

**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:** Carlos Echeverria & Sons Dairy

Physical address of dairy:

20229 Old River RD

Number and Street

Bakersfield

City

Kern

County

93311

Zip Code

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

Date facility was originally placed in operation: 01/01/2004Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

X295-X080-XX28-XXXX X295-X080-XX48-XXXX**B. OPERATORS**

Echeverria, Felix

Operator name: Echeverria, FelixTelephone no.: (661) 831-3063

Landline

Cellular

13441 Eberle RD

Mailing Address Number and Street

Bakersfield

City

CA

State

93311

Zip Code

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

Echeverria, Felix

Legal owner name: Echeverria, FelixTelephone no.: (661) 831-3063

Landline

Cellular

13441 Eberle RD

Mailing Address Number and Street

Bakersfield

City

CA

State

93311

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	0	760	1,625	1,360	600	775
Number under roof	5,025	0	0	0	0	0
Maximum number	5,250	810	1,650	1,410	625	800
Average number	5,025	760	1,625	1,360	600	775
Avg live weight (lbs)	1,400	1,450	1,000	750		

Predominant milk cow breed: Holstein

Average milk production: 75 pounds per cow per day

### B. MANURE GENERATED

Total manure excreted by the herd: 177,824.27 tons per reporting period

Total nitrogen from manure: 2,216,077.31 lbs per reporting period

After ammonia losses (30% loss applied): 1,551,254.12 lbs per reporting period

Total phosphorus from manure: 363,613.57 lbs per reporting period

Total potassium from manure: 978,840.99 lbs per reporting period

Total salt from manure: 2,540,783.25 lbs per reporting period

### C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 124,525,685 gallons

Total nitrogen generated: 247,979.69 lbs

Total phosphorus generated: 48,201.64 lbs

Total potassium generated: 511,606.64 lbs

Total salt generated: 3,180,491.19 lbs

124,525,685 gallons applied
+ 0 gallons exported
- 0 gallons imported
= 124,525,685 gallons generated

### D. FRESH WATER SOURCES

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

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Source Description	Type
6	Ground water
7	Ground water
CE	Ground water
CN	Ground water
CS	Ground water
SLE	Ground water
SLES	Ground water
SLN	Ground water

**E. SUBSURFACE (TILE) DRAINAGE SOURCES***No subsurface (tile) drainage sources entered.***F. NUTRIENT IMPORTS***No dry manure nutrient imports entered.**No process wastewater nutrient imports entered.**No commercial or other nutrient imports entered.***G. NUTRIENT EXPORTS***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	62	62	2	process wastewater	X295-X010-XX10-XXXX
11	15	15	2	process wastewater	X295-X010-XX10-XXXX
12	27	27	2	process wastewater	X295-X010-XX10-XXXX
13	20	20	2	process wastewater	X295-X010-XX10-XXXX
14	124	124	2	both	X295-X080-XX45-XXXX X295-X080-XX46-XXXX
18	37	37	2	process wastewater	X295-X080-XX47-XXXX
19	17	17	2	process wastewater	X295-X080-XX47-XXXX
2	37	37	2	process wastewater	X295-X010-XX10-XXXX
20N	26	26	2	process wastewater	X295-X080-XX47-XXXX
20S	66	66	2	both	X295-X080-XX47-XXXX
21	37	37	2	process wastewater	X295-X080-XX47-XXXX
22	22	22	2	process wastewater	X295-X080-XX35-XXXX
3	100	100	2	both	X295-X010-XX10-XXXX
4	40	40	2	process wastewater	X295-X010-XX10-XXXX X295-X010-XX80-XXXX
5	107	107	2	both	X295-X010-XX10-XXXX X295-X010-XX80-XXXX
6	99	99	1	both	X295-X010-XX10-XXXX
9	53	53	1	both	X295-X080-XX45-XXXX
C1	130	130	0	none	X295-X130-XX78-XXXX
C2	130	130	2	manure	X295-X130-XX78-XXXX
C3	140	140	2	manure	X295-X130-XX78-XXXX
SL1	130	130	2	manure	X295-X040-XX36-XXXX
SL2	130	130	2	manure	X295-X040-XX36-XXXX
SL3	130	130	2	manure	X295-X040-XX36-XXXX
SL4	130	130	2	manure	X295-X040-XX36-XXXX
Totals for areas that were used for application	1,679	1,679	44		
Totals for areas that were not used for application	130	130	0		
Land application area totals	1,809	1,809	44		

**B. CROPS AND HARVESTS**

1

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1

Field name: 1

11/08/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 62 Plant date: 11/08/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/06/2023	1,132.00 ton	Dry-weight		70.0	21,300.00	4,300.00	19,800.00		10.70

	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	18.26	233.34	47.11	216.91	1,172.17

06/16/2023: Corn, silage

Crop: Corn, silage

Acres planted: 62 Plant date: 06/16/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	1,875.00 ton	Dry-weight		70.7	13,500.00	2,700.00	11,800.00		5.79

	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	30.24	239.24	47.85	209.12	1,026.09

11

Field name: 11

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

Crop: Wheat, silage, soft dough

Acres planted: 15 Plant date: 11/10/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	280.00 ton	Dry-weight		65.7	17,300.00	3,200.00	19,100.00		9.20

	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	18.67	221.53	40.98	244.58	1,178.09

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11

06/15/2023: Corn, silage

Crop: Corn, silage Acres planted: 15 Plant date: 06/15/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/17/2023	445.00 ton	Dry-weight		71.0	14,000.00	2,900.00	12,400.00		5.97

	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	29.67	240.89	49.90	213.36	1,027.24

12

Field name: 12

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

Crop: Wheat, silage, soft dough Acres planted: 27 Plant date: 11/10/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	490.00 ton	Dry-weight		65.6	17,300.00	3,100.00	20,300.00		9.49

	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	18.15	216.01	38.71	253.46	1,184.91

06/15/2023: Corn, silage

Crop: Corn, silage Acres planted: 27 Plant date: 06/15/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/17/2023	795.00 ton	Dry-weight		75.3	15,900.00	3,200.00	19,500.00		7.50

	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	29.44	231.27	46.55	283.64	1,090.92

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13

Field name: 13

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

Crop: Wheat, silage, soft dough Acres planted: 20 Plant date: 11/10/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	370.00 ton	Dry-weight		68.7	16,700.00	3,400.00	14,200.00		9.81

	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	18.50	193.40	39.38	164.45	1,136.10

06/27/2023: Corn, silage

Crop: Corn, silage Acres planted: 20 Plant date: 06/27/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/17/2023	575.00 ton	Dry-weight		65.4	12,000.00	3,100.00	18,400.00		7.38

	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	28.75	238.74	61.67	366.07	1,468.25

14

Field name: 14

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

Crop: Wheat, silage, soft dough Acres planted: 124 Plant date: 11/11/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/06/2023	2,250.00 ton	Dry-weight		66.7	17,300.00	3,200.00	13,400.00		8.89

	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	18.15	209.06	38.67	161.93	1,074.33

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14

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 124 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/17/2023	3,745.00 ton	Dry-weight		70.6	13,800.00	2,900.00	16,700.00		6.18

	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	30.20	245.07	51.50	296.57	1,097.48

18

Field name: 18

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

Crop: Wheat, silage, soft dough Acres planted: 37 Plant date: 11/11/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/06/2023	670.00 ton	Dry-weight		67.6	16,300.00	3,200.00	13,400.00		9.21

	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	18.11	191.27	37.55	157.24	1,080.71

06/28/2023: Corn, silage

Crop: Corn, silage Acres planted: 37 Plant date: 06/28/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	1,115.00 ton	Dry-weight		74.8	15,800.00	3,300.00	18,200.00		6.12

	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	30.14	239.97	50.12	276.42	929.51



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19

Field name: 19

11/12/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 17 Plant date: 11/12/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	315.00 ton	Dry-weight		70.3	17,900.00	3,000.00	8,900.00		9.62

	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	18.53	197.02	33.02	97.96	1,058.82

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 17 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	520.00 ton	Dry-weight		69.0	12,400.00	3,200.00	18,100.00		6.48

	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	30.59	235.16	60.69	343.26	1,228.91

2

Field name: 2

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

Crop: Wheat, silage, soft dough Acres planted: 37 Plant date: 11/11/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/06/2023	670.00 ton	Dry-weight		65.7	17,300.00	2,800.00	11,400.00		8.38

	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	18.11	214.90	34.78	141.61	1,040.98

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2

06/29/2023: Corn, silage

Crop: Corn, silage

Acres planted: 37 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	1,120.00 ton	Dry-weight		69.0	12,200.00	3,000.00	11,800.00		5.64

	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	30.27	228.96	56.30	221.46	1,058.49

20N

Field name: 20N

11/12/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 26 Plant date: 11/12/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	470.00 ton	Dry-weight		70.5	19,000.00	3,100.00	9,100.00		9.17

	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	18.08	202.64	33.06	97.06	978.02

06/29/2023: Corn, silage

Crop: Corn, silage

Acres planted: 26 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	775.00 ton	Dry-weight		70.1	14,300.00	3,300.00	21,200.00		7.58

	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	29.81	254.90	58.82	377.89	1,351.14

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20S

Field name: 20S

11/13/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 66 Plant date: 11/13/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	1,190.00 <i>ton</i>	Dry-weight		69.3	17,600.00	2,300.00	7,000.00		8.87

	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	18.03	194.84	25.46	77.49	981.96

06/30/2023: Corn, silage

Crop: Corn, silage Acres planted: 66 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	1,975.00 <i>ton</i>	Dry-weight		71.0	13,900.00	3,000.00	20,300.00		7.54

	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	29.92	241.25	52.07	352.33	1,308.65

21

Field name: 21

11/13/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 37 Plant date: 11/13/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/09/2023	675.00 <i>ton</i>	Dry-weight		68.9	16,600.00	2,900.00	8,000.00		9.37

	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	18.24	188.37	32.91	90.78	1,063.24

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21

06/30/2023: Corn, silage

Crop: Corn, silage

Acres planted: 37 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	1,115.00 ton	Dry-weight		70.8	14,200.00	2,800.00	13,800.00		6.46

	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	30.14	249.90	49.28	242.87	1,136.89

22

Field name: 22

11/13/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 22 Plant date: 11/13/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/09/2023	401.00 ton	Dry-weight		66.5	16,300.00	3,000.00	8,100.00		9.21

	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	18.23	199.06	36.64	98.92	1,124.75

06/30/2023: Corn, silage

Crop: Corn, silage

Acres planted: 22 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/18/2023	675.00 ton	Dry-weight		69.8	14,000.00	2,500.00	12,400.00		5.97

	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	30.68	259.45	46.33	229.79	1,106.35

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3

Field name: 3

11/14/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 100 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	1,822.00 ton	Dry-weight		72.8	21,000.00	4,500.00	22,800.00		10.30

	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	18.22	208.15	44.60	225.99	1,020.90

06/27/2023: Corn, silage

Crop: Corn, silage Acres planted: 100 Plant date: 06/27/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	3,005.00 ton	Dry-weight		71.3	14,100.00	3,100.00	13,800.00		6.39

	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	30.05	243.21	53.47	238.03	1,102.19

4

Field name: 4

11/14/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 40 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	725.00 ton	Dry-weight		66.7	15,400.00	3,200.00	12,900.00		8.62

	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	18.13	185.90	38.63	155.72	1,040.54

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4

06/30/2023: Corn, silage

Crop: Corn, silage

Acres planted: 40 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	1,225.00 ton	Dry-weight		69.3	12,300.00	2,900.00	12,800.00		5.88

	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	30.63	231.29	54.53	240.69	1,105.66

5

Field name: 5

11/13/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough

Acres planted: 107 Plant date: 11/13/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	1,930.00 ton	Dry-weight		66.1	15,900.00	2,900.00	12,000.00		8.82

	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	18.04	194.45	35.47	146.75	1,078.63

06/29/2023: Corn, silage

Crop: Corn, silage

Acres planted: 107 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/16/2023	3,215.00 ton	Dry-weight		71.0	14,200.00	3,100.00	14,400.00		6.34

	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	30.05	247.46	54.02	250.95	1,104.88

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

6

Field name: 6

11/14/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 99 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	1,796.00 <i>ton</i>	Dry-weight		66.3	15,700.00	1,300.00	11,100.00		8.09

	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	18.14	191.97	15.90	135.72	989.19

9

Field name: 9

11/14/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 53 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/08/2023	966.00 <i>ton</i>	Dry-weight		65.5	16,700.00	3,000.00	19,400.00		8.36

	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	18.23	210.02	37.73	243.98	1,051.37

C2

Field name: C2

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C2

11/16/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 130 Plant date: 11/16/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/10/2023	2,335.00 ton	Dry-weight		65.8	16,400.00	2,600.00	10,000.00		8.95

	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	17.96	201.49	31.94	122.86	1,099.57

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 130 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	3,956.00 ton	Dry-weight		64.1	11,400.00	2,100.00	5,100.00		4.31

	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	30.43	249.08	45.88	111.43	941.70

C3

Field name: C3

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

Crop: Wheat, silage, soft dough Acres planted: 140 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 (%)
05/10/2023	2,530.00 ton	Dry-weight		68.1	17,100.00	3,100.00	19,300.00		7.40

	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	18.07	197.16	35.74	222.52	853.19



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C3

06/28/2023: Corn, silage

Crop: Corn, silage Acres planted: 140 Plant date: 06/28/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	4,195.00 ton	Dry-weight		68.2	11,800.00	2,000.00	4,500.00		3.72

	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	29.96	224.88	38.11	85.76	708.93

SL1

Field name: SL1

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

Crop: Wheat, silage, soft dough Acres planted: 130 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 (%)
05/09/2023	2,345.00 ton	Dry-weight		66.7	17,700.00	2,100.00	7,100.00		9.00

	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	18.04	212.64	25.23	85.30	1,081.23

06/30/2023: Corn, silage

Crop: Corn, silage Acres planted: 130 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	3,945.00 ton	Dry-weight		64.1	10,700.00	2,200.00	5,300.00		4.71

	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	30.35	233.14	47.93	115.48	1,026.24

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SL2

Field name: SL2

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

Crop: Wheat, silage, soft dough Acres planted: 130 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 (%)
05/10/2023	2,205.00 ton	Dry-weight		66.7	17,100.00	2,300.00	7,200.00		8.92

	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	16.96	193.17	25.98	81.33	1,007.64

06/30/2023: Corn, silage

Crop: Corn, silage Acres planted: 130 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	3,948.00 ton	Dry-weight		62.7	10,500.00	1,900.00	4,100.00		3.51

	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	30.37	237.88	43.05	92.89	795.21

SL3

Field name: SL3

11/16/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 130 Plant date: 11/16/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/09/2023	2,350.00 ton	Dry-weight		65.8	16,700.00	2,400.00	8,000.00		8.17

	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	18.08	206.49	29.68	98.92	1,010.19

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SL3

06/29/2023: Corn, silage

Crop: Corn, silage Acres planted: 130 Plant date: 06/29/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	3,944.00 ton	Dry-weight		68.8	10,800.00	1,900.00	4,500.00		3.37

	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	30.34	204.46	35.97	85.19	637.98

SL4

Field name: SL4

11/16/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 130 Plant date: 11/16/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/09/2023	2,359.00 ton	Dry-weight		65.5	17,300.00	2,400.00	7,500.00		8.64

	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	18.15	216.61	30.05	93.91	1,081.80

06/30/2023: Corn, silage

Crop: Corn, silage Acres planted: 130 Plant date: 06/30/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/19/2023	3,955.00 ton	Dry-weight		63.3	10,700.00	1,900.00	4,600.00		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	30.42	238.94	42.43	102.72	949.05

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## NUTRIENT BUDGET

## A. LAND APPLICATIONS

1 - 11/08/2022: Wheat, silage, soft dough

Field name: 1

Crop: Wheat, silage, soft dough

Plant date: 11/08/2022

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
11/09/2022	Surface (irrigation)		No precipitation	No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon		Process wastewater	106.79	13.86	113.99	1,319.69	2,055,503.00 <i>gal</i>
1		Ground water	0.00	0.00	0.00	267.08	9,019,554.00 <i>gal</i>
Application event totals			106.79	13.86	113.99	1,586.77	
01/15/2023	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	82.33	10.69	87.88	1,017.41	1,584,687.00 <i>gal</i>
1		Ground water	0.00	0.00	0.00	222.69	7,520,557.00 <i>gal</i>
Application event totals			82.33	10.69	87.88	1,240.10	
02/20/2023	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	69.92	9.08	74.63	864.09	1,345,881.00 <i>gal</i>
1		Ground water	0.00	0.00	0.00	211.22	7,133,254.00 <i>gal</i>
Application event totals			69.92	9.08	74.63	1,075.32	

1 - 06/16/2023: Corn, silage

Field name: 1

Crop: Corn, silage

Plant date: 06/16/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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1 - 06/16/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application			Precipitation 24 hours following	
06/06/2023	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	86.97	18.23	227.86	605.30	2,584,557.00 <i>gal</i>	
1		Ground water	0.00	0.00	0.00	237.50	8,020,554.00 <i>gal</i>	
Application event totals			86.97	18.23	227.86	842.80		
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	
1		Ground water	0.00	0.00	0.00	237.56	8,022,459.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	237.56		
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	90.51	18.97	237.12	629.91	2,689,664.00 <i>gal</i>	
1		Ground water	0.00	0.00	0.00	248.86	8,404,115.00 <i>gal</i>	
Application event totals			90.51	18.97	237.12	878.77		
07/24/2023	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	
1		Ground water	0.00	0.00	0.00	249.32	8,419,647.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	249.32		
08/09/2023	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	80.78	26.27	297.52	1,707.64	4,879,654.00 <i>gal</i>	
1		Ground water	0.00	0.00	0.00	243.45	8,221,478.00 <i>gal</i>	
Application event totals			80.78	26.27	297.52	1,951.09		

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**1 - 06/16/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/23/2023	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
1	Ground water	0.00	0.00	0.00	237.55	8,022,445.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	237.55	
09/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
1	Ground water	0.00	0.00	0.00	246.44	8,322,451.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	246.44	
09/22/2023	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
1	Ground water	0.00	0.00	0.00	246.53	8,325,669.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	246.53	

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

Field name: 11

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		
11/11/2022	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	72.92	9.46	77.83	901.07	339,551.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	332.20	2,388,514.00 <i>gal</i>
Application event totals		72.92	9.46	77.83	1,233.27	

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

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
01/17/2023	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	78.52	10.19	83.81	970.32	365,647.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	215.43	1,548,951.00 <i>gal</i>
Application event totals		78.52	10.19	83.81	1,185.75	
02/19/2023	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	82.65	10.73	88.22	1,021.37	384,885.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	209.21	1,504,229.00 <i>gal</i>
Application event totals		82.65	10.73	88.22	1,230.59	

**11 - 06/15/2023: Corn, silage**

Field name: 11

Crop: Corn, silage

Plant date: 06/15/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/06/2023	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	77.82	16.31	203.88	541.62	559,510.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	243.19	1,748,541.00 <i>gal</i>
Application event totals		77.82	16.31	203.88	784.81	
06/26/2023	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
3	Ground water	0.00	0.00	0.00	249.35	1,792,784.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	249.35	

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## 11 - 06/15/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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	73.88	15.49	193.58	514.24	531,228.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	249.19	1,791,667.00 <i>gal</i>
Application event totals		73.88	15.49	193.58	763.43	
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
3	Ground water	0.00	0.00	0.00	247.51	1,779,554.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	247.51	
08/07/2023	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	65.32	21.24	240.57	1,380.77	954,578.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	248.91	1,789,654.00 <i>gal</i>
Application event totals		65.32	21.24	240.57	1,629.68	
08/23/2023	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
3	Ground water	0.00	0.00	0.00	248.91	1,789,654.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	248.91	
09/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	68.15	22.16	250.98	1,440.53	995,897.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	244.06	1,754,789.00 <i>gal</i>
Application event totals		68.15	22.16	250.98	1,684.59	



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## 11 - 06/15/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
3	Ground water	0.00	0.00	0.00	238.62	1,715,663.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	238.62	

## 12 - 11/10/2022: Wheat, silage, soft dough

Field name: 12

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		
11/11/2022	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	84.85	11.01	90.57	1,048.56	711,236.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	313.68	4,059,645.00 <i>gal</i>
Application event totals		84.85	11.01	90.57	1,362.25	
01/18/2023	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	84.09	10.91	89.76	1,039.20	704,882.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	237.88	3,078,678.00 <i>gal</i>
Application event totals		84.09	10.91	89.76	1,277.08	
02/21/2023	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	80.59	10.46	86.02	995.86	675,487.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	200.29	2,592,115.00 <i>gal</i>
Application event totals		80.59	10.46	86.02	1,196.15	

## 12 - 06/15/2023: Corn, silage

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12 - 06/15/2023: Corn, silage

Field name: 12

Crop: Corn, silage

Plant date: 06/15/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/05/2023	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	77.39	16.22	202.76	538.62	1,001,547.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	199.37	2,580,245.00 <i>gal</i>
Application event totals		77.39	16.22	202.76	737.99	
06/26/2023	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
3	Ground water	0.00	0.00	0.00	253.60	3,282,118.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	253.60	
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	75.05	15.73	196.62	522.31	971,224.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	261.36	3,382,459.00 <i>gal</i>
Application event totals		75.05	15.73	196.62	783.67	
07/23/2023	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
3	Ground water	0.00	0.00	0.00	284.93	3,687,541.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	284.93	
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
Lagoon	Process wastewater	70.50	22.93	259.66	1,490.31	1,854,557.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	261.60	3,385,647.00 <i>gal</i>
Application event totals		70.50	22.93	259.66	1,751.91	

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**12 - 06/15/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/19/2023	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
3	Ground water	0.00	0.00	0.00	261.76	3,387,654.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	261.76	
09/02/2023	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	60.71	19.74	223.58	1,283.25	1,596,889.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	244.16	3,159,852.00 <i>gal</i>
Application event totals		60.71	19.74	223.58	1,527.41	
09/22/2023	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
3	Ground water	0.00	0.00	0.00	267.25	3,458,779.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	267.25	

**13 - 11/10/2022: Wheat, silage, soft dough**

Field name: 13

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		
11/11/2022	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	72.42	9.40	77.30	894.96	449,664.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	262.72	2,518,554.00 <i>gal</i>
Application event totals		72.42	9.40	77.30	1,157.68	

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## 13 - 11/10/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
01/12/2023	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	90.14	11.70	96.21	1,113.89	559,664.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	231.10	2,215,448.00 <i>gal</i>
Application event totals		90.14	11.70	96.21	1,344.99	
02/21/2023	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	72.67	9.43	77.57	898.07	451,225.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	197.10	1,889,554.00 <i>gal</i>
Application event totals		72.67	9.43	77.57	1,095.17	

## 13 - 06/27/2023: Corn, silage

Field name: 13

Crop: Corn, silage

Plant date: 06/27/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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	89.37	18.73	234.15	622.01	856,741.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	262.67	2,518,096.00 <i>gal</i>
Application event totals		89.37	18.73	234.15	884.68	
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
3	Ground water	0.00	0.00	0.00	273.40	2,621,004.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	273.40	

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13 - 06/27/2023: 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	86.03	18.03	225.40	598.78	824,752.00 <i>gal</i>	
3		Ground water	0.00	0.00	0.00	283.88	2,721,445.00 <i>gal</i>	
Application event totals			86.03	18.03	225.40	882.66		
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	
3		Ground water	0.00	0.00	0.00	273.25	2,619,547.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	273.25		
08/20/2023	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	90.06	29.29	331.68	1,903.67	1,754,775.00 <i>gal</i>	
3		Ground water	0.00	0.00	0.00	284.22	2,724,657.00 <i>gal</i>	
Application event totals			90.06	29.29	331.68	2,187.88		
09/05/2023	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	
3		Ground water	0.00	0.00	0.00	277.95	2,664,587.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	277.95		
09/20/2023	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	
3		Ground water	0.00	0.00	0.00	235.43	2,256,998.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	235.43		
10/06/2023	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	
3		Ground water	0.00	0.00	0.00	235.71	2,259,669.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	235.71		

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14 - 11/11/2022: Wheat, silage, soft dough

Field name: 14

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
11/12/2022	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	84.07	10.91	89.73	1,038.90	3,236,324.00 gal
3	Ground water	0.00	0.00	0.00	295.65	17,572,458.00 gal
Application event totals		84.07	10.91	89.73	1,334.55	

01/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	76.27	9.90	81.41	942.57	2,936,225.00 gal
3	Ground water	0.00	0.00	0.00	245.23	14,575,641.00 gal
Application event totals		76.27	9.90	81.41	1,187.80	

02/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation
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Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	80.49	10.45	85.91	994.68	3,098,554.00 gal
3	Ground water	0.00	0.00	0.00	211.55	12,574,114.00 gal
Application event totals		80.49	10.45	85.91	1,206.23	

14 - 06/29/2023: Corn, silage

Field name: 14

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
06/05/2023	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
Manure	Corral solids	222.60	83.32	370.58	3,631.16	1,000.00 ton
Application event totals		222.60	83.32	370.58	3,631.16	

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**14 - 06/29/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
3	Ground water	0.00	0.00	0.00	327.36	19,456,995.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	327.36	
07/08/2023	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
3	Ground water	0.00	0.00	0.00	315.99	19,564,221.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	315.99	
07/22/2023	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	46.08	14.98	169.70	973.99	5,566,448.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	283.40	17,546,332.00 <i>gal</i>
Application event totals		46.08	14.98	169.70	1,257.40	
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
3	Ground water	0.00	0.00	0.00	283.79	17,570,115.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	283.79	
08/21/2023	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
3	Ground water	0.00	0.00	0.00	274.22	16,977,841.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	274.22	
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
Lagoon	Process wastewater	33.41	10.87	123.06	706.30	4,036,541.00 <i>gal</i>
3	Ground water	0.00	0.00	0.00	274.09	16,969,884.00 <i>gal</i>
Application event totals		33.41	10.87	123.06	980.39	

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**14 - 06/29/2023: Corn, silage**

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
09/19/2023	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
3		Ground water	0.00	0.00	0.00	274.16	16,974,159.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	274.16	

10/04/2023	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
3		Ground water	0.00	0.00	0.00	43.19	2,566,995.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	43.19	

**18 - 11/11/2022: Wheat, silage, soft dough**

Field name: 18

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/15/2022	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	74.48	9.67	79.49	920.34	855,467.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	331.97	5,887,456.00 <i>gal</i>
Application event totals		74.48	9.67	79.49	1,252.30	
01/18/2023	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	63.16	8.20	67.41	780.48	725,471.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	230.42	4,086,482.00 <i>gal</i>
Application event totals		63.16	8.20	67.41	1,010.90	



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18 - 11/11/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
02/22/2023	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	65.66	8.52	70.08	811.42	754,225.00 gal
4	Ground water	0.00	0.00	0.00	224.83	3,987,441.00 gal
Application event totals		65.66	8.52	70.08	1,036.25	

18 - 06/28/2023: Corn, silage

Field name: 18

Crop: Corn, silage

Plant date: 06/28/2023

Application date	Application method	Precipitation 24 hours prior		Precipitation during application			Precipitation 24 hours following	
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	85.12	17.84	223.00	592.41	1,509,541.00 <i>gal</i>	
4		Ground water	0.00	0.00	0.00	258.88	4,591,224.00 <i>gal</i>	
Application event totals			85.12	17.84	223.00	851.28		
07/09/2023	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	
4		Ground water	0.00	0.00	0.00	253.09	4,488,648.00 <i>gal</i>	
Application event totals			0.00	0.00	0.00	253.09		
07/24/2023	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	68.24	14.25	178.08	473.06	1,205,422.00 <i>gal</i>	
4		Ground water	0.00	0.00	0.00	242.07	4,293,224.00 <i>gal</i>	
Application event totals			68.24	14.25	178.08	715.13		

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**18 - 06/28/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/06/2023	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
4	Ground water	0.00	0.00	0.00	253.15	4,489,664.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	253.15	
08/21/2023	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	53.39	17.36	196.63	1,128.57	1,924,559.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	253.29	4,492,147.00 <i>gal</i>
Application event totals		53.39	17.36	196.63	1,381.86	
09/03/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
4	Ground water	0.00	0.00	0.00	242.15	4,294,568.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	242.15	
09/18/2023	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	66.82	21.73	246.08	1,412.39	2,408,554.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	242.09	4,293,486.00 <i>gal</i>
Application event totals		66.82	21.73	246.08	1,654.48	
10/04/2023	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
4	Ground water	0.00	0.00	0.00	230.47	4,087,502.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	230.47	

**19 - 11/12/2022: Wheat, silage, soft dough**

Field name: 19

Crop: Wheat, silage, soft dough

Plant date: 11/12/2022

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

**19 - 11/12/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/13/2022	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	52.15	6.77	55.66	644.44	275,224.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	301.21	2,454,448.00 <i>gal</i>
Application event totals		52.15	6.77	55.66	945.65	
01/20/2023	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	92.57	12.02	98.81	1,143.95	488,554.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	203.03	1,654,441.00 <i>gal</i>
Application event totals		92.57	12.02	98.81	1,346.99	
02/22/2023	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	86.78	11.26	92.63	1,072.40	457,994.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	190.89	1,555,481.00 <i>gal</i>
Application event totals		86.78	11.26	92.63	1,263.29	

**19 - 06/29/2023: Corn, silage**

Field name: 19

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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	76.24	15.98	199.74	530.61	621,224.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	239.48	1,951,448.00 <i>gal</i>
Application event totals		76.24	15.98	199.74	770.09	

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19 - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/08/2023	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
4	Ground water	0.00	0.00	0.00	252.12	2,054,449.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	252.12	
07/22/2023	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	80.34	16.84	210.50	559.19	654,687.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	251.45	2,048,996.00 <i>gal</i>
Application event totals		80.34	16.84	210.50	810.65	
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
4	Ground water	0.00	0.00	0.00	263.25	2,145,114.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	263.25	
08/19/2023	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	65.20	21.20	240.13	1,378.21	1,079,852.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	252.09	2,054,164.00 <i>gal</i>
Application event totals		65.20	21.20	240.13	1,630.30	
09/03/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
4	Ground water	0.00	0.00	0.00	252.18	2,054,881.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	252.18	

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19 - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
09/17/2023	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	57.95	18.85	213.42	1,224.93	959,755.00 <i>gal</i>
4		Ground water	0.00	0.00	0.00	240.16	1,956,994.00 <i>gal</i>
Application event totals			57.95	18.85	213.42	1,465.09	
10/04/2023	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
4		Ground water	0.00	0.00	0.00	263.99	2,151,124.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	263.99	

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

Field name: 2

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/12/2022	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	85.79	11.14	91.57	1,060.20	985,469.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	251.02	5,058,995.00 <i>gal</i>
Application event totals		85.79	11.14	91.57	1,311.22	
01/18/2023	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	86.70	11.25	92.53	1,071.34	995,825.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	211.49	4,262,348.00 <i>gal</i>
Application event totals		86.70	11.25	92.53	1,282.83	

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

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
02/18/2023	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	80.06	10.39	85.46	989.39	919,655.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	206.48	4,161,248.00 <i>gal</i>
Application event totals		80.06	10.39	85.46	1,195.87	

**2 - 06/29/2023: Corn, silage**

Field name: 2

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	56.08	11.75	146.93	390.30	994,558.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	221.42	4,462,448.00 <i>gal</i>
Application event totals		56.08	11.75	146.93	611.73	
07/08/2023	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
1	Ground water	0.00	0.00	0.00	216.23	4,357,852.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	216.23	
07/22/2023	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	65.15	13.66	170.70	453.46	1,155,478.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	196.61	3,962,486.00 <i>gal</i>
Application event totals		65.15	13.66	170.70	650.07	

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**2 - 06/29/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/03/2023	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
1	Ground water	0.00	0.00	0.00	201.31	4,057,124.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	201.31	
08/18/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	68.21	22.18	251.21	1,441.83	2,458,753.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	211.45	4,261,485.00 <i>gal</i>
Application event totals		68.21	22.18	251.21	1,653.28	
09/02/2023	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
1	Ground water	0.00	0.00	0.00	206.44	4,160,581.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	206.44	
09/19/2023	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	70.87	23.05	261.03	1,498.16	2,554,825.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	201.58	4,062,489.00 <i>gal</i>
Application event totals		70.87	23.05	261.03	1,699.74	
10/03/2023	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
1	Ground water	0.00	0.00	0.00	201.33	4,057,428.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	201.33	

**20N - 11/12/2022: Wheat, silage, soft dough**

Field name: 20N

Crop: Wheat, silage, soft dough

Plant date: 11/12/2022

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**20N - 11/12/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/13/2022	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	68.20	8.85	72.80	842.83	550,514.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	315.71	3,934,551.00 <i>gal</i>
Application event totals		68.20	8.85	72.80	1,158.54	
01/18/2023	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	93.10	12.08	99.37	1,150.51	751,485.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	211.37	2,634,258.00 <i>gal</i>
Application event totals		93.10	12.08	99.37	1,361.89	
02/20/2023	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	81.58	10.59	87.07	1,008.06	658,441.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	219.85	2,739,882.00 <i>gal</i>
Application event totals		81.58	10.59	87.07	1,227.91	

**20N - 06/29/2023: Corn, silage**

Field name: 20N

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	77.93	16.33	204.18	542.40	971,224.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	243.46	3,034,159.00 <i>gal</i>
Application event totals		77.93	16.33	204.18	785.86	



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

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/09/2023	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
4	Ground water	0.00	0.00	0.00	235.87	2,939,551.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	235.87	
07/23/2023	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	79.95	16.76	209.48	556.47	996,412.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	219.22	2,731,995.00 <i>gal</i>
Application event totals		79.95	16.76	209.48	775.69	
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
4	Ground water	0.00	0.00	0.00	251.63	3,135,993.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	251.63	
08/20/2023	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	82.49	26.83	303.81	1,743.72	2,089,541.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	227.76	2,838,441.00 <i>gal</i>
Application event totals		82.49	26.83	303.81	1,971.48	
09/03/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
4	Ground water	0.00	0.00	0.00	235.89	2,939,772.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	235.89	

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

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/16/2023	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	67.33	21.90	247.96	1,423.19	1,705,441.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	227.55	2,835,881.00 <i>gal</i>
Application event totals		67.33	21.90	247.96	1,650.74	
10/05/2023	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
4	Ground water	0.00	0.00	0.00	201.86	2,515,664.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	201.86	

20S - 11/13/2022: Wheat, silage, soft dough

Field name: 20S

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
10/27/2022	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
Manure		Corral solids	201.85	72.80	261.42	0.00	300.00 <i>ton</i>
Application event totals			201.85	72.80	261.42	0.00	
11/14/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation			
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
4		Ground water	0.00	0.00	0.00	347.82	11,003,445.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	347.82	

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**20S - 11/13/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
01/20/2023	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	29.55	3.84	31.54	365.13	605,413.00 <i>gal</i>
4		Ground water	0.00	0.00	0.00	253.05	8,005,448.00 <i>gal</i>
Application event totals			29.55	3.84	31.54	618.19	
02/19/2023	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
4		Ground water	0.00	0.00	0.00	189.96	6,009,664.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	189.96	

**20S - 06/30/2023: Corn, silage**

Field name: 20S

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	201.85	72.80	261.42	0.00	300.00 <i>ton</i>
Application event totals		201.85	72.80	261.42	0.00	
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
4	Ground water	0.00	0.00	0.00	301.74	9,545,889.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	301.74	
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
4	Ground water	0.00	0.00	0.00	278.30	8,804,225.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	278.30	

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20S - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
4	Ground water	0.00	0.00	0.00	281.44	8,903,665.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	281.44	
08/08/2023	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	53.87	11.29	141.14	374.94	1,704,221.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	278.43	8,808,254.00 <i>gal</i>
Application event totals		53.87	11.29	141.14	653.36	
08/24/2023	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
4	Ground water	0.00	0.00	0.00	275.19	8,705,774.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	275.19	
09/07/2023	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	28.07	9.13	103.36	593.25	1,804,595.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	290.96	9,204,882.00 <i>gal</i>
Application event totals		28.07	9.13	103.36	884.21	
09/20/2023	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
4	Ground water	0.00	0.00	0.00	282.56	8,938,994.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	282.56	
10/07/2023	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
4	Ground water	0.00	0.00	0.00	272.11	8,608,442.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	272.11	

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21 - 11/13/2022: Wheat, silage, soft dough

Field name: 21

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022

Application date	Application method	Precipitation 24 hours prior		Precipitation during application			Precipitation 24 hours following
11/14/2022	Surface (irrigation)	No precipitation		No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon		Process wastewater	63.16	8.20	67.41	780.46	725,447.00 <i>gal</i>
4		Ground water	0.00	0.00	0.00	285.82	5,068,994.00 <i>gal</i>
Application event totals			63.16	8.20	67.41	1,066.27	
01/20/2023	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	94.42	12.25	100.78	1,166.79	1,084,551.00 <i>gal</i>
4		Ground water	0.00	0.00	0.00	240.71	4,268,995.00 <i>gal</i>
Application event totals			94.42	12.25	100.78	1,407.50	
02/22/2023	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	70.24	9.12	74.97	867.95	806,778.00 <i>gal</i>
4		Ground water	0.00	0.00	0.00	229.74	4,074,554.00 <i>gal</i>
Application event totals			70.24	9.12	74.97	1,097.70	

21 - 06/30/2023: Corn, silage

Field name: 21

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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	84.66	17.67	220.92	586.87	1,495,448.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	240.77	4,270,115.00 <i>gal</i>
Application event totals		84.66	17.67	220.92	827.65	

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21 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/08/2023	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
4	Ground water	0.00	0.00	0.00	246.66	4,374,554.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	246.66	
07/23/2023	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	93.29	19.55	244.43	649.31	1,654,551.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	241.59	4,284,557.00 <i>gal</i>
Application event totals		93.29	19.55	244.43	890.90	
08/07/2023	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
4	Ground water	0.00	0.00	0.00	252.28	4,474,224.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	252.28	
08/22/2023	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	83.94	27.30	309.13	1,774.27	3,025,667.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	251.95	4,468,445.00 <i>gal</i>
Application event totals		83.94	27.30	309.13	2,026.22	
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
4	Ground water	0.00	0.00	0.00	252.18	4,472,498.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	252.18	

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21 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/19/2023	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	40.50	13.17	149.16	856.13	1,459,963.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	252.30	4,474,587.00 <i>gal</i>
Application event totals		40.50	13.17	149.16	1,108.43	
10/04/2023	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
4	Ground water	0.00	0.00	0.00	236.03	4,185,998.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	236.03	

22 - 11/13/2022: Wheat, silage, soft dough

Field name: 22

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/14/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	71.72	9.31	76.55	886.31	489,852.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	309.86	3,267,548.00 <i>gal</i>
Application event totals		71.72	9.31	76.55	1,196.17	
01/14/2023	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	88.71	11.51	94.69	1,096.25	605,882.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	195.87	2,065,487.00 <i>gal</i>
Application event totals		88.71	11.51	94.69	1,292.12	

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22 - 11/13/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
02/18/2023	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	95.97	12.46	102.43	1,185.93	655,448.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	148.65	1,567,548.00 <i>gal</i>
Application event totals		95.97	12.46	102.43	1,334.58	

22 - 06/30/2023: Corn, silage

Field name: 22

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/21/2023	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	81.49	17.08	213.50	567.17	859,332.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	214.78	2,264,885.00 <i>gal</i>
Application event totals		81.49	17.08	213.50	781.95	
07/09/2023	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
4	Ground water	0.00	0.00	0.00	224.31	2,365,448.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	224.31	
07/23/2023	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	93.74	19.65	245.61	652.46	988,554.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	243.70	2,569,885.00 <i>gal</i>
Application event totals		93.74	19.65	245.61	896.16	



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22 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/06/2023	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
4	Ground water	0.00	0.00	0.00	243.20	2,564,555.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	243.20	
08/21/2023	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	74.92	24.37	275.94	1,583.76	1,605,882.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	252.80	2,665,884.00 <i>gal</i>
Application event totals		74.92	24.37	275.94	1,836.57	
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
Lagoon	Process wastewater	43.15	14.03	158.92	912.14	924,882.00 <i>gal</i>
4	Ground water	0.00	0.00	0.00	243.70	2,569,887.00 <i>gal</i>
Application event totals		43.15	14.03	158.92	1,155.85	
09/19/2023	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
4	Ground water	0.00	0.00	0.00	244.23	2,575,441.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	244.23	
10/03/2023	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
4	Ground water	0.00	0.00	0.00	246.44	2,598,778.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	246.44	

3 - 11/14/2022: Wheat, silage, soft dough

Field name: 3

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022

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

**3 - 11/14/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/26/2022	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
Manure	Corral solids	199.84	72.07	258.80	0.00	450.00 <i>ton</i>
Application event totals		199.84	72.07	258.80	0.00	
11/15/2022	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
1	Ground water	0.00	0.00	0.00	268.86	14,644,587.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	268.86	
01/22/2023	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	48.64	6.31	51.91	601.02	1,509,876.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	261.60	14,248,931.00 <i>gal</i>
Application event totals		48.64	6.31	51.91	862.61	
02/22/2023	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
1	Ground water	0.00	0.00	0.00	186.20	10,142,159.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	186.20	

**3 - 06/27/2023: Corn, silage**

Field name: 3

Crop: Corn, silage

Plant date: 06/27/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
06/17/2023	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
1	Ground water	0.00	0.00	0.00	250.60	13,650,214.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	250.60	

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**3 - 06/27/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	222.04	80.08	287.56	0.00	500.00 <i>ton</i>
Application event totals		222.04	80.08	287.56	0.00	
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
1	Ground water	0.00	0.00	0.00	250.46	13,642,547.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	250.46	
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	53.02	11.11	138.90	368.99	2,541,224.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	287.28	15,647,881.00 <i>gal</i>
Application event totals		53.02	11.11	138.90	656.27	
08/02/2023	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
1	Ground water	0.00	0.00	0.00	250.42	13,640,215.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	250.42	
08/17/2023	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	19.42	6.32	71.53	410.54	1,892,156.00 <i>gal</i>
1	Ground water	0.32	0.00	0.00	232.06	12,639,852.00 <i>gal</i>
Application event totals		19.74	6.32	71.53	642.60	
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
1	Ground water	0.00	0.00	0.00	268.80	14,641,247.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	268.80	

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**3 - 06/27/2023: Corn, silage**

Application date	Application method		Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following		
09/16/2023	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
1			Ground water		0.00	0.00	0.00	232.16	12,645,321.00 <i>gal</i>
Application event totals					0.00	0.00	0.00	232.16	
10/02/2023	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
1			Ground water		0.00	0.00	0.00	213.72	11,641,258.00 <i>gal</i>
Application event totals					0.00	0.00	0.00	213.72	

**4 - 11/14/2022: Wheat, silage, soft dough**

Field name: 4

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
11/15/2022	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	56.09	7.28	59.87	693.17	696,554.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	278.04	6,057,884.00 <i>gal</i>
Application event totals		56.09	7.28	59.87	971.21	
01/22/2023	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	96.22	12.49	102.70	1,189.02	1,194,825.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	208.82	4,549,632.00 <i>gal</i>
Application event totals		96.22	12.49	102.70	1,397.84	

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**4 - 11/14/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
02/18/2023	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	80.19	10.41	85.59	990.98	995,821.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	190.33	4,146,852.00 <i>gal</i>
Application event totals		80.19	10.41	85.59	1,181.31	

**4 - 06/30/2023: Corn, silage**

Field name: 4

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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	99.44	20.84	260.53	692.09	1,906,554.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	213.36	4,648,559.00 <i>gal</i>
Application event totals		99.44	20.84	260.53	905.45	
07/09/2023	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
1	Ground water	0.00	0.00	0.00	241.03	5,251,424.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	241.03	
07/23/2023	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	93.09	19.51	243.90	647.93	1,784,885.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	208.94	4,552,347.00 <i>gal</i>
Application event totals		93.09	19.51	243.90	856.87	

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**4 - 06/30/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
08/08/2023	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
1	Ground water	0.00	0.00	0.00	227.08	4,947,532.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	227.08	
08/22/2023	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	74.38	24.19	273.93	1,572.24	2,898,547.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	208.90	4,551,478.00 <i>gal</i>
Application event totals		74.38	24.19	273.93	1,781.15	
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
1	Ground water	0.00	0.00	0.00	231.85	5,051,447.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	231.85	
09/20/2023	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
1	Ground water	0.00	0.00	0.00	231.94	5,053,456.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	231.94	
10/04/2023	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
1	Ground water	0.00	0.00	0.00	232.10	5,056,824.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	232.10	

**5 - 11/13/2022: Wheat, silage, soft dough**

Field name: 5

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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**5 - 11/13/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/25/2022	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
Manure	Corral solids	207.51	74.84	268.75	0.00	500.00 <i>ton</i>
Application event totals		207.51	74.84	268.75	0.00	
11/14/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
1	Ground water	0.00	0.00	0.00	266.29	15,519,845.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	266.29	
01/15/2023	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	28.48	3.70	30.39	351.88	945,881.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	197.67	11,520,321.00 <i>gal</i>
Application event totals		28.48	3.70	30.39	549.55	
02/19/2023	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
1	Ground water	0.00	0.00	0.00	197.68	11,521,447.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	197.68	

**5 - 06/29/2023: Corn, silage**

Field name: 5

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	249.02	89.81	322.50	0.00	600.00 <i>ton</i>
Application event totals		249.02	89.81	322.50	0.00	

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**5 - 06/29/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
1	Ground water	0.00	0.00	0.00	231.98	13,520,115.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	231.98	
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
1	Ground water	0.00	0.00	0.00	266.27	15,518,574.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	266.27	
07/17/2023	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	22.11	4.63	57.93	153.90	1,134,115.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	231.94	13,517,884.00 <i>gal</i>
Application event totals		22.11	4.63	57.93	385.84	
08/02/2023	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
1	Ground water	0.00	0.00	0.00	232.00	13,521,447.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	232.00	
08/18/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	18.75	6.10	69.04	396.25	1,954,115.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	231.89	13,514,884.00 <i>gal</i>
Application event totals		18.75	6.10	69.04	628.13	
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
1	Ground water	0.00	0.00	0.00	231.85	13,512,448.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	231.85	



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## 5 - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/15/2023	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	7.20	2.34	26.50	152.10	750,114.00 <i>gal</i>
1	Ground water	0.00	0.00	0.00	232.00	13,521,498.00 <i>gal</i>
Application event totals		7.20	2.34	26.50	384.11	
10/03/2023	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
1	Ground water	0.00	0.00	0.00	231.89	13,514,884.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	231.89	

## 6 - 11/14/2022: Wheat, silage, soft dough

Field name: 6

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
10/25/2022	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
Manure		Corral solids	190.64	68.76	246.89	0.00	425.00 <i>ton</i>
Application event totals			190.64	68.76	246.89	0.00	
11/15/2022	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
3		Ground water	0.00	0.00	0.00	367.19	17,424,558.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	367.19	

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**6 - 11/14/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
01/15/2023	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	29.40	3.82	31.38	363.30	903,554.00 <i>gal</i>
3		Ground water	0.00	0.00	0.00	261.85	12,425,678.00 <i>gal</i>
Application event totals			29.40	3.82	31.38	625.15	
02/21/2023	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
3		Ground water	0.00	0.00	0.00	261.97	12,431,224.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	261.97	

**9 - 11/14/2022: Wheat, silage, soft dough**

Field name: 9

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/25/2022	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
Manure	Corral solids	217.85	78.57	282.13	0.00	260.00 <i>ton</i>
Application event totals		217.85	78.57	282.13	0.00	
11/15/2022	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
3	Ground water	0.00	0.00	0.00	318.54	8,092,335.00 <i>gal</i>
Application event totals		0.00	0.00	0.00	318.54	

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## 9 - 11/14/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
01/15/2023	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	39.80	5.17	42.48	491.84	654,871.00 <i>gal</i>
3		Ground water	0.00	0.00	0.00	251.61	6,392,115.00 <i>gal</i>
Application event totals			39.80	5.17	42.48	743.46	
02/20/2023	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
3		Ground water	0.00	0.00	0.00	259.45	6,591,225.00 <i>gal</i>
Application event totals			0.00	0.00	0.00	259.45	

## C2 - 11/16/2022: Wheat, silage, soft dough

Field name: C2

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/25/2022	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
Manure	Corral solids	204.96	73.92	265.44	0.00	600.00 <i>ton</i>
Application event totals		204.96	73.92	265.44	0.00	
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
CN	Ground water	0.32	0.00	0.00	1,032.35	12,564,122.00 <i>gal</i>
Application event totals		0.32	0.00	0.00	1,032.35	
01/25/2023	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
CN	Ground water	0.37	0.00	0.00	1,196.74	14,564,882.00 <i>gal</i>
Application event totals		0.37	0.00	0.00	1,196.74	

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**C2 - 11/16/2022: 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
CN		Ground water	0.40	0.00	0.00	1,274.64	15,512,987.00 <i>gal</i>
Application event totals			0.40	0.00	0.00	1,274.64	

**C2 - 06/29/2023: Corn, silage**

Field name: C2

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	245.28	128.21	507.28	0.00	1,800.00 <i>ton</i>
Application event totals		245.28	128.21	507.28	0.00	
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CN	Ground water	0.52	0.00	0.00	1,673.40	20,365,995.00 <i>gal</i>
Application event totals		0.52	0.00	0.00	1,673.40	
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
CN	Ground water	0.53	0.00	0.00	1,681.02	20,458,775.00 <i>gal</i>
Application event totals		0.53	0.00	0.00	1,681.02	
07/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CN	Ground water	0.52	0.00	0.00	1,673.72	20,369,885.00 <i>gal</i>
Application event totals		0.52	0.00	0.00	1,673.72	

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## C2 - 06/29/2023: 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
CN	Ground water	0.52	0.00	0.00	1,656.46	20,159,863.00 <i>gal</i>
Application event totals		0.52	0.00	0.00	1,656.46	
08/20/2023	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
CN	Ground water	0.52	0.00	0.00	1,656.45	20,159,753.00 <i>gal</i>
Application event totals		0.52	0.00	0.00	1,656.45	
09/05/2023	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
CN	Ground water	0.41	0.00	0.00	1,311.86	15,965,896.00 <i>gal</i>
Application event totals		0.41	0.00	0.00	1,311.86	
09/20/2023	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
CN	Ground water	0.40	0.00	0.00	1,281.69	15,598,778.00 <i>gal</i>
Application event totals		0.40	0.00	0.00	1,281.69	
10/05/2023	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
CN	Ground water	0.40	0.00	0.00	1,280.33	15,582,225.00 <i>gal</i>
Application event totals		0.40	0.00	0.00	1,280.33	

## C3 - 11/15/2022: Wheat, silage, soft dough

Field name: C3

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
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## C3 - 11/15/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/25/2022	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
Manure	Corral solids	253.76	91.52	328.64	0.00	800.00 <i>ton</i>
Application event totals		253.76	91.52	328.64	0.00	
11/16/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
CN	Ground water	0.30	0.00	0.00	956.86	12,541,229.00 <i>gal</i>
Application event totals		0.30	0.00	0.00	956.86	
01/15/2023	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
CN	Ground water	0.30	0.00	0.00	954.77	12,513,846.00 <i>gal</i>
Application event totals		0.30	0.00	0.00	954.77	
02/15/2023	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
CN	Ground water	0.35	0.00	0.00	1,109.89	14,546,998.00 <i>gal</i>
Application event totals		0.35	0.00	0.00	1,109.89	
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
CN	Ground water	0.30	0.00	0.00	957.45	12,548,996.00 <i>gal</i>
Application event totals		0.30	0.00	0.00	957.45	

## C3 - 06/28/2023: Corn, silage

Field name: C3

Crop: Corn, silage

Plant date: 06/28/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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**C3 - 06/28/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	221.43	115.75	457.96	0.00	1,750.00 <i>ton</i>
Application event totals		221.43	115.75	457.96	0.00	
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
CN	Ground water	0.44	0.00	0.00	1,408.90	18,465,978.00 <i>gal</i>
Application event totals		0.44	0.00	0.00	1,408.90	
07/08/2023	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
CN	Ground water	0.41	0.00	0.00	1,315.82	17,245,951.00 <i>gal</i>
Application event totals		0.41	0.00	0.00	1,315.82	
07/20/2023	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
CN	Ground water	0.44	0.00	0.00	1,393.11	18,258,951.00 <i>gal</i>
Application event totals		0.44	0.00	0.00	1,393.11	
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
CN	Ground water	0.46	0.00	0.00	1,469.29	19,257,489.00 <i>gal</i>
Application event totals		0.46	0.00	0.00	1,469.29	
08/20/2023	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
CN	Ground water	0.46	0.00	0.00	1,469.37	19,258,456.00 <i>gal</i>
Application event totals		0.46	0.00	0.00	1,469.37	

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## C3 - 06/28/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
09/05/2023	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
CN	Ground water	0.46	0.00	0.00	1,469.46	19,259,654.00 <i>gal</i>
Application event totals		0.46	0.00	0.00	1,469.46	
09/20/2023	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
CN	Ground water	0.46	0.00	0.00	1,469.40	19,258,963.00 <i>gal</i>
Application event totals		0.46	0.00	0.00	1,469.40	
10/05/2023	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
CN	Ground water	0.49	0.00	0.00	1,569.04	20,564,889.00 <i>gal</i>
Application event totals		0.49	0.00	0.00	1,569.04	

## SL1 - 11/15/2022: Wheat, silage, soft dough

Field name: SL1

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		
10/25/2022	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
Manure	Corral solids	256.20	92.40	331.80	0.00	750.00 <i>ton</i>
Application event totals		256.20	92.40	331.80	0.00	
11/16/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
SLN	Ground water	0.81	0.00	0.00	1,752.30	12,579,554.00 <i>gal</i>
Application event totals		0.81	0.00	0.00	1,752.30	



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**SL1 - 11/15/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
01/15/2023	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
SLN	Ground water	0.81	0.00	0.00	1,752.17	12,578,654.00 <i>gal</i>
Application event totals		0.81	0.00	0.00	1,752.17	
02/15/2023	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
SLN	Ground water	0.81	0.00	0.00	1,752.07	12,577,895.00 <i>gal</i>
Application event totals		0.81	0.00	0.00	1,752.07	
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
SLN	Ground water	0.81	0.00	0.00	1,752.22	12,578,995.00 <i>gal</i>
Application event totals		0.81	0.00	0.00	1,752.22	

**SL1 - 06/30/2023: Corn, silage**

Field name: SL1

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
06/15/2023	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
Manure		Corral solids	224.84	117.53	465.00	0.00	1,650.00 <i>ton</i>
Application event totals			224.84	117.53	465.00	0.00	
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
SLN		Ground water	1.00	0.00	0.00	2,168.15	15,564,885.00 <i>gal</i>
Application event totals			1.00	0.00	0.00	2,168.15	

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SL1 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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
SLN	Ground water	1.31	0.00	0.00	2,849.60	20,456,958.00 <i>gal</i>
Application event totals		1.31	0.00	0.00	2,849.60	
07/20/2023	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
SLN	Ground water	1.31	0.00	0.00	2,849.60	20,456,995.00 <i>gal</i>
Application event totals		1.31	0.00	0.00	2,849.60	
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
SLN	Ground water	1.32	0.00	0.00	2,865.33	20,569,889.00 <i>gal</i>
Application event totals		1.32	0.00	0.00	2,865.33	
08/20/2023	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
SLN	Ground water	1.32	0.00	0.00	2,864.62	20,564,778.00 <i>gal</i>
Application event totals		1.32	0.00	0.00	2,864.62	
09/05/2023	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
SLN	Ground water	1.30	0.00	0.00	2,829.92	20,315,669.00 <i>gal</i>
Application event totals		1.30	0.00	0.00	2,829.92	
09/20/2023	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
SLN	Ground water	0.98	0.00	0.00	2,133.28	15,314,559.00 <i>gal</i>
Application event totals		0.98	0.00	0.00	2,133.28	

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**SL1 - 06/30/2023: Corn, silage**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/05/2023	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
SLN	Ground water	1.12	0.00	0.00	2,439.80	17,515,025.00 <i>gal</i>
Application event totals		1.12	0.00	0.00	2,439.80	

**SL2 - 11/15/2022: Wheat, silage, soft dough**

Field name: SL2

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	
10/15/2022	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
Manure		Corral solids	239.12	86.24	309.68	0.00	700.00 <i>ton</i>
Application event totals			239.12	86.24	309.68	0.00	
11/16/2022	Surface (irrigation)	No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
SLN		Ground water	1.26	0.00	0.00	2,726.39	19,572,448.00 <i>gal</i>
Application event totals			1.26	0.00	0.00	2,726.39	
01/15/2023	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
SLN		Ground water	0.74	0.00	0.00	1,612.15	11,573,445.00 <i>gal</i>
Application event totals			0.74	0.00	0.00	1,612.15	
02/15/2023	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
SLN		Ground water	0.81	0.00	0.00	1,751.42	12,573,224.00 <i>gal</i>
Application event totals			0.81	0.00	0.00	1,751.42	

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**SL2 - 11/15/2022: 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
SLN	Ground water	0.54	0.00	0.00	1,065.72	10,574,558.00 <i>gal</i>
Application event totals		0.54	0.00	0.00	1,065.72	

**SL2 - 06/30/2023: Corn, silage**

Field name: SL2

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	238.46	124.65	493.19	0.00	1,750.00 <i>ton</i>
Application event totals		238.46	124.65	493.19	0.00	
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
SLN	Ground water	1.00	0.00	0.00	2,180.68	15,654,882.00 <i>gal</i>
Application event totals		1.00	0.00	0.00	2,180.68	
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
SLN	Ground water	1.29	0.00	0.00	2,808.19	20,159,687.00 <i>gal</i>
Application event totals		1.29	0.00	0.00	2,808.19	
07/20/2023	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
SLN	Ground water	1.31	0.00	0.00	2,849.60	20,456,995.00 <i>gal</i>
Application event totals		1.31	0.00	0.00	2,849.60	

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**SL2 - 06/30/2023: 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	
SLN		Ground water	1.29	0.00	0.00	2,804.97	20,136,558.00 <i>gal</i>	
Application event totals			1.29	0.00	0.00	2,804.97		
08/20/2023	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	
SLN		Ground water	1.29	0.00	0.00	2,808.20	20,159,753.00 <i>gal</i>	
Application event totals			1.29	0.00	0.00	2,808.20		
09/05/2023	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	
SLN		Ground water	1.29	0.00	0.00	2,804.97	20,136,559.00 <i>gal</i>	
Application event totals			1.29	0.00	0.00	2,804.97		
09/20/2023	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	
SLN		Ground water	1.30	0.00	0.00	2,829.76	20,314,559.00 <i>gal</i>	
Application event totals			1.30	0.00	0.00	2,829.76		
10/05/2023	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	
SLN		Ground water	0.97	0.00	0.00	2,107.91	15,132,445.00 <i>gal</i>	
Application event totals			0.97	0.00	0.00	2,107.91		

**SL3 - 11/16/2022: Wheat, silage, soft dough**

Field name: SL3

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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**SL3 - 11/16/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
10/25/2022	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
Manure		Corral solids	256.20	92.40	331.80	0.00	750.00 <i>ton</i>
Application event totals			256.20	92.40	331.80	0.00	
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
SLN		Ground water	0.81	0.00	0.00	1,751.46	12,573,554.00 <i>gal</i>
Application event totals			0.81	0.00	0.00	1,751.46	
01/15/2023	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
SLN		Ground water	0.81	0.00	0.00	1,751.60	12,574,558.00 <i>gal</i>
Application event totals			0.81	0.00	0.00	1,751.60	
02/15/2023	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
SLN		Ground water	0.81	0.00	0.00	1,751.73	12,575,448.00 <i>gal</i>
Application event totals			0.81	0.00	0.00	1,751.73	
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
SLN		Ground water	0.81	0.00	0.00	1,751.93	12,576,884.00 <i>gal</i>
Application event totals			0.81	0.00	0.00	1,751.93	

**SL3 - 06/29/2023: Corn, silage**

Field name: SL3

Crop: Corn, silage

Plant date: 06/29/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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SL3 - 06/29/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	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
Manure	Corral solids	204.40	106.84	422.73	0.00	1,500.00 <i>ton</i>
Application event totals		204.40	106.84	422.73	0.00	
06/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
SLN	Ground water	1.19	0.00	0.00	2,583.67	18,547,889.00 <i>gal</i>
Application event totals		1.19	0.00	0.00	2,583.67	
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
SLN	Ground water	1.21	0.00	0.00	2,629.93	18,879,996.00 <i>gal</i>
Application event totals		1.21	0.00	0.00	2,629.93	
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
SLN	Ground water	1.29	0.00	0.00	2,807.77	20,156,669.00 <i>gal</i>
Application event totals		1.29	0.00	0.00	2,807.77	
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
SLN	Ground water	1.29	0.00	0.00	2,806.55	20,147,889.00 <i>gal</i>
Application event totals		1.29	0.00	0.00	2,806.55	
08/17/2023	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
SLN	Ground water	1.27	0.00	0.00	2,756.09	19,785,668.00 <i>gal</i>
Application event totals		1.27	0.00	0.00	2,756.09	

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## SL3 - 06/29/2023: 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	
SLN		Ground water	1.28	0.00	0.00	2,784.20	19,987,448.00 <i>gal</i>	
Application event totals			1.28	0.00	0.00	2,784.20		
09/15/2023	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	
SLN		Ground water	1.23	0.00	0.00	2,661.77	19,108,559.00 <i>gal</i>	
Application event totals			1.23	0.00	0.00	2,661.77		
10/01/2023	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	
SLN		Ground water	1.00	0.00	0.00	2,180.67	15,654,779.00 <i>gal</i>	
Application event totals			1.00	0.00	0.00	2,180.67		

## SL4 - 11/16/2022: Wheat, silage, soft dough

Field name: SL4

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
10/25/2022	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
Manure		Corral solids	256.20	92.40	331.80	0.00	750.00 <i>ton</i>
Application event totals			256.20	92.40	331.80	0.00	
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
SLN		Ground water	0.76	0.00	0.00	1,654.13	11,874,852.00 <i>gal</i>
Application event totals			0.76	0.00	0.00	1,654.13	



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

**SL4 - 11/16/2022: Wheat, silage, soft dough**

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
01/15/2023	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
SLN	Ground water	0.77	0.00	0.00	1,668.58	11,978,554.00 <i>gal</i>
Application event totals		0.77	0.00	0.00	1,668.58	
02/15/2023	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
SLN	Ground water	0.77	0.00	0.00	1,668.73	11,979,654.00 <i>gal</i>
Application event totals		0.77	0.00	0.00	1,668.73	
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
SLN	Ground water	1.03	0.00	0.00	2,225.40	15,975,884.00 <i>gal</i>
Application event totals		1.03	0.00	0.00	2,225.40	

**SL4 - 06/30/2023: Corn, silage**

Field name: SL4

Crop: Corn, silage

Plant date: 06/30/2023

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
06/15/2023	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
Manure		Corral solids	238.46	124.65	493.19	0.00	1,750.00 <i>ton</i>
Application event totals			238.46	124.65	493.19	0.00	
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
SLN		Ground water	1.29	0.00	0.00	2,806.75	20,149,335.00 <i>gal</i>
Application event totals			1.29	0.00	0.00	2,806.75	

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

SL4 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/09/2023	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
SLN	Ground water	1.26	0.00	0.00	2,737.86	19,654,778.00 <i>gal</i>
Application event totals		1.26	0.00	0.00	2,737.86	
07/23/2023	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
SLN	Ground water	1.29	0.00	0.00	2,806.64	20,148,559.00 <i>gal</i>
Application event totals		1.29	0.00	0.00	2,806.64	
08/06/2023	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
SLN	Ground water	1.27	0.00	0.00	2,752.50	19,759,887.00 <i>gal</i>
Application event totals		1.27	0.00	0.00	2,752.50	
08/20/2023	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
SLN	Ground water	1.25	0.00	0.00	2,710.21	19,456,332.00 <i>gal</i>
Application event totals		1.25	0.00	0.00	2,710.21	
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
SLN	Ground water	1.23	0.00	0.00	2,662.78	19,115,774.00 <i>gal</i>
Application event totals		1.23	0.00	0.00	2,662.78	
09/19/2023	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
SLN	Ground water	1.23	0.00	0.00	2,677.97	19,224,885.00 <i>gal</i>
Application event totals		1.23	0.00	0.00	2,677.97	

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SL4 - 06/30/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
10/04/2023	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
SLN	Ground water	0.99	0.00	0.00	2,154.68	15,468,228.00 <i>gal</i>
Application event totals		0.99	0.00	0.00	2,154.68	

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

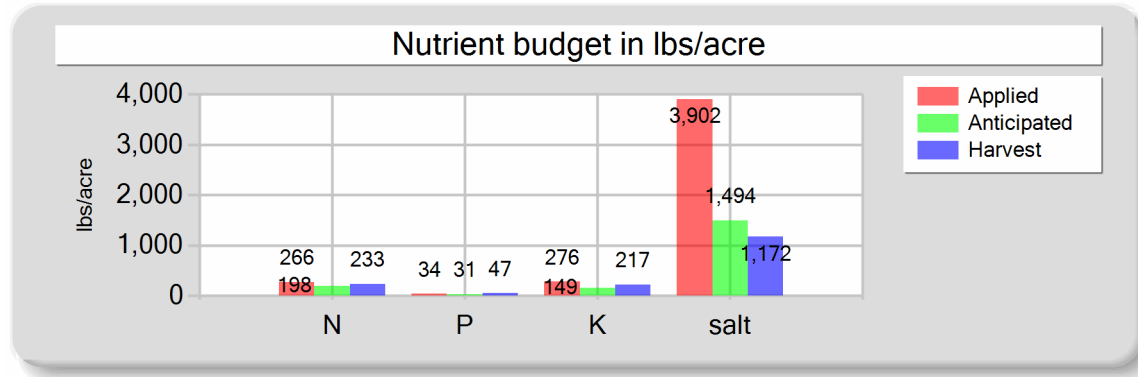
## B. NUTRIENT BUDGET

1 - 11/08/2022: Wheat, silage, soft dough

Field name: 1

Crop: Wheat, silage, soft dough

Plant date: 11/08/2022



	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	23,673,365.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	871.81 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	14.06 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	259.05	33.62	276.50	3,201.19	Process wastewater applied
Fresh water	0.00	0.00	0.00	701.00	4,986,071.00 gallons
Atmospheric deposition	7.00	0.00	0.00	0.00	183.62 acre-inches
Total nutrients applied	266.05	33.62	276.50	3,902.19	2.96 inches/acre
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00	
Actual crop nutrient removal	233.34	47.11	216.91	1,172.17	Total harvests for the crop
Nutrient balance	32.71	-13.48	59.59	2,730.02	1 harvests
Applied to removed ratio	1.14	0.71	1.27	3.33	

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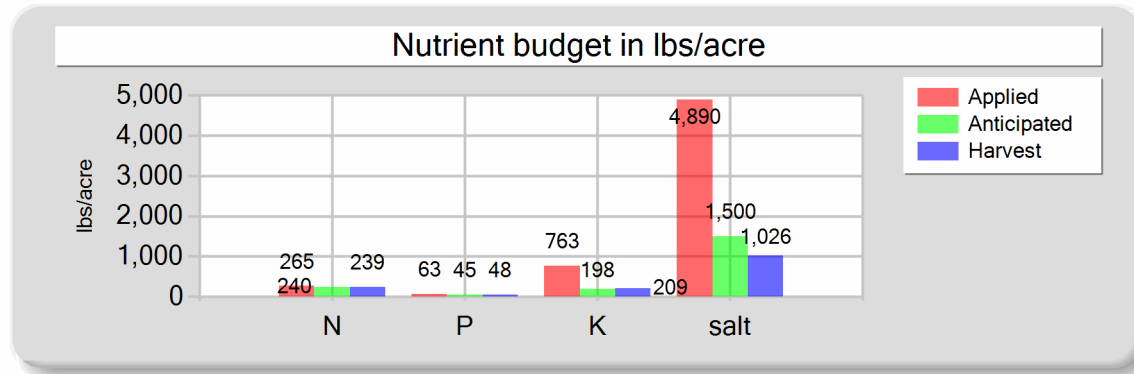
Reporting period 01/01/2023 to 12/31/2023.

1 - 06/16/2023: Corn, silage

Field name: 1

Crop: Corn, silage

Plant date: 06/16/2023



	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	258.26	63.47	762.50	2,942.86
Fresh water	0.00	0.00	0.00	1,947.20
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	265.26	63.47	762.50	4,890.06
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	239.24	47.85	209.12	1,026.09
Nutrient balance	26.01	15.62	553.39	3,863.97
Applied to removed ratio	1.11	1.33	3.65	4.77

Fresh water applied
65,758,818.00 <i>gallons</i>
2,421.67 <i>acre-inches</i>
39.06 <i>inches/acre</i>

Process wastewater applied
10,153,875.00 <i>gallons</i>
373.93 <i>acre-inches</i>
6.03 <i>inches/acre</i>

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

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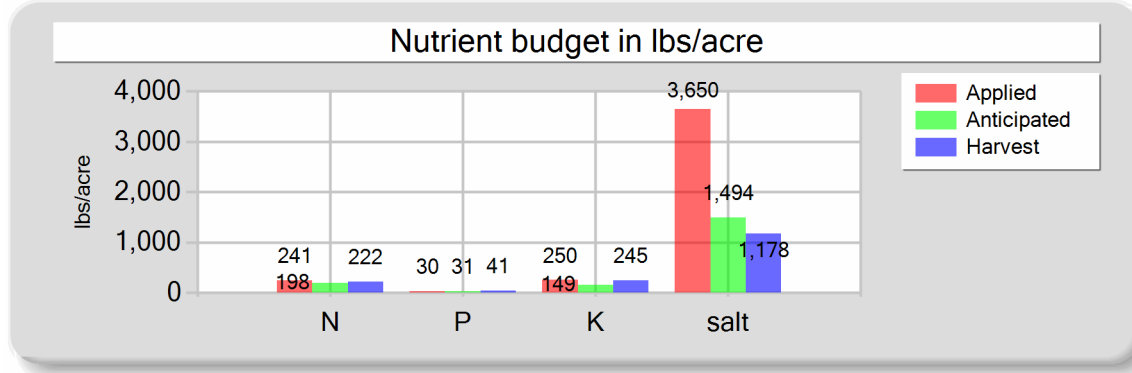
Reporting period 01/01/2023 to 12/31/2023.

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

Field name: 11

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)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	234.09	30.38	249.86	2,892.76
Fresh water	0.00	0.00	0.00	756.85
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	241.09	30.38	249.86	3,649.61
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	221.53	40.98	244.58	1,178.09
Nutrient balance	19.56	-10.59	5.28	2,471.52
Applied to removed ratio	1.09	0.74	1.02	3.10

Fresh water applied
5,441,694.00 <i>gallons</i>
200.40 <i>acre-inches</i>
13.36 <i>inches/acre</i>

Process wastewater applied
1,090,083.00 <i>gallons</i>
40.14 <i>acre-inches</i>
2.68 <i>inches/acre</i>

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

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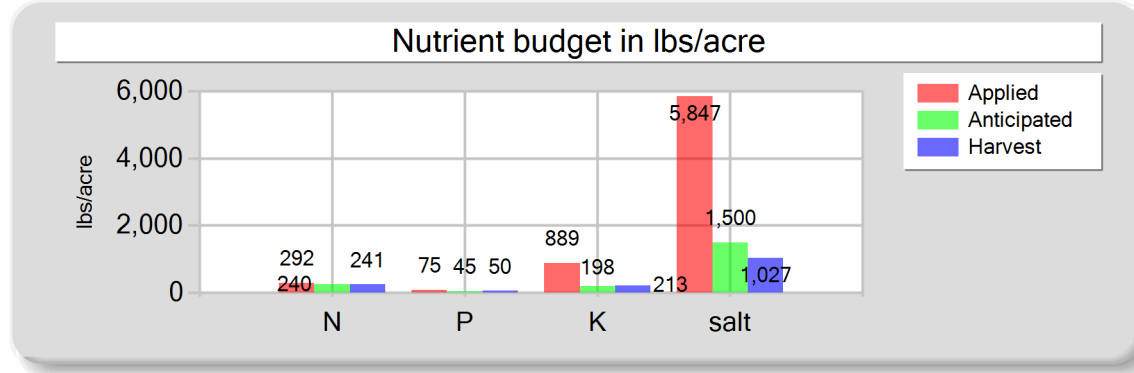
Reporting period 01/01/2023 to 12/31/2023.

11 - 06/15/2023: Corn, silage

Field name: 11

Crop: Corn, silage

Plant date: 06/15/2023



	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	285.17	75.20	889.02	3,877.15
Fresh water	0.00	0.00	0.00	1,969.74
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	292.17	75.20	889.02	5,846.89
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	240.89	49.90	213.36	1,027.24
Nutrient balance	51.28	25.30	675.66	4,819.66
Applied to removed ratio	1.21	1.51	4.17	5.69

Fresh water applied
14,162,306.00 <i>gallons</i>
521.55 <i>acre-inches</i>
34.77 <i>inches/acre</i>

Process wastewater applied
3,041,213.00 <i>gallons</i>
112.00 <i>acre-inches</i>
7.47 <i>inches/acre</i>

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

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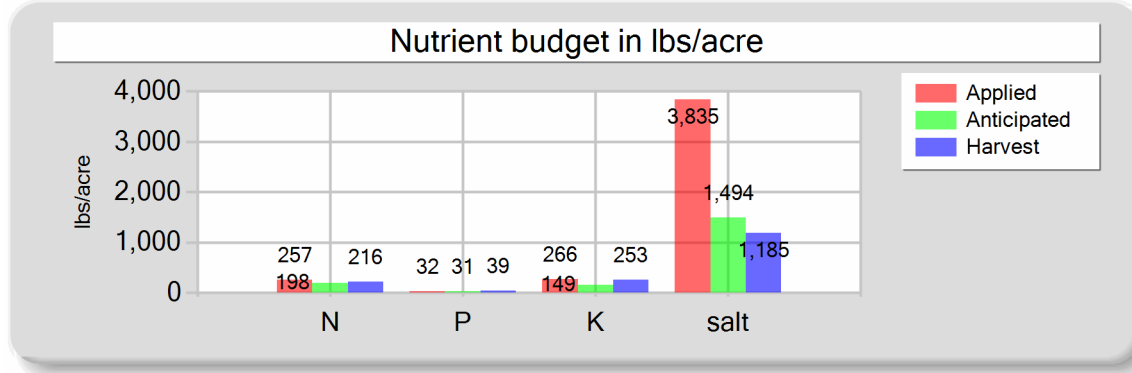
Reporting period 01/01/2023 to 12/31/2023.

12 - 11/10/2022: Wheat, silage, soft dough

Field name: 12

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)
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	249.53	32.39	266.34	3,083.62
Fresh water	0.00	0.00	0.00	751.86
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	256.53	32.39	266.34	3,835.47
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	216.01	38.71	253.46	1,184.91
Nutrient balance	40.53	-6.32	12.88	2,650.56
Applied to removed ratio	1.19	0.84	1.05	3.24

Fresh water applied
9,730,438.00 <i>gallons</i>
358.34 <i>acre-inches</i>
13.27 <i>inches/acre</i>

Process wastewater applied
2,091,605.00 <i>gallons</i>
77.03 <i>acre-inches</i>
2.85 <i>inches/acre</i>

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



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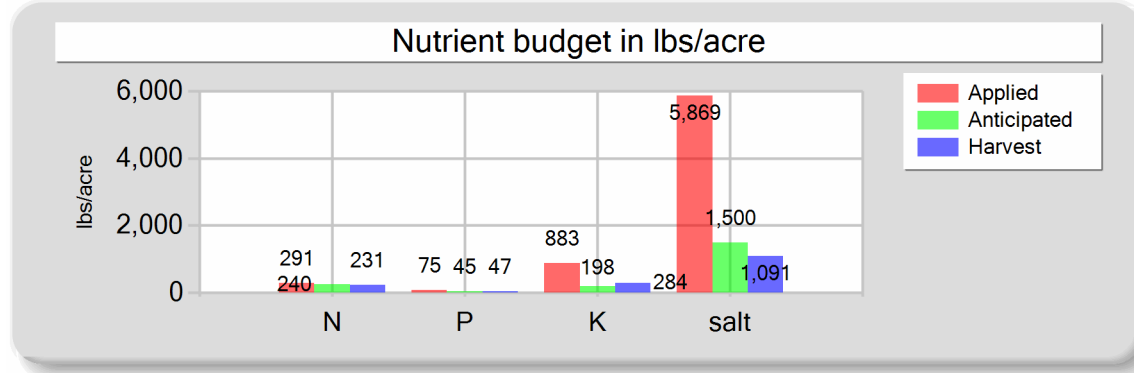
Reporting period 01/01/2023 to 12/31/2023.

12 - 06/15/2023: Corn, silage

Field name: 12

Crop: Corn, silage

Plant date: 06/15/2023



	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	283.64	74.62	882.61	3,834.49
Fresh water	0.00	0.00	0.00	2,034.04
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	290.64	74.62	882.61	5,868.53
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	231.27	46.55	283.64	1,090.92
Nutrient balance	59.37	28.07	598.98	4,777.61
Applied to removed ratio	1.26	1.60	3.11	5.38

Fresh water applied
26,324,295.00 <i>gallons</i>
969.43 <i>acre-inches</i>
35.90 <i>inches/acre</i>

Process wastewater applied
5,424,217.00 <i>gallons</i>
199.76 <i>acre-inches</i>
7.40 <i>inches/acre</i>

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

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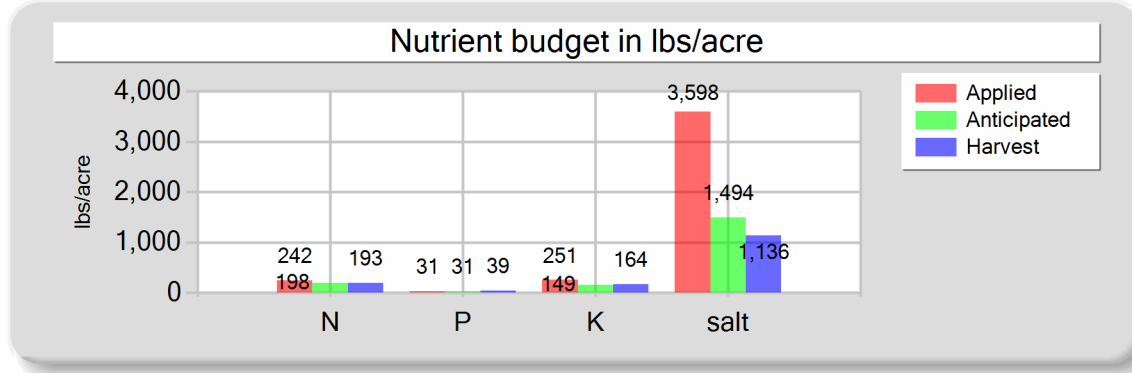
Reporting period 01/01/2023 to 12/31/2023.

13 - 11/10/2022: Wheat, silage, soft dough

Field name: 13

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	6,623,556.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	243.92 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	12.20 <i>inches/acre</i>
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	235.23	30.53	251.08	2,906.91	Process wastewater applied
Fresh water	0.00	0.00	0.00	690.92	1,460,553.00 <i>gallons</i>
Atmospheric deposition	7.00	0.00	0.00	0.00	53.79 <i>acre-inches</i>
Total nutrients applied	242.23	30.53	251.08	3,597.83	2.69 <i>inches/acre</i>
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00	
Actual crop nutrient removal	193.40	39.38	164.45	1,136.10	Total harvests for the crop
Nutrient balance	48.83	-8.84	86.63	2,461.74	1 <i>harvests</i>
Applied to removed ratio	1.25	0.78	1.53	3.17	

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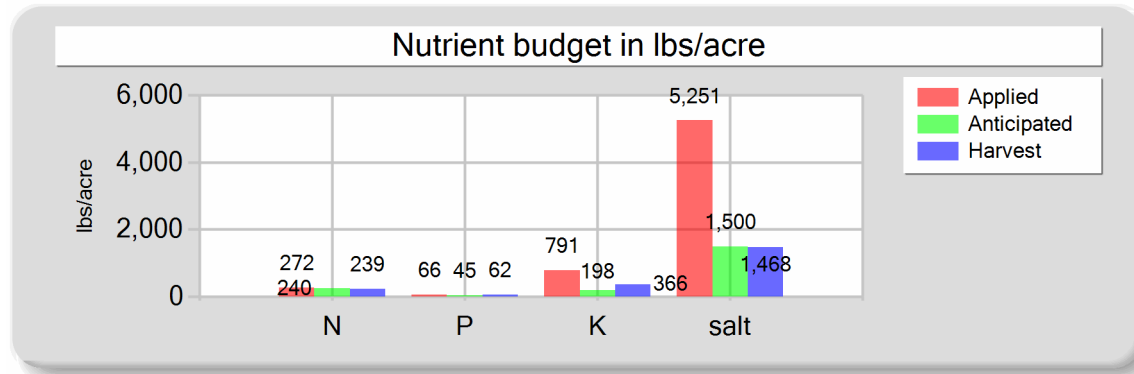
Reporting period 01/01/2023 to 12/31/2023.

13 - 06/27/2023: Corn, silage

Field name: 13

Crop: Corn, silage

Plant date: 06/27/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	265.46	66.05	791.23	3,124.46
Fresh water	0.00	0.00	0.00	2,126.51
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	272.46	66.05	791.23	5,250.97
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	238.74	61.67	366.07	1,468.25
Nutrient balance	33.72	4.38	425.16	3,782.72
Applied to removed ratio	1.14	1.07	2.16	3.58

Fresh water applied
20,386,003.00 <i>gallons</i>
750.75 <i>acre-inches</i>
37.54 <i>inches/acre</i>

Process wastewater applied
3,436,268.00 <i>gallons</i>
126.55 <i>acre-inches</i>
6.33 <i>inches/acre</i>

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

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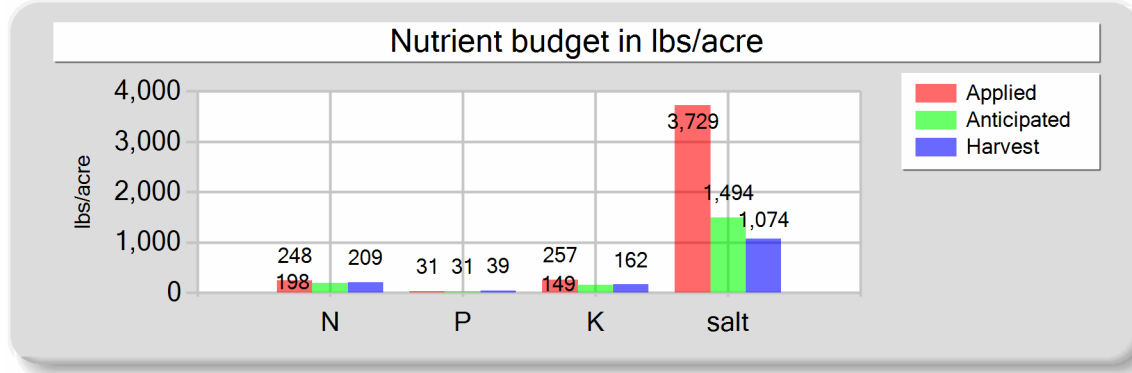
Reporting period 01/01/2023 to 12/31/2023.

14 - 11/11/2022: Wheat, silage, soft dough

Field name: 14

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	240.84	31.26	257.06	2,976.15
Fresh water	0.00	0.00	0.00	752.43
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	247.84	31.26	257.06	3,728.58
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	209.06	38.67	161.93	1,074.33
Nutrient balance	38.77	-7.41	95.12	2,654.25
Applied to removed ratio	1.19	0.81	1.59	3.47

Fresh water applied
44,722,213.00 gallons
1,646.97 acre-inches
13.28 inches/acre

Process wastewater applied
9,271,103.00 gallons
341.42 acre-inches
2.75 inches/acre

Total harvests for the crop
1 harvests

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

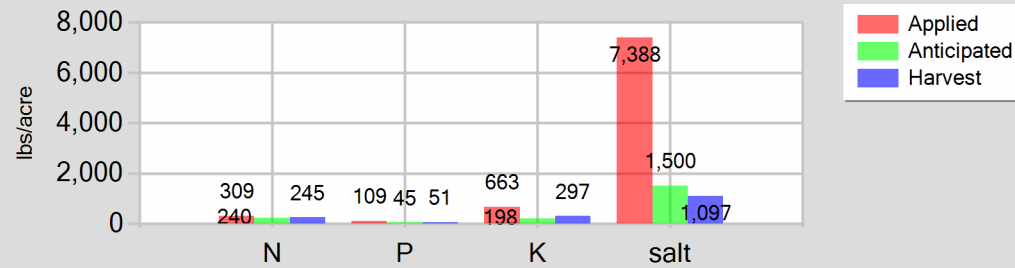
14 - 06/29/2023: Corn, silage

Field name: 14

Crop: Corn, silage

Plant date: 06/29/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	222.60	83.32	370.58	3,631.16
Process wastewater	79.49	25.85	292.76	1,680.29
Fresh water	0.00	0.00	0.00	2,076.20
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	309.09	109.17	663.34	7,387.65
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	245.07	51.50	296.57	1,097.48
Nutrient balance	64.02	57.67	366.77	6,290.17
Applied to removed ratio	1.26	2.12	2.24	6.73

Fresh water applied
127,626,542.00 <i>gallons</i>
4,700.05 <i>acre-inches</i>
37.90 <i>inches/acre</i>

Process wastewater applied
9,602,989.00 <i>gallons</i>
353.65 <i>acre-inches</i>
2.85 <i>inches/acre</i>

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

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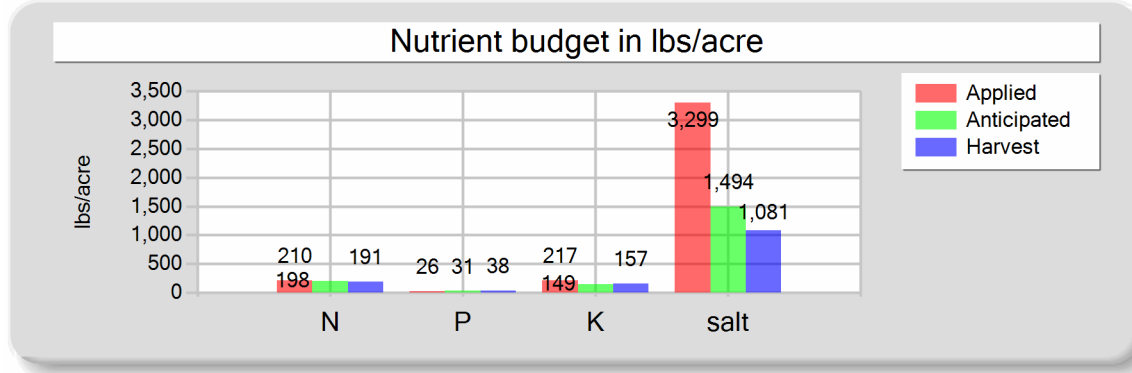
Reporting period 01/01/2023 to 12/31/2023.

18 - 11/11/2022: Wheat, silage, soft dough

Field name: 18

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	203.30	26.39	216.99	2,512.23
Fresh water	0.00	0.00	0.00	787.21
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	210.30	26.39	216.99	3,299.45
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	191.27	37.55	157.24	1,080.71
Nutrient balance	19.03	-11.16	59.75	2,218.74
Applied to removed ratio	1.10	0.70	1.38	3.05

Fresh water applied
13,961,379.00 <i>gallons</i>
514.15 <i>acre-inches</i>
13.90 <i>inches/acre</i>

Process wastewater applied
2,335,163.00 <i>gallons</i>
86.00 <i>acre-inches</i>
2.32 <i>inches/acre</i>

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

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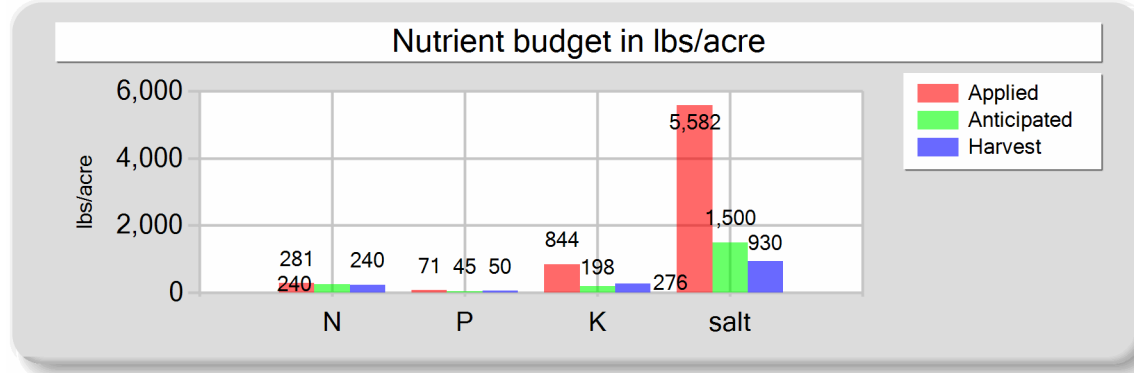
Reporting period 01/01/2023 to 12/31/2023.

18 - 06/28/2023: Corn, silage

Field name: 18

Crop: Corn, silage

Plant date: 06/28/2023



	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	273.56	71.18	843.79	3,606.42
Fresh water	0.00	0.00	0.00	1,975.20
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	280.56	71.18	843.79	5,581.62
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	239.97	50.12	276.42	929.51
Nutrient balance	40.59	21.06	567.37	4,652.11
Applied to removed ratio	1.17	1.42	3.05	6.00

Fresh water applied
35,030,463.00 <i>gallons</i>
1,290.05 <i>acre-inches</i>
34.87 <i>inches/acre</i>

Process wastewater applied
7,048,076.00 <i>gallons</i>
259.56 <i>acre-inches</i>
7.02 <i>inches/acre</i>

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

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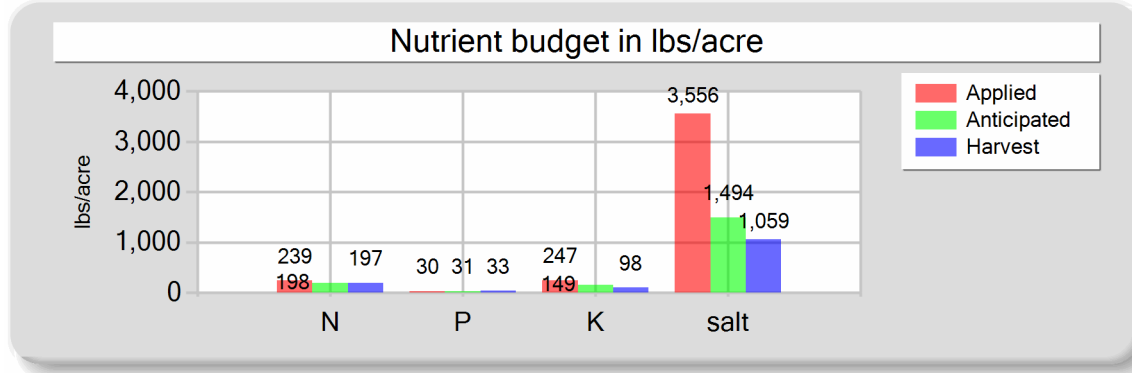
Reporting period 01/01/2023 to 12/31/2023.

19 - 11/12/2022: Wheat, silage, soft dough

Field name: 19

Crop: Wheat, silage, soft dough

Plant date: 11/12/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	231.50	30.05	247.10	2,860.79
Fresh water	0.00	0.00	0.00	695.13
Atmospheric deposition	7.00	0.00	0.00	0.00
<b>Total nutrients applied</b>	<b>238.50</b>	<b>30.05</b>	<b>247.10</b>	<b>3,555.92</b>
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	197.02	33.02	97.96	1,058.82
<b>Nutrient balance</b>	<b>41.49</b>	<b>-2.97</b>	<b>149.14</b>	<b>2,497.10</b>
Applied to removed ratio	1.21	0.91	2.52	3.36

Fresh water applied
5,664,370.00 <i>gallons</i>
208.60 <i>acre-inches</i>
12.27 <i>inches/acre</i>

Process wastewater applied
1,221,772.00 <i>gallons</i>
44.99 <i>acre-inches</i>
2.65 <i>inches/acre</i>

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



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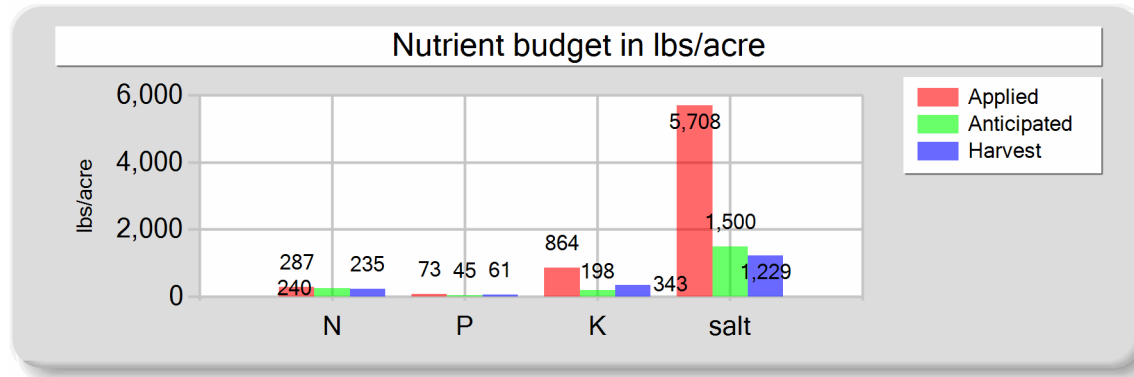
Reporting period 01/01/2023 to 12/31/2023.

19 - 06/29/2023: Corn, silage

Field name: 19

Crop: Corn, silage

Plant date: 06/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	279.73	72.87	863.79	3,692.94
Fresh water	0.00	0.00	0.00	2,014.72
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	286.73	72.87	863.79	5,707.66
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	235.16	60.69	343.26	1,228.91
Nutrient balance	51.57	12.18	520.53	4,478.75
Applied to removed ratio	1.22	1.20	2.52	4.64

Fresh water applied
16,417,170.00 <i>gallons</i>
604.59 <i>acre-inches</i>
35.56 <i>inches/acre</i>

Process wastewater applied
3,315,518.00 <i>gallons</i>
122.10 <i>acre-inches</i>
7.18 <i>inches/acre</i>

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

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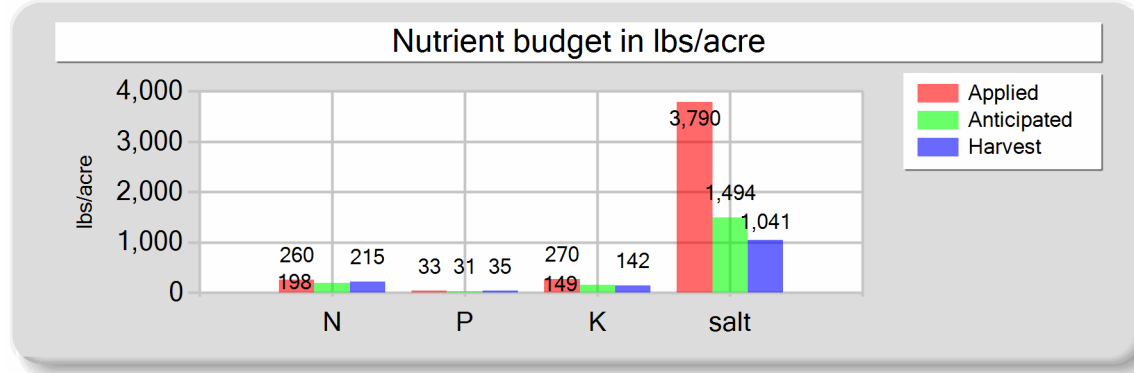
Reporting period 01/01/2023 to 12/31/2023.

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

Field name: 2

Crop: Wheat, silage, soft dough

Plant date: 11/11/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	252.55	32.78	269.56	3,120.92
Fresh water	0.00	0.00	0.00	668.99
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	259.55	32.78	269.56	3,789.91
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	214.90	34.78	141.61	1,040.98
Nutrient balance	44.65	-2.00	127.95	2,748.94
Applied to removed ratio	1.21	0.94	1.90	3.64

Fresh water applied
13,482,591.00 <i>gallons</i>
496.52 <i>acre-inches</i>
13.42 <i>inches/acre</i>

Process wastewater applied
2,900,949.00 <i>gallons</i>
106.83 <i>acre-inches</i>
2.89 <i>inches/acre</i>

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

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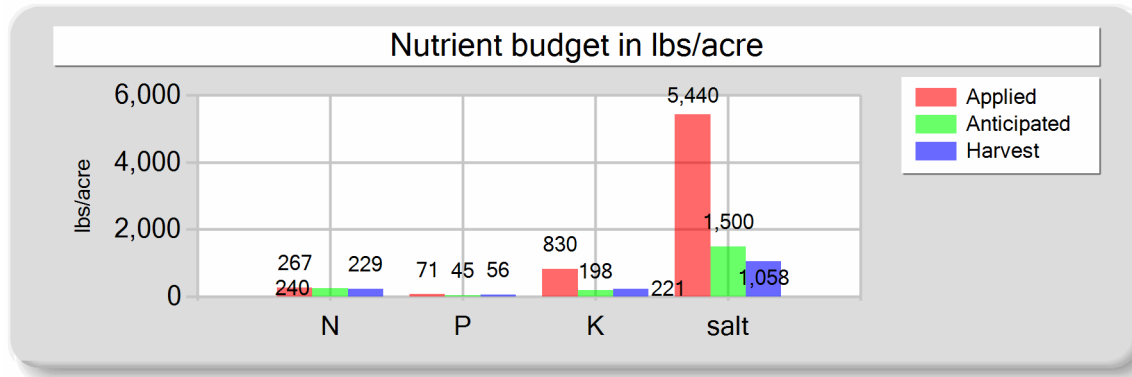
Reporting period 01/01/2023 to 12/31/2023.

2 - 06/29/2023: Corn, silage

Field name: 2

Crop: Corn, silage

Plant date: 06/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	260.31	70.64	829.86	3,783.75
Fresh water	0.00	0.00	0.00	1,656.37
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	267.31	70.64	829.86	5,440.12
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	228.96	56.30	221.46	1,058.49
Nutrient balance	38.35	14.34	608.40	4,381.63
Applied to removed ratio	1.17	1.25	3.75	5.14

Fresh water applied
33,381,893.00 <i>gallons</i>
1,229.34 <i>acre-inches</i>
33.23 <i>inches/acre</i>

Process wastewater applied
7,163,614.00 <i>gallons</i>
263.81 <i>acre-inches</i>
7.13 <i>inches/acre</i>

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

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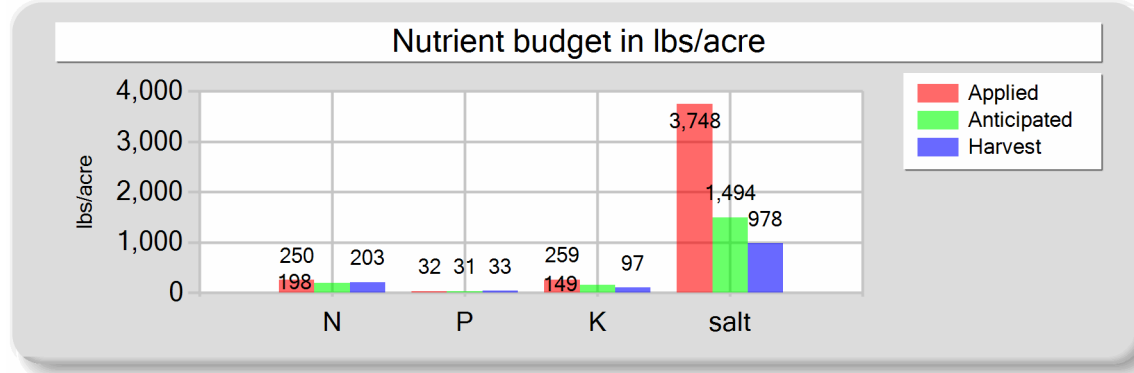
Reporting period 01/01/2023 to 12/31/2023.

20N - 11/12/2022: Wheat, silage, soft dough

Field name: 20N

Crop: Wheat, silage, soft dough

Plant date: 11/12/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	242.88	31.52	259.24	3,001.41
Fresh water	0.00	0.00	0.00	746.93
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	249.88	31.52	259.24	3,748.34
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	202.64	33.06	97.06	978.02
Nutrient balance	47.24	-1.54	162.19	2,770.32
Applied to removed ratio	1.23	0.95	2.67	3.83

Fresh water applied
9,308,691.00 <i>gallons</i>
342.81 <i>acre-inches</i>
13.18 <i>inches/acre</i>

Process wastewater applied
1,960,440.00 <i>gallons</i>
72.20 <i>acre-inches</i>
2.78 <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.

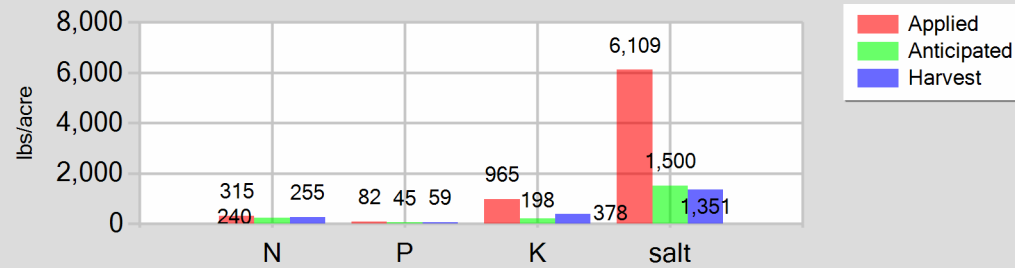
20N - 06/29/2023: Corn, silage

Field name: 20N

Crop: Corn, silage

Plant date: 06/29/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	307.70	81.81	965.43	4,265.78
Fresh water	0.00	0.00	0.00	1,843.24
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	314.70	81.81	965.43	6,109.02
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	254.90	58.82	377.89	1,351.14
Nutrient balance	59.81	22.99	587.54	4,757.89
Applied to removed ratio	1.23	1.39	2.55	4.52

Fresh water applied
22,971,456.00 gallons
845.96 acre-inches
32.54 inches/acre
Process wastewater applied
5,762,618.00 gallons
212.22 acre-inches
8.16 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.

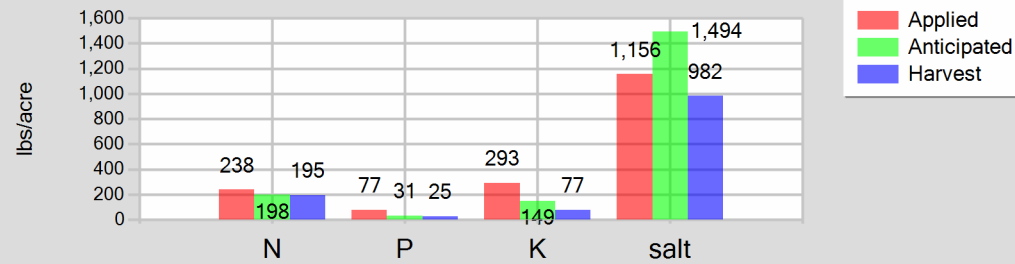
20S - 11/13/2022: Wheat, silage, soft dough

Field name: 20S

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022

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	201.85	72.80	261.42	0.00
Process wastewater	29.55	3.84	31.54	365.13
Fresh water	0.00	0.00	0.00	790.83
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	238.40	76.64	292.96	1,155.97
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	194.84	25.46	77.49	981.96
Nutrient balance	43.56	51.17	215.46	174.00
Applied to removed ratio	1.22	3.01	3.78	1.18

Fresh water applied
25,018,557.00 <i>gallons</i>
921.35 <i>acre-inches</i>
13.96 <i>inches/acre</i>
Process wastewater applied
605,413.00 <i>gallons</i>
22.30 <i>acre-inches</i>
0.34 <i>inches/acre</i>
Total harvests for the crop
1 <i>harvests</i>

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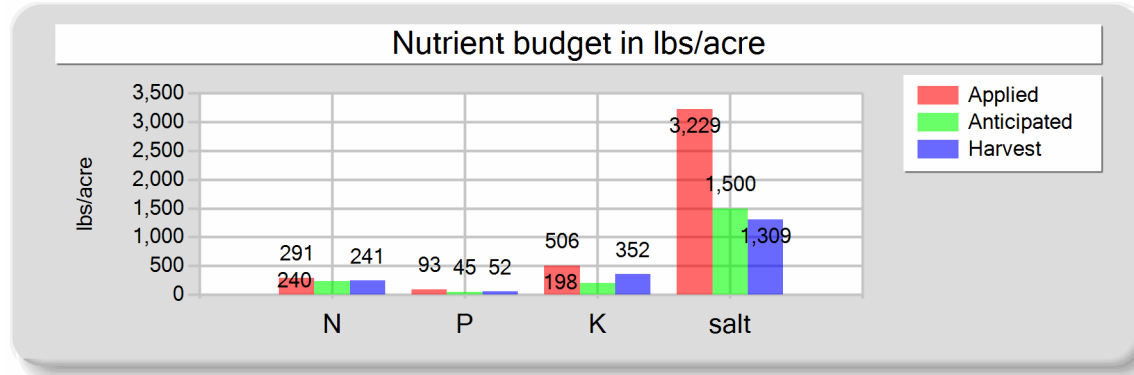
Reporting period 01/01/2023 to 12/31/2023.

20S - 06/30/2023: Corn, silage

Field name: 20S

Crop: Corn, silage

Plant date: 06/30/2023



	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	201.85	72.80	261.42	0.00
Process wastewater	81.94	20.42	244.50	968.18
Fresh water	0.00	0.00	0.00	2,260.74
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	290.79	93.22	505.92	3,228.92
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	241.25	52.07	352.33	1,308.65
Nutrient balance	49.54	41.15	153.59	1,920.28
Applied to removed ratio	1.21	1.79	1.44	2.47

Fresh water applied
71,520,125.00 <i>gallons</i>
2,633.84 <i>acre-inches</i>
39.91 <i>inches/acre</i>

Process wastewater applied
3,508,816.00 <i>gallons</i>
129.22 <i>acre-inches</i>
1.96 <i>inches/acre</i>

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

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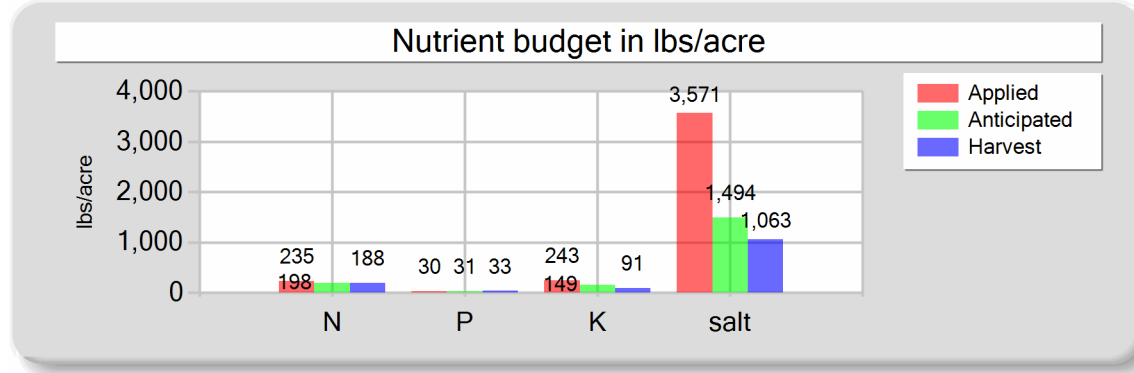
Reporting period 01/01/2023 to 12/31/2023.

21 - 11/13/2022: Wheat, silage, soft dough

Field name: 21

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	227.81	29.57	243.16	2,815.20
Fresh water	0.00	0.00	0.00	756.27
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	234.81	29.57	243.16	3,571.47
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	188.37	32.91	90.78	1,063.24
Nutrient balance	46.45	-3.34	152.38	2,508.23
Applied to removed ratio	1.25	0.90	2.68	3.36

Fresh water applied
13,412,543.00 <i>gallons</i>
493.94 <i>acre-inches</i>
13.35 <i>inches/acre</i>

Process wastewater applied
2,616,776.00 <i>gallons</i>
96.37 <i>acre-inches</i>
2.60 <i>inches/acre</i>

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



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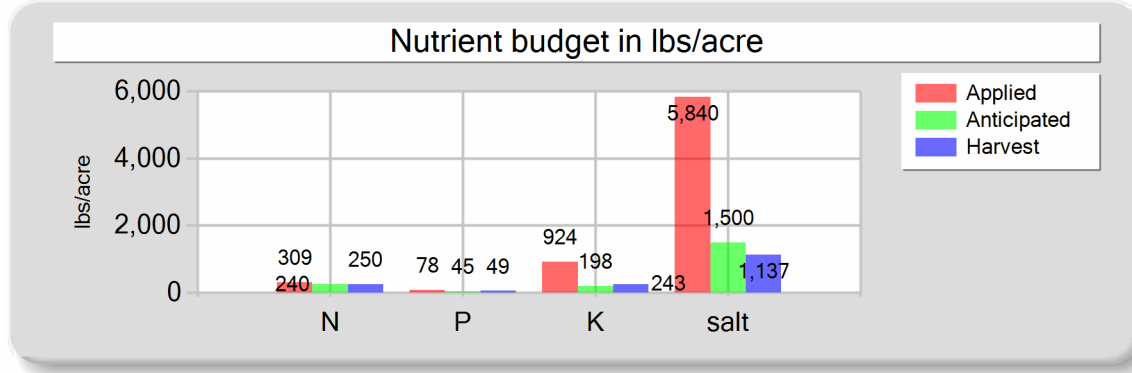
Reporting period 01/01/2023 to 12/31/2023.

21 - 06/30/2023: Corn, silage

Field name: 21

Crop: Corn, silage

Plant date: 06/30/2023



	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	302.39	77.70	923.64	3,866.58
Fresh water	0.00	0.00	0.00	1,973.76
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	309.39	77.70	923.64	5,840.35
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	249.90	49.28	242.87	1,136.89
Nutrient balance	59.48	28.42	680.78	4,703.46
Applied to removed ratio	1.24	1.58	3.80	5.14

Fresh water applied
35,004,978.00 <i>gallons</i>
1,289.11 <i>acre-inches</i>
34.84 <i>inches/acre</i>

Process wastewater applied
7,635,629.00 <i>gallons</i>
281.19 <i>acre-inches</i>
7.60 <i>inches/acre</i>

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

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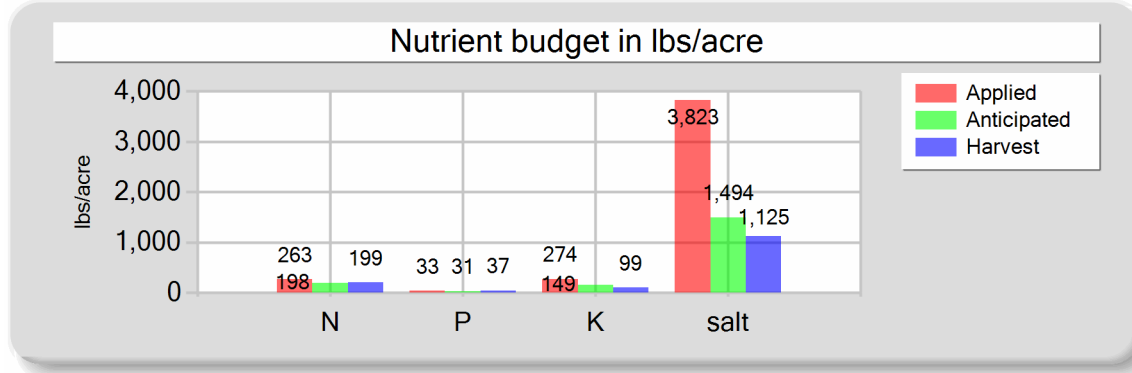
Reporting period 01/01/2023 to 12/31/2023.

22 - 11/13/2022: Wheat, silage, soft dough

Field name: 22

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	256.40	33.28	273.67	3,168.50
Fresh water	0.00	0.00	0.00	654.38
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	263.40	33.28	273.67	3,822.88
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	199.06	36.64	98.92	1,124.75
Nutrient balance	64.34	-3.36	174.75	2,698.13
Applied to removed ratio	1.32	0.91	2.77	3.40

Fresh water applied
6,900,583.00 <i>gallons</i>
254.13 <i>acre-inches</i>
11.55 <i>inches/acre</i>

Process wastewater applied
1,751,182.00 <i>gallons</i>
64.49 <i>acre-inches</i>
2.93 <i>inches/acre</i>

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

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

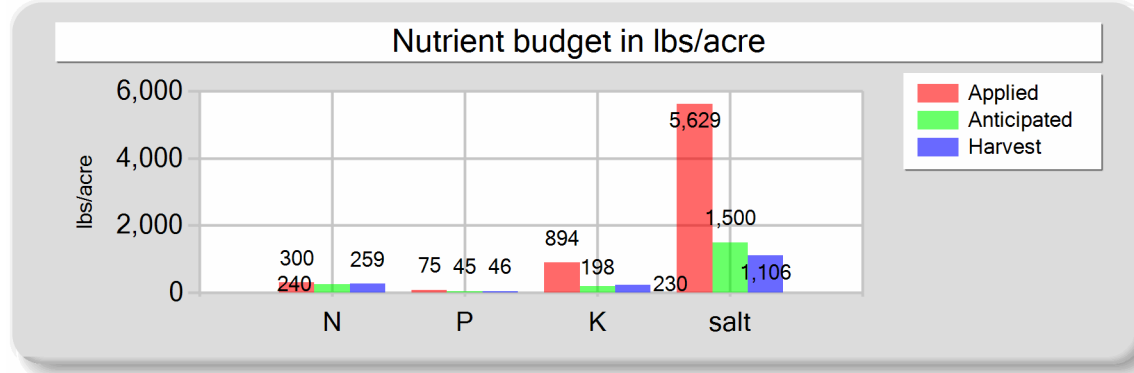
Reporting period 01/01/2023 to 12/31/2023.

22 - 06/30/2023: Corn, silage

Field name: 22

Crop: Corn, silage

Plant date: 06/30/2023



	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	293.31	75.13	893.98	3,715.54
Fresh water	0.00	0.00	0.00	1,913.16
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	300.31	75.13	893.98	5,628.70
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	259.45	46.33	229.79	1,106.35
Nutrient balance	40.86	28.80	664.18	4,522.35
Applied to removed ratio	1.16	1.62	3.89	5.09

Fresh water applied
20,174,763.00 <i>gallons</i>
742.97 <i>acre-inches</i>
33.77 <i>inches/acre</i>

Process wastewater applied
4,378,650.00 <i>gallons</i>
161.25 <i>acre-inches</i>
7.33 <i>inches/acre</i>

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

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

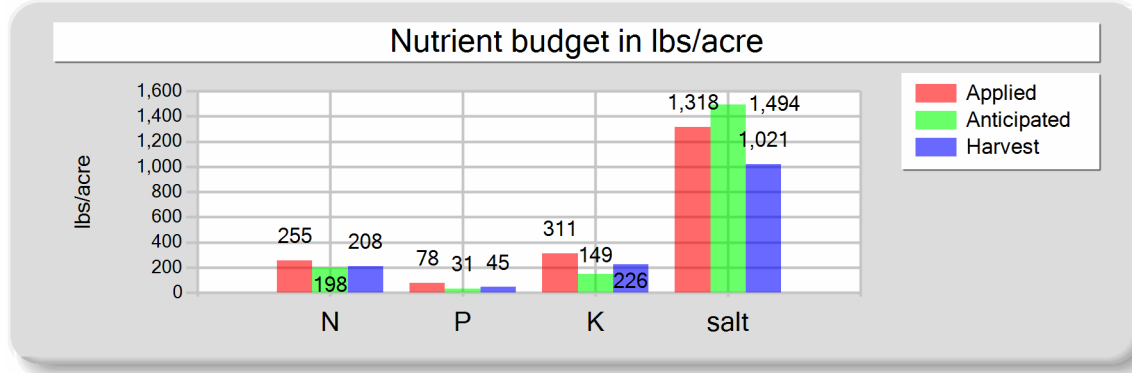
Reporting period 01/01/2023 to 12/31/2023.

3 - 11/14/2022: Wheat, silage, soft dough

Field name: 3

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022



	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	199.84	72.07	258.80	0.00
Process wastewater	48.64	6.31	51.91	601.02
Fresh water	0.00	0.00	0.00	716.66
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	255.47	78.38	310.72	1,317.67
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	208.15	44.60	225.99	1,020.90
Nutrient balance	47.33	33.78	84.73	296.77
Applied to removed ratio	1.23	1.76	1.37	1.29

Fresh water applied
39,035,677.00 <i>gallons</i>
1,437.55 <i>acre-inches</i>
14.38 <i>inches/acre</i>

Process wastewater applied
1,509,876.00 <i>gallons</i>
55.60 <i>acre-inches</i>
0.56 <i>inches/acre</i>

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

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

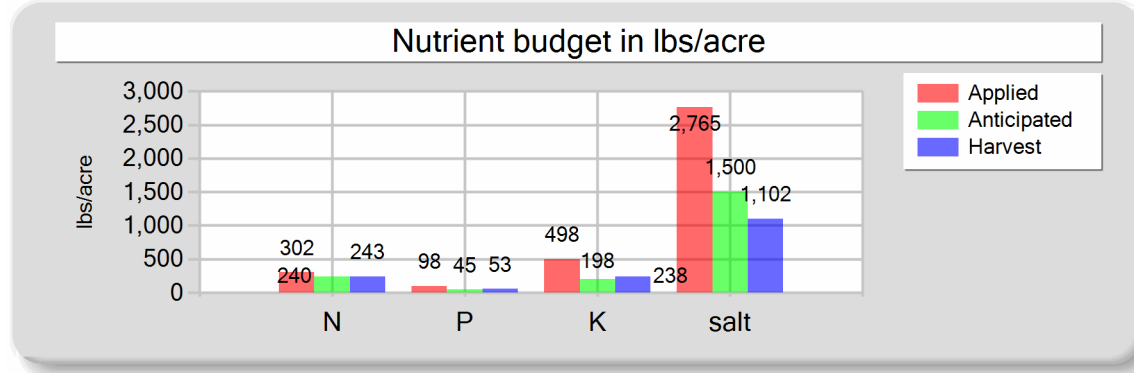
Reporting period 01/01/2023 to 12/31/2023.

3 - 06/27/2023: Corn, silage

Field name: 3

Crop: Corn, silage

Plant date: 06/27/2023



	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	108,148,535.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	3,982.74 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	39.83 <i>inches/acre</i>
Dry manure	222.04	80.08	287.56	0.00	
Process wastewater	72.44	17.43	210.43	779.53	
Fresh water	0.32	0.00	0.00	1,985.50	
Atmospheric deposition	7.00	0.00	0.00	0.00	
Total nutrients applied	301.79	97.51	497.99	2,765.03	
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00	
Actual crop nutrient removal	243.21	53.47	238.03	1,102.19	
Nutrient balance	58.59	44.04	259.96	1,662.84	
Applied to removed ratio	1.24	1.82	2.09	2.51	
					<b>Process wastewater applied</b>
					4,433,380.00 <i>gallons</i>
					163.27 <i>acre-inches</i>
					1.63 <i>inches/acre</i>
					<b>Total harvests for the crop</b>
					1 <i>harvests</i>

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

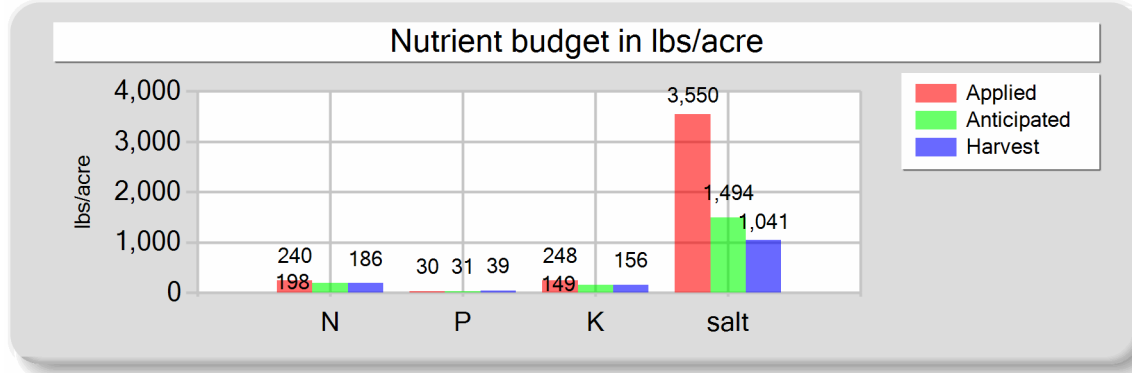
Reporting period 01/01/2023 to 12/31/2023.

4 - 11/14/2022: Wheat, silage, soft dough

Field name: 4

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	232.50	30.18	248.16	2,873.17
Fresh water	0.00	0.00	0.00	677.19
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	239.50	30.18	248.16	3,550.36
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	185.90	38.63	155.72	1,040.54
Nutrient balance	53.61	-8.45	92.45	2,509.82
Applied to removed ratio	1.29	0.78	1.59	3.41

Fresh water applied
14,754,368.00 gallons
543.35 acre-inches
13.58 inches/acre

Process wastewater applied
2,887,200.00 gallons
106.33 acre-inches
2.66 inches/acre

Total harvests for the crop
1 harvests

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

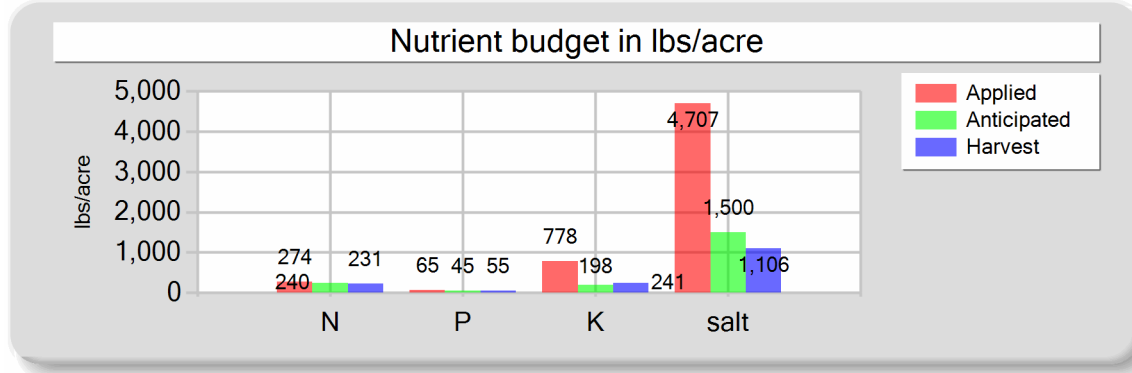
Reporting period 01/01/2023 to 12/31/2023.

4 - 06/30/2023: Corn, silage

Field name: 4

Crop: Corn, silage

Plant date: 06/30/2023



	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	266.91	64.54	778.37	2,912.26
Fresh water	0.00	0.00	0.00	1,795.19
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	273.91	64.54	778.37	4,707.46
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	231.29	54.53	240.69	1,105.66
Nutrient balance	42.62	10.01	537.68	3,601.80
Applied to removed ratio	1.18	1.18	3.23	4.26

Fresh water applied
39,113,067.00 <i>gallons</i>
1,440.40 <i>acre-inches</i>
36.01 <i>inches/acre</i>

Process wastewater applied
6,589,986.00 <i>gallons</i>
242.69 <i>acre-inches</i>
6.07 <i>inches/acre</i>

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

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

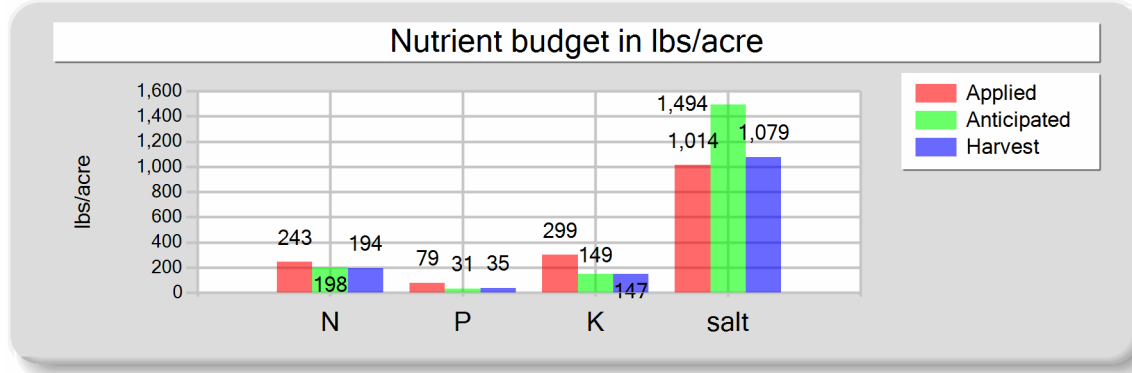
Reporting period 01/01/2023 to 12/31/2023.

5 - 11/13/2022: Wheat, silage, soft dough

Field name: 5

Crop: Wheat, silage, soft dough

Plant date: 11/13/2022



	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	207.51	74.84	268.75	0.00
Process wastewater	28.48	3.70	30.39	351.88
Fresh water	0.00	0.00	0.00	661.64
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	242.99	78.54	299.14	1,013.52
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	194.45	35.47	146.75	1,078.63
Nutrient balance	48.54	43.07	152.39	-65.11
Applied to removed ratio	1.25	2.21	2.04	0.94

Fresh water applied
38,561,613.00 <i>gallons</i>
1,420.09 <i>acre-inches</i>
13.27 <i>inches/acre</i>

Process wastewater applied
945,881.00 <i>gallons</i>
34.83 <i>acre-inches</i>
0.33 <i>inches/acre</i>

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



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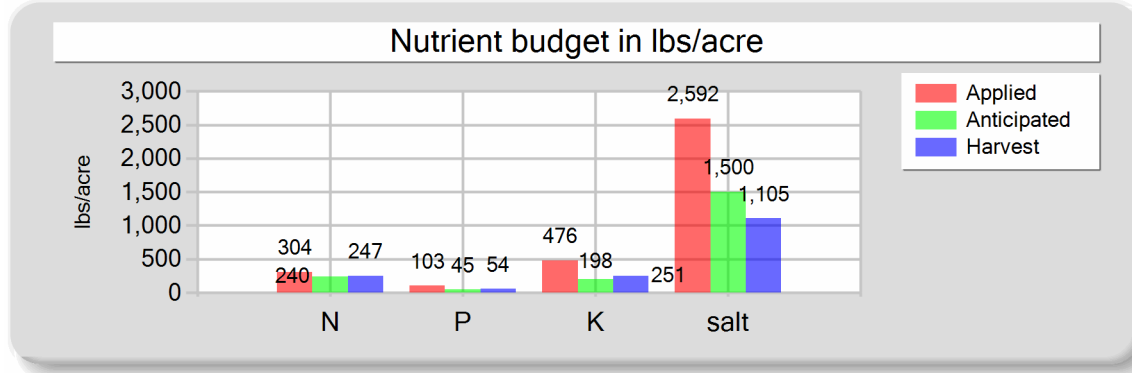
Reporting period 01/01/2023 to 12/31/2023.

5 - 06/29/2023: Corn, silage

Field name: 5

Crop: Corn, silage

Plant date: 06/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	249.02	89.81	322.50	0.00
Process wastewater	48.05	13.07	153.47	702.26
Fresh water	0.00	0.00	0.00	1,889.81
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	304.07	102.88	475.97	2,592.06
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	247.46	54.02	250.95	1,104.88
Nutrient balance	56.61	48.86	225.02	1,487.18
Applied to removed ratio	1.23	1.90	1.90	2.35

Fresh water applied
110,141,734.00 <i>gallons</i>
4,056.15 <i>acre-inches</i>
37.91 <i>inches/acre</i>

Process wastewater applied
3,838,344.00 <i>gallons</i>
141.35 <i>acre-inches</i>
1.32 <i>inches/acre</i>

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

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

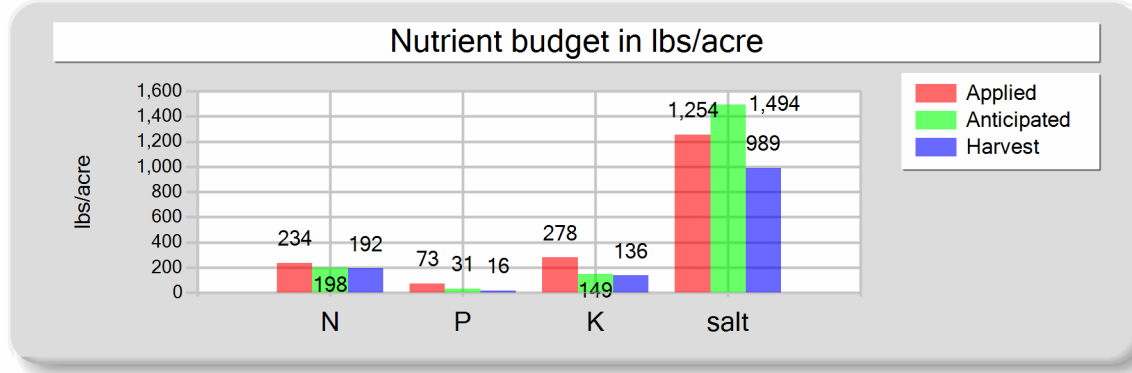
Reporting period 01/01/2023 to 12/31/2023.

6 - 11/14/2022: Wheat, silage, soft dough

Field name: 6

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022



	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	190.64	68.76	246.89	0.00
Process wastewater	29.40	3.82	31.38	363.30
Fresh water	0.00	0.00	0.00	891.01
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	234.04	72.57	278.27	1,254.31
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	191.97	15.90	135.72	989.19
Nutrient balance	42.07	56.68	142.55	265.12
Applied to removed ratio	1.22	4.57	2.05	1.27

Fresh water applied
42,281,460.00 gallons
1,557.08 acre-inches
15.73 inches/acre

Process wastewater applied
903,554.00 gallons
33.27 acre-inches
0.34 inches/acre

Total harvests for the crop
1 harvests

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

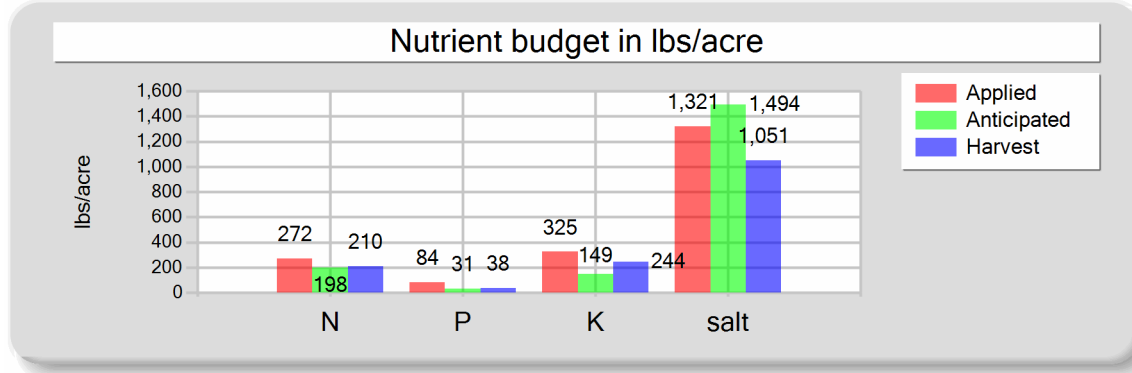
Reporting period 01/01/2023 to 12/31/2023.

9 - 11/14/2022: Wheat, silage, soft dough

Field name: 9

Crop: Wheat, silage, soft dough

Plant date: 11/14/2022



	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	217.85	78.57	282.13	0.00
Process wastewater	39.80	5.17	42.48	491.84
Fresh water	0.00	0.00	0.00	829.61
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	271.65	83.73	324.62	1,321.45
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	210.02	37.73	243.98	1,051.37
Nutrient balance	61.63	46.01	80.64	270.07
Applied to removed ratio	1.29	2.22	1.33	1.26

Fresh water applied
21,075,675.00 gallons
776.15 acre-inches
14.64 inches/acre

Process wastewater applied
654,871.00 gallons
24.12 acre-inches
0.46 inches/acre

Total harvests for the crop
1 harvests

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

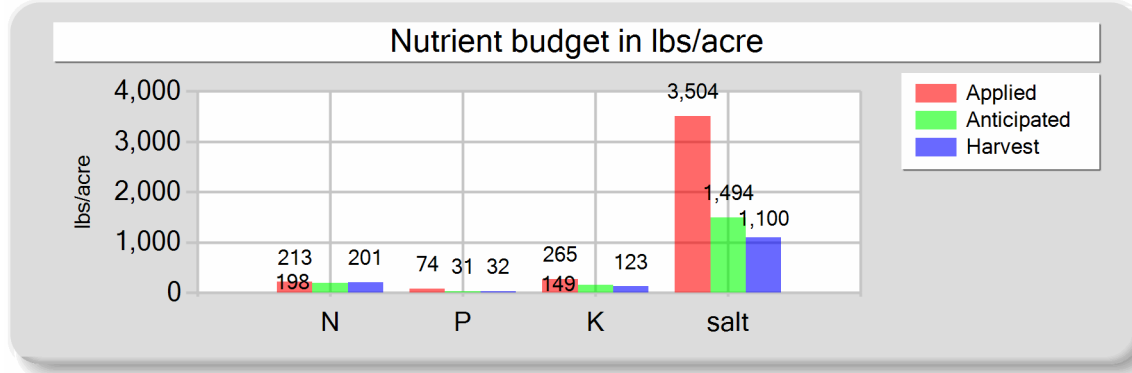
Reporting period 01/01/2023 to 12/31/2023.

C2 - 11/16/2022: Wheat, silage, soft dough

Field name: C2

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022



	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	204.96	73.92	265.44	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	1.09	0.00	0.00	3,503.73
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	213.05	73.92	265.44	3,503.73
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	201.49	31.94	122.86	1,099.57
Nutrient balance	11.57	41.98	142.58	2,404.16
Applied to removed ratio	1.06	2.31	2.16	3.19

Fresh water applied
42,641,991.00 <i>gallons</i>
1,570.36 <i>acre-inches</i>
12.08 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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

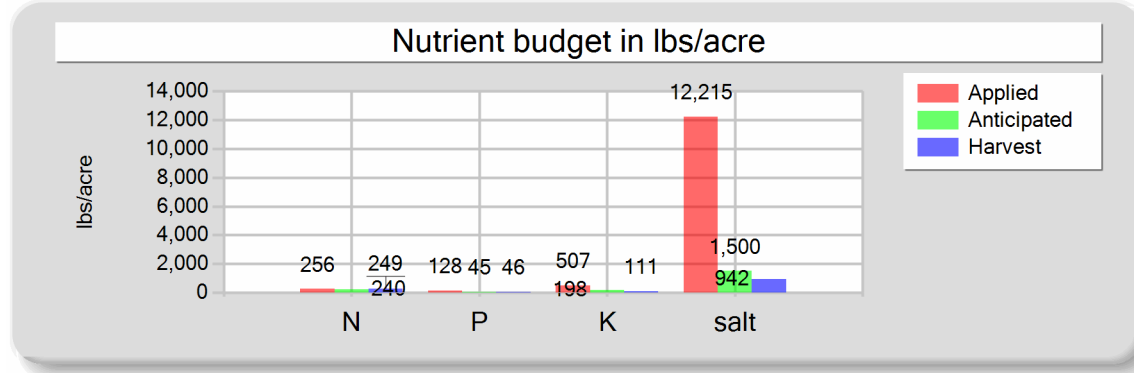
Reporting period 01/01/2023 to 12/31/2023.

C2 - 06/29/2023: Corn, silage

Field name: C2

Crop: Corn, silage

Plant date: 06/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	245.28	128.21	507.28	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	3.82	0.00	0.00	12,214.92
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	256.09	128.21	507.28	12,214.92
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	249.08	45.88	111.43	941.70
Nutrient balance	7.01	82.33	395.84	11,273.21
Applied to removed ratio	1.03	2.79	4.55	12.97

Fresh water applied
148,661,170.00 <i>gallons</i>
5,474.69 <i>acre-inches</i>
42.11 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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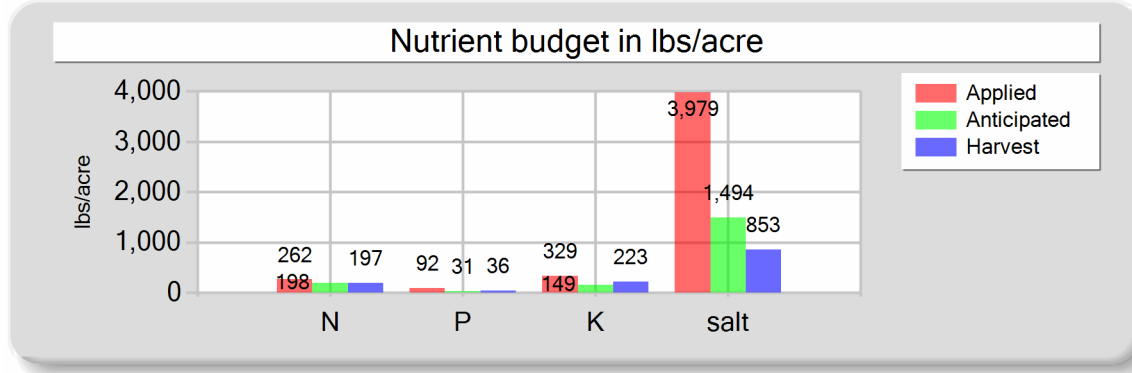
Reporting period 01/01/2023 to 12/31/2023.

C3 - 11/15/2022: Wheat, silage, soft dough

Field name: C3

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	253.76	91.52	328.64	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	1.24	0.00	0.00	3,978.98
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	262.00	91.52	328.64	3,978.98
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	197.16	35.74	222.52	853.19
Nutrient balance	64.85	55.78	106.12	3,125.79
Applied to removed ratio	1.33	2.56	1.48	4.66

Fresh water applied
52,151,069.00 gallons
1,920.55 acre-inches
13.72 inches/acre

Process wastewater applied
0.00 gallons
0.00 acre-inches
0.00 inches/acre

Total harvests for the crop
1 harvests

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

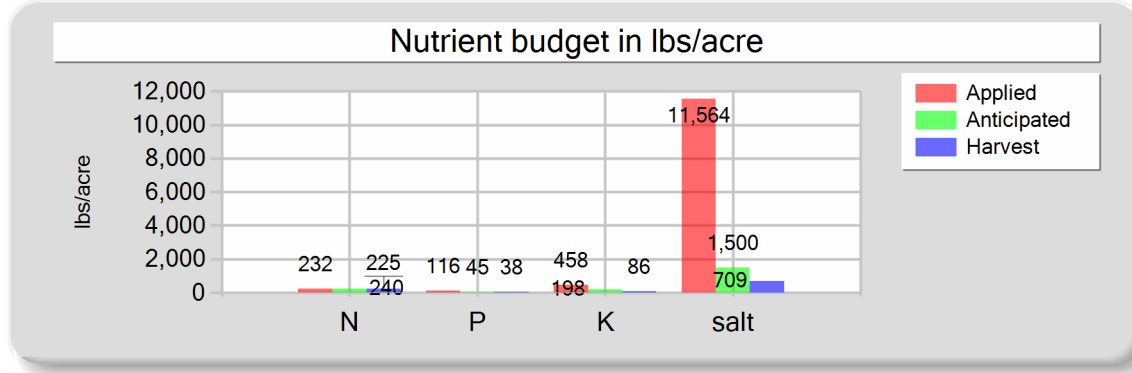
Reporting period 01/01/2023 to 12/31/2023.

C3 - 06/28/2023: Corn, silage

Field name: C3

Crop: Corn, silage

Plant date: 06/28/2023



	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	151,570,331.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	5,581.82 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	39.87 <i>inches/acre</i>
Dry manure	221.43	115.75	457.96	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	3.61	0.00	0.00	11,564.38	
Atmospheric deposition	7.00	0.00	0.00	0.00	
Total nutrients applied	232.04	115.75	457.96	11,564.38	
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00	
Actual crop nutrient removal	224.88	38.11	85.76	708.93	
Nutrient balance	7.17	77.63	372.20	10,855.45	
Applied to removed ratio	1.03	3.04	5.34	16.31	
					<b>Process wastewater applied</b>
					0.00 <i>gallons</i>
					0.00 <i>acre-inches</i>
					0.00 <i>inches/acre</i>
					<b>Total harvests for the crop</b>
					1 <i>harvests</i>

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

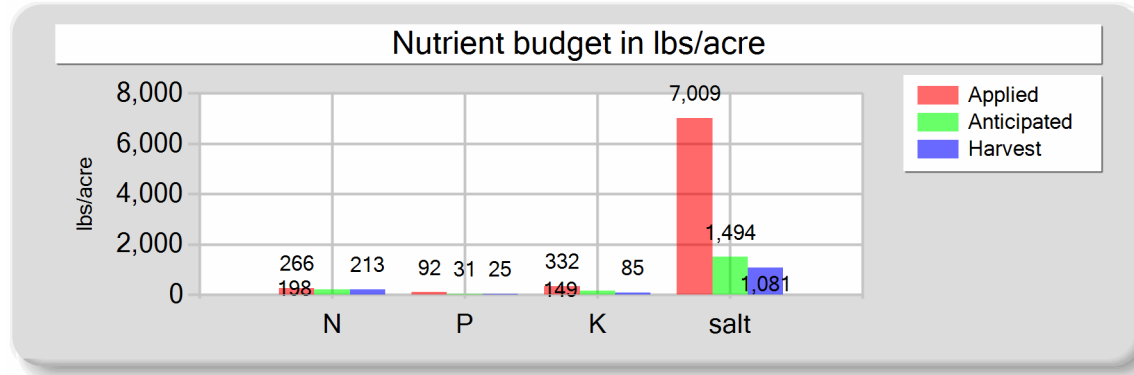
Reporting period 01/01/2023 to 12/31/2023.

SL1 - 11/15/2022: Wheat, silage, soft dough

Field name: SL1

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	256.20	92.40	331.80	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	3.23	0.00	0.00	7,008.76
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	266.43	92.40	331.80	7,008.76
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	212.64	25.23	85.30	1,081.23
Nutrient balance	53.79	67.17	246.50	5,927.53
Applied to removed ratio	1.25	3.66	3.89	6.48

Fresh water applied
50,315,098.00 <i>gallons</i>
1,852.93 <i>acre-inches</i>
14.25 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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



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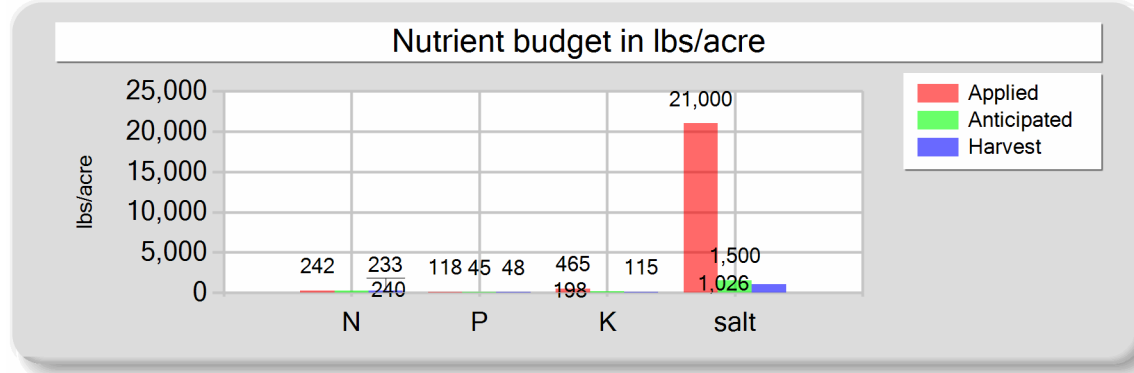
Reporting period 01/01/2023 to 12/31/2023.

SL1 - 06/30/2023: Corn, silage

Field name: SL1

Crop: Corn, silage

Plant date: 06/30/2023



	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	224.84	117.53	465.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	9.68	0.00	0.00	21,000.29
Atmospheric deposition	7.00	0.00	0.00	0.00
<b>Total nutrients applied</b>	<b>241.51</b>	<b>117.53</b>	<b>465.00</b>	<b>21,000.29</b>
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	233.14	47.93	115.48	1,026.24
<b>Nutrient balance</b>	<b>8.38</b>	<b>69.59</b>	<b>349.52</b>	<b>19,974.05</b>
Applied to removed ratio	1.04	2.45	4.03	20.46

Fresh water applied
150,758,758.00 <i>gallons</i>
5,551.93 <i>acre-inches</i>
42.71 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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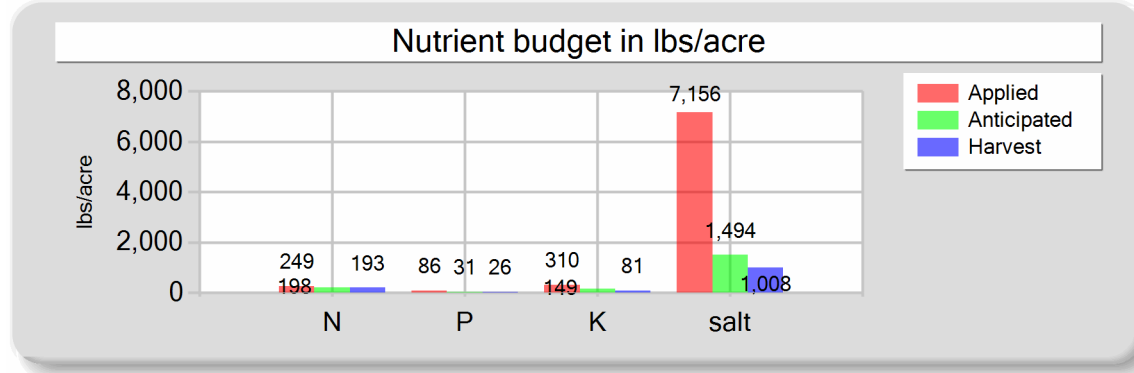
Reporting period 01/01/2023 to 12/31/2023.

SL2 - 11/15/2022: Wheat, silage, soft dough

Field name: SL2

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)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	54,293,675.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	1,999.45 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	15.38 <i>inches/acre</i>
Dry manure	239.12	86.24	309.68	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	3.35	0.00	0.00	7,155.68	
Atmospheric deposition	7.00	0.00	0.00	0.00	
Total nutrients applied	249.47	86.24	309.68	7,155.68	
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00	
Actual crop nutrient removal	193.17	25.98	81.33	1,007.64	
Nutrient balance	56.30	60.26	228.35	6,148.04	
Applied to removed ratio	1.29	3.32	3.81	7.10	
					<b>Process wastewater applied</b>
					0.00 <i>gallons</i>
					0.00 <i>acre-inches</i>
					0.00 <i>inches/acre</i>
					<b>Total harvests for the crop</b>
					1 <i>harvests</i>

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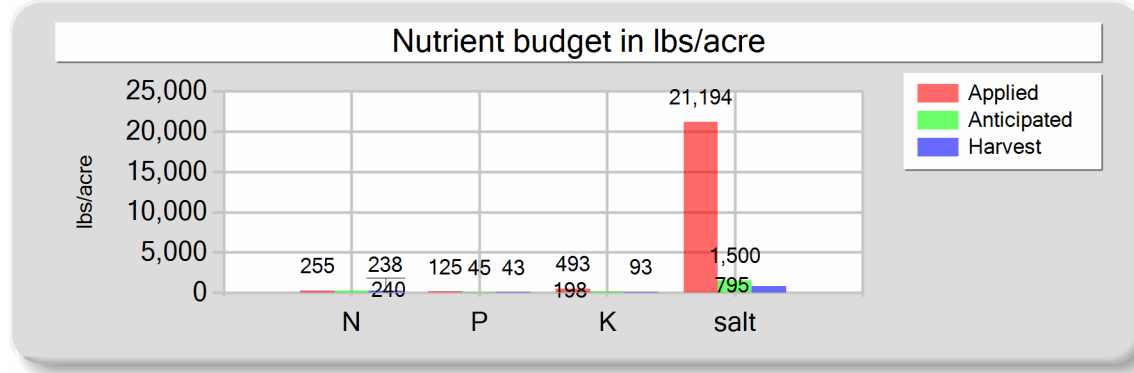
Reporting period 01/01/2023 to 12/31/2023.

SL2 - 06/30/2023: Corn, silage

Field name: SL2

Crop: Corn, silage

Plant date: 06/30/2023



	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	238.46	124.65	493.19	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	9.77	0.00	0.00	21,194.29
Atmospheric deposition	7.00	0.00	0.00	0.00
<b>Total nutrients applied</b>	<b>255.23</b>	<b>124.65</b>	<b>493.19</b>	<b>21,194.29</b>
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	237.88	43.05	92.89	795.21
<b>Nutrient balance</b>	<b>17.35</b>	<b>81.61</b>	<b>400.30</b>	<b>20,399.08</b>
Applied to removed ratio	1.07	2.90	5.31	26.65

Fresh water applied
152,151,438.00 <i>gallons</i>
5,603.22 <i>acre-inches</i>
43.10 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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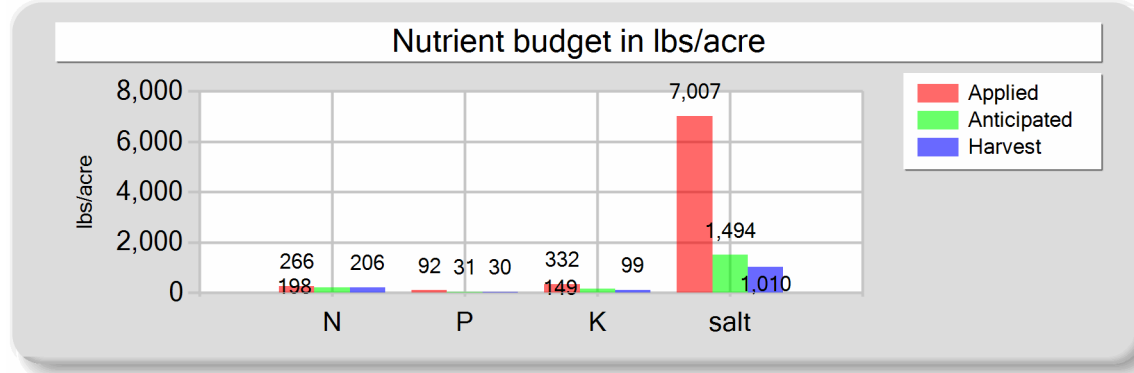
Reporting period 01/01/2023 to 12/31/2023.

SL3 - 11/16/2022: Wheat, silage, soft dough

Field name: SL3

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022



	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	256.20	92.40	331.80	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	3.23	0.00	0.00	7,006.72
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	266.43	92.40	331.80	7,006.72
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	206.49	29.68	98.92	1,010.19
Nutrient balance	59.94	62.72	232.88	5,996.53
Applied to removed ratio	1.29	3.11	3.35	6.94

Fresh water applied
50,300,444.00 <i>gallons</i>
1,852.39 <i>acre-inches</i>
14.25 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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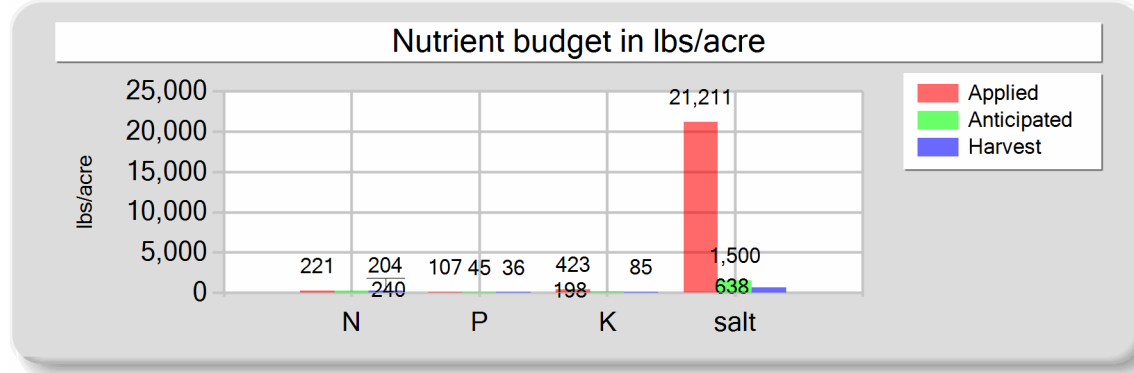
Reporting period 01/01/2023 to 12/31/2023.

SL3 - 06/29/2023: Corn, silage

Field name: SL3

Crop: Corn, silage

Plant date: 06/29/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	204.40	106.84	422.73	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	9.77	0.00	0.00	21,210.65
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	221.17	106.84	422.73	21,210.65
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	204.46	35.97	85.19	637.98
Nutrient balance	16.71	70.87	337.54	20,572.67
Applied to removed ratio	1.08	2.97	4.96	33.25

Fresh water applied
152,268,897.00 <i>gallons</i>
5,607.55 <i>acre-inches</i>
43.13 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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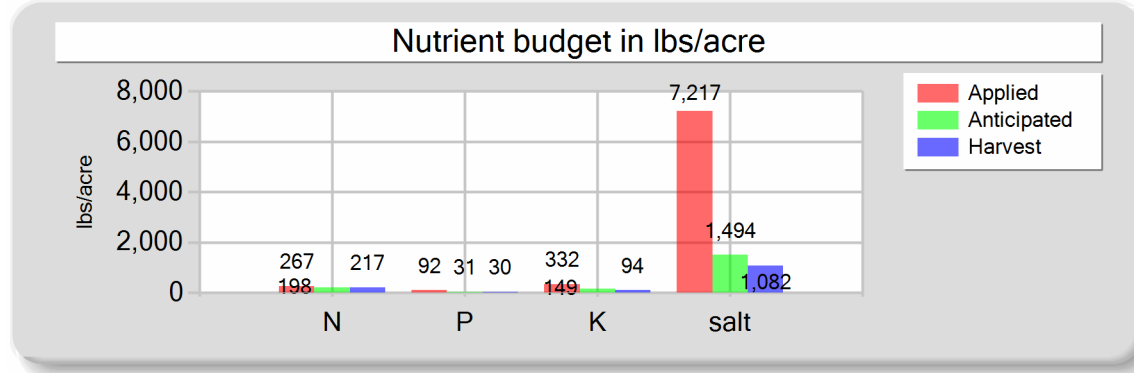
Reporting period 01/01/2023 to 12/31/2023.

SL4 - 11/16/2022: Wheat, silage, soft dough

Field name: SL4

Crop: Wheat, silage, soft dough

Plant date: 11/16/2022



	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	256.20	92.40	331.80	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	3.33	0.00	0.00	7,216.85
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	266.53	92.40	331.80	7,216.85
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	216.61	30.05	93.91	1,081.80
Nutrient balance	49.92	62.35	237.89	6,135.05
Applied to removed ratio	1.23	3.07	3.53	6.67

Fresh water applied
51,808,944.00 <i>gallons</i>
1,907.95 <i>acre-inches</i>
14.68 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <i>inches/acre</i>

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

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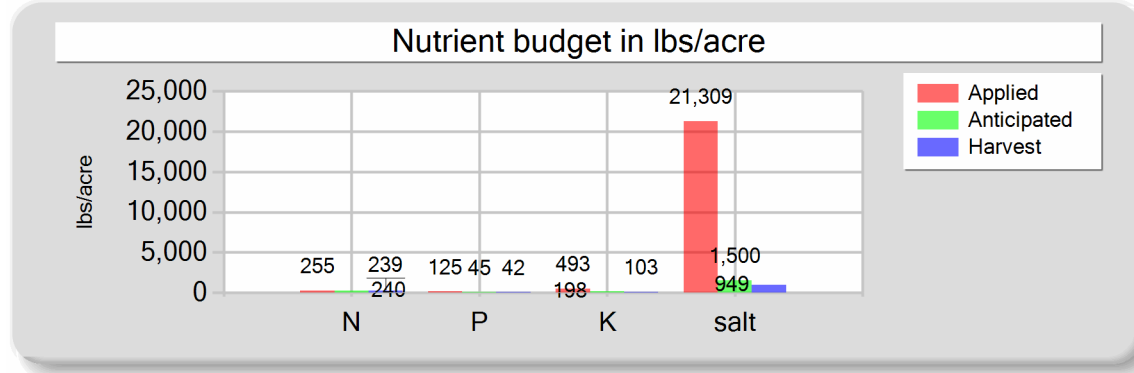
Reporting period 01/01/2023 to 12/31/2023.

SL4 - 06/30/2023: Corn, silage

Field name: SL4

Crop: Corn, silage

Plant date: 06/30/2023



	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	238.46	124.65	493.19	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	9.82	0.00	0.00	21,309.39
Atmospheric deposition	7.00	0.00	0.00	0.00
<b>Total nutrients applied</b>	<b>255.28</b>	<b>124.65</b>	<b>493.19</b>	<b>21,309.39</b>
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	238.94	42.43	102.72	949.05
<b>Nutrient balance</b>	<b>16.35</b>	<b>82.22</b>	<b>390.46</b>	<b>20,360.34</b>
Applied to removed ratio	1.07	2.94	4.80	22.45

Fresh water applied
152,977,778.00 <i>gallons</i>
5,633.65 <i>acre-inches</i>
43.34 <i>inches/acre</i>

Process wastewater applied
0.00 <i>gallons</i>
0.00 <i>acre-inches</i>
0.00 <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.

## NUTRIENT ANALYSES

### A. MANURE ANALYSES

#### Manure

Sample and source description: Manure

Sample date: 10/05/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 9.0 %

	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>	24,400.00	8,800.00	31,600.00							
<b>DL</b>	100.00	200.00	200.00							

#### Manure

Sample and source description: Manure

Sample date: 05/01/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 32.9 %

	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>	13,200.00	6,900.00	27,300.00							
<b>DL</b>	100.00	200.00	200.00							

#### Manure

Sample and source description: Manure

Sample date: 10/03/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 19.6 %

	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>	22,500.00	8,600.00	14,600.00							
<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: Lagoon

Sample date: 11/10/2022 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>	386.00	326.00	0.00	0.00	50.10	412.00								7,180.00	4,770
<b>DL</b>	10.00	2.00	0.10	0.20	0.20	0.50								100.00	10

## Lagoon

Sample and source description: Lagoon

Sample date: 03/08/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.80

	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>	326.00	217.00	0.00	0.00	39.60	535.00								5,210.00	3,460
<b>DL</b>	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

## Lagoon

Sample and source description: Lagoon

Sample date: 05/01/2023 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>	250.00	215.00	0.00	0.00	52.40	655.00								2,620.00	1,740
<b>DL</b>	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

## Lagoon

Sample and source description: Lagoon

Sample date: 08/02/2023 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>	123.00	61.00	0.00	0.00	40.00	453.00								3,910.00	2,600
<b>DL</b>	10.00	2.00	0.10	0.10	0.20	0.50								100.00	10

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

## Lagoon

Sample and source description: Lagoon

Sample date: 11/07/2023 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>	445.00	440.00	0.00	0.00	65.90	399.00								5,700.00	3,780
<b>DL</b>	10.00	2.00	0.50	0.50	0.20	0.50								100.00	10

## C. FRESH WATER ANALYSES

1

### Irrigation Well

Sample description: Irrigation Well

Sample date: 08/31/2023 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	9.00	0.00	73.00	110.00	0.00	20.10	11.00	356.00	220
<b>DL</b>	0.10	0.10	0.10	1.00	1.00	1.00	10.00	10.00	0.17	1.00	1.00	20

3

### Irrigation Well

Sample description: Irrigation Well

Sample date: 08/31/2023 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								414.00	250
<b>DL</b>	0.20	0.20	0.20								1.00	20

4

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

4

**Irrigation Well**

Sample description: Irrigation Well

Sample date: 08/31/2023 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								401.00	250
<b>DL</b>	0.20	0.20	0.20								1.00	20

6

**Domestic Well**

Sample description: Domestic Well

Sample date: 12/06/2023 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>	0.10	0.00	0.10	10.00	0.00	68.00	120.00	0.00	20.60	10.00	368.00	210
<b>DL</b>	0.10	0.50	0.10	1.00	1.00	1.00	10.00	10.00	0.17	1.00	1.00	20

CN

**Irrigation Well**

Sample description: Irrigation Well

Sample date: 12/06/2023 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>	0.40	0.00	0.40	174.00	38.00	142.00	120.00	0.00	257.00	33.00	1,650.00	1,280
<b>DL</b>	0.10	0.20	0.10	1.00	1.00	1.00	10.00	10.00	1.20	1.00	1.00	20

SLN

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

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

SLN

Irrigation Well

Sample description: Irrigation Well

Sample date: 12/06/2023 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>	1.00	0.00	1.00	386.00	18.00	191.00	60.00	0.00	458.00	22.00	2,470.00	2,170
<b>DL</b>	0.50	0.50	0.20	5.00	1.00	1.00	10.00	10.00	2.20	1.00	1.00	20

**D. SOIL ANALYSES**

*No soil analyses entered.*

**E. PLANT TISSUE ANALYSES**

1 - 11/08/2022: Wheat, silage, soft dough

Wheat

Sample and source description: Wheat

Sample date: 05/06/2023 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>	21,300.00	4,300.00	19,800.00		10.70
<b>DL</b>	500.00	200.00	200.00		0.05

1 - 06/16/2023: Corn, silage

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1 - 06/16/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 70.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	13,500.00	2,700.00	11,800.00		5.79
<b>DL</b>	500.00	200.00	200.00		0.05

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

**Wheat**Sample and source description: WheatSample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 65.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,300.00	3,200.00	19,100.00		9.20
<b>DL</b>	500.00	200.00	200.00		0.05

11 - 06/15/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/17/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 71.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,000.00	2,900.00	12,400.00		5.97
<b>DL</b>	500.00	200.00	200.00		0.05

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12 - 11/10/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,300.00	3,100.00	20,300.00		9.49
<b>DL</b>	500.00	200.00	200.00		0.05

12 - 06/15/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/17/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 75.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	15,900.00	3,200.00	19,500.00		7.50
<b>DL</b>	500.00	200.00	200.00		0.05

13 - 11/10/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,700.00	3,400.00	14,200.00		9.81
<b>DL</b>	500.00	200.00	200.00		0.05

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13 - 06/27/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/17/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	12,000.00	3,100.00	18,400.00		7.38
<b>DL</b>	500.00	200.00	200.00		0.05

14 - 11/11/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/06/2023 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>	17,300.00	3,200.00	13,400.00		8.89
<b>DL</b>	500.00	200.00	200.00		0.05

14 - 06/29/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/17/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	13,800.00	2,900.00	16,700.00		6.18
<b>DL</b>	500.00	200.00	200.00		0.05

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18 - 11/11/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/06/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 67.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,300.00	3,200.00	13,400.00		9.21
<b>DL</b>	500.00	200.00	200.00		0.05

18 - 06/28/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 74.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	15,800.00	3,300.00	18,200.00		6.12
<b>DL</b>	500.00	200.00	200.00		0.05

19 - 11/12/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 70.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,900.00	3,000.00	8,900.00		9.62
<b>DL</b>	500.00	200.00	200.00		0.05



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19 - 06/29/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 69.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	12,400.00	3,200.00	18,100.00		6.48
<b>DL</b>	500.00	200.00	200.00		0.05

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

**Wheat**

Sample and source description: Wheat

Sample date: 05/06/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,300.00	2,800.00	11,400.00		8.38
<b>DL</b>	500.00	200.00	200.00		0.05

2 - 06/29/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 69.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	12,200.00	3,000.00	11,800.00		5.64
<b>DL</b>	500.00	200.00	200.00		0.05

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20N - 11/12/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	19,000.00	3,100.00	9,100.00		9.17
<b>DL</b>	500.00	200.00	200.00		0.05

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

**Corn**

Sample and source description: Corn

Sample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,300.00	3,300.00	21,200.00		7.58
<b>DL</b>	500.00	200.00	200.00		0.05

20S - 11/13/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 69.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,600.00	2,300.00	7,000.00		8.87
<b>DL</b>	500.00	200.00	200.00		0.05

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20S - 06/30/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 71.0 %

	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	20,300.00		7.54
<b>DL</b>	500.00	200.00	200.00		0.05

21 - 11/13/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/09/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,600.00	2,900.00	8,000.00		9.37
<b>DL</b>	500.00	200.00	200.00		0.05

21 - 06/30/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 70.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,200.00	2,800.00	13,800.00		6.46
<b>DL</b>	500.00	200.00	200.00		0.05

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22 - 11/13/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/09/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 66.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,300.00	3,000.00	8,100.00		9.21
<b>DL</b>	500.00	200.00	200.00		0.05

22 - 06/30/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/18/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 69.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,000.00	2,500.00	12,400.00		5.97
<b>DL</b>	500.00	200.00	200.00		0.05

3 - 11/14/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 72.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	21,000.00	4,500.00	22,800.00		10.30
<b>DL</b>	500.00	200.00	200.00		0.05

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3 - 06/27/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 71.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,100.00	3,100.00	13,800.00		6.39
<b>DL</b>	500.00	200.00	200.00		0.05

4 - 11/14/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 66.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	15,400.00	3,200.00	12,900.00		8.62
<b>DL</b>	500.00	200.00	200.00		0.05

4 - 06/30/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 69.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	12,300.00	2,900.00	12,800.00		5.88
<b>DL</b>	500.00	200.00	200.00		0.05

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5 - 11/13/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	15,900.00	2,900.00	12,000.00		8.82
<b>DL</b>	500.00	200.00	200.00		0.05

5 - 06/29/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/16/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 71.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	14,200.00	3,100.00	14,400.00		6.34
<b>DL</b>	500.00	200.00	200.00		0.05

6 - 11/14/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	15,700.00	1,300.00	11,100.00		8.09
<b>DL</b>	500.00	200.00	200.00		0.05

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9 - 11/14/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/08/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,700.00	3,000.00	19,400.00		8.36
<b>DL</b>	500.00	200.00	200.00		0.05

C2 - 11/16/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/10/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 65.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,400.00	2,600.00	10,000.00		8.95
<b>DL</b>	500.00	200.00	200.00		0.05

C2 - 06/29/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	11,400.00	2,100.00	5,100.00		4.31
<b>DL</b>	500.00	200.00	200.00		0.05

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C3 - 11/15/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/10/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,100.00	3,100.00	19,300.00		7.40
<b>DL</b>	500.00	200.00	200.00		0.05

C3 - 06/28/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	11,800.00	2,000.00	4,500.00		3.72
<b>DL</b>	500.00	200.00	200.00		0.05

SL1 - 11/15/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/09/2023 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>	17,700.00	2,100.00	7,100.00		9.00
<b>DL</b>	500.00	200.00	200.00		0.05



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SL1 - 06/30/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,700.00	2,200.00	5,300.00		4.71
<b>DL</b>	500.00	200.00	200.00		0.05

SL2 - 11/15/2022: Wheat, silage, soft dough

**Wheat**

Sample and source description: Wheat

Sample date: 05/09/2023 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>	17,100.00	2,300.00	7,200.00		8.92
<b>DL</b>	500.00	200.00	200.00		0.05

SL2 - 06/30/2023: Corn, silage

**Corn**

Sample and source description: Corn

Sample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 62.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,500.00	1,900.00	4,100.00		3.51
<b>DL</b>	500.00	200.00	200.00		0.05

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SL3 - 11/16/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/09/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 65.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	16,700.00	2,400.00	8,000.00		8.17
<b>DL</b>	500.00	200.00	200.00		0.05

SL3 - 06/29/2023: Corn, silage

**Corn**Sample and source description: CornSample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 68.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,800.00	1,900.00	4,500.00		3.37
<b>DL</b>	500.00	200.00	200.00		0.05

SL4 - 11/16/2022: Wheat, silage, soft dough

**Wheat**Sample and source description: WheatSample date: 05/10/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 65.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	17,300.00	2,400.00	7,500.00		8.64
<b>DL</b>	500.00	200.00	200.00		0.05

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SL4 - 06/30/2023: Corn, silage

Corn

Sample and source description: Corn

Sample date: 10/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 63.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
<b>Value</b>	10,700.00	1,900.00	4,600.00		4.25
<b>DL</b>	500.00	200.00	200.00		0.05

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

*No subsurface (tile) drainage analyses entered.*

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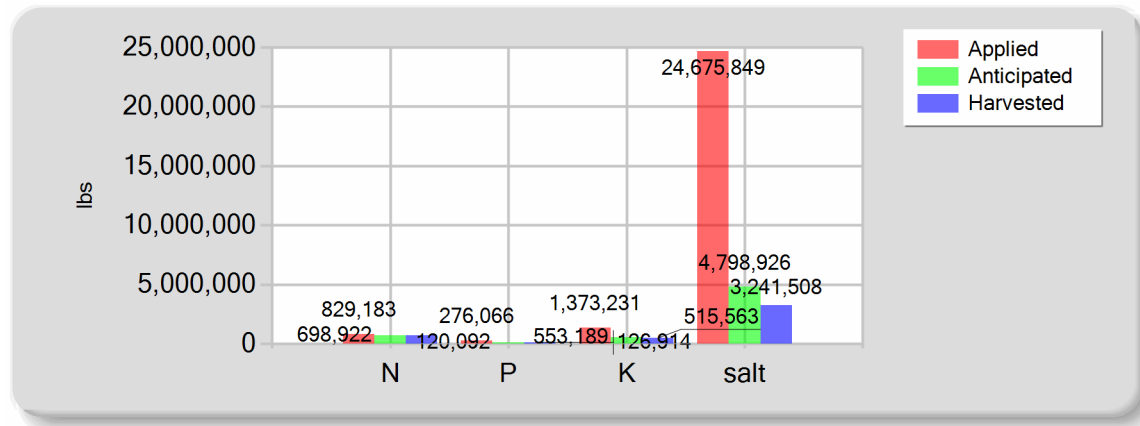
Reporting period 01/01/2023 to 12/31/2023.

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

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

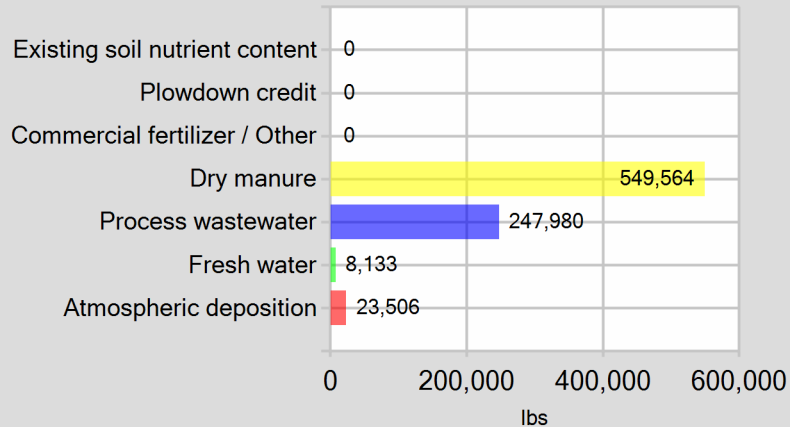
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	549,564.16	227,864.32	861,624.64	450,264.00
Process wastewater	247,979.69	48,201.64	511,606.64	3,180,491.19
Fresh water	8,132.72	0.00	0.00	21,045,094.25
Atmospheric deposition	23,506.00	0.00	0.00	0.00
Total nutrients applied	829,182.57	276,065.96	1,373,231.28	24,675,849.44
Anticipated crop nutrient removal	698,922.00	120,092.40	553,188.60	4,798,926.00
Actual crop nutrient removal	703,508.74	126,913.62	515,563.40	3,241,507.80
Nutrient balance	125,673.83	149,152.33	857,667.88	21,434,341.64
Applied to removed ratio	1.18	2.18	2.66	7.61

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

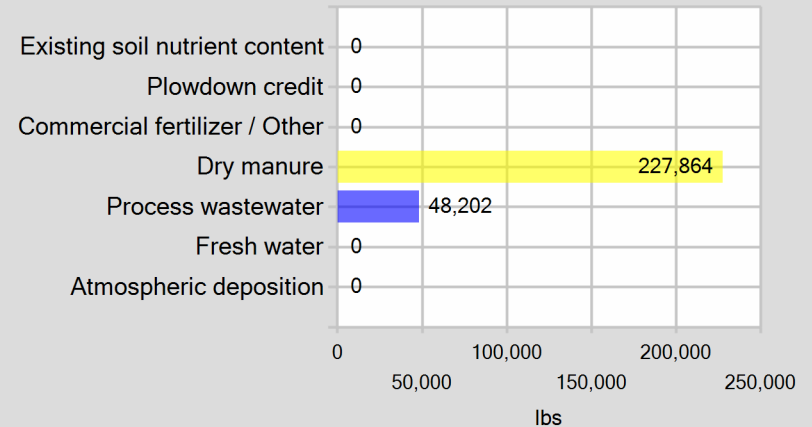


## C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

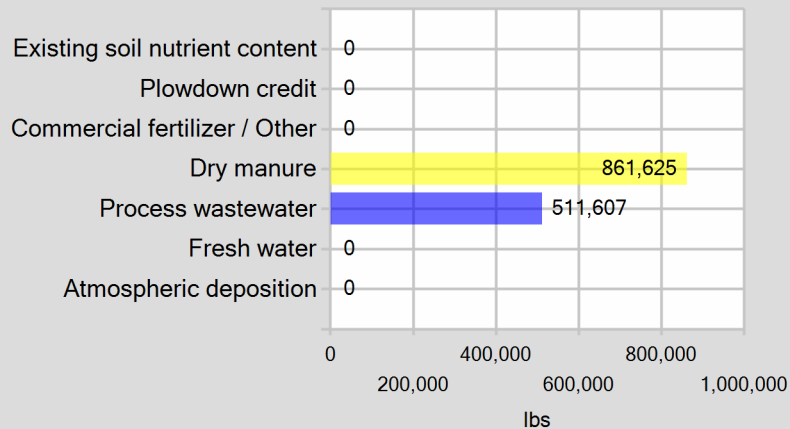
Pounds of nitrogen applied



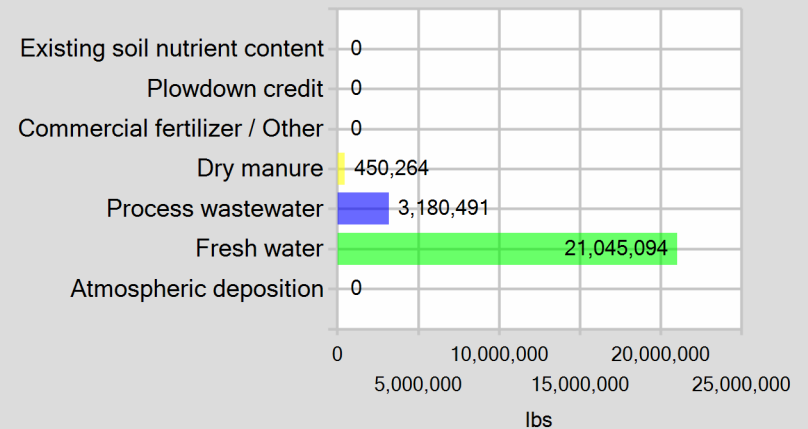
Pounds of phosphorus applied



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~ 2, 5, 7, SLE, SLES, CE, and CS were Out of Service in 2023.

Field C1 was fallow 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.

*Felix Echeverria*

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Felix Echeverria

SAME AS OWNER

PRINT OR TYPE NAME

6/20/2024

PRINT OR TYPE NAME

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.

September 22, 2023

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

**Lab No. : VI 2345833**  
**Customer No. : 4019696**  
**Reference : 3143**

### Laboratory Report

**Introduction:** This report package contains a total of 9 pages divided into 3 sections:

Case Narrative	(2 pages)	: An overview of the work performed at FGL.
Sample Results	(3 pages)	: Results for each sample submitted.
Quality Control	(4 pages)	: 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
1	08/31/2023	08/31/2023	VI 2345833-001	AGW
3	08/31/2023	08/31/2023	VI 2345833-002	AGW
4	08/31/2023	08/31/2023	VI 2345833-003	AGW

### 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

EPA 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
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)

### Discussion of Analytical Results:

VI 2345833-1 The nitrite-N result used to calculate nitrate-N was performed past holding time.

VI 2345833-2 The nitrite-N result used to calculate nitrate-N was performed past holding time.

VI 2345833-3 The nitrite-N result used to calculate nitrate-N was performed past holding time.

**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: 2023-09-22

September 22, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : 1

Project : Carlos Echevaria & Sons

Lab No. : VI 2345833-001

Customer No. : 4019696

Reference : 3143

Sampled On : August 31, 2023 at 08:20

Sampled By : Klay

Received On : August 31, 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
Alkalinity (as CaCO <sub>3</sub> )	90	10	mg/L		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	17:40	amm
Bicarbonate	110	10	mg/L		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	17:40	amm
Carbonate	ND	10	mg/L		1	U	09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	17:40	amm
Hydroxide	ND	10	mg/L		1	U	09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	17:40	amm
Chloride	11	1	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	15:32	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:04	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:50	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	Calc.	09/13/2023	18:04	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:50	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:04	lcr
Conductivity	356	1	umhos/cm		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	17:40	amm
Sulfate Sulfur	20.1	0.17	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	15:32	ldm
Solids, Total Dissolved (TDS)	220	20	mg/L		1		09/05/2023	15:20	ctl	SM 2540 C	09/06/2023	11:00	ctl
Calcium	9	1	mg/L		1		09/07/2023	06:35	ejc	EPA 200.7	09/08/2023	23:54	ac
Magnesium	ND	1	mg/L		1	J	09/07/2023	06:35	ejc	EPA 200.7	09/08/2023	23:54	ac
Sodium	73	1	mg/L		1		09/07/2023	06:35	ejc	EPA 200.7	09/08/2023	23:54	ac

**DQF Flags Definition:**

- U Constituent results were non-detect.
- l The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

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

**Corporate Offices & Laboratory**

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 FAX: (559)734-8435  
 CA ELAP Certification No. 2810

September 22, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : 3

Project : Carlos Echevaria & Sons

Lab No. : VI 2345833-002

Customer No. : 4019696

Reference : 3143

Sampled On : August 31, 2023 at 08:30

Sampled By : Klay

Received On : August 31, 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
Alkalinity (as CaCO <sub>3</sub> )	100	10	mg/L		1		09/09/2023	20:06	amm	SM 4500-H+B	09/10/2023	03:29	amm
Bicarbonate	130	10	mg/L		1		09/09/2023	20:06	amm	SM 4500-H+B	09/10/2023	03:29	amm
Carbonate	ND	10	mg/L		1	U	09/09/2023	20:06	amm	SM 4500-H+B	09/10/2023	03:29	amm
Hydroxide	ND	10	mg/L		1	U	09/09/2023	20:06	amm	SM 4500-H+B	09/10/2023	03:29	amm
Chloride	10	1	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	14:51	ldm
Nitrogen, Total Kjeldahl	0.8	0.5	mg/L		1	l	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:16	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:51	lfs
Nitrogen, Total as Nitrogen	0.8	0.5	mg/L		1	l	09/12/2023	09:41	sta	Calc.	09/13/2023	18:16	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:51	lfs
Kjeldahl Nitrogen	0.8	0.5	mg/L		1	l	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:16	lcr
Conductivity	414	1	umhos/cm		1		09/09/2023	20:06	amm	SM 4500-H+B	09/10/2023	03:29	amm
Sulfate Sulfur	25.4	0.17	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	14:51	ldm
Solids, Total Dissolved (TDS)	250	20	mg/L		1		09/06/2023	13:00	ctl	SM 2540 C	09/07/2023	11:00	ctl
Calcium	14	1	mg/L		1		09/08/2023	06:55	ejc	EPA 200.7	09/08/2023	20:30	ac
Magnesium	ND	1	mg/L		1	J	09/08/2023	06:55	ejc	EPA 200.7	09/08/2023	20:30	ac
Sodium	80	1	mg/L		1		09/08/2023	06:55	ejc	EPA 200.7	09/08/2023	20:30	ac

**DQF Flags Definition:**

U Constituent results were non-detect.

l The MS/MSD did not meet QC criteria.

J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

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

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CA ELAP Certification No. 2810

September 22, 2023

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : 4

Project : Carlos Echevaria & Sons

Lab No. : VI 2345833-003

Customer No. : 4019696

Reference : 3143

Sampled On : August 31, 2023 at 08:10

Sampled By : Klay

Received On : August 31, 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
Alkalinity (as CaCO <sub>3</sub> )	100	10	mg/L		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	19:15	amm
Bicarbonate	120	10	mg/L		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	19:15	amm
Carbonate	ND	10	mg/L		1	U	09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	19:15	amm
Hydroxide	ND	10	mg/L		1	U	09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	19:15	amm
Chloride	11	1	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	16:14	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:18	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:54	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	Calc.	09/13/2023	18:18	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	09/13/2023	12:15	lfs	SM 4500-NO <sub>3</sub> F	09/13/2023	12:54	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	09/12/2023	09:41	sta	EPA 351.2	09/13/2023	18:18	lcr
Conductivity	401	1	umhos/cm		1		09/05/2023	15:53	amm	SM 4500-H+B	09/05/2023	19:15	amm
Sulfate Sulfur	26.7	0.17	mg/L		1		09/18/2023	10:03	ldm	EPA 300.0	09/18/2023	16:14	ldm
Solids, Total Dissolved (TDS)	250	20	mg/L		1		09/05/2023	12:45	ctl	SM 2540 C	09/06/2023	11:00	ctl
Calcium	11	1	mg/L		1		09/07/2023	06:19	ejc	EPA 200.7	09/07/2023	22:16	ac
Magnesium	ND	1	mg/L		1	Jh	09/07/2023	06:19	ejc	EPA 200.7	09/07/2023	22:16	ac
Sodium	68	1	mg/L		1		09/07/2023	06:19	ejc	EPA 200.7	09/07/2023	22:16	ac

**DQF Flags Definition:**

- U Constituent results were non-detect.
- l The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.
- h The MS/MSD did not meet QC criteria.

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

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 CA ELAP Certification No. 2810

September 22, 2023  
**Sentry Ag Service**

Lab No. : VI 2345833  
Customer No. : 4019696

**Quality Control - Metals**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Calcium	200.7	09/07/2023:209994EJC	Blank	mg/L		ND	<1	
	200.7	09/07/2023:209993EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	105%	85-115	
	200.7	09/07/2023:209994EJC	LCS	mg/L	12.00	99.5%	85-115	
			MS	mg/L	12.00	102%	75-125	
	200.7	09/07/2023:209993EJC	MS	mg/L	12.00	120%	75-125	
		(SP 2315030-002)	MSD	mg/L	12.00	96.1%	75-125	
	200.7	(STK2351843-001)	MSD	mg/L	12.00	80.3%	75-125	
			MSRPD	mg/L		6.0%	≤20.0	
	200.7	09/07/2023:209993EJC	MSRPD	mg/L		2.6%	≤20.0	
			MS	mg/L	12.00	90.8%	75-125	
	200.7	09/07/2023:209994EJC	MS	mg/L	12.00	142%	<¼	406
	200.7	(CH 2377291-006)	MSD	mg/L	12.00	96.8%	75-125	
	200.7	(CC 2382993-001)	MSD	mg/L	12.00	116%	75-125	
			MSRPD	mg/L		4.4%	≤20.0	
	200.7	09/07/2023:209993EJC	MSRPD	mg/L		0.7%	≤20.0	
	200.7	09/08/2023:210050EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	107%	85-115	
			MS	mg/L	12.00	-102%	<¼	406
		(SP 2314960-001)	MSD	mg/L	12.00	279%	<1/4	
			MSRPD	mg/L		5.9%	≤20.0	
			MS	mg/L	12.00	159%	<¼	406
		(SP 2315154-001)	MSD	mg/L	12.00	308%	<1/4	
			MSRPD	mg/L		1.6%	≤20.0	
Magnesium	200.7	09/07/2023:209993EJC	Blank	mg/L		ND	<1	
	200.7	09/07/2023:209994EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	103%	85-115	
	200.7	09/07/2023:209993EJC	LCS	mg/L	12.00	104%	85-115	
			MS	mg/L	12.00	113%	75-125	
	200.7	09/07/2023:209994EJC	MS	mg/L	12.00	104%	75-125	
	200.7	(SP 2315030-002)	MSD	mg/L	12.00	106%	75-125	
	200.7	(STK2351843-001)	MSD	mg/L	12.00	85.6%	75-125	
			MSRPD	mg/L		6.2%	≤20	
	200.7	09/07/2023:209993EJC	MSRPD	mg/L		1.5%	≤20	
			MS	mg/L	12.00	98.2%	75-125	
	200.7	09/07/2023:209994EJC	MS	mg/L	12.00	128%	75-125	435
		(CC 2382993-001)	MSD	mg/L	12.00	114%	75-125	
	200.7	(CH 2377291-006)	MSD	mg/L	12.00	98.4%	75-125	
			MSRPD	mg/L		0.1%	≤20	
	200.7	09/07/2023:209994EJC	MSRPD	mg/L		4.1%	≤20	
	200.7	09/08/2023:210050EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	107%	85-115	
			MS	mg/L	12.00	25.8%	<¼	406
		(SP 2314960-001)	MSD	mg/L	12.00	56.9%	<1/4	
			MSRPD	mg/L		2.2%	≤20	
			MS	mg/L	12.00	124%	75-125	

September 22, 2023

Sentry Ag Service

Lab No. : VI 2345833

Customer No. : 4019696

## Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Sodium	200.7	(SP 2315154-001)	MSD	mg/L	12.00	701%	<1/4	435
			MSRPD	mg/L		24.6%	≤20	
	200.7	09/07/2023:209993EJC	Blank	mg/L		ND	<1	
	200.7	09/07/2023:209994EJC	Blank	mg/L		ND	<1	
	200.7	09/07/2023:209993EJC	LCS	mg/L	12.00	97.2%	85-115	
			MS	mg/L	12.00	153%	<1/4	
	200.7	09/07/2023:209994EJC	MS	mg/L	12.00	70.4%	<1/4	406
	200.7	(STK2351843-001)	MSD	mg/L	12.00	10.2%	<1/4	
			MSD	mg/L	12.00	83.8%	75-125	
	200.7	(SP 2315030-002)	MSRPD	mg/L		4.6%	≤20.0	
	200.7	09/07/2023:209994EJC	MSRPD	mg/L		6.2%	≤20.0	
	200.7	09/07/2023:209993EJC	MS	mg/L	12.00	94.9%	75-125	
	200.7	09/07/2023:209994EJC	MS	mg/L	12.00	207%	<1/4	406
	200.7	(CC 2382993-001)	MSD	mg/L	12.00	137%	<1/4	
			MSD	mg/L	12.00	102%	75-125	
	200.7	(CH 2377291-006)	MSRPD	mg/L		0.9%	≤20.0	
	200.7	09/07/2023:209994EJC	MSRPD	mg/L		4.7%	≤20.0	
	200.7	09/08/2023:210050EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	108%	85-115	406
			MS	mg/L	12.00	-83.3%	<1/4	
		(SP 2314960-001)	MSD	mg/L	12.00	668%	<1/4	406
			MSRPD	mg/L		3.3%	≤20.0	
		(SP 2315154-001)	MS	mg/L	12.00	318%	<1/4	406
			MSD	mg/L	12.00	665%	<1/4	
			MSRPD	mg/L		1.0%	≤20.0	

## 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.
- 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.

## Explanation

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



**Quality Control - Wet Chem**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO <sub>3</sub> )	2320B	09/05/2023:209945AMM	ND	mg/L		1.43%	10	435
	2320B	(STK2351859-001)	Dup	mg/L		0.3%	10	
Bicarbonate	2320B	(SP 2314674-018)	Dup	mg/L		1.43%	10	
	2320B	(STK2351859-001)	Dup	mg/L		0.5%	10	
Carbonate	2320B	(SP 2314674-018)	Dup	mg/L			10	
E. C.	2320B	(SP 2314674-018)	Dup	umhos/cm		0.2%	5	
	2320B	(STK2351859-001)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	09/05/2023:209936CTL  (CH 2377291-007) (CH 2377291-007)  (CH 2377296-005) (CH 2377296-005)	Blank	mg/L	991.5	ND	<20	
			LCS	mg/L		97.1%	90-110	
			Dup	mg/L		0.6%	5	
			Dup	mg/L		0.2%	5	
			Blank	mg/L	991.5	ND	<20	
			LCS	mg/L		102%	90-110	
			Dup	mg/L		0.5%	5	
			Dup	mg/L		0.3%	5	
	2540CE	09/06/2023:209976CTL  (SP 2314886-001) (SP 2314886-001)	Blank	mg/L	991.5	ND	<20	
			LCS	mg/L		101%	90-110	
			Dup	mg/L		2.19%	5	
			Dup	mg/L		1.42%	5	
Chloride	300.0	09/18/2023:210456LDM  (CC 2383064-001)  (CH 2377803-001)	Blank	mg/L	25.00	ND	<1	
			LCS	mg/L		101 %	90-110	
			MS	mg/L		92.6 %	67-117	
			MSD	mg/L		92.7 %	67-117	
			MSRPD	mg/L	10.00	0.03%	≤7	
			MS	mg/L	50.00	95.5 %	67-117	
			MSD	mg/L	50.00	95.5 %	67-117	
			MSRPD	mg/L	10.00	0.04%	≤7	
	300.0	09/18/2023:210456LDM  (CC 2383064-001)  (CH 2377803-001)	Blank	mg/L	50.00	ND	<0.5	
			LCS	mg/L		101 %	90-110	
			MS	mg/L		96.9 %	18-165	
			MSD	mg/L		96.9 %	18-165	
			MSRPD	mg/L	10.00	0.008%	≤7	
			MS	mg/L	100.0	95.9 %	18-165	
Sulfate Sulfur	300.0	09/18/2023:210456LDM  (CC 2383064-001)  (CH 2377803-001)	MSD	mg/L	100.0	96.0 %	18-165	
			MSRPD	mg/L	10.00	0.1%	≤7	
	300.0	09/12/2023:210201STA  (CH 2377291-007)  (CH 2377291-009)	Blank	mg/L	12.00	ND	<0.5	
			LCS	mg/L		93.2%	73-124	
			MS	mg/L		88.4%	90-110	435
			MSD	mg/L		88.0%	90-110	435
			MSRPD	mg/L	12.00	0.4%	≤20	
			MS	mg/L	12.00	91.8%	90-110	
	300.0	09/13/2023:210275LFS  (SP 2315466-001)	MSD	mg/L	12.00	85.4%	90-110	435
			MSRPD	mg/L		6.3%	≤20	
			Blank	mg/L	11.22	ND	<0.4	
			LCS	mg/L		97.3%	80-120	
Nitrate + Nitrite as N	4500NO3F	09/13/2023:210275LFS  (SP 2315466-001)	MS	mg/L	5.609	94.1%	66-125	
			MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	
	4500NO3F	09/13/2023:210275LFS	Blank	mg/L	11.22	ND	<0.4	
			LCS	mg/L		97.3%	80-120	

September 22, 2023

**Sentry Ag Service**

Lab No. : VI 2345833

Customer No. : 4019696

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(SP 2315466-001)	MS	mg/L	5.609	94.1%	66-125	
			MSD	mg/L	5.609	96.5%	66-125	
			MSRPD	mg/L		2.1%	≤30.4	

#### Definition

Blank	: Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
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.

#### Explanation

435	: Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.
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# Laboratory Analysis Work Order

3143

SITE NAME: Carlos Echeverria & Sons

2345 833

LABORATORY: VT | FGL 4-19696Billing: Sentry Ag Services, LLC  
P.O. Box 7750, Visalia, CA 93290Authorized 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	1	Irr. well	WS	8/31/23 8:20	Klam	—		
2	3	↓	↓	8:30	↓	—		
3	4	↓	↓	8:10	↓	—		
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 collection or processing of samples, please note below.

NOTES:

### CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>	<u>[Signature]</u>	<u>SAS</u>		<u>8/31/23 15:17</u>
2 <sup>nd</sup>	<u>SRO</u>	<u>FGL</u>	<u>8-31-23 1517</u>	
3 <sup>rd</sup>	<u>SRO</u>	<u>FGL</u>		<u>8-31-23 1730</u>
4 <sup>th</sup>		<u>GLS</u>	<u>8-31-23 1730</u>	

LABORATORY USE ONLY

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

ROL  
5700  
ID#TH407  
GLS  
CDA  
9/1/23  
1235

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

Sample Receipt at: STK CC

CH VI

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

2. Were samples received in a chilled condition? Temps: 20 / 15.7°C /      /      /     

Surface water SWTR bact samples: A sample that has a temperature upon receipt of  $>10^{\circ}\text{C}$ , whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

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

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

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

6. Were sample custody seals intact? Yes No N/A

7. If required, was sample split for pH analysis? Yes No N/A

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

9. 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): SRO

#### Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps:      /      /      /      /     

Acceptable is above freezing to  $6^{\circ}\text{C}$ . If many packages are received at one time check for tests/H.T.'s/rushes/

2. Shipping tracking numbers:

560050773 / 66

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

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

5. Were sample custody seals intact? Yes No N/A

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): CDA

#### 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: \_\_\_\_\_

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

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

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

(Please use the back of this sheet for additional contacts)

(4019696)  
Sentry Ag Service  
VI 2345833

cda 09/01/2023 08:11:36



January 2, 2024

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

**Lab No. : VI 2348236**  
**Customer No. : 4019696**  
**Reference : 3463**

### Laboratory Report

**Introduction:** This report package contains a total of 8 pages divided into 3 sections:

Case Narrative	(1 page)	: An overview of the work performed at FGL.
Sample Results	(3 pages)	: Results for each sample submitted.
Quality Control	(4 pages)	: 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
6	12/06/2023	12/06/2023	VI 2348236-001	DW
SLN	12/06/2023	12/06/2023	VI 2348236-002	AGW
CN	12/06/2023	12/06/2023	VI 2348236-003	AGW

### 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

EPA 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
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)

**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: 2024-01-02

January 2, 2024

**Sentry Ag Services**

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : 6

Project : Carlos Echeveria & Sons

Lab No. : VI 2348236-001

Customer No. : 4019696

Reference : 3463

Sampled On : December 6, 2023 at 08:50

Sampled By : Klay Mittel

Received On : December 6, 2023 at 12:47

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
Alkalinity (as CaCO <sub>3</sub> )	100	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	17:32	amm
Bicarbonate	120	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	17:32	amm
Carbonate	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	17:32	amm
Hydroxide	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	17:32	amm
Chloride	10	1	mg/L	500 <sup>2</sup>	1		12/07/2023	10:59	ldm	EPA 300.0	12/07/2023	19:43	ldm
Nitrate Nitrogen	0.1	0.1	mg/L	10	1		12/07/2023	10:59	ldm	EPA 300.0	12/07/2023	19:43	ldm
Conductivity	368	1	umhos/cm	1600 <sup>2</sup>	1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	17:32	amm
Sulfate Sulfur	20.6	0.17	mg/L		1		12/07/2023	10:59	ldm	EPA 300.0	12/07/2023	19:43	ldm
Solids, Total Dissolved (TDS)	210	20	mg/L	1000 <sup>2</sup>	1		12/08/2023	10:14	ctl	SM 2540 C	12/11/2023	11:30	ctl
Calcium	10	1	mg/L		1		12/11/2023	02:32	ejc	EPA 200.7	12/12/2023	18:41	ac
Magnesium	ND	1	mg/L		1	U	12/11/2023	02:32	ejc	EPA 200.7	12/12/2023	18:41	ac
Potassium	1	1	mg/L		1		12/11/2023	02:32	ejc	EPA 200.7	12/12/2023	18:41	ac
Sodium	68	1	mg/L		1		12/11/2023	02:32	ejc	EPA 200.7	12/12/2023	18:41	ac

**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

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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

January 2, 2024

**Sentry Ag Services**

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

Description : SLN  
 Project : Carlos Echeveria & Sons

Lab No. : VI 2348236-002  
 Customer No. : 4019696  
 Reference : 3463  
 Sampled On : December 6, 2023 at 09:20  
 Sampled By : Klay Mittel  
 Received On : December 6, 2023 at 12:47  
 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
Alkalinity (as CaCO <sub>3</sub> )	50	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	20:11	amm
Bicarbonate	60	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	20:11	amm
Carbonate	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	20:11	amm
Hydroxide	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	20:11	amm
Chloride	22	1	mg/L		1		12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	08:32	ldm
Nitrogen, Total Kjeldahl	1.0	0.5	mg/L		1	l	12/19/2023	05:12	lcr	EPA 351.2	12/23/2023	19:25	lcr
Nitrate Nitrogen	ND	0.1	mg/L		1	U	12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	08:32	ldm
Nitrogen, Total as Nitrogen	1	0.5	mg/L		1	l	12/19/2023	05:12	lcr	Calc.	12/23/2023	19:25	lcr
Nitrate + Nitrite as N	ND	0.1	mg/L		1	U	12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	08:32	ldm
Kjeldahl Nitrogen	1.0	0.5	mg/L		1	l	12/19/2023	05:12	lcr	EPA 351.2	12/23/2023	19:25	lcr
Conductivity	2470	1	umhos/cm		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	20:11	amm
Sulfate Sulfur	458	2.2*	mg/L		10		12/07/2023	11:23	ldm	EPA 300.0	12/09/2023	01:55	ldm
Solids, Total Dissolved (TDS)	2170	20	mg/L		1		12/08/2023	09:50	ctl	SM 2540 C	12/11/2023	11:30	ctl
Calcium	386	5*	mg/L		5		12/18/2023	07:55	ejc	EPA 200.7	12/21/2023	11:01	ac
Magnesium	18	1	mg/L		1		12/18/2023	07:55	ejc	EPA 200.7	12/19/2023	12:58	ac
Sodium	191	1	mg/L		1		12/18/2023	07:55	ejc	EPA 200.7	12/19/2023	12:58	ac

**DQF Flags Definition:**

- U Constituent results were non-detect.
- l The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution

**Corporate Offices & Laboratory**

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 CA ELAP Certification No. 2810

January 2, 2024

**Sentry Ag Services**

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

Description : CN  
 Project : Carlos Echeveria & Sons

Lab No. : VI 2348236-003  
 Customer No. : 4019696  
 Reference : 3463  
 Sampled On : December 6, 2023 at 09:10  
 Sampled By : Klay Mittel  
 Received On : December 6, 2023 at 12:47  
 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
Alkalinity (as CaCO <sub>3</sub> )	100	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	23:01	amm
Bicarbonate	120	10	mg/L		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	23:01	amm
Carbonate	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	23:01	amm
Hydroxide	ND	10	mg/L		1	U	12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	23:01	amm
Chloride	33	1	mg/L		1		12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	09:56	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	UI	12/19/2023	05:12	lcr	EPA 351.2	12/23/2023	19:28	lcr
Nitrate Nitrogen	0.4	0.1	mg/L		1		12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	09:56	ldm
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	UI	12/19/2023	05:12	lcr	Calc.	12/23/2023	19:28	lcr
Nitrate + Nitrite as N	0.4	0.1	mg/L		1		12/07/2023	11:23	ldm	EPA 300.0	12/08/2023	09:56	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	UI	12/19/2023	05:12	lcr	EPA 351.2	12/23/2023	19:28	lcr
Conductivity	1650	1	umhos/cm		1		12/09/2023	15:04	amm	SM 4500-H+B	12/09/2023	23:01	amm
Sulfate Sulfur	257	1.2*	mg/L		7		12/07/2023	11:23	ldm	EPA 300.0	12/09/2023	02:16	ldm
Solids, Total Dissolved (TDS)	1280	20	mg/L		1		12/08/2023	09:50	ctl	SM 2540 C	12/11/2023	11:30	ctl
Calcium	174	1	mg/L		1		12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	15:18	ac
Magnesium	38	1	mg/L		1		12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	15:18	ac
Sodium	142	1	mg/L		1		12/15/2023	07:10	ejc	EPA 200.7	12/15/2023	15:18	ac

**DQF Flags Definition:**

- U Constituent results were non-detect.
- I The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution



January 2, 2024  
Sentry Ag Service

Lab No. : VI 2348236  
Customer No. : 4019696

**Quality Control - Metals**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals Calcium	200.7	12/11/2023:213908EJC  (CC 2384348-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	106%	85-115	
			MS	mg/L	12.00	-2300%	<¼	
			MSD	mg/L	12.00	-2490%	<¼	
			MSRPD	mg/L		1.7%	≤20.0	
			MS	mg/L	12.00	251%	<¼	
		(SP 2320220-001)	MSD	mg/L	12.00	127%	<¼	
			MSRPD	mg/L		5.8%	≤20.0	
			Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	101%	85-115	
			MS	mg/L	12.00	111%	75-125	
			MSD	mg/L	12.00	101%	75-125	
Magnesium	200.7	12/15/2023:214106EJC  (CH 2390218-001)	MSRPD	mg/L		4.3%	≤20.0	
			MS	mg/L	12.00	55.7%	<¼	
			MSD	mg/L	12.00	124%	75-125	
			MSRPD	mg/L		6.0%	≤20.0	
		(SP 2320439-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	99.1%	85-115	
			MS	mg/L	12.00	95.7%	75-125	
			MSD	mg/L	12.00	75.8%	75-125	
			MSRPD	mg/L		3.1%	≤20.0	
			MS	mg/L	12.00	123%	75-125	
			MSD	mg/L	12.00	92.7%	75-125	
			MSRPD	mg/L		3.2%	≤20.0	
Magnesium	200.7	12/11/2023:213908EJC  (CC 2384348-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	97.7%	85-115	
			MS	mg/L	12.00	-695%	<¼	
			MSD	mg/L	12.00	-716%	<¼	
			MSRPD	mg/L		0.6%	≤20	
			MS	mg/L	12.00	114%	75-125	
		(SP 2320220-001)	MSD	mg/L	12.00	108%	75-125	
			MSRPD	mg/L		0.8%	≤20	
		12/15/2023:214106EJC  (CH 2390218-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	100%	85-115	
			MS	mg/L	12.00	105%	75-125	
			MSD	mg/L	12.00	96.6%	75-125	
			MSRPD	mg/L		6.7%	≤20	
			MS	mg/L	12.00	102%	75-125	
Magnesium	200.7	12/15/2023:214106EJC  (CH 2390218-001)	MSD	mg/L	12.00	113%	75-125	
			MSRPD	mg/L		2.9%	≤20	
		(SP 2320439-002)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	97.8%	85-115	
			MS	mg/L	12.00	103%	75-125	
			MSD	mg/L	12.00	99.2%	75-125	
			MSRPD	mg/L		3.1%	≤20	
			MS	mg/L	12.00	112%	75-125	

### Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Potassium	200.7	(SP 2320618-001)	MSD	mg/L	12.00	92.4%	75-125	
			MSRPD	mg/L		5.1%	≤20	
		12/11/2023:213908EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	100%	75-125	
		(CC 2384348-001)	MSD	mg/L	12.00	108%	75-125	
			MSRPD	mg/L		2.4%	≤20.0	
			MS	mg/L	12.00	110%	75-125	
		(SP 2320220-001)	MSD	mg/L	12.00	105%	75-125	
			MSRPD	mg/L		2.4%	≤20.0	
Sodium	200.7	12/11/2023:213908EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	105%	85-115	
			MS	mg/L	12.00	-2230%	<¼	
		(CC 2384348-001)	MSD	mg/L	12.00	-2560%	<¼	
			MSRPD	mg/L		0.9%	≤20.0	
			MS	mg/L	12.00	129%	<¼	
		(SP 2320220-001)	MSD	mg/L	12.00	157%	<¼	
			MSRPD	mg/L		1.8%	≤20.0	
	200.7	12/15/2023:214106EJC	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	102%	85-115	
			MS	mg/L	12.00	110%	75-125	
		(CH 2390218-001)	MSD	mg/L	12.00	102%	75-125	
			MSRPD	mg/L		4.5%	≤20.0	
			MS	mg/L	12.00	85.0%	75-125	
		(SP 2320439-002)	MSD	mg/L	12.00	111%	75-125	
			MSRPD	mg/L		6.8%	≤20.0	
	200.7	12/18/2023:214203EJC	Blank	mg/L		ND	<1	406
			LCS	mg/L	12.00	93.7%	85-115	
			MS	mg/L	12.00	101%	75-125	
		(VI 2348524-001)	MSD	mg/L	12.00	85.0%	75-125	
			MSRPD	mg/L		2.9%	≤20.0	
			MS	mg/L	12.00	158%	<¼	
		(SP 2320618-001)	MSD	mg/L	12.00	56.2%	<1/4	
			MSRPD	mg/L		6.2%	≤20.0	

#### Definition

- <¼ : High Sample Background - Spike concentration was less than one forth of the sample concentration.
- 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.
- 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.

#### Explanation

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO <sub>3</sub> )	2320B	(STK2356553-007)	Dup	mg/L		0.2%	10	
		(VI 2348309-001)	Dup	mg/L		0.4%	10	
Bicarbonate	2320B	(STK2356553-007)	Dup	mg/L		0.2%	10	
		(VI 2348309-001)	Dup	mg/L		0.4%	10	
E. C.	2320B	(STK2356553-007)	Dup	umhos/cm		0.06%	5	
		(VI 2348309-001)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	12/08/2023:213823CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	99.5%	90-110	
		(SP 2320140-001)	Dup	mg/L		0.6%	5	
		(SP 2320140-001)	Dup	mg/L		0.2%	5	
			Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	97.7%	90-110	
		(CC 2384328-001)	Dup	mg/L		2.91%	5	
		(CC 2384328-001)	Dup	mg/L		0.2%	5	
Chloride	300.0	12/07/2023:213855LDM	Blank	mg/L		ND	<1	
	300.0	12/07/2023:213946LDM	Blank	mg/L		ND	<1	
	300.0	12/07/2023:213855LDM	LCS	mg/L	25.00	103%	90-110	
	300.0	12/07/2023:213946LDM	LCS	mg/L	25.00	98.5%	90-110	
			MS	mg/L	50.00	102%	67-117	
	300.0	12/07/2023:213855LDM	MS	mg/L	0.000	0.0%	<¼	
		(VI 2348127-004)	MSD	mg/L	0.000	0.0%	<¼	
	300.0	(CH 2373985-001)	MSD	mg/L	50.00	102%	67-117	
			MSRPD	mg/L		0.0%	≤7	
	300.0	12/07/2023:213855LDM	MSRPD	mg/L		0.0%	≤7	
			MS	mg/L	0.000	0.0%	<¼	
	300.0	12/07/2023:213946LDM	MS	mg/L	50.00	100%	67-117	
	300.0	(VI 2348127-005)	MSD	mg/L	0.000	0.0%	<¼	
	300.0	(VI 2348252-001)	MSD	mg/L	50.00	101%	67-117	
			MSRPD	mg/L		0.8%	≤7	
	300.0	12/07/2023:213855LDM	MSRPD	mg/L		0.0%	≤7	
Nitrate + Nitrite as N	300.0	12/07/2023:213946LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	96.6%	90-110	
			MS	mg/L	40.00	101%	86-112	
		(CH 2373985-001)	MSD	mg/L	40.00	101%	86-112	
			MSRPD	mg/L		0.1%	≤7	
			MS	mg/L	40.00	101%	86-112	
		(VI 2348252-001)	MSD	mg/L	40.00	102%	86-112	
			MSRPD	mg/L		0.9%	≤7	
Nitrate Nitrogen	300.0	12/07/2023:213946LDM	Blank	mg/L		ND	<0.4	
	300.0	12/07/2023:213855LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	105%	90-110	
	300.0	12/07/2023:213946LDM	LCS	mg/L	20.00	96.6%	90-110	
	300.0	12/07/2023:213855LDM	MS	mg/L	0.000	0.0%	<¼	
	300.0	12/07/2023:213946LDM	MS	mg/L	40.00	101%	86-112	
		(CH 2373985-001)	MSD	mg/L	40.00	101%	86-112	
	300.0	(VI 2348127-004)	MSD	mg/L	0.000	0.0%	<¼	
			MSRPD	mg/L		0.0%	≤7	
	300.0	12/07/2023:213946LDM	MSRPD	mg/L		0.1%	≤7	
			MS	mg/L	40.00	101%	86-112	
	300.0	12/07/2023:213855LDM	MS	mg/L	0.000	0.0%	<¼	

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(VI 2348127-005)	MSD	mg/L	0.000	0.0%	<¼	
	300.0	(VI 2348252-001)	MSD	mg/L	40.00	102%	86-112	
	300.0	12/07/2023:213855LDM	MSRPD	mg/L		0.0%	≤7	
	300.0	12/07/2023:213946LDM	MSRPD	mg/L		0.9%	≤7	
Sulfate Sulfur	300.0	12/07/2023:213855LDM	Blank	mg/L		ND	<0.5	
	300.0	12/07/2023:213946LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.8%	90-110	
	300.0	12/07/2023:213855LDM	LCS	mg/L	50.00	103%	90-110	
	300.0	12/07/2023:213946LDM	MS	mg/L	100.0	103%	18-165	
	300.0	12/07/2023:213855LDM	MS	mg/L	0.000	0.0%	<¼	
		(VI 2348127-004)	MSD	mg/L	0.000	0.0%	<¼	
	300.0	(CH 2373985-001)	MSD	mg/L	100.0	103%	18-165	
			MSRPD	mg/L		0.1%	≤7	
	300.0	12/07/2023:213855LDM	MSRPD	mg/L		0.0%	≤7	
			MS	mg/L	0.000	0.0%	<¼	
	300.0	12/07/2023:213946LDM	MS	mg/L	100.0	102%	18-165	
		(VI 2348252-001)	MSD	mg/L	100.0	103%	18-165	
	300.0	(VI 2348127-005)	MSD	mg/L	0.000	0.0%	<¼	
			MSRPD	mg/L		0.0%	≤7	
	300.0	12/07/2023:213946LDM	MSRPD	mg/L		1.0%	≤7	
Nitrogen, Total Kjeldahl	351.2	12/19/2023:214307LCR	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	97.5%	73-124	
			MS	mg/L	12.00	90.1%	90-110	
		(CH 2390336-007)	MSD	mg/L	12.00	93.8%	90-110	
			MSRPD	mg/L		4.0%	≤20	
			MS	mg/L	12.00	89.3%	90-110	435
		(CH 2390336-010)	MSD	mg/L	12.00	88.8%	90-110	435
			MSRPD	mg/L		0.6%	≤20	

#### Definition

- <¼ : High Sample Background - Spike concentration was less than one forth of the sample concentration.
- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- 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.

#### Explanation

- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



# Laboratory Analysis Work Order

3463

2348236

SITE NAME: Carlos Echaverria & Sons

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: \_\_\_\_\_

7.8°C RST  
TK 407

### 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: \_\_\_\_\_

### 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: \_\_\_\_\_

### 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	U	Dom. Well	W4	12/6/23 8:50	Klay	-		
2	SLN	Dr. Well	W5	9:20		-		
3	CN	↓	W5	9:10	↓	-		
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 RWOCB 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>	Klay	SAS		12/6/23 12:47
2 <sup>nd</sup>	AJB	FGL	12/16/23 12:47	
3 <sup>rd</sup>	AJB	FGL		12/16/23 1730
4 <sup>th</sup>	GLS	GLS	12/16/23 1730	

LABORATORY USE ONLY

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

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

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

GLS 12/16/23 10:50

### 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 #: TH401

3. Were samples received on ice? ☒ Yes No Temps: 7.8 / 10 /      /      /       
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): ASB

#### Sample Receipt at SP:

1. Number of ice chests/packages received: 4 Shipping tracking #(s): 54054401, 54054403, 54054404, 54054405

2. Temp IR Gun ID #: 264

3. Were samples received on ice? ☒ Yes No Temps: 1 / 1 / 1 / 1 / 1 / 1 / 1 / 1  
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):     

#### 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: \_\_\_\_\_

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

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

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

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Sentry Ag Service  
VI 2348236

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