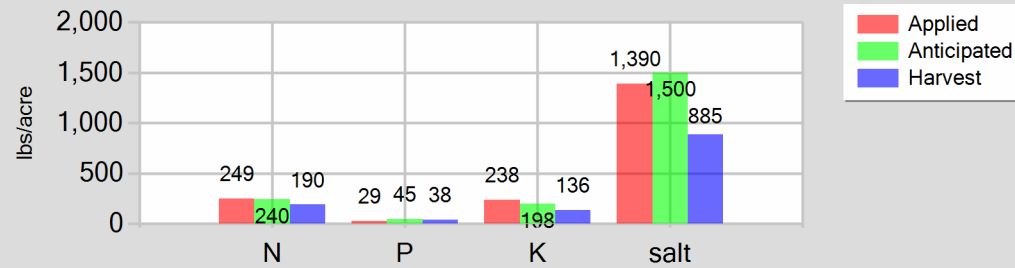
9 - 06/01/2023: Corn, silage

Field name: 9

Crop: Corn, silage

Plant date: 06/01/2023

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	241.95	28.75	237.68	1,067.44
Fresh water	0.00	0.00	0.00	322.75
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	248.95	28.75	237.68	1,390.19
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	189.62	38.27	135.69	885.47
Nutrient balance	59.33	-9.52	101.99	504.71
Applied to removed ratio	1.31	0.75	1.75	1.57

Fresh water applied
26,106,181.00 gallons
961.40 acre-inches
35.61 inches/acre
Process wastewater applied
4,604,876.00 gallons
169.58 acre-inches
6.28 inches/acre
Total harvests for the crop
1 harvests



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

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

## NUTRIENT ANALYSES

### A. MANURE ANALYSES

#### Manure

Sample and source description: Manure

Sample date: 10/19/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 16.3 %

	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 (%)
<b>Value</b>	24,100.00	7,500.00	20,000.00							
<b>DL</b>	100.00	200.00	200.00							

#### Manure

Sample and source description: Manure

Sample date: 05/02/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 8.2 %

	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 (%)
<b>Value</b>	18,700.00	6,800.00	27,100.00							
<b>DL</b>	100.00	200.00	200.00							

#### Manure

Sample and source description: Manure

Sample date: 10/09/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 7.2 %

	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 (%)
<b>Value</b>	15,500.00	5,300.00	12,800.00							
<b>DL</b>	100.00	200.00	200.00							

### B. PROCESS WASTEWATER ANALYSES

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

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

## Lagoon

Sample and source description: LagoonSample date: 11/15/2022 Material type: Process wastewater Source of analysis: Lab analysis pH:         

	Kjeldahl-N (mg/L)	NH <sub>4</sub> -N (mg/L)	NH <sub>3</sub> -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	446.00	80.30	0.00	0.00	61.60	362.00								4,230.00	2,810
DL	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

## Lagoon

Sample and source description: LagoonSample date: 02/22/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 6.70

	Kjeldahl-N (mg/L)	NH <sub>4</sub> -N (mg/L)	NH <sub>3</sub> -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	298.00	76.10			56.90	339.00								3,080.00	2,040
DL	10.00	2.00			0.20	0.50								100.00	10

## Lagoon

Sample and source description: LagoonSample date: 05/19/2023 Material type: Process wastewater Source of analysis: Lab analysis pH:         

	Kjeldahl-N (mg/L)	NH <sub>4</sub> -N (mg/L)	NH <sub>3</sub> -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	170.00	21.50	0.00	0.00	20.20	167.00								1,130.00	750
DL	10.00	2.00	2.00	2.00	0.20	0.50								100.00	10

## Lagoon

Sample and source description: LagoonSample date: 09/15/2023 Material type: Process wastewater Source of analysis: Lab analysis pH:         

	Kjeldahl-N (mg/L)	NH <sub>4</sub> -N (mg/L)	NH <sub>3</sub> -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	134.00	15.00	0.00	0.00	11.80	70.20								740.00	491
DL	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

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

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

## Lagoon

Sample and source description: Lagoon

Sample date: 11/15/2023 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)
<b>Value</b>	234.00	143.00	0.00	0.00	60.10	370.00								3,260.00	2,160
<b>DL</b>	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

## C. FRESH WATER ANALYSES

### DW 10

#### DW 10

Sample description: DW 10

Sample date: 10/25/2023 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)
<b>Value</b>	0.00	0.00	0.00									281
<b>DL</b>	0.10	0.10	0.10									20

### House

#### House

Sample description: House

Sample date: 10/25/2023 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)
<b>Value</b>	0.00	0.00	0.00								364.00	
<b>DL</b>	0.20	0.20	0.20								1.00	

### Laguna I.D.

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

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

Laguna I.D.

Canal

Sample description: Canal

Sample date: 07/18/2023 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		0.00								23.00	40
DL	0.10		0.10								1.00	20

## D. SOIL ANALYSES

*No soil analyses entered.*

## E. PLANT TISSUE ANALYSES

1 - 11/10/2022: Wheat, silage, soft dough

1

Sample and source description: 1

Sample date: 04/11/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 73.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	17,800.00	4,600.00	26,000.00		14.20
DL	500.00	200.00	200.00		0.05

1 - 04/20/2023: Corn, silage

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

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

1 - 04/20/2023: Corn, silage

1

Sample and source description: 1

Sample date: 08/02/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 61.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	12,300.00	1,900.00	5,400.00		4.87
<b>DL</b>	500.00	200.00	200.00		0.05

10 - 03/01/2021: Alfalfa, hay

10

Sample and source description: 10

Sample date: 11/06/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 9.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	37,900.00	3,100.00	22,700.00		16.60
<b>DL</b>	500.00	200.00	200.00		0.05

11 - 11/26/2022: Wheat, silage, soft dough

11

Sample and source description: 11

Sample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	11,300.00	2,700.00	11,200.00		7.01
<b>DL</b>	500.00	200.00	200.00		0.05

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

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

11 - 05/20/2023: Corn, silage

11

Sample and source description: 11

Sample date: 08/02/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 59.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	11,100.00	2,100.00	4,900.00		3.90
<b>DL</b>	500.00	200.00	200.00		0.05

2 - 11/15/2022: Wheat, silage, soft dough

2

Sample and source description: 2

Sample date: 05/12/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,200.00	2,700.00	15,000.00		6.86
<b>DL</b>	500.00	200.00	200.00		0.05

2 - 06/05/2023: Corn, silage

2

Sample and source description: 2

Sample date: 09/27/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 71.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,200.00	22,000.00	9,100.00		6.61
<b>DL</b>	500.00	200.00	200.00		0.05

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

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

3 - 11/25/2022: Wheat, silage, soft dough

3

Sample and source description: 3

Sample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 67.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	13,900.00	3,000.00	16,800.00		7.18
<b>DL</b>	500.00	200.00	200.00		0.05

3 - 05/25/2023: Corn, silage

3

Sample and source description: 3

Sample date: 09/01/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,100.00	1,900.00	9,500.00		5.53
<b>DL</b>	500.00	200.00	200.00		0.05

4 - 11/25/2022: Wheat, silage, soft dough

4

Sample and source description: 4

Sample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 67.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	13,200.00	2,800.00	14,400.00		6.88
<b>DL</b>	500.00	200.00	200.00		0.05

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

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

4 - 05/25/2023: Corn, silage

4

Sample and source description: 4

Sample date: 09/01/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	9,100.00	1,900.00	9,000.00		5.14
<b>DL</b>	500.00	200.00	200.00		0.05

5 - 11/25/2022: Wheat, silage, soft dough

5

Sample and source description: 5

Sample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	11,900.00	2,800.00	11,600.00		6.97
<b>DL</b>	500.00	200.00	200.00		0.05

5 - 05/25/2023: Corn, silage

5

Sample and source description: 5

Sample date: 09/01/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	9,800.00	1,900.00	8,500.00		5.06
<b>DL</b>	500.00	200.00	200.00		0.05



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

6 - 10/26/2022: Wheat, silage, soft dough

6

Sample and source description: 6

Sample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,400.00	3,000.00	13,800.00		6.38
DL	500.00	200.00	200.00		0.05

6 - 05/26/2023: Corn, silage

6

Sample and source description: 6

Sample date: 08/02/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 60.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,000.00	2,100.00	5,200.00		4.25
DL	500.00	200.00	200.00		0.05

7 - 10/26/2022: Wheat, silage, soft dough

7

Sample and source description: 7

Sample date: 05/12/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 67.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,900.00	2,900.00	16,000.00		7.60
DL	500.00	200.00	200.00		0.05

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

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

7 - 05/28/2023: Corn, silage

7

Sample and source description: 7

Sample date: 09/01/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	8,700.00	1,800.00	8,000.00		4.79
<b>DL</b>	500.00	200.00	200.00		0.05

8 - 10/27/2022: Wheat, silage, soft dough

8

Sample and source description: 8

Sample date: 05/12/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	13,400.00	2,800.00	16,500.00		7.67
<b>DL</b>	500.00	200.00	200.00		0.05

8 - 05/28/2023: Corn, silage

8

Sample and source description: 8

Sample date: 09/01/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	8,200.00	1,900.00	9,100.00		5.34
<b>DL</b>	500.00	200.00	200.00		0.05

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

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

9 - 10/28/2022: Wheat, silage, soft dough

9

Sample and source description: 9

Sample date: 05/12/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,400.00	2,700.00	13,300.00		7.47
DL	500.00	200.00	200.00		0.05

9 - 06/01/2023: Corn, silage

9

Sample and source description: 9

Sample date: 09/27/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 69.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	10,900.00	2,200.00	7,800.00		5.09
DL	500.00	200.00	200.00		0.05

**F. SUBSURFACE (TILE) DRAINAGE ANALYSES***No subsurface (tile) drainage analyses entered.*

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

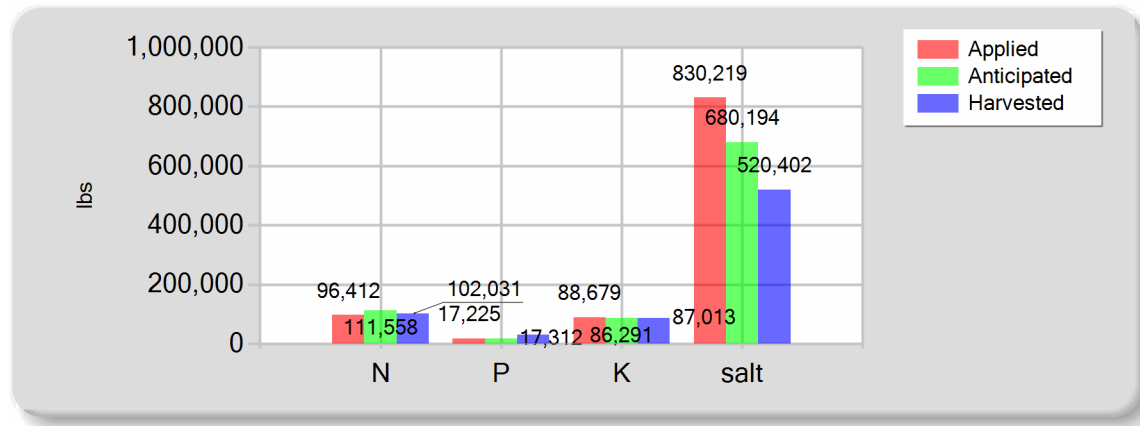
*Reporting period 01/01/2023 to 12/31/2023.*

**NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE**

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

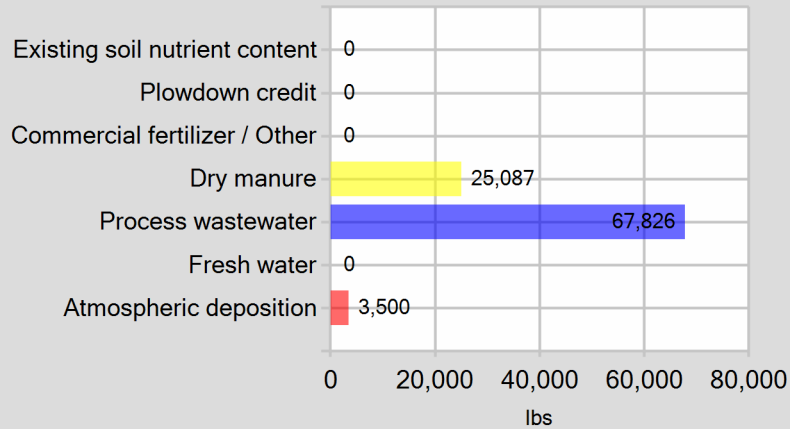
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	25,086.61	7,942.05	22,413.51	350,475.98
Process wastewater	67,825.59	9,282.93	66,265.82	357,139.16
Fresh water	0.00	0.00	0.00	122,603.96
Atmospheric deposition	3,500.00	0.00	0.00	0.00
Total nutrients applied	96,412.19	17,224.98	88,679.33	830,219.10
Anticipated crop nutrient removal	111,558.00	17,312.40	86,291.40	680,194.00
Actual crop nutrient removal	102,031.30	30,050.78	87,013.49	520,401.58
Nutrient balance	-5,619.10	-12,825.80	1,665.84	309,817.52
Applied to removed ratio	0.94	0.57	1.02	1.60

**B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL**

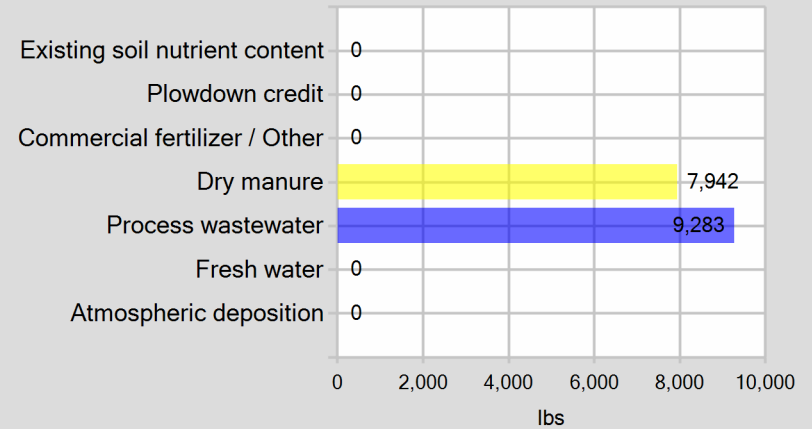


## C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

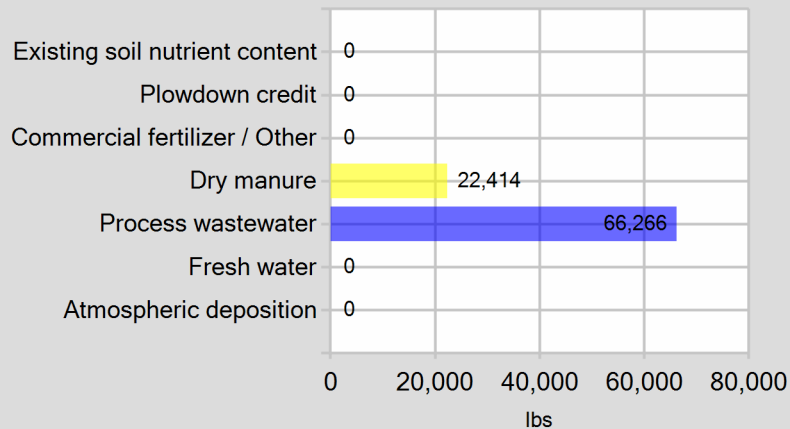
Pounds of nitrogen applied



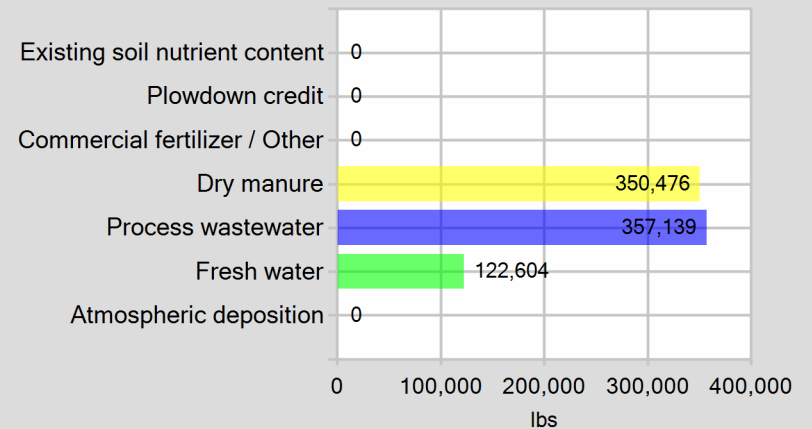
Pounds of phosphorus applied



Pounds of potassium applied



Pounds of salt applied



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

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

**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

**Annual Report - General Order No. R5-2007-0035**  
*Reporting period 01/01/2023 to 12/31/2023.*

ADDITIONAL NOTES

**A. NOTES**

~Wells~ Ag 1, Ag 2, Ag 3, Ag 4, Ag 5, Ag 6, and Ag 7 were out of Service in 2023.

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

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

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

Joe Martins

SAME AS OWNER

PRINT OR TYPE NAME

PRINT OR TYPE NAME

6/18/24

DATE

DATE



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

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

**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.

August 11, 2023

**Sentry Ag Services**  
 Attn: Monique Baldiviez  
 P.O. Box 7750  
 Visalia, CA 93290

**Lab No. : VI 2344658**  
**Customer No. : 4019696**  
**Reference : 3061**

### Laboratory Report

**Introduction:** This report package contains a total of 3 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(1 page)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Laguna I.D.	07/18/2023	07/18/2023	VI 2344658-001	AGW

### Sampling and Receipt Information:

The Sample was received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. The Sample was received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.

**Quality Control:** All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

### Test Summary

EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

**Certification:** I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.**



Digitally signed by Kelly A. Dunnahoo, B.S.  
 Title: Laboratory Director  
 Date: 2023-08-14

August 11, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez  
 P.O. Box 7750  
 Visalia, CA 93290

Description : Laguna I.D.  
 Project : Laguna I.D.

Lab No. : VI 2344658-001  
 Customer No. : 4019696  
 Reference : 3061  
 Sampled On : July 18, 2023 at 11:10  
 Sampled By : Jeremy  
 Received On : July 18, 2023 at 15:17  
 Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	17:16	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	15:01	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	Calc.	08/10/2023	17:16	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	15:01	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	17:16	lcr
Conductivity	23	1	umhos/cm		1		07/31/2023	14:51	amm	SM 4500-H+B	07/31/2023	18:57	amm
Solids, Total Dissolved (TDS)	40	20	mg/L		1		07/20/2023	16:15	ctl	SM 2540 C	07/21/2023	11:10	ctl

**DQF Flags Definition:**

U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution

**Corporate Offices & Laboratory**

853 Corporation Street  
 Santa Paula, CA 93060  
 TEL: (805)392-2000  
 Env FAX: (805)525-4172 / Ag FAX: (805)392-2063  
 CA ELAP Certification No. 1573

**Office & Laboratory**

2500 Stagecoach Road  
 Stockton, CA 95215  
 TEL: (209)942-0182  
 FAX: (209)942-0423  
 CA ELAP Certification No. 1563

**Office & Laboratory**

563 E. Lindo Avenue  
 Chico, CA 95926  
 TEL: (530)343-5818  
 FAX: (530)343-3807  
 CA ELAP Certification No. 2670

**Office & Laboratory**

3442 Empresa Drive, Suite D  
 San Luis Obispo, CA 93401  
 TEL: (805)783-2940  
 FAX: (805)783-2912  
 CA ELAP Certification No. 2775

**Office & Laboratory**

9415 W. Goshen Avenue  
 Visalia, CA 93291  
 TEL: (559)734-9473  
 FAX: (559)734-8435  
 CA ELAP Certification No. 2810

August 11, 2023  
Sentry Ag Service

Lab No. : VI 2344658  
Customer No. : 4019696

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
E. C.	2320B	(VI 2344636-006)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	07/20/2023:207946CTL (STK2339578-001) (STK2339578-001)	Blank	mg/L	993.7	ND	<20	
			LCS	mg/L		102%	90-110	
			Dup	mg/L		0.4%	5	
			Dup	mg/L		1.98%	5	
Nitrogen, Total Kjeldahl	351.2	08/08/2023:208707STA (VI 2344654-002)	Blank	mg/L	12.00	ND	<0.5	
			LCS	mg/L		91.3%	73-124	
			MS	mg/L		85.5%	54-136	
			MSD	mg/L		85.3%	54-136	
		(VI 2344644-003)	MSRPD	mg/L	12.00	0.3%	≤27	
			MS	mg/L		82.8%	54-136	
			MSD	mg/L		82.5%	54-136	
			MSRPD	mg/L		0.3%	≤27	
Nitrate + Nitrite as N	4500NO3F	07/19/2023:207926LFS (STK2339515-001)	Blank	mg/L	11.22	ND	<0.4	
			LCS	mg/L		97.8%	80-120	
			MS	mg/L		91.9%	66-125	
			MSD	mg/L		94.5%	66-125	
			MSRPD	mg/L		1.2%	≤30.4	
Nitrate Nitrogen	4500NO3F	07/19/2023:207926LFS (STK2339515-001)	Blank	mg/L	11.22	ND	<0.4	
			LCS	mg/L		97.8%	80-120	
			MS	mg/L		91.9%	66-125	
			MSD	mg/L		94.5%	66-125	
			MSRPD	mg/L		1.2%	≤30.4	

#### Definition

Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
DQO	: Data Quality Objective - This is the criteria against which the quality control data is compared.
Dup	: Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
LCS	: Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
MS	: Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSD	: Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
MSRPD	: MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
ND	: Non-detect - Result was below the DQO listed for the analyte.



# Laboratory Analysis Work Order

3061

SITE NAME: Laguna F.D.

LABORATORY: VT | FGL 4-19696

Billing: Sentry Ag Services, LLC  
P.O. Box 7750, Visalia, CA 93290

Authorized Copy Release to:  
labs@sentryagservices.com

## ANALYSIS TO BE COMPLETED

### Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO<sub>3</sub>N (Dom)  
 W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)  
 W3 NH<sub>4</sub>-N (Ammonium)  
 W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)  
 W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)  
 W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)  
 W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)  
 W8 Other: \_\_\_\_\_

### Plant Tissue

- P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)  
 P2 TN, P, K (Mid-season - Corn)  
 P3 TN, TP, TK, Ash, %M (At Harvest)  
 P4 TN, %M  
 P5 % Moisture  
 P6 NIR  
 P7 Other: \_\_\_\_\_

### Process Waste Water (lagoon)

- L1 EC, NH<sub>4</sub>N, TKN, TP, TK, TDS (Quarterly)  
 L2 EC, NO<sub>3</sub>N, NH<sub>4</sub>N, TKN, TP, TK, TDS, pH (Annually)  
 L3 Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Biennially)  
 L4 Other: \_\_\_\_\_

### Manure

- M1 TN, TP, TK, %M (2/year)  
 M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)  
 M3 Other: \_\_\_\_\_

### Soil

- S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO<sub>3</sub>N, PO<sub>4</sub>P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>S  
 S2 S1 + CEC, CaCO<sub>3</sub>, OM, C:N, TN  
 S3 NO<sub>3</sub>N, NH<sub>4</sub>N  
 S4 Other: \_\_\_\_\_

	Sample ID	Description	Analysis	Date/Time	Sampled by	SAS USE ONLY: FIELD TESTS		
						NH <sub>3</sub> N *	pH	Temp
1	Laguna F.D.	Canal	W2	7/18/23 11:10	Geremy	—		
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES:

## CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>	<i>[Signature]</i>	SAS		7/18/23 3:17 pm
2 <sup>nd</sup>	SRO	FGL	7/18/23 1517	
3 <sup>rd</sup>	SRO	FGL		7/18/23 1730
4 <sup>th</sup>		GLS	7/18/23 1730	

LABORATORY USE ONLY

Logged In By: \_\_\_\_\_ Total Samples: \_\_\_\_\_ Laboratory No.: \_\_\_\_\_

R01 GLS 7/19/23  
 5.3°C MC 1100



November 13, 2023

**Sentry Ag Services**  
 Attn: Monique Baldiviez  
 P.O. Box 7750  
 Visalia, CA 93290

**Lab No. : VI 2347234**  
**Customer No. : 4019696**  
**Reference : 3321**

### Laboratory Report

**Introduction:** This report package contains a total of 4 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(2 pages)	: Results for each sample submitted.
Quality Control	(1 page)	: Supporting Quality Control (QC) results.

### Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
House	10/25/2023	10/25/2023	VI 2347234-001	DW
DW10	10/25/2023	10/25/2023	VI 2347234-002	DW

### Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were received, prepared and analyzed within the method specified holding times. All samples arrived on ice. All samples were checked for pH if acid or base preservation is required (except for VOAs). For details of sample receipt information, please see the associated Chain of Custody and Condition Upon Receipt Form.


**Quality Control:** All samples were prepared and analyzed according to established quality control criteria. Any exceptions are noted in the Quality Control Section of this report.

### Test Summary

SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

**Certification:** I certify that this data package is in compliance with ELAP standards, both technically and for completeness, except for any conditions listed above and in the QC Section. Release of the data contained in this data package is authorized by the Laboratory Director or his designee, as verified by the following electronic signature. This report shall not be reproduced except in full, without the written approval of the laboratory.

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.**  Digitally signed by Kelly A. Dunnahoo, B.S.  
 Title: Laboratory Director  
 Date: 2023-11-14

November 13, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : House

Project : J & F Martins #2

Lab No. : VI 2347234-001

Customer No. : 4019696

Reference : 3321

Sampled On : October 25, 2023 at 10:45

Sampled By : Jeremy

Received On : October 25, 2023 at 15:22

Matrix : Drinking Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	ND	0.4	mg/L	10	1	U	10/26/2023	13:15	lfs	SM 4500-NO3 F	10/26/2023	15:26	lfs
Conductivity	364	1	umhos/cm	1600 <sup>2</sup>	1		11/03/2023	07:56	krh	SM 4500-H+B	11/03/2023	11:22	krh

DQF Flags Definition:

U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level, Dil.=Dilution

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

**Corporate Offices & Laboratory**

853 Corporation Street

Santa Paula, CA 93060

TEL: (805)392-2000

Env FAX: (805)525-4172 / Ag FAX: (805)392-2063

CA ELAP Certification No. 1573

**Office & Laboratory**

2500 Stagecoach Road

Stockton, CA 95215

TEL: (209)942-0182

FAX: (209)942-0423

CA ELAP Certification No. 1563

**Office & Laboratory**

563 E. Lindo Avenue

Chico, CA 95926

TEL: (530)343-5818

FAX: (530)343-3807

CA ELAP Certification No. 2670

**Office & Laboratory**

3442 Empresa Drive, Suite D

San Luis Obispo, CA 93401

TEL: (805)783-2940

FAX: (805)783-2912

CA ELAP Certification No. 2775

**Office & Laboratory**

9415 W. Goshen Avenue

Visalia, CA 93291

TEL: (559)734-9473

FAX: (559)734-8435

CA ELAP Certification No. 2810



November 13, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : DW10

Project : J & F Martins #2

Lab No. : VI 2347234-002

Customer No. : 4019696

Reference : 3321

Sampled On : October 25, 2023 at 10:30

Sampled By : Jeremy

Received On : October 25, 2023 at 15:22

Matrix : Drinking Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	ND	0.4	mg/L	10	1	U	10/26/2023	13:15	lfs	SM 4500-NO3 F	10/26/2023	15:29	lfs
Conductivity	281	1	umhos/cm	1600 <sup>2</sup>	1		11/02/2023	09:02	krh	SM 4500-H+B	11/02/2023	13:09	krh

DQF Flags Definition:

U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level, Dil.=Dilution

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

November 13, 2023  
Sentry Ag Service

Lab No. : VI 2347234  
Customer No. : 4019696

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
E. C.	2320B	(CH 2378562-001)	Dup	umhos/cm		0.3%	5	
	2320B	(VI 2347233-001)	Dup	umhos/cm		0.2%	5	
Nitrate Nitrogen	4500NO3F	10/26/2023:212150LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	94.7%	80-120	
			MS	mg/L	5.609	95.1%	66-125	
		(CH 2379222-001)	MSD	mg/L	5.609	96.8%	66-125	
			MSRPD	mg/L		1.5%	≤30.4	

#### Definition

- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.
- Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.
- LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.
- MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.
- MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.
- ND : Non-detect - Result was below the DQO listed for the analyte.



# Laboratory Analysis Work Order

3321

SITE NAME: J & F Martins #2

2347234

LABORATORY: VF | FGL 4-19696

Billing: Sentry Ag Services, LLC  
P.O. Box 7750, Visalia, CA 93290

Authorized Copy Release to:  
labs@sentryagservices.com

## ANALYSIS TO BE COMPLETED

### Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO<sub>3</sub>N (Dom)  
W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)  
W3 NH<sub>4</sub>-N (Ammonium)  
W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)  
W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)  
W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)  
W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)  
W8 Other: \_\_\_\_\_

### Plant Tissue

- P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)  
P2 TN, P, K (Mid-season - Corn)  
P3 TN, TP, TK, Ash, %M (At Harvest)  
P4 TN, %M  
P5 % Moisture  
P6 NIR  
P7 Other: \_\_\_\_\_

### Process Waste Water (lagoon)

- L1 EC, NH<sub>4</sub>N, TKN, TP, TK, TDS (Quarterly)  
L2 EC, NO<sub>3</sub>N, NH<sub>4</sub>N, TKN, TP, TK, TDS, pH (Annually)  
L3 Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Biennially)  
L4 Other: \_\_\_\_\_

### Manure

- M1 TN, TP, TK, %M (2/year)  
M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)  
M3 Other: \_\_\_\_\_

### Soil

- S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO<sub>3</sub>N, PO<sub>4</sub>P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>S  
S2 S1 + CEC, CaCO<sub>3</sub>, OM, C:N, TN  
S3 NO<sub>3</sub>N, NH<sub>4</sub>N  
S4 Other: \_\_\_\_\_

	Sample ID	Description	Analysis	Date/Time	Sampled by	SAS USE ONLY: FIELD TESTS		
						NH <sub>3</sub> N *	pH	Temp
1	House	DW	W1	10/25/23 10:45	Jeremy	0		
2	DW10	DW	W1	10/25/23 10:30	"	0		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES: ROI 7.9°C

ID# F14407

### CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>	<u>AV DORA</u>	<u>SAS</u>		<u>10/25/23 15:22</u>
2 <sup>nd</sup>	<u>SRO</u>	<u>FGL</u>	<u>10.25.23 1522</u>	
3 <sup>rd</sup>	<u>SRO</u>	<u>FGL</u>		<u>10.25.23 1730</u>
4 <sup>th</sup>		<u>GLS</u>	<u>10.25.23 1730</u>	

LABORATORY USE ONLY

Logged In By: \_\_\_\_\_

Total Samples: \_\_\_\_\_

Laboratory No.: \_\_\_\_\_

GJ 10/26/23  
ML

**Inter-Laboratory Condition Upon Receipt (Attach to COC)**

Sample Receipt at: CC CH STK VI

1. Number of ice chests/packages received: 1 Shipping tracking #(s): OTC

2. Temp IR Gun ID #: 11407

3. Were samples received on ice? Yes No Temps: 7.9°C / / /  
Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

4. Do the number of bottles received agree with the COC? Yes No N/A

5. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No

6. VOAs checked for Headspace? Yes No N/A

7. Were all analyses within holding times at time of receipt? Yes No

8. Verify sample date, time and sampler name Yes No

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.

Sample Receipt Review completed by (initials): SRU

**Sample Receipt at SP:**

1. Number of ice chests/packages received: 3 Shipping tracking #(s): 560359082, 560360071  
560359449

2. Temp IR Gun ID #: 214

3. Were samples received on ice? Yes No Temps: 3 / 3 / 3 / /  
Acceptable is above freezing to 6°C. If many packages are received at one time check for tests/H.T.'s/rushes/

4. Do the number of bottles received agree with the COC? Yes No N/A

5. Were samples received intact? (i.e. no broken bottles, leaks etc.) Yes No

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

**Sample Verification, Labeling and Distribution:**

1. Were all requested analyses understood and acceptable? Yes No  
2. Did bottle labels correspond with the client's ID's? Yes No  
3. Were all bottles requiring sample preservation properly preserved? Yes No N/A FGL  
[Exception: Oil & Grease, VOA and CrVI verified in lab]

4. VOAs checked for Headspace? Yes No N/A

5. Have rush or project due dates been checked and accepted? Yes No N/A

6. Were all analyses within holding times at time of receipt? Yes No

Attach labels to the containers and include a copy of the COC for lab delivery.

Sample Receipt, Login and Verification completed by (initials): ll

**Discrepancy Documentation:**

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Initiated By: \_\_\_\_\_ Date: \_\_\_\_\_

Problem: \_\_\_\_\_

Resolution: \_\_\_\_\_

2. Person Contacted: \_\_\_\_\_ Phone Number: \_\_\_\_\_

Initiated By: \_\_\_\_\_ Date: \_\_\_\_\_

Problem: \_\_\_\_\_

Resolution: \_\_\_\_\_

(4019696)  
Sentry Ag Service  
VI 2347234

iv 10/26/2023 09:23:13



VI 2347234