

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:** Phoenix Dairy

Physical address of dairy:

10736 1 1/2 Avenue
Number and StreetHanford
CityKings
County93230
Zip Code

Street and nearest cross street (if no address): _____

Date facility was originally placed in operation: 01/01/1980Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

X016-X100-X012-XXXX X016-X100-X066-XXXX**B. OPERATORS**

te Velde, Bernard Jr

Operator name: te Velde, Bernard Jr

Telephone no.:

(559) 936-2253

Landline

Cellular

10736 1 1/2 AvenueHanfordCA93230

Mailing Address Number and Street

City

State

Zip Code

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

te Velde, Bernard Jr

Legal owner name: te Velde, Bernard Jr

Telephone no.:

(559) 936-2253

Landline

Cellular

10736 1 1/2 AvenueHanfordCA93230

Mailing Address Number and Street

City

State

Zip Code

This owner is responsible for paying permit fees.

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AVAILABLE NUTRIENTS

A. HERD INFORMATION

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	0	485	400	0	0	0
Number under roof	590	600	0	0	0	0
Maximum number	605	1,105	445	0	0	0
Average number	590	1,085	400	0	0	0
Avg live weight (lbs)	1,400	1,450	1,000	0		

Predominant milk cow breed: Holstein

Average milk production: 70 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 35,168.25 tons per reporting period

Total nitrogen from manure: 433,846.76 lbs per reporting period

After ammonia losses (30% loss applied): 303,692.73 lbs per reporting period

Total phosphorus from manure: 66,060.57 lbs per reporting period

Total potassium from manure: 112,990.44 lbs per reporting period

Total salt from manure: 527,297.25 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 30,071,788 gallons

Total nitrogen generated: 100,384.24 lbs

Total phosphorus generated: 14,887.79 lbs

Total potassium generated: 173,782.21 lbs

Total salt generated: 958,970.35 lbs

30,071,788 gallons applied
+ 0 gallons exported
- 0 gallons imported
= 30,071,788 gallons generated

D. FRESH WATER SOURCES

Source Description	Type
Dairy Irr	Ground water
Dom 1	Ground water
Dom 2	Ground water
House Dom	Ground water
House Dom 2	Ground water

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Source Description	Type
House Dom 3	Ground water
Well 11	Ground water
Well 14	Ground water
Well 3	Ground water

E. SUBSURFACE (TILE) DRAINAGE SOURCES

No subsurface (tile) drainage sources entered.

F. NUTRIENT IMPORTS

No dry manure nutrient imports entered.

No process wastewater nutrient imports entered.

No commercial or other nutrient imports entered.

G. NUTRIENT EXPORTS

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
11	56	56	2	process wastewater	X016-X100-X001-XXXX
12	15	15	2	process wastewater	X016-X100-X053-XXXX
13	36	36	2	process wastewater	X016-X100-X012-XXXX
14	37	37	2	process wastewater	X016-X100-X011-XXXX
15	8	8	2	process wastewater	X016-X100-X066-XXXX
16	36	36	2	process wastewater	X016-X100-X050-XXXX
Totals for areas that were used for application	188	188	12		
Totals for areas that were not used for application					
Land application area totals	188	188	12		

B. CROPS AND HARVESTS

11

Field name: 11

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

Crop: Wheat, silage, soft dough

Acres planted: 56 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 (%)
05/19/2023	1,290.00 <i>ton</i>	Dry-weight		64.1	13,900.00	3,600.00	15,100.00		9.72

	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	23.04	229.90	59.54	249.75	1,607.65

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11

06/10/2023: Corn, silage

Crop: Corn, silage Acres planted: 56 Plant date: 06/10/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/28/2023	1,685.00 ton	Dry-weight		73.3	11,600.00	2,400.00	14,200.00		5.48

	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	30.09	186.39	38.56	228.16	880.51

12

Field name: 12

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

Crop: Wheat, silage, soft dough Acres planted: 15 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 (%)
05/19/2023	380.00 ton	Dry-weight		66.3	14,100.00	3,500.00	12,800.00		9.31

	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	25.33	240.75	59.76	218.56	1,589.65

06/10/2023: Corn, silage

Crop: Corn, silage Acres planted: 15 Plant date: 06/10/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/27/2023	480.00 ton	Dry-weight		73.9	13,200.00	2,400.00	19,700.00		7.08

	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	32.00	220.49	40.09	329.07	1,182.64

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13

Field name: 13

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

Crop: Wheat, silage, soft dough

Acres planted: 36 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 (%)
05/19/2023	815.00 ton	Dry-weight		66.5	14,100.00	3,600.00	13,100.00		8.59

	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	22.64	213.87	54.61	198.70	1,302.94

06/11/2023: Corn, silage

Crop: Corn, silage

Acres planted: 36 Plant date: 06/11/2023

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	1,090.00 ton	Dry-weight		68.4	14,500.00	3,200.00	11,900.00		5.75

	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	30.28	277.47	61.23	227.71	1,100.29

14

Field name: 14

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

Crop: Wheat, silage, soft dough

Acres planted: 37 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 (%)
05/19/2023	875.00 ton	Dry-weight		64.5	14,500.00	3,400.00	10,700.00		8.27

	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	23.65	243.46	57.09	179.66	1,388.58

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14

06/12/2023: Corn, silage

Crop: Corn, silage Acres planted: 37 Plant date: 06/12/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/11/2023	1,120.00 ton	Dry-weight		68.3	12,300.00	2,700.00	15,800.00		6.16

	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	236.05	51.82	303.22	1,182.19

15

Field name: 15

11/09/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 8 Plant date: 11/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/19/2023	240.00 ton	Dry-weight		66.7	13,200.00	3,500.00	12,700.00		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	30.00	263.74	69.93	253.75	1,832.17

06/13/2023: Corn, silage

Crop: Corn, silage Acres planted: 8 Plant date: 06/13/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/28/2023	219.00 ton	Dry-weight		67.3	12,500.00	2,600.00	15,100.00		6.37

	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	27.38	223.79	46.55	270.34	1,140.44

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16

Field name: 16

11/09/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 36 Plant date: 11/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/19/2023	1,044.00 ton	Dry-weight		65.6	13,300.00	3,600.00	13,600.00		9.22

	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	29.00	265.36	71.83	271.35	1,839.57

06/13/2023: Corn, silage

Crop: Corn, silage Acres planted: 36 Plant date: 06/13/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/28/2023	979.00 ton	Dry-weight		69.3	13,500.00	2,800.00	13,600.00		5.68

	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	27.19	225.41	46.75	227.08	948.41

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NUTRIENT BUDGET

A. LAND APPLICATIONS

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

Field name: 11

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		
10/21/2022	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	78.43	11.48	123.25	1,184.76	1,232,625.00 <i>gal</i>
Well 3	Ground water	3.39	0.00	0.00	181.66	8,126,954.00 <i>gal</i>
Application event totals		81.82	11.48	123.25	1,366.42	
03/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	107.65	15.68	168.03	1,212.78	1,792,625.00 <i>gal</i>
Well 3	Ground water	2.97	0.00	0.00	159.00	7,113,124.00 <i>gal</i>
Application event totals		110.62	15.68	168.03	1,371.78	
04/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	82.43	12.01	128.66	928.64	1,372,625.00 <i>gal</i>
Well 3	Ground water	2.95	0.00	0.00	157.88	7,063,124.00 <i>gal</i>
Application event totals		85.38	12.01	128.66	1,086.52	

11 - 06/10/2023: Corn, silage

Field name: 11

Crop: Corn, silage

Plant date: 06/10/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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11 - 06/10/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/23/2023	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	60.09	9.01	113.13	401.61	1,028,653.00 <i>gal</i>
Well 3	Ground water	3.73	0.00	0.00	200.08	8,951,067.00 <i>gal</i>
Application event totals		63.82	9.01	113.13	601.69	
07/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 3	Ground water	3.93	0.00	0.00	210.32	9,409,294.00 <i>gal</i>
Application event totals		3.93	0.00	0.00	210.32	
07/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	66.89	10.03	125.92	447.04	1,145,000.00 <i>gal</i>
Well 3	Ground water	3.35	0.00	0.00	179.48	8,029,295.00 <i>gal</i>
Application event totals		70.24	10.03	125.92	626.51	
07/28/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	53.02	7.99	100.33	356.20	912,341.00 <i>gal</i>
Well 3	Ground water	3.84	0.00	0.00	205.81	9,207,522.00 <i>gal</i>
Application event totals		56.86	7.99	100.33	562.02	
08/16/2023	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	44.41	6.66	83.61	296.84	760,284.00 <i>gal</i>
Well 3	Ground water	3.76	0.00	0.00	201.21	9,001,493.00 <i>gal</i>
Application event totals		48.17	6.66	83.61	498.04	

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11 - 06/10/2023: Corn, silage

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
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
Well 3		Ground water	3.93	0.00	0.00	210.41	9,413,408.00 <i>gal</i>
Application event totals			3.93	0.00	0.00	210.41	

12 - 11/14/2022: Wheat, silage, soft dough

Field name: 12

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		
10/21/2022	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	107.79	15.78	169.39	1,628.23	453,754.00 <i>gal</i>
Well 3	Ground water	3.27	0.00	0.00	175.38	2,101,581.00 <i>gal</i>
Application event totals		111.06	15.78	169.39	1,803.61	
03/05/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	99.88	14.55	155.89	1,125.15	445,471.00 <i>gal</i>
Well 3	Ground water	3.12	0.00	0.00	167.28	2,004,499.00 <i>gal</i>
Application event totals		103.00	14.55	155.89	1,292.43	
04/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	54.79	7.98	85.52	617.24	244,377.00 <i>gal</i>
Well 3	Ground water	2.53	0.00	0.00	135.32	1,621,581.00 <i>gal</i>
Application event totals		57.32	7.98	85.52	752.56	

12 - 06/10/2023: Corn, silage

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12 - 06/10/2023: Corn, silage

Field name: 12

Crop: Corn, silage

Plant date: 06/10/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/22/2023	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	64.07	9.66	121.24	430.42	295,295.00 <i>gal</i>
Well 3	Ground water	3.59	0.00	0.00	192.19	2,303,040.00 <i>gal</i>
Application event totals		67.66	9.66	121.24	622.61	
06/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	61.13	9.17	115.08	408.56	280,300.00 <i>gal</i>
Well 3	Ground water	4.12	0.00	0.00	220.50	2,642,311.00 <i>gal</i>
Application event totals		65.24	9.17	115.08	629.06	
07/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	61.94	9.34	117.21	416.10	285,471.00 <i>gal</i>
Well 3	Ground water	3.12	0.00	0.00	167.28	2,004,499.00 <i>gal</i>
Application event totals		65.06	9.34	117.21	583.38	
07/26/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	44.60	6.72	84.39	299.61	205,551.00 <i>gal</i>
Well 3	Ground water	3.90	0.00	0.00	209.08	2,505,463.00 <i>gal</i>
Application event totals		48.50	6.72	84.39	508.69	
08/13/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	44.19	6.66	83.61	296.83	203,647.00 <i>gal</i>
Well 3	Ground water	3.74	0.00	0.00	200.44	2,401,966.00 <i>gal</i>
Application event totals		47.93	6.66	83.61	497.28	

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12 - 06/10/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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
Well 3	Ground water	3.98	0.00	0.00	212.99	2,552,361.00 <i>gal</i>
Application event totals		3.98	0.00	0.00	212.99	

13 - 11/16/2022: Wheat, silage, soft dough

Field name: 13

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		
10/26/2022	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	76.74	11.23	120.58	1,159.12	775,256.00 <i>gal</i>
Well 3	Ground water	3.55	0.00	0.00	189.91	5,461,796.00 <i>gal</i>
Application event totals		80.28	11.23	120.58	1,349.03	
03/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	100.45	14.63	156.78	1,131.60	1,075,259.00 <i>gal</i>
Well 3	Ground water	2.83	0.00	0.00	151.39	4,354,045.00 <i>gal</i>
Application event totals		103.27	14.63	156.78	1,282.99	
04/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	73.40	10.69	114.57	826.93	785,754.00 <i>gal</i>
Well 3	Ground water	2.60	0.00	0.00	139.49	4,011,796.00 <i>gal</i>
Application event totals		76.01	10.69	114.57	966.42	

13 - 06/11/2023: Corn, silage

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

13 - 06/11/2023: Corn, silage

Field name: 13

Crop: Corn, silage

Plant date: 06/11/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	90.68	13.67	171.59	609.16	1,003,010.00 <i>gal</i>
Well 3	Ground water	3.28	0.00	0.00	175.85	5,057,297.00 <i>gal</i>
Application event totals		93.96	13.67	171.59	785.01	
06/29/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 3	Ground water	3.54	0.00	0.00	189.52	5,450,549.00 <i>gal</i>
Application event totals		3.54	0.00	0.00	189.52	
07/14/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	98.61	14.87	186.60	662.45	1,090,760.00 <i>gal</i>
Well 3	Ground water	2.66	0.00	0.00	142.62	4,101,796.00 <i>gal</i>
Application event totals		101.27	14.87	186.60	805.07	
07/28/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	83.85	12.64	158.67	563.30	927,508.00 <i>gal</i>
Well 3	Ground water	2.67	0.00	0.00	143.01	4,112,799.00 <i>gal</i>
Application event totals		86.52	12.64	158.67	706.31	
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	70.70	10.66	133.78	474.94	782,006.00 <i>gal</i>
Well 3	Ground water	3.34	0.00	0.00	178.90	5,145,048.00 <i>gal</i>
Application event totals		74.04	10.66	133.78	653.83	

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

13 - 06/11/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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
Well 3	Ground water	3.28	0.00	0.00	175.92	5,059,547.00 <i>gal</i>
Application event totals		3.28	0.00	0.00	175.92	
09/14/2023	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
Well 3	Ground water	3.35	0.00	0.00	179.59	5,165,048.00 <i>gal</i>
Application event totals		3.35	0.00	0.00	179.59	
09/30/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 3	Ground water	2.84	0.00	0.00	152.17	4,376,294.00 <i>gal</i>
Application event totals		2.84	0.00	0.00	152.17	

14 - 11/15/2022: Wheat, silage, soft dough

Field name: 14

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		
10/27/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	94.14	13.78	147.93	1,422.02	977,508.00 <i>gal</i>
Well 3	Ground water	3.42	0.00	0.00	183.30	5,417,966.00 <i>gal</i>
Application event totals		97.56	13.78	147.93	1,605.31	

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

14 - 11/15/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
03/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	77.60	11.30	121.11	874.18	853,729.00 <i>gal</i>
Well 3	Ground water	2.53	0.00	0.00	135.58	4,007,500.00 <i>gal</i>
Application event totals		80.13	11.30	121.11	1,009.76	
04/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	88.38	12.87	137.94	995.62	972,330.00 <i>gal</i>
Well 3	Ground water	2.59	0.00	0.00	138.93	4,106,568.00 <i>gal</i>
Application event totals		90.97	12.87	137.94	1,134.55	

14 - 06/12/2023: Corn, silage

Field name: 14

Crop: Corn, silage

Plant date: 06/12/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	83.34	12.57	157.71	559.90	947,508.00 <i>gal</i>
Well 3	Ground water	3.81	0.00	0.00	203.93	6,027,966.00 <i>gal</i>
Application event totals		87.15	12.57	157.71	763.83	
06/29/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	60.19	9.07	113.89	404.34	684,255.00 <i>gal</i>
Well 3	Ground water	3.58	0.00	0.00	191.81	5,669,546.00 <i>gal</i>
Application event totals		63.77	9.07	113.89	596.14	

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

14 - 06/12/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/13/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	80.70	12.17	152.72	542.17	917,508.00 <i>gal</i>
Well 3	Ground water	3.35	0.00	0.00	179.57	5,307,966.00 <i>gal</i>
Application event totals		84.06	12.17	152.72	721.74	
08/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	70.55	10.64	133.49	473.92	802,006.00 <i>gal</i>
Well 3	Ground water	3.71	0.00	0.00	198.49	5,867,034.00 <i>gal</i>
Application event totals		74.25	10.64	133.49	672.41	
08/16/2023	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
Well 3	Ground water	3.35	0.00	0.00	179.56	5,307,500.00 <i>gal</i>
Application event totals		3.35	0.00	0.00	179.56	
09/03/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 3	Ground water	3.45	0.00	0.00	184.60	5,456,568.00 <i>gal</i>
Application event totals		3.45	0.00	0.00	184.60	
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
Well 3	Ground water	3.58	0.00	0.00	191.81	5,669,546.00 <i>gal</i>
Application event totals		3.58	0.00	0.00	191.81	

15 - 11/09/2022: Wheat, silage, soft dough

Field name: 15

Crop: Wheat, silage, soft dough

Plant date: 11/09/2022

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

15 - 11/09/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/21/2022	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	96.75	14.16	152.04	1,461.52	217,224.00 <i>gal</i>
Well 3	Ground water	2.95	0.00	0.00	158.02	1,009,899.00 <i>gal</i>
Application event totals		99.70	14.16	152.04	1,619.53	
03/07/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	100.45	14.63	156.78	1,131.60	238,946.00 <i>gal</i>
Well 3	Ground water	2.64	0.00	0.00	141.35	903,344.00 <i>gal</i>
Application event totals		103.09	14.63	156.78	1,272.94	
04/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	73.05	10.64	114.02	822.98	173,779.00 <i>gal</i>
Well 3	Ground water	2.84	0.00	0.00	107.65	938,177.00 <i>gal</i>
Application event totals		75.89	10.64	114.02	930.63	

15 - 06/13/2023: Corn, silage

Field name: 15

Crop: Corn, silage

Plant date: 06/13/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/23/2023	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	66.28	9.99	125.42	445.25	162,918.00 <i>gal</i>
Well 3	Ground water	3.49	0.00	0.00	186.94	1,194,732.00 <i>gal</i>
Application event totals		69.77	9.99	125.42	632.19	

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15 - 06/13/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	61.86	9.33	117.06	415.57	152,057.00 <i>gal</i>
Well 3	Ground water	3.55	0.00	0.00	190.34	1,216,454.00 <i>gal</i>
Application event totals		65.41	9.33	117.06	605.91	
07/14/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Well 3	Ground water	3.68	0.00	0.00	197.13	1,259,899.00 <i>gal</i>
Application event totals		3.68	0.00	0.00	197.13	
07/29/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	70.70	10.66	133.78	474.94	173,779.00 <i>gal</i>
Well 3	Ground water	3.55	0.00	0.00	190.34	1,216,454.00 <i>gal</i>
Application event totals		74.25	10.66	133.78	665.27	
08/16/2023	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	71.40	10.76	135.11	479.64	175,501.00 <i>gal</i>
Well 3	Ground water	3.74	0.00	0.00	200.53	1,281,622.00 <i>gal</i>
Application event totals		75.14	10.76	135.11	680.18	
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
Well 3	Ground water	3.81	0.00	0.00	203.93	1,303,344.00 <i>gal</i>
Application event totals		3.81	0.00	0.00	203.93	

16 - 11/09/2022: Wheat, silage, soft dough

Field name: 16

Crop: Wheat, silage, soft dough

Plant date: 11/09/2022

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

16 - 11/09/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
10/25/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	87.30	12.78	137.19	1,318.73	882,006.00 <i>gal</i>
Well 3	Ground water	3.47	0.00	0.00	186.09	5,351,796.00 <i>gal</i>
Application event totals		90.78	12.78	137.19	1,504.81	
03/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	100.45	14.63	156.78	1,131.60	1,075,259.00 <i>gal</i>
Well 3	Ground water	2.82	0.00	0.00	150.81	4,337,297.00 <i>gal</i>
Application event totals		103.26	14.63	156.78	1,282.41	
04/12/2023	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	68.49	9.98	106.89	771.55	733,131.00 <i>gal</i>
Well 3	Ground water	2.68	0.00	0.00	143.51	4,127,298.00 <i>gal</i>
Application event totals		71.17	9.98	106.89	915.05	

16 - 06/13/2023: Corn, silage

Field name: 16

Crop: Corn, silage

Plant date: 06/13/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/23/2023	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	79.53	11.99	150.50	534.30	879,757.00 <i>gal</i>
Well 3	Ground water	3.74	0.00	0.00	200.53	5,767,297.00 <i>gal</i>
Application event totals		83.28	11.99	150.50	734.84	

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

16 - 06/13/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following	
06/29/2023	Surface (irrigation)	No precipitation		No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well 3	Ground water	3.87	0.00	0.00	207.33	5,962,799.00 <i>gal</i>	
Application event totals		3.87	0.00	0.00	207.33		
07/15/2023	Surface (irrigation)	No precipitation		No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Lagoon	Process wastewater	106.04	15.99	200.67	712.40	1,173,009.00 <i>gal</i>	
Well 3	Ground water	3.74	0.00	0.00	200.53	5,767,297.00 <i>gal</i>	
Application event totals		109.79	15.99	200.67	912.94		
07/31/2023	Surface (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	70.70	10.66	133.78	474.94	782,006.00 <i>gal</i>	
Well 3	Ground water	3.68	0.00	0.00	197.13	5,669,546.00 <i>gal</i>	
Application event totals		74.38	10.66	133.78	672.07		
08/14/2023	Surface (irrigation)	No precipitation		No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Well 3	Ground water	3.80	0.00	0.00	203.74	5,859,555.00 <i>gal</i>	
Application event totals		3.80	0.00	0.00	203.74		
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	
Well 3	Ground water	3.74	0.00	0.00	200.53	5,767,297.00 <i>gal</i>	
Application event totals		3.74	0.00	0.00	200.53		

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

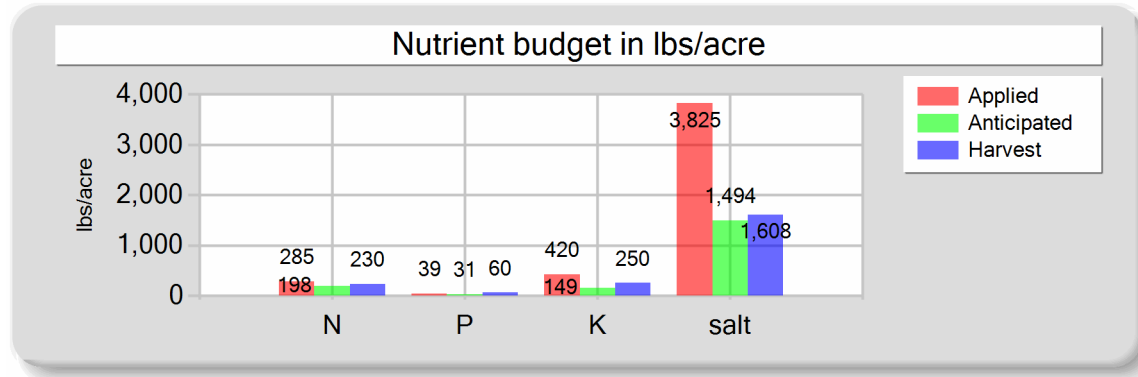
B. NUTRIENT BUDGET

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

Field name: 11

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)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	22,303,202.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	821.35 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	14.67 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	268.52	39.17	419.94	3,326.18	Process wastewater applied
Fresh water	9.31	0.00	0.00	498.54	4,397,875.00 gallons
Atmospheric deposition	7.00	0.00	0.00	0.00	161.96 acre-inches
Total nutrients applied	284.83	39.17	419.94	3,824.71	2.89 inches/acre
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00	
Actual crop nutrient removal	229.90	59.54	249.75	1,607.65	Total harvests for the crop
Nutrient balance	54.92	-20.37	170.19	2,217.06	1 harvests
Applied to removed ratio	1.24	0.66	1.68	2.38	

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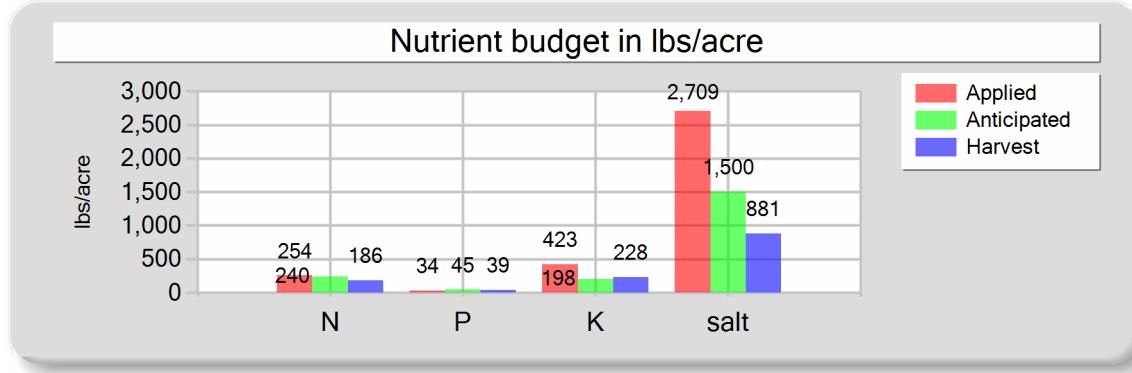
Reporting period 01/01/2023 to 12/31/2023.

11 - 06/10/2023: Corn, silage

Field name: 11

Crop: Corn, silage

Plant date: 06/10/2023



	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	224.41	33.70	423.00	1,501.69
Fresh water	22.54	0.00	0.00	1,207.31
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	253.94	33.70	423.00	2,709.00
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	186.39	38.56	228.16	880.51
Nutrient balance	67.56	-4.86	194.83	1,828.50
Applied to removed ratio	1.36	0.87	1.85	3.08

Fresh water applied
54,012,079.00 gallons
1,989.08 acre-inches
35.52 inches/acre

Process wastewater applied
3,846,278.00 gallons
141.65 acre-inches
2.53 inches/acre

Total harvests for the crop
1 harvests

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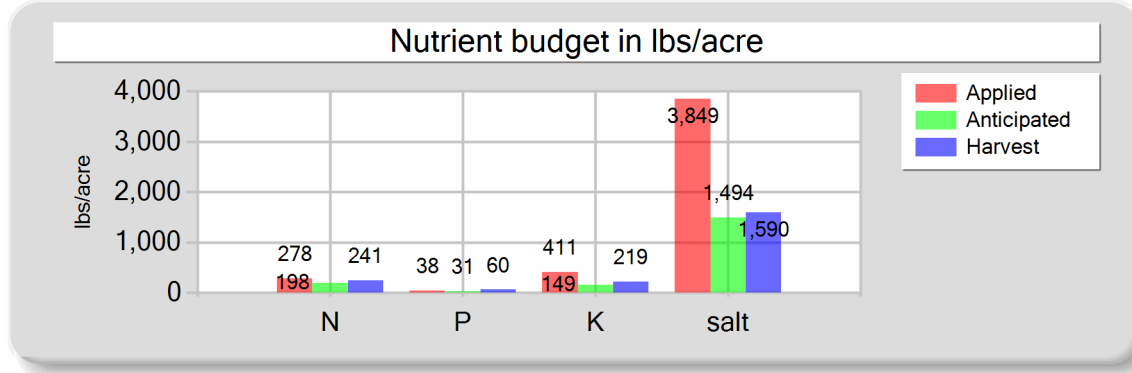
Reporting period 01/01/2023 to 12/31/2023.

12 - 11/14/2022: Wheat, silage, soft dough

Field name: 12

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	262.46	38.31	410.79	3,370.61
Fresh water	8.92	0.00	0.00	477.97
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	278.38	38.31	410.79	3,848.59
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	240.75	59.76	218.56	1,589.65
Nutrient balance	37.63	-21.46	192.23	2,258.94
Applied to removed ratio	1.16	0.64	1.88	2.42

Fresh water applied
5,727,661.00 gallons
210.93 acre-inches
14.06 inches/acre

Process wastewater applied
1,143,602.00 gallons
42.11 acre-inches
2.81 inches/acre

Total harvests for the crop
1 harvests

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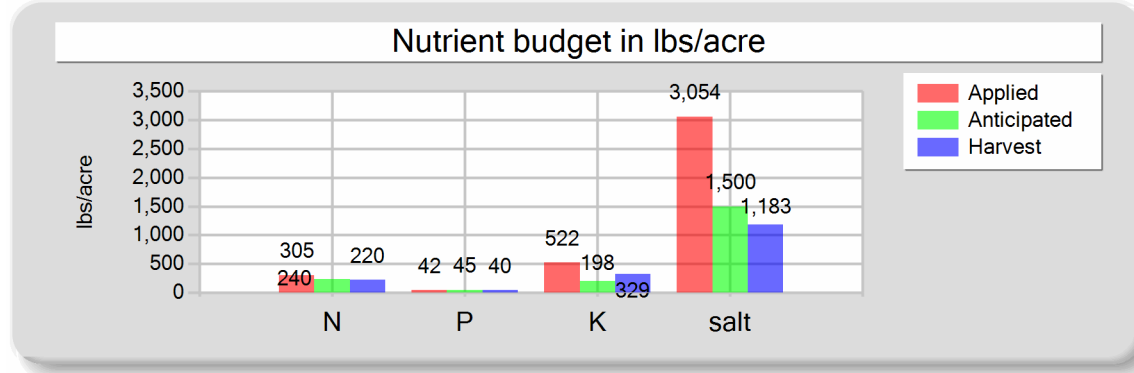
Reporting period 01/01/2023 to 12/31/2023.

12 - 06/10/2023: Corn, silage

Field name: 12

Crop: Corn, silage

Plant date: 06/10/2023



	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	275.92	41.55	521.54	1,851.53
Fresh water	22.45	0.00	0.00	1,202.48
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	305.37	41.55	521.54	3,054.01
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	220.49	40.09	329.07	1,182.64
Nutrient balance	84.87	1.46	192.47	1,871.37
Applied to removed ratio	1.38	1.04	1.58	2.58

Fresh water applied
14,409,640.00 gallons
530.66 acre-inches
35.38 inches/acre

Process wastewater applied
1,270,264.00 gallons
46.78 acre-inches
3.12 inches/acre

Total harvests for the crop
1 harvests

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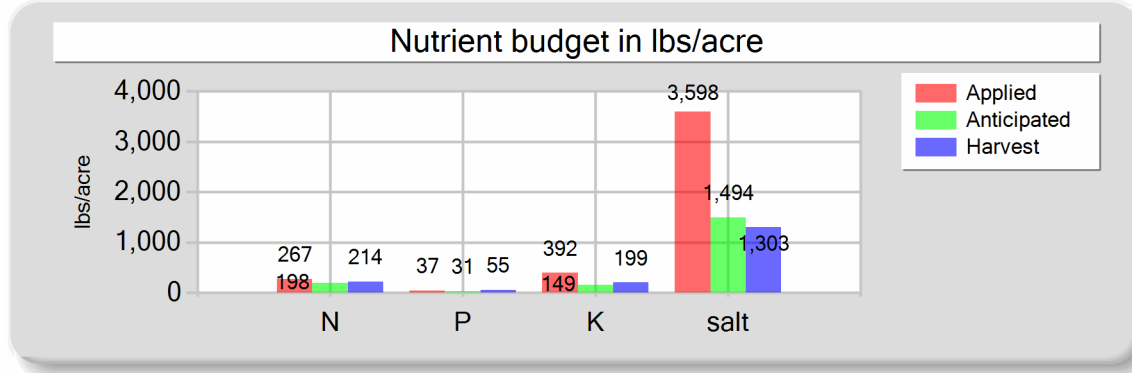
Reporting period 01/01/2023 to 12/31/2023.

13 - 11/16/2022: Wheat, silage, soft dough

Field name: 13

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	0.00	0.00	0.00	0.00
Process wastewater	250.59	36.55	391.93	3,117.65
Fresh water	8.97	0.00	0.00	480.80
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	266.56	36.55	391.93	3,598.44
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	213.87	54.61	198.70	1,302.94
Nutrient balance	52.69	-18.05	193.23	2,295.51
Applied to removed ratio	1.25	0.67	1.97	2.76

Fresh water applied
13,827,637.00 <i>gallons</i>
509.22 <i>acre-inches</i>
14.15 <i>inches/acre</i>

Process wastewater applied
2,636,269.00 <i>gallons</i>
97.08 <i>acre-inches</i>
2.70 <i>inches/acre</i>

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

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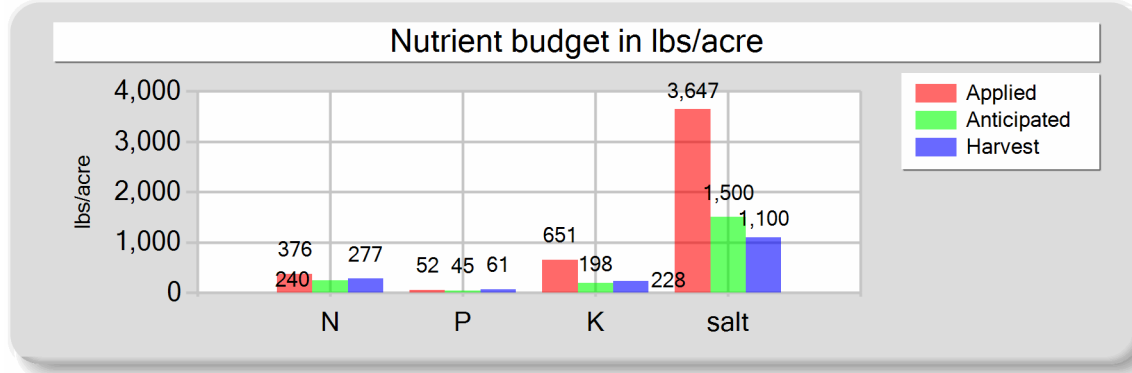
Reporting period 01/01/2023 to 12/31/2023.

13 - 06/11/2023: Corn, silage

Field name: 13

Crop: Corn, silage

Plant date: 06/11/2023



	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	343.83	51.84	650.64	2,309.85
Fresh water	24.97	0.00	0.00	1,337.58
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	375.80	51.84	650.64	3,647.43
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	277.47	61.23	227.71	1,100.29
Nutrient balance	98.34	-9.39	422.92	2,547.13
Applied to removed ratio	1.35	0.85	2.86	3.31

Fresh water applied
38,468,378.00 gallons
1,416.66 acre-inches
39.35 inches/acre

Process wastewater applied
3,803,284.00 gallons
140.06 acre-inches
3.89 inches/acre

Total harvests for the crop
1 harvests

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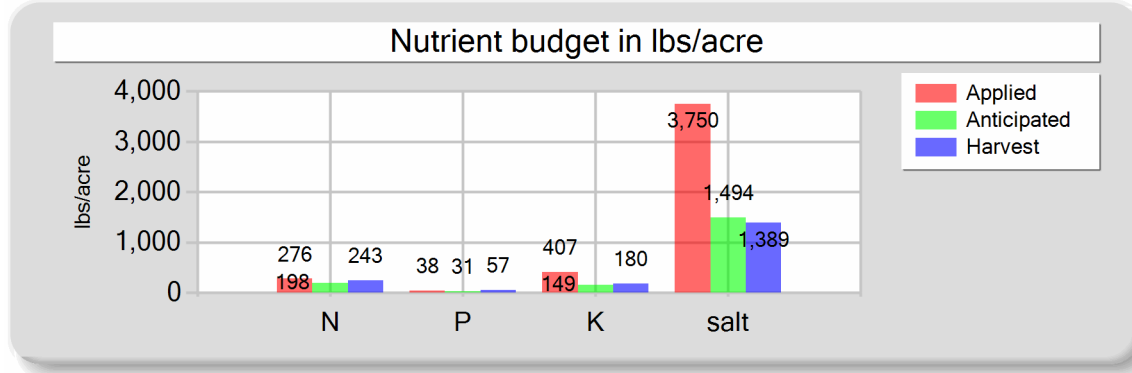
Reporting period 01/01/2023 to 12/31/2023.

14 - 11/15/2022: Wheat, silage, soft dough

Field name: 14

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	0.00	0.00	0.00	0.00
Process wastewater	260.12	37.95	406.99	3,291.82
Fresh water	8.55	0.00	0.00	457.80
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	275.66	37.95	406.99	3,749.62
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	243.46	57.09	179.66	1,388.58
Nutrient balance	32.20	-19.13	227.33	2,361.04
Applied to removed ratio	1.13	0.66	2.27	2.70

Fresh water applied
13,532,034.00 gallons
498.34 acre-inches
13.47 inches/acre

Process wastewater applied
2,803,567.00 gallons
103.25 acre-inches
2.79 inches/acre

Total harvests for the crop
1 harvests

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

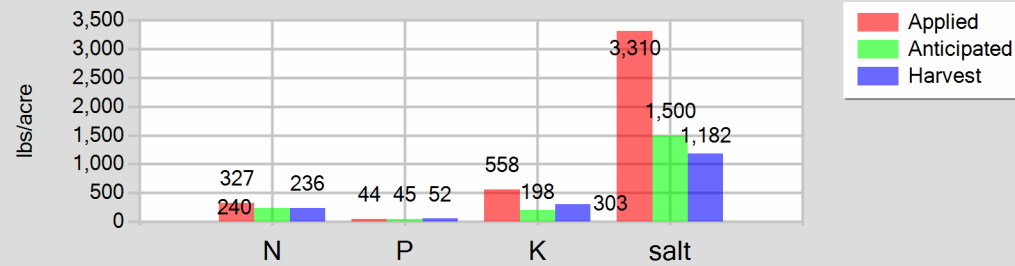
14 - 06/12/2023: Corn, silage

Field name: 14

Crop: Corn, silage

Plant date: 06/12/2023

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	294.78	44.44	557.82	1,980.32
Fresh water	24.82	0.00	0.00	1,329.77
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	326.60	44.44	557.82	3,310.09
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	236.05	51.82	303.22	1,182.19
Nutrient balance	90.55	-7.37	254.59	2,127.91
Applied to removed ratio	1.38	0.86	1.84	2.80

Fresh water applied
39,306,126.00 gallons
1,447.51 acre-inches
39.12 inches/acre
Process wastewater applied
3,351,277.00 gallons
123.42 acre-inches
3.34 inches/acre
Total harvests for the crop
1 harvests

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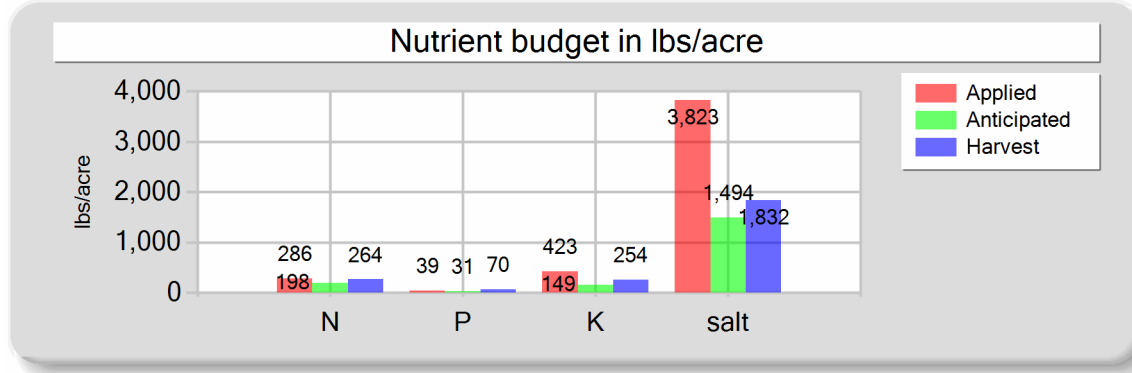
Reporting period 01/01/2023 to 12/31/2023.

15 - 11/09/2022: Wheat, silage, soft dough

Field name: 15

Crop: Wheat, silage, soft dough

Plant date: 11/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	270.26	39.43	422.84	3,416.09
Fresh water	8.43	0.00	0.00	407.01
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	285.68	39.43	422.84	3,823.11
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	263.74	69.93	253.75	1,832.17
Nutrient balance	21.95	-30.50	169.10	1,990.94
Applied to removed ratio	1.08	0.56	1.67	2.09

Fresh water applied
2,851,420.00 gallons
105.01 acre-inches
13.13 inches/acre

Process wastewater applied
629,949.00 gallons
23.20 acre-inches
2.90 inches/acre

Total harvests for the crop
1 harvests

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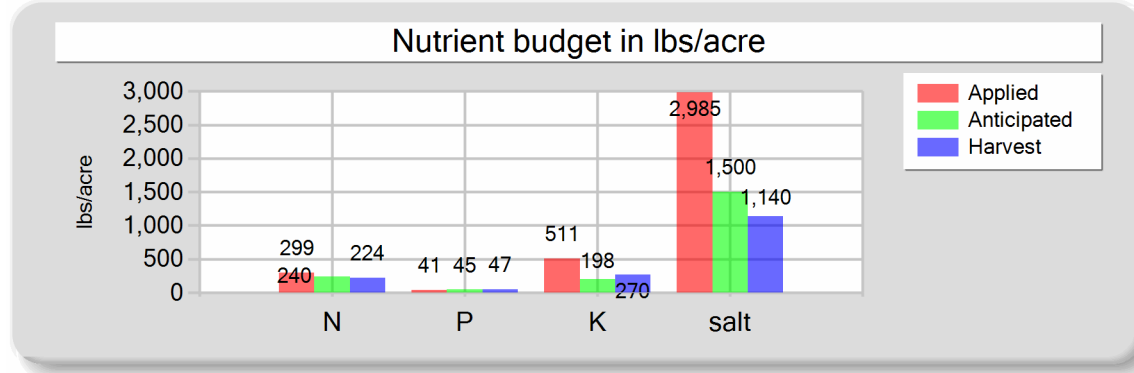
Reporting period 01/01/2023 to 12/31/2023.

15 - 06/13/2023: Corn, silage

Field name: 15

Crop: Corn, silage

Plant date: 06/13/2023



	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	270.23	40.74	511.36	1,815.40
Fresh water	21.83	0.00	0.00	1,169.21
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	299.06	40.74	511.36	2,984.61
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00
Actual crop nutrient removal	223.79	46.55	270.34	1,140.44
Nutrient balance	75.27	-5.81	241.02	1,844.18
Applied to removed ratio	1.34	0.88	1.89	2.62

Fresh water applied
7,472,505.00 gallons
275.19 acre-inches
34.40 inches/acre

Process wastewater applied
664,255.00 gallons
24.46 acre-inches
3.06 inches/acre

Total harvests for the crop
1 harvests

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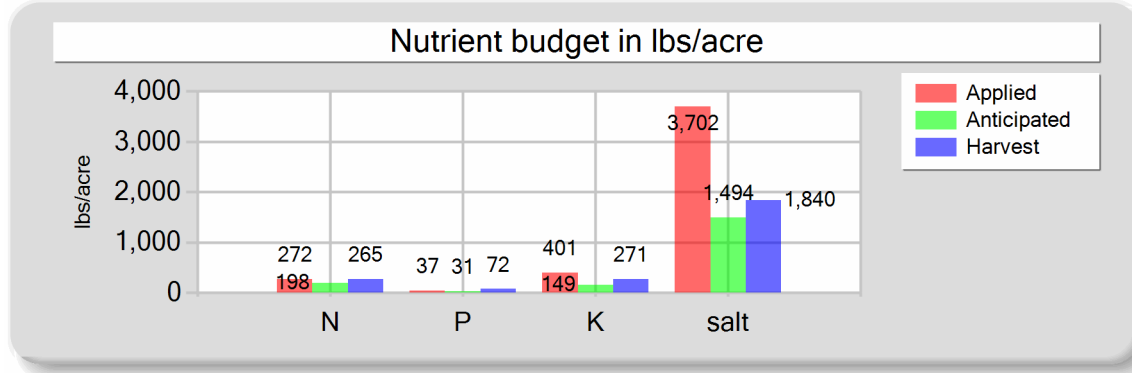
Reporting period 01/01/2023 to 12/31/2023.

16 - 11/09/2022: Wheat, silage, soft dough

Field name: 16

Crop: Wheat, silage, soft dough

Plant date: 11/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	256.24	37.39	400.86	3,221.87
Fresh water	8.97	0.00	0.00	480.41
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	272.20	37.39	400.86	3,702.28
Anticipated crop nutrient removal	198.00	30.60	149.40	1,494.00
Actual crop nutrient removal	265.36	71.83	271.35	1,839.57
Nutrient balance	6.84	-34.44	129.51	1,862.71
Applied to removed ratio	1.03	0.52	1.48	2.01

Fresh water applied
13,816,391.00 <i>gallons</i>
508.81 <i>acre-inches</i>
14.13 <i>inches/acre</i>

Process wastewater applied
2,690,396.00 <i>gallons</i>
99.08 <i>acre-inches</i>
2.75 <i>inches/acre</i>

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

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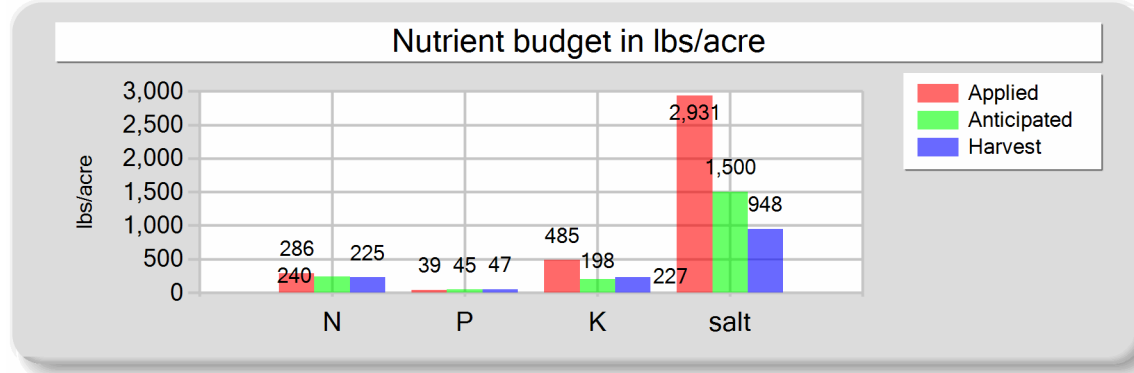
Reporting period 01/01/2023 to 12/31/2023.

16 - 06/13/2023: Corn, silage

Field name: 16

Crop: Corn, silage

Plant date: 06/13/2023



	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	34,793,791.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	1,281.34 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	35.59 <i>inches/acre</i>
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	256.28	38.64	484.95	1,721.64	Process wastewater applied
Fresh water	22.58	0.00	0.00	1,209.81	2,834,772.00 <i>gallons</i>
Atmospheric deposition	7.00	0.00	0.00	0.00	104.40 <i>acre-inches</i>
Total nutrients applied	285.86	38.64	484.95	2,931.45	2.90 <i>inches/acre</i>
Anticipated crop nutrient removal	240.00	45.00	198.00	1,500.00	
Actual crop nutrient removal	225.41	46.75	227.08	948.41	Total harvests for the crop
Nutrient balance	60.44	-8.11	257.87	1,983.04	1 <i>harvests</i>
Applied to removed ratio	1.27	0.83	2.14	3.09	

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

NUTRIENT ANALYSES

A. MANURE ANALYSES

Manure

Sample and source description: Manure

Sample date: 05/03/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 33.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	22,900.00	5,800.00	12,400.00							
DL	100.00	200.00	200.00							

Manure

Sample and source description: Manure

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

Moisture: 24.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,700.00	3,500.00	600.00							
DL	100.00	200.00	200.00							

B. PROCESS WASTEWATER ANALYSES

Lagoon

Sample and source description: Lagoon

Sample date: 11/15/2022 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)
Value	427.00	333.00			62.50	671.00								9,720.00	6,450
DL	10.00	2.00			0.20	0.50								100.00	10

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Lagoon

Sample and source description: Lagoon

Sample date: 02/21/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: 7.50

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	403.00	283.00			58.70	629.00								6,830.00	4,540
DL	10.00	2.00			0.20	0.50								100.00	10

Lagoon

Sample and source description: Lagoon

Sample date: 05/03/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	390.00	370.00			58.80	738.00								3,940.00	2,620
DL	10.00	2.00			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)
Value	281.00	273.00			53.90	373.00								5,360.00	3,560
DL	10.00	2.00			0.20	0.50								100.00	10

Lagoon

Sample and source description: Lagoon

Sample date: 11/10/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	456.00	450.00			58.70	498.00								6,850.00	4,550
DL	0.10	2.00			0.20	0.50								100.00	10

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

C. FRESH WATER ANALYSES

Dairy Irr

Irrigation

Sample description: Irrigation

Sample date: 07/18/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	46.20		46.20								1,120.00	910
DL	0.40		0.40								1.00	20

Dom 2

Domestic

Sample description: Domestic

Sample date: 08/23/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value			13.80								484.00	
DL			0.20								1.00	

House Dom

Domestic

Sample description: Domestic

Sample date: 08/23/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value			64.60								1,690.00	
DL			0.20								1.00	

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

House Dom 2**Domestic**Sample description: DomesticSample date: 08/23/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value			41.30	136.00	4.00	76.00	150.00	0.00	41.50	93.00	1,110.00	880
DL			0.20	1.00	1.00	1.00	10.00	10.00	0.17	1.00	1.00	20

Well 3**Irrigation**Sample description: IrrigationSample date: 07/18/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	2.80		2.80								211.00	150
DL	0.50		0.20								1.00	20

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

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

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

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

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

11

Sample and source description: 11

Sample date: 05/19/2023 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 (%)
Value	13,900.00	3,600.00	15,100.00		9.72
DL	500.00	200.00	200.00		0.05

11 - 06/10/2023: Corn, silage

11

Sample and source description: 11

Sample date: 09/28/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 73.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	11,600.00	2,400.00	14,200.00		5.48
DL	500.00	200.00	200.00		0.05

12 - 11/14/2022: Wheat, silage, soft dough

12

Sample and source description: 12

Sample date: 05/19/2023 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 (%)
Value	14,100.00	3,500.00	12,800.00		9.31
DL	500.00	200.00	200.00		0.05

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

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

12 - 06/10/2023: Corn, silage

12

Sample and source description: 12

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

Moisture: 73.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	13,200.00	2,400.00	19,700.00		7.08
DL	500.00	200.00	200.00		0.05

13 - 11/16/2022: Wheat, silage, soft dough

13

Sample and source description: 13

Sample date: 05/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 66.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,100.00	3,600.00	13,100.00		8.59
DL	500.00	200.00	200.00		0.05

13 - 06/11/2023: Corn, silage

13

Sample and source description: 13

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

Moisture: 68.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,500.00	3,200.00	11,900.00		5.75
DL	500.00	200.00	200.00		0.05

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

14 - 11/15/2022: Wheat, silage, soft dough

14

Sample and source description: 14

Sample date: 05/19/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	14,500.00	3,400.00	10,700.00		8.27
DL	500.00	200.00	200.00		0.05

14 - 06/12/2023: Corn, silage

14

Sample and source description: 14

Sample date: 10/11/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,300.00	2,700.00	15,800.00		6.16
DL	500.00	200.00	200.00		0.05

15 - 11/09/2022: Wheat, silage, soft dough

15

Sample and source description: 15

Sample date: 05/19/2023 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 (%)
Value	13,200.00	3,500.00	12,700.00		9.17
DL	500.00	200.00	200.00		0.05

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

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

15 - 06/13/2023: Corn, silage

15

Sample and source description: 15

Sample date: 09/28/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	10,800.00	2,500.00	15,700.00		5.94
DL	500.00	200.00	200.00		0.05

16 - 11/09/2022: Wheat, silage, soft dough

16

Sample and source description: 16

Sample date: 05/19/2023 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 (%)
Value	13,300.00	3,600.00	13,600.00		9.22
DL	500.00	200.00	200.00		0.05

16 - 06/13/2023: Corn, silage

16

Sample and source description: 16

Sample date: 09/28/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 68.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	10,800.00	2,500.00	15,700.00		5.94
DL	500.00	200.00	200.00		0.05

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

No subsurface (tile) drainage analyses entered.

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

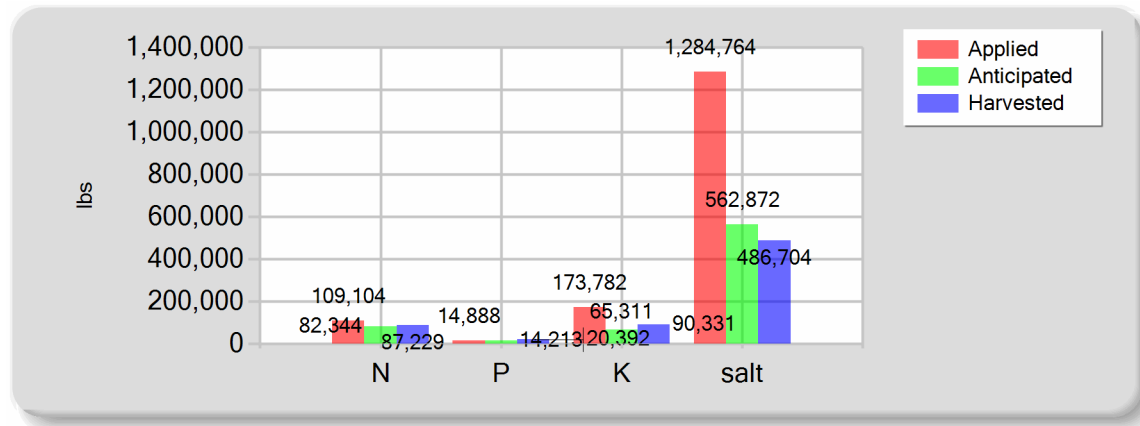
Reporting period 01/01/2023 to 12/31/2023.

NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

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

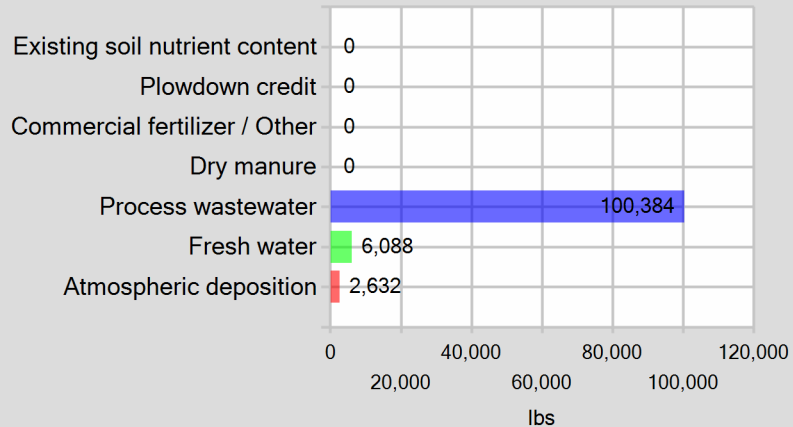
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	100,384.24	14,887.79	173,782.21	958,970.35
Fresh water	6,088.11	0.00	0.00	325,793.83
Atmospheric deposition	2,632.00	0.00	0.00	0.00
Total nutrients applied	109,104.36	14,887.79	173,782.21	1,284,764.18
Anticipated crop nutrient removal	82,344.00	14,212.80	65,311.20	562,872.00
Actual crop nutrient removal	87,229.04	20,392.02	90,331.10	486,704.42
Nutrient balance	21,875.32	-5,504.23	83,451.11	798,059.76
Applied to removed ratio	1.25	0.73	1.92	2.64

B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

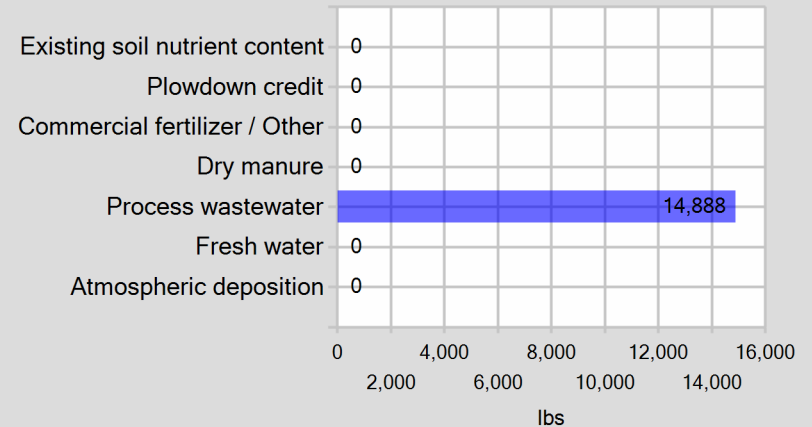


C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

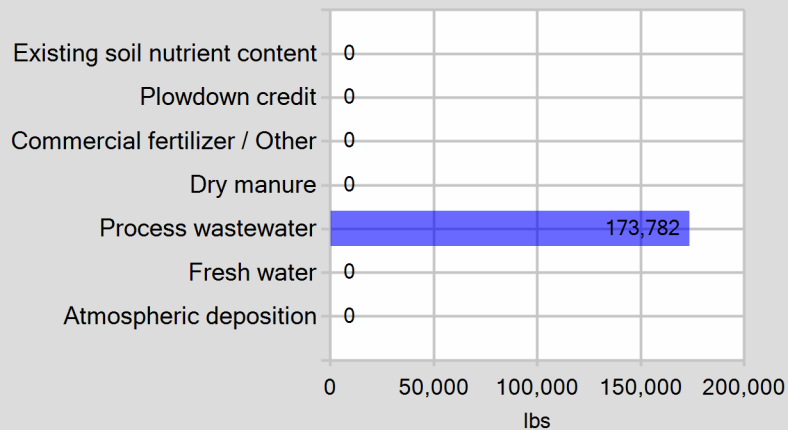
Pounds of nitrogen applied



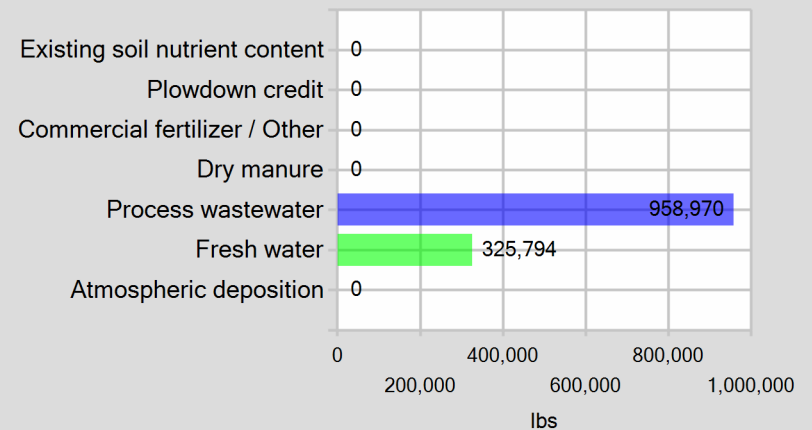
Pounds of phosphorus applied



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 14, Dom 1, House Dom 3, and Well 11 were out of service in 2023.

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

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.



SIGNATURE OF OWNER OF FACILITY

Bernard te Velde, Jr

PRINT OR TYPE NAME

6-13-2024

DATE

SIGNATURE OF OPERATOR OF FACILITY

SAME AS OWNER

PRINT OR TYPE NAME

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 8, 2023

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

Lab No. : VI 2345624
Customer No. : 4019696
Reference : 3134

Laboratory Report

Introduction: This report package contains a total of 7 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	(3 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
Dom 2	08/23/2023	08/23/2023	VI 2345624-001	DW
House Dom	08/23/2023	08/23/2023	VI 2345624-002	DW
House Dom 2	08/23/2023	08/23/2023	VI 2345624-003	DW

Sampling and Receipt Information:

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

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

Test Summary

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

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

KD: KEH

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


 Digitally signed by Kelly A. Dunnahoo, B.S.
 Title: Laboratory Director
 Date: 2023-09-09

September 8, 2023

Sentry Ag Services

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : Dom 2
Project : Phoenix

Lab No. : VI 2345624-001
Customer No. : 4019696
Reference : 3134
Sampled On : August 23, 2023 at 10:45
Sampled By : Jeremy
Received On : August 23, 2023 at 14:53
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	13.8	0.4	mg/L	10	1		08/24/2023	12:00	lfs	SM 4500-NO3 F	08/24/2023	14:24	lfs
Conductivity	484	1	umhos/cm	1600 ²	1		09/05/2023	09:15	krh	SM 4500-H+B	09/05/2023	13:11	amm

DQF Flags Definition:

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
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Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
CA ELAP Certification No. 1573

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

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FAX: (530)343-3807
CA ELAP Certification No. 2670

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3442 Empresa Drive, Suite D
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FAX: (805)783-2912
CA ELAP Certification No. 2775

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

September 8, 2023

Sentry Ag Services

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : House Dom

Project : Phoenix

Lab No. : VI 2345624-002

Customer No. : 4019696

Reference : 3134

Sampled On : August 23, 2023 at 11:00

Sampled By : Jeremy

Received On : August 23, 2023 at 14:53

Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	64.6	2*	mg/L	10	5		08/24/2023	12:00	lfs	SM 4500-NO3 F	08/24/2023	16:14	lfs
Conductivity	1690	1	umhos/cm	1600 ²	1		09/05/2023	09:15	krh	SM 4500-H+B	09/05/2023	12:14	amm

DQF Flags Definition:

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

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

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FAX: (559)734-8435

CA ELAP Certification No. 2810

September 8, 2023

Sentry Ag Services

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

Description : House Dom 2
 Project : Phoenix

Lab No. : VI 2345624-003
 Customer No. : 4019696
 Reference : 3134
 Sampled On : August 23, 2023 at 11:15
 Sampled By : Jeremy
 Received On : August 23, 2023 at 14:53
 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 ₃)	130	10	mg/L		1	I	08/28/2023	14:15	amm	SM 4500-H+B	08/29/2023	01:16	amm
Bicarbonate	150	10	mg/L		1	I	08/28/2023	14:15	amm	SM 4500-H+B	08/29/2023	01:16	amm
Carbonate	ND	10	mg/L		1	U	08/28/2023	14:15	amm	SM 4500-H+B	08/29/2023	01:16	amm
Hydroxide	ND	10	mg/L		1	U	08/28/2023	14:15	amm	SM 4500-H+B	08/29/2023	01:16	amm
Chloride	93	1	mg/L	500 ²	1		08/24/2023	10:26	ldm	EPA 300.0	08/24/2023	17:57	ldm
Nitrate Nitrogen	41.3	0.5*	mg/L	10	5		08/24/2023	10:26	ldm	EPA 300.0	08/25/2023	06:52	ldm
Conductivity	1110	1	umhos/cm	1600 ²	1	I	08/28/2023	14:15	amm	SM 4500-H+B	08/29/2023	01:16	amm
Sulfate Sulfur	41.5	0.17	mg/L		1		08/24/2023	10:26	ldm	EPA 300.0	08/24/2023	17:57	ldm
Solids, Total Dissolved (TDS)	880	20	mg/L	1000 ²	1		08/25/2023	12:45	ctl	SM 2540 C	08/28/2023	10:45	ctl
Calcium	136	1	mg/L		1		09/01/2023	07:35	ejc	EPA 200.7	09/06/2023	19:08	ac
Magnesium	4	1	mg/L		1		09/01/2023	07:35	ejc	EPA 200.7	09/06/2023	19:08	ac
Potassium	ND	1	mg/L		1	J	09/01/2023	07:35	ejc	EPA 200.7	09/06/2023	19:08	ac
Sodium	76	1	mg/L		1		09/01/2023	07:35	ejc	EPA 200.7	09/06/2023	19:08	ac

DQF Flags Definition:

- I The RPD for the laboratory duplicate exceeded laboratory criteria.
- U Constituent results were non-detect.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

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

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

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September 8, 2023
Sentry Ag Service

Lab No. : VI 2345624
Customer No. : 4019696

Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Metals								
Calcium	200.7	09/01/2023:209819EJC (STK2351603-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	96.3%	85-115	
			MS	mg/L	12.00	107%	75-125	
			MSD	mg/L	12.00	109%	75-125	
			MSRPD	mg/L		1.0%	≤20.0	
			MS	mg/L	12.00	115%	75-125	
			MSD	mg/L	12.00	118%	75-125	
			MSRPD	mg/L		1.5%	≤20.0	
Magnesium	200.7	09/01/2023:209819EJC (STK2351603-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	99.9%	85-115	
			MS	mg/L	12.00	115%	75-125	
			MSD	mg/L	12.00	119%	75-125	
			MSRPD	mg/L		0.7%	≤20	
			MS	mg/L	12.00	147%	<¼	406
			MSD	mg/L	12.00	148%	<1/4	
			MSRPD	mg/L		0.1%	≤20	
Potassium	200.7	09/01/2023:209819EJC (STK2351603-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	91.3%	85-115	
			MS	mg/L	12.00	112%	75-125	
			MSD	mg/L	12.00	115%	75-125	
			MSRPD	mg/L		1.4%	≤20.0	
			MS	mg/L	12.00	121%	75-125	
			MSD	mg/L	12.00	125%	75-125	
			MSRPD	mg/L		2.1%	≤20.0	
Sodium	200.7	09/01/2023:209819EJC (STK2351603-001)	Blank	mg/L		ND	<1	
			LCS	mg/L	12.00	92.7%	85-115	
			MS	mg/L	12.00	184%	<¼	406
			MSD	mg/L	12.00	185%	<1/4	
			MSRPD	mg/L		0.0%	≤20.0	
			MS	mg/L	12.00	247%	<¼	406
			MSD	mg/L	12.00	264%	<1/4	
			MSRPD	mg/L		0.8%	≤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.

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
Alkalinity (as CaCO ₃)	2320B	08/28/2023:209654AMM	ND	mg/L		64.2%	10	406
Bicarbonate	2320B	(VI 2345565-001)	Dup	mg/L		63.7%	10	440
E. C.	2320B	(VI 2345565-001)	Dup	umhos/cm		50.0%	5	440
	2320B	(VI 2345518-025)	Dup	umhos/cm		0.5%	5	
		(VI 2345796-002)	Dup	umhos/cm		0.4%	5	
Solids, Total Dissolved	2540CE	08/25/2023:209549CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	98.3%	90-110	
		(VI 2345629-003)	Dup	mg/L		2.71%	5	
		(VI 2345629-003)	Dup	mg/L		1.38%	5	
Chloride	300.0	08/24/2023:209576LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.8 %	90-110	
			MS	mg/L	50.00	92.3 %	67-117	
		(SP 2314123-005)	MSD	mg/L	50.00	92.3 %	67-117	
			MSRPD	mg/L	10.00	0.06%	≤7	
			MS	mg/L	50.00	98.1 %	67-117	
		(VI 2345581-004)	MSD	mg/L	50.00	98.1 %	67-117	
			MSRPD	mg/L	10.00	0.02%	≤7	
Nitrate Nitrogen	300.0	08/24/2023:209576LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	99.1 %	90-110	
			MS	mg/L	40.00	100 %	86-112	
		(SP 2314123-005)	MSD	mg/L	40.00	100 %	86-112	
			MSRPD	mg/L	10.00	0.2%	≤7	
			MS	mg/L	40.00	98.8 %	86-112	
		(VI 2345581-004)	MSD	mg/L	40.00	98.9 %	86-112	
			MSRPD	mg/L	10.00	0.03%	≤7	
Sulfate Sulfur	300.0	08/24/2023:209576LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	100 %	90-110	
			MS	mg/L	100.0	94.7 %	18-165	
		(SP 2314123-005)	MSD	mg/L	100.0	94.8 %	18-165	
			MSRPD	mg/L	10.00	0.1%	≤7	
			MS	mg/L	100.0	100 %	18-165	
		(VI 2345581-004)	MSD	mg/L	100.0	101 %	18-165	
			MSRPD	mg/L	10.00	0.05%	≤7	
Nitrate Nitrogen	4500NO3F	08/24/2023:209533LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.7%	80-120	
			MS	mg/L	5.609	92.4%	66-125	
		(SP 2314443-001)	MSD	mg/L	5.609	95.0%	66-125	
			MSRPD	mg/L		1.3%	≤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

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



Laboratory Analysis Work Order

3134

SITE NAME: Phoenix

2345624

LABORATORY: VF | FGL 4-19696

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

Authorized Copy Release to:
labs@sentryagservices.com

ANALYSIS TO BE COMPLETED

Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO₃N (Dom)
- W2 EC, NO₃N, TDS, TN (Irr)
- W3 NH₄-N (Ammonium)
- W4 EC, NO₃N, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)
- W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)
- W6 NO₃N, NO₂ (Dom ILRP, Annually)
- W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)
- W8 Other: _____

2015.4 C
 ID#
 TH407

Process Waste Water (lagoon)

- L1 EC, NH₄N, TKN, TP, TK, TDS (Quarterly)
- L2 EC, NO₃N, NH₄N, TKN, TP, TK, TDS, pH (Annually)
- L3 Ca, Mg, Na, HCO₃, CO₃, SO₄S, 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, NO₃N, PO₄P, 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, NO₃N, PO₄P, K-AA, Zn, Mn, Fe, Cu, SO₄S
- S2 S1 + CEC, CaCO₃, OM, C:N, TN
- S3 NO₃N, NH₄N
- S4 Other: _____

Sample ID	Description	Analysis	Date/Time	Sampled by	SAS USE ONLY: FIELD TESTS		
					NH ₃ N *	pH	Temp
1	Dom 2	Domestic well	W1	8/23/23 10:45	Gentry	0	
2	House Dom	↓	W1	8/23/23 11:00	↓	0	
3	House Dom 2	↓	W4	8/23/23 11:15	↓	0	
4							
5							
6							
7							
8							
9							
10							
11							
12							

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

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

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 st	<i>[Signature]</i>	SAS	8/23/23 14:53	8/23/23 14:53
2 nd	<i>[Signature]</i>	FGL	8/23/23 14:53	8/23/23 17:40
3 rd	<i>[Signature]</i>		8/23/23 17:30	
4 th	<i>[Signature]</i>			

LABORATORY USE ONLY

Logged In By: _____ Total Samples: _____ Laboratory No.: 8/23/23 11:55

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH VI

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

2. Were samples received in a chilled condition? Temps del 15.4 C / ____ / ____ / ____

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

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. ID#

Sample Receipt Review completed by (initials): ADH TH407

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps 6 / ____ / ____ / ____ / ____

Acceptable is above freezing to 6 C. If many packages are received at one time check for tests/H.T.'s/rushes/

2. Shipping tracking numbers: 500001444

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): U

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 c-contacts)

(4019696)
Sentry Ag Service
VI 2345624

cda 08/24/2023 09:36:45



VI 2345624

August 11, 2023

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

Lab No. : VI 2344654
Customer No. : 4019696
Reference : 3055

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Dairy Irr	07/18/2023	07/18/2023	VI 2344654-001	AGW
Well 3	07/18/2023	07/18/2023	VI 2344654-002	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 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

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

KD: EHB

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



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

August 11, 2023

Sentry Ag Services

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

Description : Dairy Irr
 Project : Phoenix

Lab No. : VI 2344654-001
 Customer No. : 4019696
 Reference : 3055
 Sampled On : July 18, 2023 at 08:15
 Sampled By : Jeremy
 Received On : July 18, 2023 at 15:17
 Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	17:25	lcr
Nitrate Nitrogen	46.2	0.8*	mg/L		2		07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	16:46	lfs
Nitrogen, Total as Nitrogen	46.2	0.8	mg/L		1		08/08/2023	08:55	sta	Calc.	08/10/2023	17:25	lcr
Nitrate + Nitrite as N	46.2	0.8*	mg/L		2		07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	16:46	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	17:25	lcr
Conductivity	1120	1	umhos/cm		1		07/31/2023	17:05	amm	SM 4500-H+B	07/31/2023	20:45	amm
Solids, Total Dissolved (TDS)	910	20	mg/L		1		07/21/2023	09:30	ctl	SM 2540 C	07/24/2023	11:00	ctl

DQF Flags Definition:

U Constituent results were non-detect.

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

Corporate Offices & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

August 11, 2023

Sentry Ag Services

Attn: Monique Baldiviez

P.O. Box 7750

Visalia, CA 93290

Description : Well 3
Project : Phoenix

Lab No. : VI 2344654-002
Customer No. : 4019696
Reference : 3055
Sampled On : July 18, 2023 at 08:20
Sampled By : Jeremy
Received On : July 18, 2023 at 15:17
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	16:38	lcr
Nitrate Nitrogen	2.8	0.4	mg/L		1		07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	14:31	lfs
Nitrogen, Total as Nitrogen	2.8	0.5	mg/L		1		08/08/2023	08:55	sta	Calc.	08/10/2023	16:38	lcr
Nitrate + Nitrite as N	2.8	0.4	mg/L		1		07/19/2023	12:15	lfs	SM 4500-NO3 F	07/19/2023	14:31	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	08/08/2023	08:55	sta	EPA 351.2	08/10/2023	16:38	lcr
Conductivity	211	1	umhos/cm		1		07/31/2023	21:43	amm	SM 4500-H+B	08/01/2023	01:16	amm
Solids, Total Dissolved (TDS)	150	20	mg/L		1		07/20/2023	16:15	ctl	SM 2540 C	07/21/2023	11:10	ctl

DQF Flags Definition:

U Constituent results were non-detect.

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

Corporate Offices & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

Office & Laboratory

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

August 11, 2023
Sentry Ag Service

Lab No. : VI 2344654
Customer No. : 4019696

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2344710-008)	Dup	umhos/cm		0.3%	5	
		(VI 2344724-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	07/20/2023:207946CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	993.7	102%	90-110	
		(STK2339578-001)	Dup	mg/L		0.4%	5	
		(STK2339578-001)	Dup	mg/L		1.98%	5	
	2540CE	07/21/2023:207986CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	991.5	101%	90-110	
		(SP 2312256-003)	Dup	mg/L		0.2%	5	
		(SP 2312256-003)	Dup	mg/L		3.10%	5	
Nitrogen, Total Kjeldahl	351.2	08/08/2023:208707STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	91.3%	73-124	
			MS	mg/L	12.00	85.5%	54-136	
			MSD	mg/L	12.00	85.3%	54-136	
		(VI 2344654-002)	MSRPD	mg/L		0.3%	≤27	
			MS	mg/L	12.00	82.8%	54-136	
			MSD	mg/L	12.00	82.5%	54-136	
			MSRPD	mg/L		0.3%	≤27	
Nitrate + Nitrite as N	4500NO3F	07/19/2023:207926LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.8%	80-120	
			MS	mg/L	5.609	91.9%	66-125	
			MSD	mg/L	5.609	94.5%	66-125	
			MSRPD	mg/L		1.2%	≤30.4	
Nitrate Nitrogen	4500NO3F	07/19/2023:207926LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.8%	80-120	
			MS	mg/L	5.609	91.9%	66-125	
			MSD	mg/L	5.609	94.5%	66-125	
			MSRPD	mg/L		1.2%	≤30.4	

Definition

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



Laboratory Analysis Work Order

3055

SITE NAME: Phoenix

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, NO₃N (Dom)
W2 EC, NO₃N, TDS, TN (Irr)
W3 NH₄-N (Ammonium)
W4 EC, NO₃N, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl, TDS (Dom, GM)
W5 EC, NO₃N, TDS, TN, Ca, Mg, Na, HCO₃, CO₃, SO₄S, Cl (Irr, GM)
W6 NO₃N, NO₂ (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO₃, CO₃, SO₄, Cl + Lab Filtering (GWM)
W8 Other: _____

Plant Tissue

- P1 TN, NO₃N, PO₄P, 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, NH₄N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO₃N, NH₄N, TKN, TP, TK, TDS, pH (Annually)
L3 Ca, Mg, Na, HCO₃, CO₃, SO₄S, 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, NO₃N, PO₄P, K-AA, Zn, Mn, Fe, Cu, SO₄S
S2 S1 + CEC, CaCO₃, OM, C:N, TN
S3 NO₃N, NH₄N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	SAS USE ONLY: FIELD TESTS		
						NH ₄ N *	pH	Temp
1	Drain Irr	FW	W2	7/18/23 8:15	Jeremy	—		
2	Well 3	FW	W2	7/18/23 8:20	u	—		
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								

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

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

NOTES:

CHAIN OF CUSTODY RECORDING

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

LABORATORY USE ONLY

Logged In By: _____ Total Samples: _____ Laboratory No.: _____

R01 GLS 7/19/23
5.3°C MC 1100

Sample Receipt at: STK CC

CH (VI)

- ### Sample Receipt at SP:

- ### Sample Verification, Labeling and Distribution:

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

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

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: _____
- (4019696)**
Sentry Ag Service
1-800-4-A-AG

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

(4019696)
Sentry Ag Service
VI 2344654

iv 07/19/2023 08:11:38



VI 234465