

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:** BIG DE DAIRY, LP

Physical address of dairy:

2947 W Manning AVE

Number and Street

Fresno

City

Fresno

County

93706

Zip Code

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

Date facility was originally placed in operation: 11/01/1994Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

0338-0020-0015-0000**B. OPERATORS**

Souza, Dan

Operator name: Souza, DanTelephone no.: (559) 289-1795(559) 264-1989

Landline

Cellular

8415 Valentine Avenue

Mailing Address Number and Street

Fresno

City

CA

State

93706

Zip Code

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

Souza, Dan

Legal owner name: Souza, DanTelephone no.: (559) 289-1795(559) 264-1989

Landline

Cellular

8415 Valentine Avenue

Mailing Address Number and Street

Fresno

City

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State

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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	138	685	686	368	0
Number under roof	1,147	0	0	0	0	0
Maximum number	1,155	145	690	700	380	0
Average number	1,147	138	685	686	368	0
Avg live weight (lbs)	1,300	1,350	900	650		

Predominant milk cow breed: Jersey-Holstein Cross

Average milk production: 78 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 47,060.71 tons per reporting period

Total nitrogen from manure: 572,858.88 lbs per reporting period

After ammonia losses (30% loss applied): 401,001.22 lbs per reporting period

Total phosphorus from manure: 94,385.59 lbs per reporting period

Total potassium from manure: 225,689.72 lbs per reporting period

Total salt from manure: 571,798.05 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 40,320,000 gallons

Total nitrogen generated: 96,597.05 lbs

Total phosphorus generated: 20,709.75 lbs

Total potassium generated: 124,968.71 lbs

Total salt generated: 703,102.97 lbs

40,320,000 gallons applied
+ 0 gallons exported
- 0 gallons imported
= 40,320,000 gallons generated

D. FRESH WATER SOURCES

Source Description	Type
D-1	Ground water
D-2	Ground water
D-3	Ground water
D-4	Ground water
Markarian Well	Ground water

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Source Description	Type
Nakata Well	Ground water
Riley-N	Ground water
Riley-S	Ground water
S-Dom	Ground water
Shannon-S	Ground water

E. SUBSURFACE (TILE) DRAINAGE SOURCES

No subsurface (tile) drainage sources entered.

F. NUTRIENT IMPORTS

No dry manure nutrient imports entered.

No process wastewater nutrient imports entered.

No commercial or other nutrient imports entered.

G. NUTRIENT EXPORTS

Date	Material type	Quantity	Reporting basis	Moisture (%)	Density (lbs/cu ft)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
03/25/2023	Corral solids	1,925.00 <i>ton</i>	Dry-weight	35.5		28,300.00	3,470.00	47,100.00		0.00
05/10/2023	Corral solids	2,175.00 <i>ton</i>	Dry-weight	32.6		13,400.00	4,100.00	27,400.00		0.00
05/17/2023	Corral solids	2,000.00 <i>ton</i>	Dry-weight	32.6		13,400.00	4,100.00	27,400.00		0.00
06/05/2023	Corral solids	1,150.00 <i>ton</i>	Dry-weight	58.6		17,000.00	2,870.00	6,830.00		0.00
11/17/2023	Corral solids	1,359.00 <i>ton</i>	Dry-weight	35.5		28,300.00	3,470.00	47,100.00		0.00

No liquid nutrient exports entered.

Material type	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Dry manure	211,490.25	40,507.37	360,240.54	0.00
Process wastewater	0.00	0.00	0.00	0.00
Total exports for all materials	211,490.25	40,507.37	360,240.54	0.00

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APPLICATION AREA

A. LIST OF LAND APPLICATION AREAS

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
#421-Marks	38	38	2	both	0338-0020-003S-0000
#422-Hughes	38	38	2	both	0338-0020-003S-0000
Nakata	34	34	2	both	0338-0020-0002-0000
Riley N.	30	30	2	both	0035-0130-0038-0000
Riley S.	45	45	2	process wastewater	0035-0130-0038-0000
Shannon N.	40	40	1	process wastewater	0035-0130-0019-0000
Shannon S.	38	38	2	both	0035-0130-0019-0000
Totals for areas that were used for application	263	263	13		
Totals for areas that were not used for application					
Land application area totals	263	263	13		

B. CROPS AND HARVESTS

#421-Marks

Field name: #421-Marks

11/28/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 38 Plant date: 11/28/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/27/2023	810.00 ton	Dry-weight		61.2	20,700.00	2,410.00	14,900.00		7.38

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	21.32	342.40	39.86	246.46	1,220.73

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#421-Marks

06/21/2023: Corn, silage

Crop: Corn, silage Acres planted: 38 Plant date: 06/21/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/07/2023	1,076.00 ton	Dry-weight		70.8	11,900.00	1,340.00	13,200.00		5.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	28.32	196.78	22.16	218.28	942.58

#422-Hughes

Field name: #422-Hughes

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

Crop: Wheat, silage, soft dough Acres planted: 38 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 (%)
05/05/2023	798.00 ton	Dry-weight		64.2	20,100.00	5,110.00	28,000.00		13.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	21.00	302.22	76.83	421.01	2,044.90

05/25/2023: Corn, silage

Crop: Corn, silage Acres planted: 38 Plant date: 05/25/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/14/2023	1,084.00 ton	Dry-weight		73.8	13,000.00	2,380.00	18,900.00		7.10

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	28.53	194.32	35.58	282.51	1,061.29

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Nakata

Field name: Nakata

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

Crop: Wheat, silage, soft dough Acres planted: 34 Plant date: 11/26/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/24/2023	730.00 ton	Dry-weight		61.8	18,300.00	3,640.00	29,900.00		12.00

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	21.47	300.18	59.71	490.47	1,968.42

06/21/2023: Corn, silage

Crop: Corn, silage Acres planted: 34 Plant date: 06/21/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/09/2023	920.00 ton	Dry-weight		67.6	12,500.00	2,110.00	15,300.00		6.60

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	27.06	219.18	37.00	268.27	1,157.25

Riley N.

Field name: Riley N.

10/09/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 30 Plant date: 10/09/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
03/23/2023	605.00 ton	Dry-weight		50.4	23,900.00	2,910.00	19,400.00		7.23

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	20.17	478.13	58.22	388.10	1,446.39

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Riley N.

06/19/2023: Corn, silage

Crop: Corn, silage Acres planted: 30 Plant date: 06/19/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/09/2023	816.00 ton	Dry-weight		70.4	12,900.00	2,420.00	20,200.00		6.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	27.20	207.72	38.97	325.27	1,111.07

Riley S.

Field name: Riley S.

12/01/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 45 Plant date: 12/01/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/29/2023	920.00 ton	Dry-weight		48.0	16,500.00	2,430.00	17,900.00		7.96

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	20.44	350.83	51.67	380.59	1,692.47

06/17/2023: Corn, silage

Crop: Corn, silage Acres planted: 45 Plant date: 06/17/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/07/2023	1,290.00 ton	Dry-weight		64.0	12,000.00	1,530.00	13,000.00		4.30

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	28.67	247.68	31.58	268.32	887.52

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Shannon N.

Field name: Shannon N.

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

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

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
04/28/2023	820.00 ton	Dry-weight		57.6	20,700.00	3,920.00	34,600.00		10.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	20.50	359.85	68.15	601.49	1,860.09

Shannon S.

Field name: Shannon S.

11/23/2022: Wheat, silage, soft dough

Crop: Wheat, silage, soft dough Acres planted: 38 Plant date: 11/23/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/06/2023	785.00 ton	Dry-weight		62.2	19,100.00	4,270.00	34,000.00		15.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	18.00	216.00	30.60	149.40	1,080.00
Total actual harvest content	20.66	298.29	66.69	530.99	2,451.93

06/07/2023: Corn, silage

Crop: Corn, silage Acres planted: 38 Plant date: 06/07/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
09/25/2023	996.00 ton	Dry-weight		69.8	23,200.00	2,260.00	18,500.00		7.80

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	28.00	252.00	42.00	184.80	1,120.00
Total actual harvest content	26.21	367.28	35.78	292.88	1,234.83

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NUTRIENT BUDGET

A. LAND APPLICATIONS

#421-Marks - 11/28/2022: Wheat, silage, soft dough

Field name: #421-Marks

Crop: Wheat, silage, soft dough

Plant date: 11/28/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
12/12/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	184.52	45.54	243.81	1,318.69	2,160,000.00 <i>gal</i>
Application event totals		184.52	45.54	243.81	1,318.69	
01/10/2023	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
Blended Lg and Fresh Water Application	Process wastewater	136.61	23.62	160.80	1,081.51	2,160,000.00 <i>gal</i>
Application event totals		136.61	23.62	160.80	1,081.51	
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
Markarian Well	Ground water	9.55	0.00	0.00	325.13	4,500,000.00 <i>gal</i>
Application event totals		9.55	0.00	0.00	325.13	
05/13/2023	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
Markarian Well	Ground water	9.38	0.00	0.00	319.49	4,422,000.00 <i>gal</i>
Application event totals		9.38	0.00	0.00	319.49	

#421-Marks - 06/21/2023: Corn, silage

Field name: #421-Marks

Crop: Corn, silage

Plant date: 06/21/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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#421-Marks - 06/21/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
06/15/2023	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	216.76	66.32	443.22	0.00	456.00 <i>ton</i>
Application event totals		216.76	66.32	443.22	0.00	
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
Markarian Well	Ground water	9.20	0.00	0.00	313.42	4,338,000.00 <i>gal</i>
Application event totals		9.20	0.00	0.00	313.42	
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
Markarian Well	Ground water	9.04	0.00	0.00	307.79	4,260,000.00 <i>gal</i>
Application event totals		9.04	0.00	0.00	307.79	
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
Markarian Well	Ground water	8.91	0.00	0.00	303.45	4,200,000.00 <i>gal</i>
Application event totals		8.91	0.00	0.00	303.45	
08/21/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Markarian Well	Ground water	9.25	0.00	0.00	315.16	4,362,000.00 <i>gal</i>
Application event totals		9.25	0.00	0.00	315.16	
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
Markarian Well	Ground water	9.29	0.00	0.00	316.46	4,380,000.00 <i>gal</i>
Application event totals		9.29	0.00	0.00	316.46	

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#421-Marks - 06/21/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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
Markarian Well	Ground water	9.33	0.00	0.00	317.76	4,398,000.00 <i>gal</i>
Application event totals		9.33	0.00	0.00	317.76	
09/26/2023	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
Markarian Well	Ground water	9.29	0.00	0.00	316.46	4,380,000.00 <i>gal</i>
Application event totals		9.29	0.00	0.00	316.46	

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

Field name: #422-Hughes

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		
12/14/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application	Process wastewater	184.52	45.54	243.81	1,318.69	2,160,000.00 <i>gal</i>
Application event totals		184.52	45.54	243.81	1,318.69	
02/26/2023	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
Blended Lg and Fresh Water Application	Process wastewater	113.84	19.69	134.00	901.26	1,800,000.00 <i>gal</i>
Application event totals		113.84	19.69	134.00	901.26	
04/13/2023	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
Markarian Well	Ground water	9.42	0.00	0.00	320.79	4,440,000.00 <i>gal</i>
Application event totals		9.42	0.00	0.00	320.79	

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#422-Hughes - 05/25/2023: Corn, silage

Field name: #422-Hughes

Crop: Corn, silage

Plant date: 05/25/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
05/18/2023	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	216.76	66.32	443.22	0.00	456.00 <i>ton</i>
Application event totals		216.76	66.32	443.22	0.00	
06/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Markarian Well	Ground water	9.42	0.00	0.00	320.79	4,440,000.00 <i>gal</i>
Application event totals		9.42	0.00	0.00	320.79	
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
Markarian Well	Ground water	9.29	0.00	0.00	316.46	4,380,000.00 <i>gal</i>
Application event totals		9.29	0.00	0.00	316.46	
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
Markarian Well	Ground water	9.25	0.00	0.00	315.16	4,362,000.00 <i>gal</i>
Application event totals		9.25	0.00	0.00	315.16	
07/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Markarian Well	Ground water	9.42	0.00	0.00	320.79	4,440,000.00 <i>gal</i>
Application event totals		9.42	0.00	0.00	320.79	
08/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Markarian Well	Ground water	9.55	0.00	0.00	325.13	4,500,000.00 <i>gal</i>
Application event totals		9.55	0.00	0.00	325.13	

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#422-Hughes - 05/25/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following	
08/18/2023	Surface (irrigation)	No precipitation		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Markarian Well		Ground water	9.20	0.00	0.00	313.42	4,338,000.00 <i>gal</i>
Application event totals			9.20	0.00	0.00	313.42	
08/30/2023	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
Markarian Well		Ground water	9.38	0.00	0.00	319.49	4,422,000.00 <i>gal</i>
Application event totals			9.38	0.00	0.00	319.49	

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

Field name: Nakata

Crop: Wheat, silage, soft dough

Plant date: 11/26/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
01/05/2023	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
Blended Lg and Fresh Water Application	Process wastewater	152.68	26.40	179.72	1,208.75	2,160,000.00 <i>gal</i>
Application event totals		152.68	26.40	179.72	1,208.75	
03/30/2023	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
Lagoon Water Application	Process wastewater	152.68	26.40	179.72	1,208.75	2,160,000.00 <i>gal</i>
Nakata Well	Ground water	4.65	0.00	0.00	186.61	2,376,000.00 <i>gal</i>
Application event totals		157.34	26.40	179.72	1,395.36	
05/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Nakata Well	Ground water	7.26	0.00	0.00	291.23	3,708,000.00 <i>gal</i>
Application event totals		7.26	0.00	0.00	291.23	

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Nakata - 06/21/2023: Corn, silage

Field name: Nakata

Crop: Corn, silage

Plant date: 06/21/2023

Application date	Application method	Precipitation 24 hours prior		Precipitation during application			Precipitation 24 hours following	
06/15/2023	Broadcast/incorporate	No precipitation		No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Manure Application		Corral solids	216.76	66.32	443.22	0.00	408.00 <i>ton</i>	
Application event totals			216.76	66.32	443.22	0.00		
07/12/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Nakata Well		Ground water	7.47	0.00	0.00	299.71	3,816,000.00 <i>gal</i>	
Application event totals			7.47	0.00	0.00	299.71		
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	
Nakata Well		Ground water	7.57	0.00	0.00	303.39	3,862,800.00 <i>gal</i>	
Application event totals			7.57	0.00	0.00	303.39		
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	
Nakata Well		Ground water	7.47	0.00	0.00	299.71	3,816,000.00 <i>gal</i>	
Application event totals			7.47	0.00	0.00	299.71		
08/21/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount	
Nakata Well		Ground water	7.47	0.00	0.00	299.71	3,816,000.00 <i>gal</i>	
Application event totals			7.47	0.00	0.00	299.71		

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Nakata - 06/21/2023: 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	
Nakata Well		Ground water	7.59	0.00	0.00	304.52	3,877,200.00 <i>gal</i>	
Application event totals			7.59	0.00	0.00	304.52		
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	
Nakata Well		Ground water	7.54	0.00	0.00	302.54	3,852,000.00 <i>gal</i>	
Application event totals			7.54	0.00	0.00	302.54		
09/26/2023	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	
Nakata Well		Ground water	7.47	0.00	0.00	299.71	3,816,000.00 <i>gal</i>	
Application event totals			7.47	0.00	0.00	299.71		

Riley N. - 10/09/2022: Wheat, silage, soft dough

Field name: Riley N.

Crop: Wheat, silage, soft dough

Plant date: 10/09/2022

Application date	Application method	Precipitation 24 hours prior		Precipitation during application		Precipitation 24 hours following	
10/01/2022	Surface (irrigation)	No precipitation		No precipitation		No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-N		Ground water	6.00	0.00	0.00	243.01	3,360,000.00 <i>gal</i>
Application event totals			6.00	0.00	0.00	243.01	
11/10/2022	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
Blended Lg and Fresh Water Application		Process wastewater	155.82	38.45	205.89	1,113.56	1,440,000.00 <i>gal</i>
Application event totals			155.82	38.45	205.89	1,113.56	

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Riley N. - 10/09/2022: 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 Water Application	Process wastewater	173.04	29.92	203.68	1,369.92	2,160,000.00 <i>gal</i>
Riley-N	Ground water	3.11	0.00	0.00	125.84	1,740,000.00 <i>gal</i>
Application event totals		176.15	29.92	203.68	1,495.76	

Riley N. - 06/19/2023: Corn, silage

Field name: Riley N.

Crop: Corn, silage

Plant date: 06/19/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
03/28/2023	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
Blended Lg and Fresh Water Application	Process wastewater	86.52	14.96	101.84	684.96	1,080,000.00 <i>gal</i>
Application event totals		86.52	14.96	101.84	684.96	
06/03/2023	Broadcast/incorporate	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application	Corral solids	144.51	44.21	295.48	0.00	240.00 <i>ton</i>
Application event totals		144.51	44.21	295.48	0.00	
06/07/2023	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
Riley-N	Ground water	6.00	0.00	0.00	243.01	3,360,000.00 <i>gal</i>
Application event totals		6.00	0.00	0.00	243.01	
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
Riley-S	Ground water	8.99	0.00	0.00	339.02	3,660,000.00 <i>gal</i>
Application event totals		8.99	0.00	0.00	339.02	

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Riley N. - 06/19/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior		Precipitation during application			Precipitation 24 hours following
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
Riley-N		Ground water	6.43	0.00	0.00	260.36	3,600,000.00 <i>gal</i>
Application event totals			6.43	0.00	0.00	260.36	
08/07/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-S		Ground water	8.89	0.00	0.00	335.13	3,618,000.00 <i>gal</i>
Application event totals			8.89	0.00	0.00	335.13	
08/19/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-N		Ground water	6.32	0.00	0.00	256.02	3,540,000.00 <i>gal</i>
Application event totals			6.32	0.00	0.00	256.02	
08/31/2023	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
Riley-N		Ground water	6.11	0.00	0.00	247.35	3,420,000.00 <i>gal</i>
Application event totals			6.11	0.00	0.00	247.35	
09/12/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-S		Ground water	8.74	0.00	0.00	329.58	3,558,000.00 <i>gal</i>
Application event totals			8.74	0.00	0.00	329.58	
09/24/2023	Surface (irrigation)	No precipitation		No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-N		Ground water	6.54	0.00	0.00	264.70	3,660,000.00 <i>gal</i>
Application event totals			6.54	0.00	0.00	264.70	

Riley S. - 12/01/2022: Wheat, silage, soft dough

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Riley S. - 12/01/2022: Wheat, silage, soft dough

Field name: Riley S.

Crop: Wheat, silage, soft dough

Plant date: 12/01/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
12/28/2022	Surface (irrigation)	No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Blended Lg and Fresh Water Application		Process wastewater	155.82	38.45	205.89	1,113.56	2,160,000.00 <i>gal</i>
Application event totals			155.82	38.45	205.89	1,113.56	
01/16/2023	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
Blended Lg and Fresh Water Application		Process wastewater	76.91	13.30	90.53	608.85	1,440,000.00 <i>gal</i>
Application event totals			76.91	13.30	90.53	608.85	
04/15/2023	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 Water Application		Process wastewater	83.85	20.40	137.79	395.22	2,880,000.00 <i>gal</i>
Riley-S		Ground water	4.03	0.00	0.00	151.91	2,460,000.00 <i>gal</i>
Application event totals			87.88	20.40	137.79	547.13	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-S		Ground water	8.15	0.00	0.00	307.53	4,980,000.00 <i>gal</i>
Application event totals			8.15	0.00	0.00	307.53	

Riley S. - 06/17/2023: Corn, silage

Field name: Riley S.

Crop: Corn, silage

Plant date: 06/17/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Riley S. - 06/17/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
07/07/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-S	Ground water	8.35	0.00	0.00	314.94	5,100,000.00 <i>gal</i>
Application event totals		8.35	0.00	0.00	314.94	
07/23/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon Water Application	Process wastewater	121.24	28.15	163.96	897.25	2,880,000.00 <i>gal</i>
Riley-S	Ground water	4.62	0.00	0.00	174.14	2,820,000.00 <i>gal</i>
Application event totals		125.85	28.15	163.96	1,071.40	
08/04/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-N	Ground water	5.98	0.00	0.00	242.14	5,022,000.00 <i>gal</i>
Application event totals		5.98	0.00	0.00	242.14	
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 Water Application	Process wastewater	121.24	28.15	163.96	897.25	2,880,000.00 <i>gal</i>
Riley-S	Ground water	4.52	0.00	0.00	170.44	2,760,000.00 <i>gal</i>
Application event totals		125.76	28.15	163.96	1,067.69	
08/28/2023	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
Riley-N	Ground water	6.21	0.00	0.00	251.69	5,220,000.00 <i>gal</i>
Application event totals		6.21	0.00	0.00	251.69	
09/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-S	Ground water	8.32	0.00	0.00	313.83	5,082,000.00 <i>gal</i>
Application event totals		8.32	0.00	0.00	313.83	

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Riley S. - 06/17/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following	
09/21/2023	Surface (irrigation)	No precipitation	No precipitation			No precipitation	
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Riley-N		Ground water	5.93	0.00	0.00	240.11	4,980,000.00 <i>gal</i>
Application event totals			5.93	0.00	0.00	240.11	

Shannon N. - 11/14/2022: Wheat, silage, soft dough

Field name: Shannon N.

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
02/23/2023	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
Blended Lg and Fresh Water Application		Process wastewater	216.30	37.40	254.61	1,712.39	3,600,000.00 <i>gal</i>
Application event totals			216.30	37.40	254.61	1,712.39	
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 Water Application		Process wastewater	117.91	28.69	193.77	555.78	3,600,000.00 <i>gal</i>
Shannon-S		Ground water	3.71	0.00	0.00	152.40	1,602,000.00 <i>gal</i>
Application event totals			121.62	28.69	193.77	708.18	

Shannon S. - 11/23/2022: Wheat, silage, soft dough

Field name: Shannon S.

Crop: Wheat, silage, soft dough

Plant date: 11/23/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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Shannon S. - 11/23/2022: Wheat, silage, soft dough

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following			
11/08/2022	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
Blended Lg and Fresh Water Application		Process wastewater	123.01	30.36	162.54	879.12	1,440,000.00 <i>gal</i>
Application event totals			123.01	30.36	162.54	879.12	
12/10/2022	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
Blended Lg and Fresh Water Application		Process wastewater	184.52	45.54	243.81	1,318.69	2,160,000.00 <i>gal</i>
Application event totals			184.52	45.54	243.81	1,318.69	
04/13/2023	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
Shannon-S		Ground water	10.78	0.00	0.00	442.82	4,422,000.00 <i>gal</i>
Application event totals			10.78	0.00	0.00	442.82	

Shannon S. - 06/07/2023: Corn, silage

Field name: Shannon S.

Crop: Corn, silage

Plant date: 06/07/2023

Application date	Application method		Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
06/03/2023	Broadcast/incorporate		No precipitation	No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Manure Application		Corral solids	237.67	72.72	485.99	0.00	500.00 <i>ton</i>
Application event totals			237.67	72.72	485.99	0.00	
06/28/2023	Surface (irrigation)		No precipitation	No precipitation			No precipitation
Source description		Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Shannon-S		Ground water	11.16	0.00	0.00	458.44	4,578,000.00 <i>gal</i>
Application event totals			11.16	0.00	0.00	458.44	

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Shannon S. - 06/07/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following		
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
Shannon-S	Ground water	10.93	0.00	0.00	448.83	4,482,000.00 <i>gal</i>
Application event totals		10.93	0.00	0.00	448.83	
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
Shannon-S	Ground water	10.97	0.00	0.00	450.63	4,500,000.00 <i>gal</i>
Application event totals		10.97	0.00	0.00	450.63	
08/07/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Shannon-S	Ground water	10.57	0.00	0.00	434.41	4,338,000.00 <i>gal</i>
Application event totals		10.57	0.00	0.00	434.41	
08/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Shannon-S	Ground water	10.68	0.00	0.00	438.61	4,380,000.00 <i>gal</i>
Application event totals		10.68	0.00	0.00	438.61	
08/31/2023	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
Shannon-S	Ground water	10.82	0.00	0.00	444.62	4,440,000.00 <i>gal</i>
Application event totals		10.82	0.00	0.00	444.62	
09/12/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation		
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Shannon-S	Ground water	10.93	0.00	0.00	448.83	4,482,000.00 <i>gal</i>
Application event totals		10.93	0.00	0.00	448.83	

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

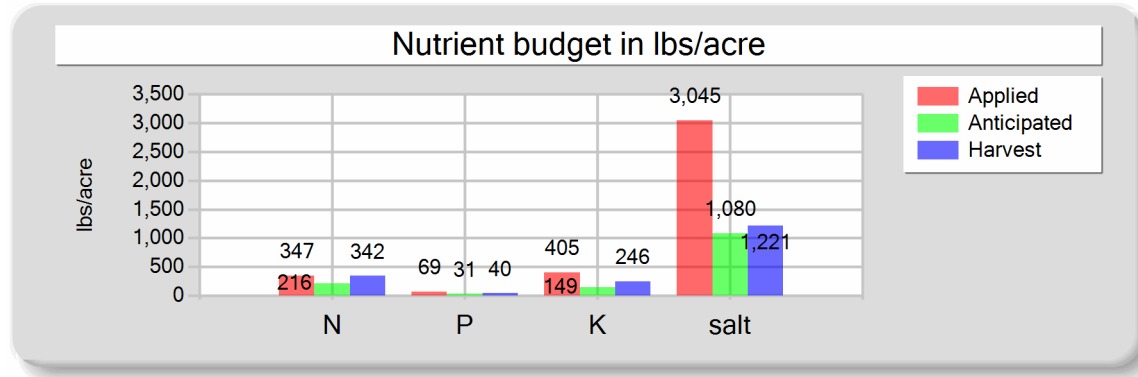
B. NUTRIENT BUDGET

#421-Marks - 11/28/2022: Wheat, silage, soft dough

Field name: #421-Marks

Crop: Wheat, silage, soft dough

Plant date: 11/28/2022



	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	8,922,000.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	328.57 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	8.65 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	321.13	69.16	404.62	2,400.20	Process wastewater applied
Fresh water	18.93	0.00	0.00	644.62	4,320,000.00 gallons
Atmospheric deposition	7.00	0.00	0.00	0.00	159.09 acre-inches
Total nutrients applied	347.06	69.16	404.62	3,044.81	4.19 inches/acre
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00	
Actual crop nutrient removal	342.40	39.86	246.46	1,220.73	Total harvests for the crop
Nutrient balance	4.66	29.30	158.16	1,824.08	1 harvests
Applied to removed ratio	1.01	1.73	1.64	2.49	

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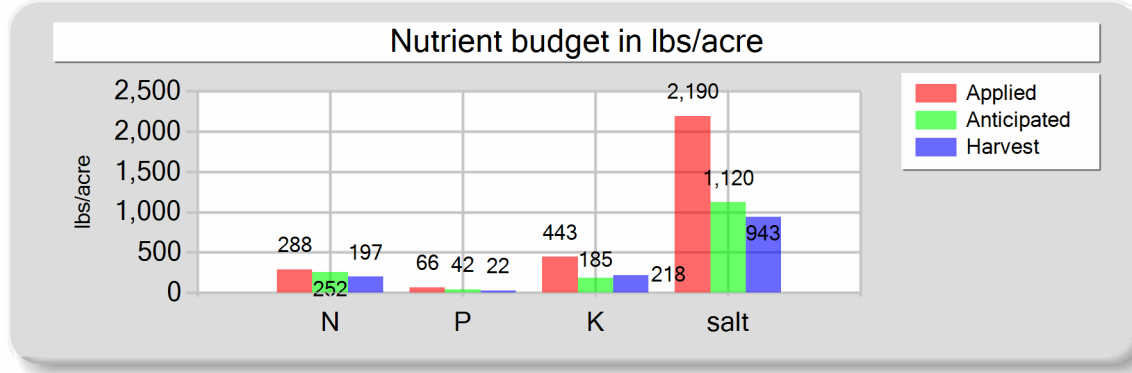
Reporting period 01/01/2023 to 12/31/2023.

#421-Marks - 06/21/2023: Corn, silage

Field name: #421-Marks

Crop: Corn, silage

Plant date: 06/21/2023



	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	30,318,000.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	1,116.51 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	29.38 <i>inches/acre</i>
Dry manure	216.76	66.32	443.22	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	64.32	0.00	0.00	2,190.48	
Atmospheric deposition	7.00	0.00	0.00	0.00	
Total nutrients applied	288.07	66.32	443.22	2,190.48	
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00	
Actual crop nutrient removal	196.78	22.16	218.28	942.58	
Nutrient balance	91.29	44.16	224.94	1,247.90	
Applied to removed ratio	1.46	2.99	2.03	2.32	
					Process wastewater applied
					0.00 <i>gallons</i>
					0.00 <i>acre-inches</i>
					0.00 <i>inches/acre</i>
					Total harvests for the crop
					1 <i>harvests</i>

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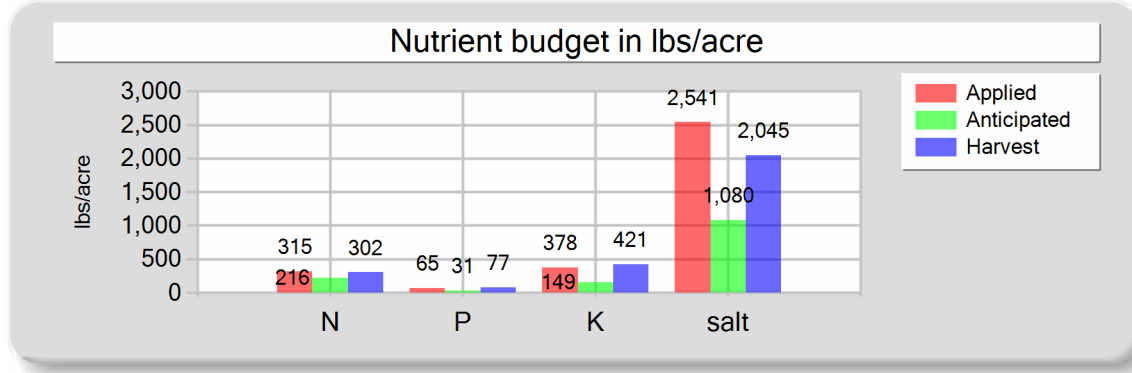
Reporting period 01/01/2023 to 12/31/2023.

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

Field name: #422-Hughes

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	298.36	65.22	377.82	2,219.95
Fresh water	9.42	0.00	0.00	320.79
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	314.78	65.22	377.82	2,540.74
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00
Actual crop nutrient removal	302.22	76.83	421.01	2,044.90
Nutrient balance	12.56	-11.61	-43.19	495.84
Applied to removed ratio	1.04	0.85	0.90	1.24

Fresh water applied
4,440,000.00 gallons
163.51 acre-inches
4.30 inches/acre

Process wastewater applied
3,960,000.00 gallons
145.83 acre-inches
3.84 inches/acre

Total harvests for the crop
1 harvests

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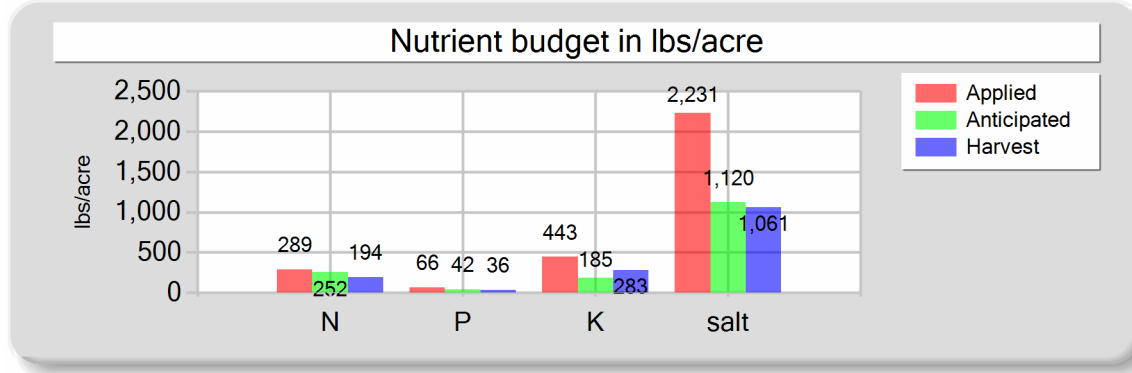
Reporting period 01/01/2023 to 12/31/2023.

#422-Hughes - 05/25/2023: Corn, silage

Field name: #422-Hughes

Crop: Corn, silage

Plant date: 05/25/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	216.76	66.32	443.22	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	65.51	0.00	0.00	2,231.23
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	289.27	66.32	443.22	2,231.23
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	194.32	35.58	282.51	1,061.29
Nutrient balance	94.95	30.75	160.71	1,169.94
Applied to removed ratio	1.49	1.86	1.57	2.10

Fresh water applied
30,882,000.00 <i>gallons</i>
1,137.28 <i>acre-inches</i>
29.93 <i>inches/acre</i>

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

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

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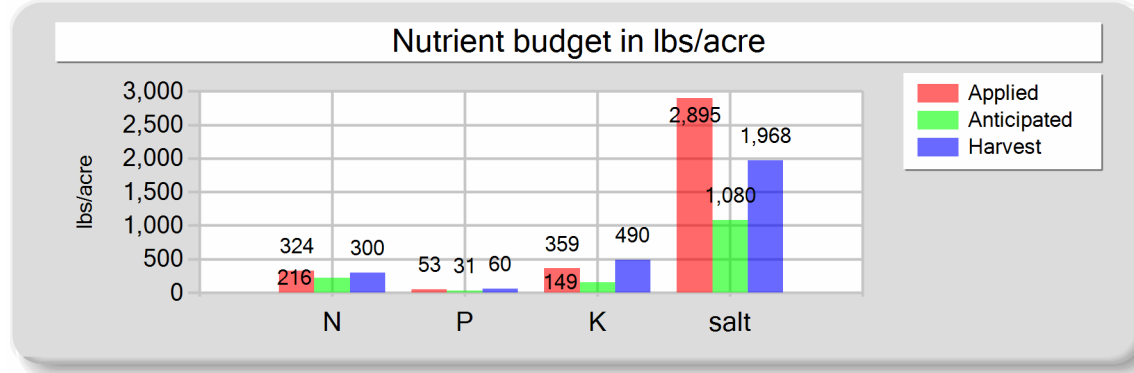
Reporting period 01/01/2023 to 12/31/2023.

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

Field name: Nakata

Crop: Wheat, silage, soft dough

Plant date: 11/26/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	305.37	52.80	359.44	2,417.50
Fresh water	11.92	0.00	0.00	477.84
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	324.28	52.80	359.44	2,895.34
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00
Actual crop nutrient removal	300.18	59.71	490.47	1,968.42
Nutrient balance	24.10	-6.91	-131.02	926.92
Applied to removed ratio	1.08	0.88	0.73	1.47

Fresh water applied
6,084,000.00 <i>gallons</i>
224.05 <i>acre-inches</i>
6.59 <i>inches/acre</i>

Process wastewater applied
4,320,000.00 <i>gallons</i>
159.09 <i>acre-inches</i>
4.68 <i>inches/acre</i>

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

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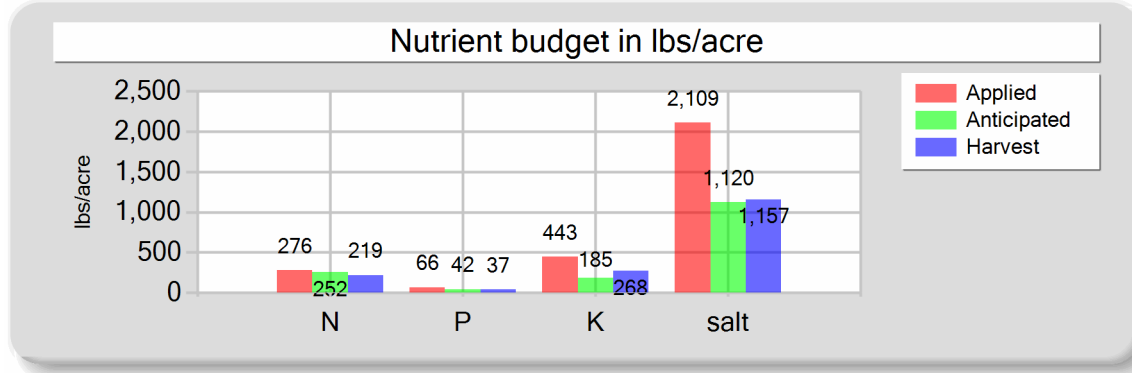
Reporting period 01/01/2023 to 12/31/2023.

Nakata - 06/21/2023: Corn, silage

Field name: Nakata

Crop: Corn, silage

Plant date: 06/21/2023



	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	216.76	66.32	443.22	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	52.60	0.00	0.00	2,109.30
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	276.36	66.32	443.22	2,109.30
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	219.18	37.00	268.27	1,157.25
Nutrient balance	57.18	29.32	174.95	952.05
Applied to removed ratio	1.26	1.79	1.65	1.82

Fresh water applied
26,856,000.00 <i>gallons</i>
989.02 <i>acre-inches</i>
29.09 <i>inches/acre</i>

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

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

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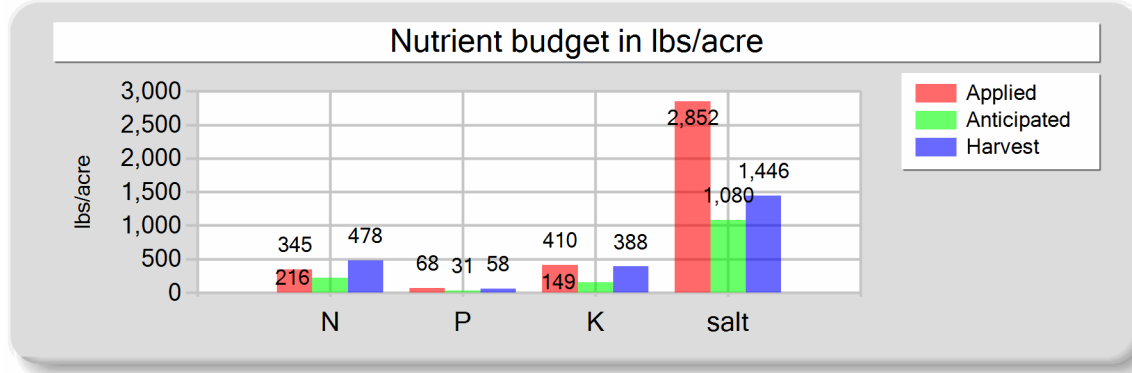
Reporting period 01/01/2023 to 12/31/2023.

Riley N. - 10/09/2022: Wheat, silage, soft dough

Field name: Riley N.

Crop: Wheat, silage, soft dough

Plant date: 10/09/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	328.86	68.38	409.57	2,483.47
Fresh water	9.11	0.00	0.00	368.85
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	344.97	68.38	409.57	2,852.32
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00
Actual crop nutrient removal	478.13	58.22	388.10	1,446.39
Nutrient balance	-133.16	10.16	21.47	1,405.94
Applied to removed ratio	0.72	1.17	1.06	1.97

Fresh water applied
5,100,000.00 <i>gallons</i>
187.82 <i>acre-inches</i>
6.26 <i>inches/acre</i>

Process wastewater applied
3,600,000.00 <i>gallons</i>
132.58 <i>acre-inches</i>
4.42 <i>inches/acre</i>

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

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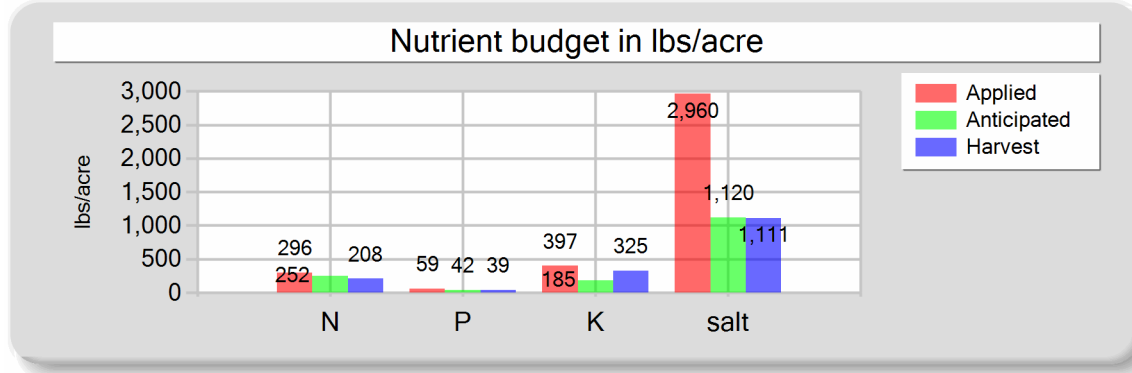
Reporting period 01/01/2023 to 12/31/2023.

Riley N. - 06/19/2023: Corn, silage

Field name: Riley N.

Crop: Corn, silage

Plant date: 06/19/2023



	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	144.51	44.21	295.48	0.00
Process wastewater	86.52	14.96	101.84	684.96
Fresh water	58.01	0.00	0.00	2,275.18
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	296.04	59.18	397.32	2,960.14
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	207.72	38.97	325.27	1,111.07
Nutrient balance	88.32	20.21	72.06	1,849.07
Applied to removed ratio	1.43	1.52	1.22	2.66

Fresh water applied
28,416,000.00 <i>gallons</i>
1,046.46 <i>acre-inches</i>
34.88 <i>inches/acre</i>

Process wastewater applied
1,080,000.00 <i>gallons</i>
39.77 <i>acre-inches</i>
1.33 <i>inches/acre</i>

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

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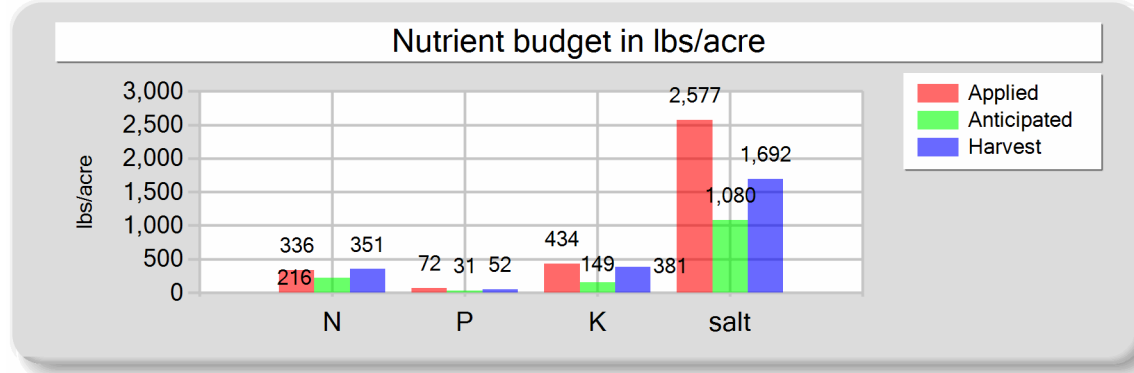
Reporting period 01/01/2023 to 12/31/2023.

Riley S. - 12/01/2022: Wheat, silage, soft dough

Field name: Riley S.

Crop: Wheat, silage, soft dough

Plant date: 12/01/2022



	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	7,440,000.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	273.99 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	6.09 <i>inches/acre</i>
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	316.58	72.15	434.21	2,117.63	Process wastewater applied
Fresh water	12.18	0.00	0.00	459.44	6,480,000.00 <i>gallons</i>
Atmospheric deposition	7.00	0.00	0.00	0.00	238.64 <i>acre-inches</i>
Total nutrients applied	335.76	72.15	434.21	2,577.07	5.30 <i>inches/acre</i>
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00	
Actual crop nutrient removal	350.83	51.67	380.59	1,692.47	Total harvests for the crop
Nutrient balance	-15.07	20.49	53.61	884.60	1 <i>harvests</i>
Applied to removed ratio	0.96	1.40	1.14	1.52	

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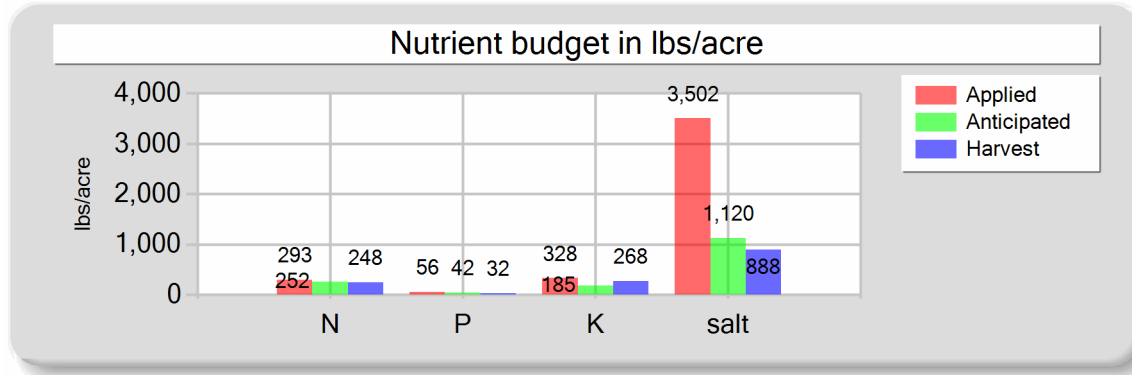
Reporting period 01/01/2023 to 12/31/2023.

Riley S. - 06/17/2023: Corn, silage

Field name: Riley S.

Crop: Corn, silage

Plant date: 06/17/2023



	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	242.47	56.29	327.93	1,794.51
Fresh water	43.93	0.00	0.00	1,707.29
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	293.40	56.29	327.93	3,501.80
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	247.68	31.58	268.32	887.52
Nutrient balance	45.72	24.71	59.61	2,614.28
Applied to removed ratio	1.18	1.78	1.22	3.95

Fresh water applied
30,984,000.00 <i>gallons</i>
1,141.04 <i>acre-inches</i>
25.36 <i>inches/acre</i>

Process wastewater applied
5,760,000.00 <i>gallons</i>
212.12 <i>acre-inches</i>
4.71 <i>inches/acre</i>

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

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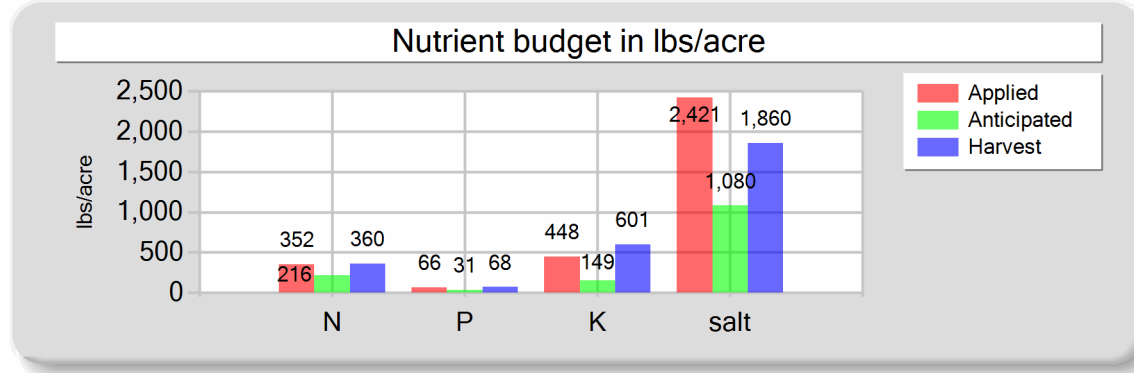
Reporting period 01/01/2023 to 12/31/2023.

Shannon N. - 11/14/2022: Wheat, silage, soft dough

Field name: Shannon N.

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	334.22	66.09	448.38	2,268.17
Fresh water	3.71	0.00	0.00	152.40
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	351.93	66.09	448.38	2,420.57
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00
Actual crop nutrient removal	359.85	68.15	601.49	1,860.09
Nutrient balance	-7.92	-2.05	-153.11	560.49
Applied to removed ratio	0.98	0.97	0.75	1.30

Fresh water applied
1,602,000.00 <i>gallons</i>
59.00 <i>acre-inches</i>
1.47 <i>inches/acre</i>

Process wastewater applied
7,200,000.00 <i>gallons</i>
265.15 <i>acre-inches</i>
6.63 <i>inches/acre</i>

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

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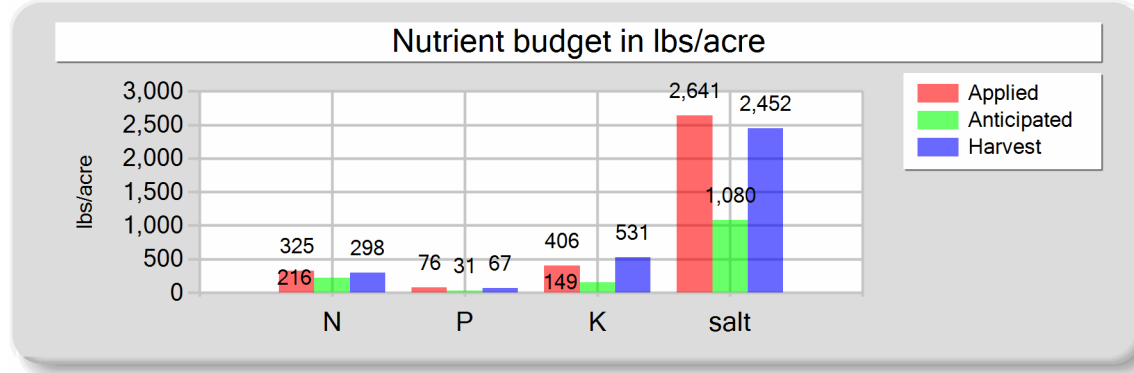
Reporting period 01/01/2023 to 12/31/2023.

Shannon S. - 11/23/2022: Wheat, silage, soft dough

Field name: Shannon S.

Crop: Wheat, silage, soft dough

Plant date: 11/23/2022



	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	307.54	75.90	406.36	2,197.81
Fresh water	10.78	0.00	0.00	442.82
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	325.31	75.90	406.36	2,640.63
Anticipated crop nutrient removal	216.00	30.60	149.40	1,080.00
Actual crop nutrient removal	298.29	66.69	530.99	2,451.93
Nutrient balance	27.02	9.21	-124.63	188.70
Applied to removed ratio	1.09	1.14	0.77	1.08

Fresh water applied
4,422,000.00 gallons
162.85 acre-inches
4.29 inches/acre

Process wastewater applied
3,600,000.00 gallons
132.58 acre-inches
3.49 inches/acre

Total harvests for the crop
1 harvests

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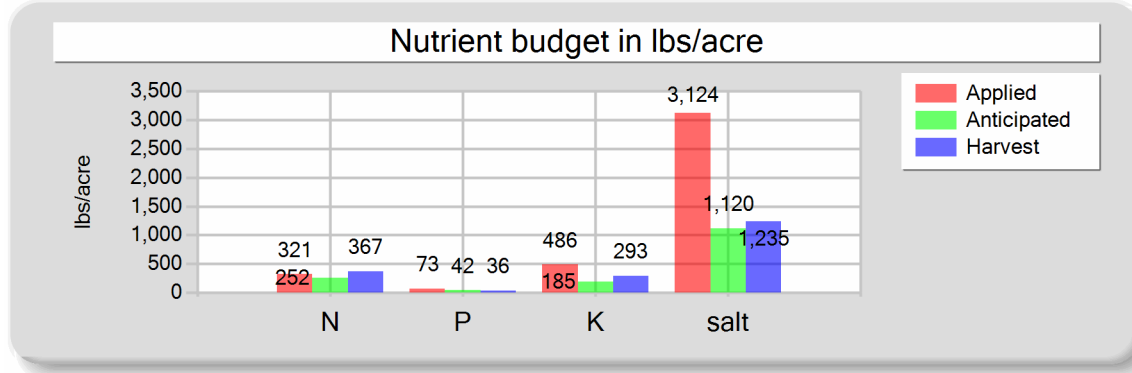
Reporting period 01/01/2023 to 12/31/2023.

Shannon S. - 06/07/2023: Corn, silage

Field name: Shannon S.

Crop: Corn, silage

Plant date: 06/07/2023



	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	237.67	72.72	485.99	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	76.05	0.00	0.00	3,124.37
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	320.73	72.72	485.99	3,124.37
Anticipated crop nutrient removal	252.00	42.00	184.80	1,120.00
Actual crop nutrient removal	367.28	35.78	292.88	1,234.83
Nutrient balance	-46.56	36.94	193.11	1,889.54
Applied to removed ratio	0.87	2.03	1.66	2.53

Fresh water applied
31,200,000.00 <i>gallons</i>
1,148.99 <i>acre-inches</i>
30.24 <i>inches/acre</i>

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

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

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NUTRIENT ANALYSES

A. MANURE ANALYSES

Corral solids - 2022

Sample and source description: Corral solids - 2022

Sample date: 08/10/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 35.5 %

	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	28,300.00	3,470.00	47,100.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

Corral solids

Sample and source description: Corral solids

Sample date: 06/08/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 32.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	13,400.00	4,100.00	27,400.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

Separator Solids

Sample and source description: Separator Solids

Sample date: 06/08/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 58.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	17,000.00	2,870.00	6,830.00							0.00
DL	1,000.00	1,000.00	1,000.00							0.10

B. PROCESS WASTEWATER ANALYSES

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LG-1-4, 2022

Sample and source description: LG-1-4, 2022

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

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	389.00	255.00	0.00	0.00	96.00	514.00								4,190.00	2,780
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-1-1

Sample and source description: LG-1-1

Sample date: 03/16/2023 Material type: Process wastewater Source of analysis: Lab analysis pH: _____

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb. (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	288.00	151.00	0.00	0.00	49.80	339.00								2,850.00	2,280
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-1-2

Sample and source description: LG-1-2

Sample date: 06/08/2023 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	157.00	78.40	0.00	0.00	38.20	258.00								2,210.00	740
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

LG-1-3

Sample and source description: LG-1-3

Sample date: 08/17/2023 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	227.00	171.00	0.00	0.00	52.70	307.00								3,140.00	1,680
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

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LG-1-4

Sample and source description: LG-1-4

Sample date: 10/26/2023 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	148.00	78.40	0.00	0.00	30.10	162.00								1,760.00	1,020
DL	0.50	0.50	0.50	0.50	0.50	2.00								1.00	10

C. FRESH WATER ANALYSES

D-1

D-1

Sample description: D-1

Sample date: 10/26/2023 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	6.52	0.00	6.52								359.00	230
DL	0.50	0.50	0.50								1.00	10

D-2

D-2

Sample description: D-2

Sample date: 10/26/2023 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	2.33	0.00	2.33								202.00	130
DL	0.50	0.50	0.50								1.00	10

D-3

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D-3

D-3

Sample description: D-3

Sample date: 10/26/2023 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	2.60	0.00	2.60								222.00	142
DL	0.50	0.50	0.50								1.00	10

D-4

D-4

Sample description: D-4

Sample date: 10/26/2023 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	2.61	0.00	2.61								225.00	144
DL	0.50	0.50	0.50								1.00	10

Markarian Well

Markarian Well

Sample description: Markarian Well

Sample date: 08/17/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	9.66	0.00	9.66								513.00	329
DL	0.50	0.50	0.50								1.00	10

Nakata Well

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Nakata Well

Nakata

Sample description: Nakata

Sample date: 08/17/2023 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	7.98	0.00	7.98								501.00	320
DL	0.50	0.50	0.50								1.00	10

Riley-N

Riley-N

Sample description: Riley-N

Sample date: 08/17/2023 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	6.42	0.00	6.42								407.00	260
DL	0.50	0.50	0.50								1.00	10

Riley-S

Riley-S

Sample description: Riley-S

Sample date: 08/17/2023 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	8.83	0.00	8.83								520.00	333
DL	0.50	0.50	0.50								1.00	10

S-Dom

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S-Dom

S-Domestic

Sample description: S-Domestic

Sample date: 10/26/2023 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	2.71	0.00	2.71								230.00	147
DL	0.50	0.50	0.50								1.00	10

Shannon-S

Shannon-S

Sample description: Shannon-S

Sample date: 09/20/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	11.10	0.00	11.10								713.00	456
DL	0.50	0.50	0.50								1.00	10

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

#421-Marks - 11/28/2022: Wheat, silage, soft dough

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#421-Marks - 11/28/2022: Wheat, silage, soft dough

Winter ForageSample and source description: Winter ForageSample date: 05/27/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 61.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	20,700.00	2,410.00	14,900.00		7.38
DL	1,000.00	1,000.00	1,000.00		0.10

#421-Marks - 06/21/2023: Corn, silage

Corn SilagesSample and source description: Corn SilagesSample date: 10/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 70.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	11,900.00	1,340.00	13,200.00		5.70
DL	1,000.00	1.00	1,000.00		0.10

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

Winter ForageSample and source description: Winter ForageSample date: 05/05/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 64.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	20,100.00	5,110.00	28,000.00		13.60
DL	1,000.00	1,000.00	1,000.00		0.10

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#422-Hughes - 05/25/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

Sample date: 09/14/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 73.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	13,000.00	2,380.00	18,900.00		7.10
DL	1,000.00	1,000.00	1,000.00		0.10

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

Winter Forage

Sample and source description: Winter Forage

Sample date: 05/24/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 61.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	18,300.00	3,640.00	29,900.00		12.00
DL	1,000.00	1,000.00	1,000.00		0.10

Nakata - 06/21/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

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

Moisture: 67.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,500.00	2,110.00	15,300.00		6.60
DL	1,000.00	1,000.00	1,000.00		0.10

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Riley N. - 10/09/2022: Wheat, silage, soft dough

Winter ForageSample and source description: Winter ForageSample date: 03/23/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 50.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	23,900.00	2,910.00	19,400.00		7.23
DL	1,000.00	1,000.00	1,000.00		0.10

Riley N. - 06/19/2023: Corn, silage

Corn SilagesSample and source description: Corn SilagesSample date: 10/09/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 70.4 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,900.00	2,420.00	20,200.00		6.90
DL	1,000.00	1,000.00	1,000.00		0.10

Riley S. - 12/01/2022: Wheat, silage, soft dough

Winter ForageSample and source description: Winter ForageSample date: 05/29/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 48.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	16,500.00	2,430.00	17,900.00		7.96
DL	1,000.00	1,000.00	1,000.00		0.10

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Riley S. - 06/17/2023: Corn, silage

Corn Silages

Sample and source description: Corn Silages

Sample date: 10/07/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 64.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	12,000.00	1,530.00	13,000.00		4.30
DL	1,000.00	1,000.00	1,000.00		0.10

Shannon N. - 11/14/2022: Wheat, silage, soft dough

Winter Forage

Sample and source description: Winter Forage

Sample date: 04/28/2023 Source of analysis: Lab analysis Method of reporting: Dry-weight

Moisture: 57.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	20,700.00	3,920.00	34,600.00		10.70
DL	1,000.00	1,000.00	1,000.00		0.10

Shannon S. - 11/23/2022: Wheat, silage, soft dough

Winter Forage

Sample and source description: Winter Forage

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

Moisture: 62.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	19,100.00	4,270.00	34,000.00		15.70
DL	1,000.00	1,000.00	1,000.00		0.10

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Shannon S. - 06/07/2023: Corn, silage

Corn SilagesSample and source description: Corn SilagesSample date: 09/25/2023 Source of analysis: Lab analysis Method of reporting: Dry-weightMoisture: 69.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	23,200.00	2,260.00	18,500.00		7.80
DL	1,000.00	1,000.00	1,000.00		0.10

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

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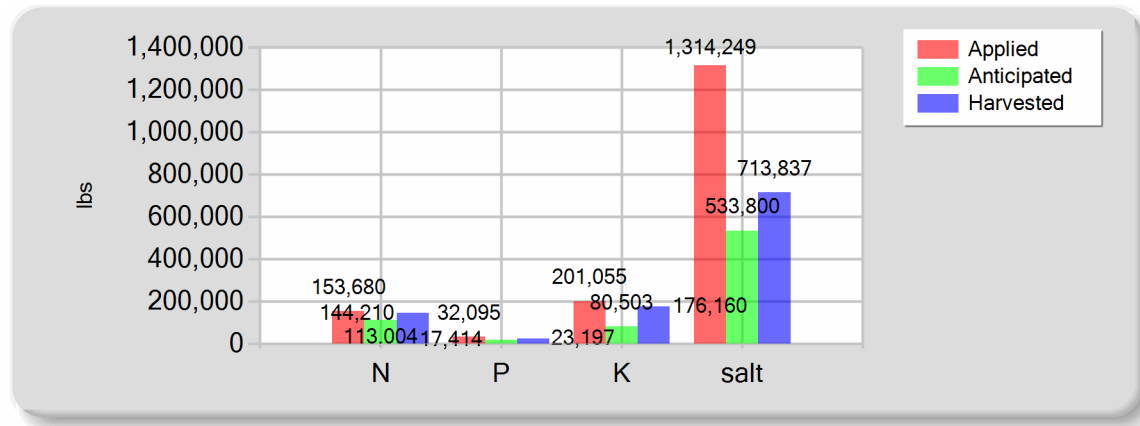
Reporting period 01/01/2023 to 12/31/2023.

NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

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

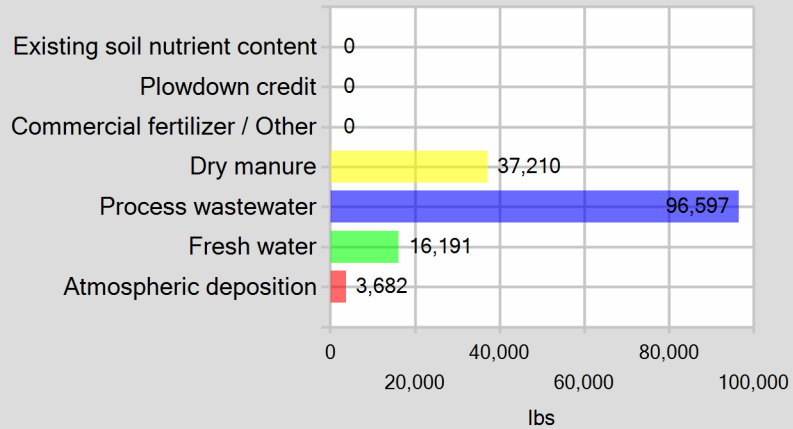
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	37,210.19	11,385.21	76,086.51	0.00
Process wastewater	96,597.05	20,709.75	124,968.71	703,102.97
Fresh water	16,190.99	0.00	0.00	611,146.21
Atmospheric deposition	3,682.00	0.00	0.00	0.00
Total nutrients applied	153,680.23	32,094.96	201,055.22	1,314,249.18
Anticipated crop nutrient removal	113,004.00	17,413.80	80,502.60	533,800.00
Actual crop nutrient removal	144,209.98	23,197.48	176,159.77	713,837.27
Nutrient balance	9,470.25	8,897.48	24,895.45	600,411.91
Applied to removed ratio	1.07	1.38	1.14	1.84

B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

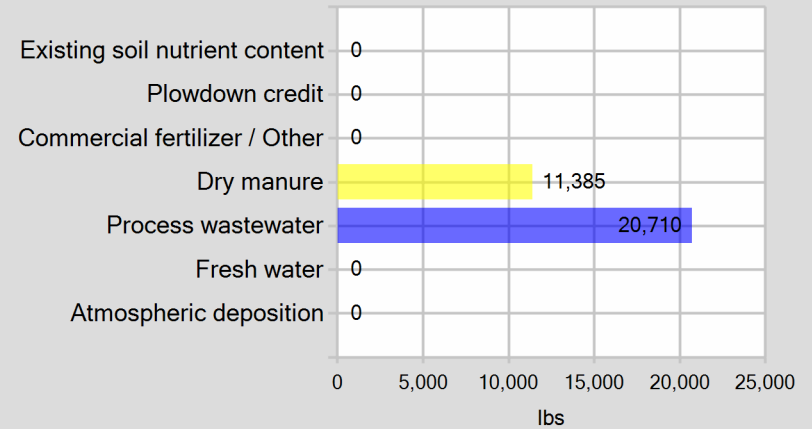


C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

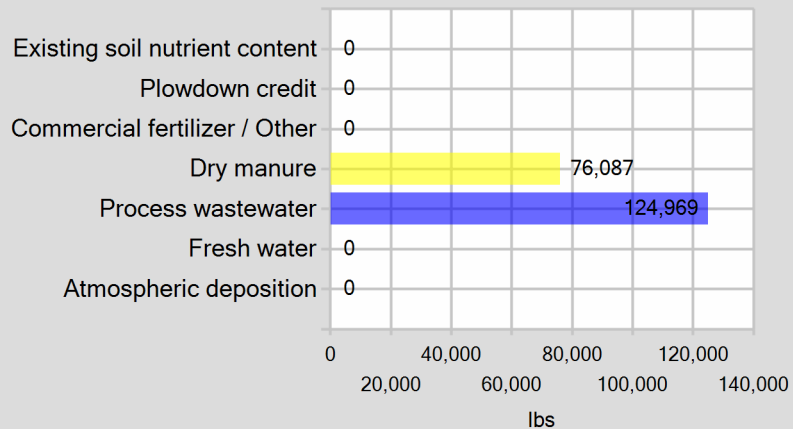
Pounds of nitrogen applied



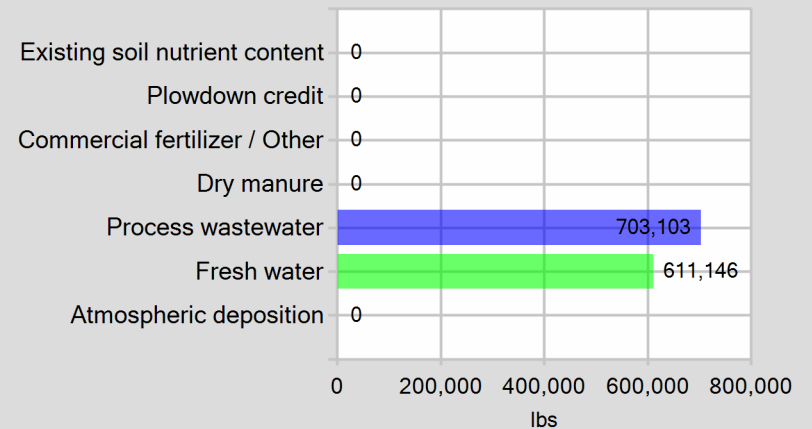
Pounds of phosphorus applied



Pounds of potassium applied



Pounds of salt applied



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EXCEPTION REPORTING

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

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

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

B. STORM WATER DISCHARGES

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

No stormwater discharges occurred during the reporting period.

C. LAND APPLICATION AREA TO SURFACE WATER DISCHARGES

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

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

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

Was the facility's NMP updated in the reporting period? 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

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ADDITIONAL NOTES

A. NOTES

Big De Dairy:

Fresh irrigation water was added to the Lagoon before each application to run a blended Process Waste Water and Well waters .

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CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

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

Dan Souza

Dan Souza (Jun 27, 2024 15:01 PDT)

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Dan Souza

SAME AS OWNER

PRINT OR TYPE NAME

PRINT OR TYPE NAME

Jun 27, 2024

DATE

DATE

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

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

ATTACHMENTS

A. REQUIRED ATTACHMENTS

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

Annual Dairy Facility Assessment

Provide an Annual Dairy Facility Assessment (an update to the Preliminary Dairy Facility Assessment in Attachment A) for each reporting period. On the PDFa Final page, click on the ADFA Report button to generate an ADFA report after updating information as needed .

Manure/Process Wastewater Tracking Manifests

Provide copies of all manure/process wastewater tracking manifests for the reporting period, signed by both the owner/operator and the hauler.

Corrective Actions Documents

Provide records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements of the General Order. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.

Groundwater Monitoring

Dischargers that monitor supply wells or subsurface (tile) drainage systems, or that have monitoring well systems must submit monitoring results as directed in the General Order, Groundwater Reporting Section starting on page MRP-13.

Storm Water Monitoring

Dischargers that are required to monitor storm water more frequently than required in the General Order must submit monitoring results as directed in the General Order, Storm Water Reporting Section on page MRP-14.

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

INSTRUCTIONS

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

OPERATOR INFORMATION

Name of Operator: Dan Souza

Name of Dairy Facility: BIG DE DAIRY, LP

Facility Address:

<u>2947 W Manning AVE</u>	<u>Fresno</u>	<u>Fresno</u>	<u>93706</u>
Number and Street	City	County	Zip Code

Contact Person Name and Phone Number:	<u>Dan Souza</u>	<u>(559) 497-5142</u>
	Name	Phone Number

MANURE HAULER INFORMATION

Name of Hauling Company/Person: Burrows Trucking

Address of Hauling Company/Person:

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>CA</u>	<u>93630</u>
Number and Street	City	State	Zip Code

Contact Person:	<u>Burrows Tony</u>	<u>(559) 846-9671</u>
	Name	Phone Number

DESTINATION INFORMATION

Composting Facility / Broker / Farmer / Other (identify): Broker

Contact information of Composting Facility, Broker, Farmer, or Other (as identified above):

<u>Larry Burrows Spreading</u>	<u>(559) 846-9671</u>
Name	Phone Number

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>CA</u>	<u>93630</u>
Address	City	State	Zip Code

Destination Address or Assessor's Parcel Number:

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>93630</u>
Address	City	Zip Code

<u>W. Jensen Avenue</u>	<u>Fresno</u>
Street and nearest cross street (if no address)	County

Assessor's Parcel Number	Assessor's Parcel Number County
--------------------------	---------------------------------

Last date hauled: 03/25/2023

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

MANURE AMOUNT HAULED

Enter the amount of manure hauled in tons, manure solids content, and the method used to calculate the amount:

Manure: 1,925.00 tons

Manure Solids Content: 64.5 %

Method used to determine amount of manure:

Averaged scale weighed trucks multiplied by the number of trucks hauled.

CERTIFICATION

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

Dan Souza

Dan Souza (Jun 27, 2024 15:01 PDT)

Jun 27, 2024

Operator Signature

Date

Tony Burrows

Hauler Signature

6-25-24

Date

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

INSTRUCTIONS

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- 2) If there are multiple destinations, complete a separate form for each destination.
- 3) The operator must obtain the signature of the hauler upon completion of each manure/process wastewater hauling event.
- 4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

OPERATOR INFORMATION

Name of Operator: Dan Souza

Name of Dairy Facility: BIG DE DAIRY, LP

Facility Address:

2947 W Manning AVE

Fresno

Fresno

93706

Number and Street

City

County

Zip Code

Contact Person Name and Phone Number: Dan Souza

(559) 497-5142

Name

Phone Number

MANURE HAULER INFORMATION

Name of Hauling Company/Person: Burrows Trucking

Address of Hauling Company/Person:

11751 W. Jensen Avenue

Kerman

CA

93630

Number and Street

City

State

Zip Code

Contact Person: Burrows Tony

(559) 846-9671

Name

Phone Number

DESTINATION INFORMATION

Composting Facility / Broker / Farmer / Other (identify): Broker

Contact information of Composting Facility, Broker, Farmer, or Other (as identified above):

Larry Burrows Spreading

(559) 846-9671

Name

Phone Number

11751 W. Jensen Avenue

Kerman

CA

93630

Address

City

State

Zip Code

Destination Address or Assessor's Parcel Number:

11751 W. Jensen Avenue

Kerman

93630

Address

City

Zip Code

Central & Dickenson Avenues

Fresno

Street and nearest cross street (if no address)

County

Assessor's Parcel Number

Assessor's Parcel Number County

Last date hauled: 05/10/2023

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

MANURE AMOUNT HAULED

Enter the amount of manure hauled in tons, manure solids content, and the method used to calculate the amount:

Manure: 2,175.00 tons

Manure Solids Content: 67.4 %

Method used to determine amount of manure:

An average of scale weighed loads multiplied by the total number of loads hauled.

CERTIFICATION

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

Dan Souza
Dan Souza (Jun 27, 2024 15:01 PDT)

Jun 27, 2024

Operator Signature

Date

Tony Burrows
Hauler Signature

6-25-24
Date

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

INSTRUCTIONS

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OPERATOR INFORMATION

Name of Operator: Dan Souza

Name of Dairy Facility: BIG DE DAIRY, LP

Facility Address:

2947 W Manning AVE

Fresno

Fresno

93706

Number and Street

City

County

Zip Code

Contact Person Name and Phone Number: Dan Souza

(559) 497-5142

Name

Phone Number

MANURE HAULER INFORMATION

Name of Hauling Company/Person: Burrows Trucking

Address of Hauling Company/Person:

11751 W. Jensen Avenue

Kerman

CA

93630

Number and Street

City

State

Zip Code

Contact Person: Burrows Tony

(559) 846-9671

Name

Phone Number

DESTINATION INFORMATION

Composting Facility / Broker / Farmer / Other (identify): Broker

Contact information of Composting Facility, Broker, Farmer, or Other (as identified above):

Larry Burrows Spreading

(559) 846-9671

Name

Phone Number

11751 W. Jensen Avenue

Kerman

CA

93630

Address

City

State

Zip Code

Destination Address or Assessor's Parcel Number:

Address

Kerman
City

93630
Zip Code

Central and Dickenson Avenue

Fresno

Street and nearest cross street (if no address)

County

Assessor's Parcel Number

Assessor's Parcel Number County

Last date hauled: 05/17/2023

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

MANURE AMOUNT HAULED

Enter the amount of manure hauled in tons, manure solids content, and the method used to calculate the amount:

Manure: 2,000.00 tons

Manure Solids Content: 67.4 %

Method used to determine amount of manure:

An average of scale weighed loads multiplied by the total number of loads hauled.

CERTIFICATION

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Dan Souza

Dan Souza (Jun 27, 2024 15:01 PDT)

Jun 27, 2024

Operator Signature

Date

Tony Burrows

Hauler Signature

6-25-24

Date

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

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OPERATOR INFORMATION

Name of Operator: Dan Souza

Name of Dairy Facility: BIG DE DAIRY, LP

Facility Address:

2947 W Manning AVE	Fresno	Fresno	93706
Number and Street	City	County	Zip Code

Contact Person Name and Phone Number:	<u>Dan Souza</u>	(559) 497-5142
	Name	Phone Number

MANURE HAULER INFORMATION

Name of Hauling Company/Person: Burrows Trucking

Address of Hauling Company/Person:

11751 W. Jensen Avenue	Kerman	CA	93630
Number and Street	City	State	Zip Code

Contact Person:	<u>Burrows Tony</u>	(559) 846-9671
	Name	Phone Number

DESTINATION INFORMATION

Composting Facility / Broker / Farmer / Other (identify): Broker

Contact information of Composting Facility, Broker, Farmer, or Other (as identified above):

Larry Burrows Spreading	(559) 846-9671
Name	Phone Number

11751 W. Jensen Avenue	Kerman	CA	93630
Address	City	State	Zip Code

Destination Address or Assessor's Parcel Number:

11751 W. Jensen Avenue	Kerman	93630
Address	City	Zip Code

W. Jensen Avenue	Fresno
Street and nearest cross street (if no address)	County

Assessor's Parcel Number	Assessor's Parcel Number County
--------------------------	---------------------------------

Last date hauled: 06/05/2023

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

MANURE AMOUNT HAULED

Enter the amount of manure hauled in tons, manure solids content, and the method used to calculate the amount:

Manure: 1,150.00 tons

Manure Solids Content: 41.4 %

Method used to determine amount of manure:

An average of scale weighed loads multiplied by the total number of loads hauled.

CERTIFICATION

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

Dan Souza

Dan Souza (Jun 27, 2024 15:01 PDT)

Jun 27, 2024

Operator Signature

Date

Tony Burrows

6-25-24

Hauler Signature

Date

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

INSTRUCTIONS

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- 4) The operator shall submit copies of manure/process wastewater tracking manifest(s) with the Annual Monitoring Report for Existing Milk Cow Dairies.

OPERATOR INFORMATION

Name of Operator: Dan Souza

Name of Dairy Facility: BIG DE DAIRY, LP

Facility Address:

<u>2947 W Manning AVE</u>	<u>Fresno</u>	<u>Fresno</u>	<u>93706</u>
Number and Street	City	County	Zip Code

Contact Person Name and Phone Number:	<u>Dan Souza</u>	<u>(559) 497-5142</u>
	Name	Phone Number

MANURE HAULER INFORMATION

Name of Hauling Company/Person: Burrows Trucking

Address of Hauling Company/Person:

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>CA</u>	<u>93630</u>
Number and Street	City	State	Zip Code

Contact Person:	<u>Burrows Tony</u>	<u>(559) 846-9671</u>
	Name	Phone Number

DESTINATION INFORMATION

Composting Facility / Broker / Farmer / Other (identify): Broker

Contact information of Composting Facility, Broker, Farmer, or Other (as identified above):

<u>Larry Burrows Spreading</u>	<u>(559) 846-9671</u>
Name	Phone Number

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>CA</u>	<u>93630</u>
Address	City	State	Zip Code

Destination Address or Assessor's Parcel Number:

<u>11751 W. Jensen Avenue</u>	<u>Kerman</u>	<u>93630</u>
Address	City	Zip Code

<u>Central Storae Pad</u>	<u>Fresno</u>
Street and nearest cross street (if no address)	County

Assessor's Parcel Number	Assessor's Parcel Number County
--------------------------	---------------------------------

Last date hauled: 11/17/2023

**Manure / Process Wastewater Tracking Manifest
For
Existing Milk Cow Dairies**

General Order No. R5-2007-0035, Attachment D

MANURE AMOUNT HAULED

Enter the amount of manure hauled in tons, manure solids content, and the method used to calculate the amount:

Manure: 1,359.00 tons

Manure Solids Content: 64.5 %

Method used to determine amount of manure:

An average of scale weighed loads multiplied by the total number of loads hauled.

CERTIFICATION

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

Dan Souza

Dan Souza (Jun 27, 2024 15:01 PDT)

Jun 27, 2024

Operator Signature

Date

Tony Burrows

6-25-24

Hauler Signature

Date

**Denele Analytical, Inc.**

865 South Kilroy Avenue Turlock, CA 95380
Phone (209) 634-9055 - Fax (209) 634-9057
www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 8/17/23 2:40 PM
SUBMITTED BY: Dan
ANALYZED DATE: 8/18/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 20.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Markarian Well	T3229029A	Electrical Conductivity (EC)	EPA 120.1 and	0.513	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	9.66	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	329	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	97.8	91.0 (T3229026A)	94.6 (T3229026A)	3.87
Electrical Conductivity (EC)	100			1.27
Nitrate Nitrogen (NO3-N)	103	99.7 (T3229026A)	97.3 (T3229026A)	2.46

The warranty of Denele Analytical is limited to the accuracy of the analyses of the samples as received. Denele Analytical assumes no responsibility for which the customer uses our test results, nor liability for any other warranties, express or implied. These terms and conditions shall supercede any conflicting terms and conditions submitted on customer purchase orders or other forms submitted for work.

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Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 8/17/23 2:40 PM
SUBMITTED BY: Dan
ANALYZED DATE: 8/18/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 21.4c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Riley-N	T3229029C	Electrical Conductivity (EC)	EPA 120.1 and	0.407	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	6.42	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	260	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	97.8	91.0 (T3229026A)	94.6 (T3229026A)	3.87
Electrical Conductivity (EC)	100			1.27
Nitrate Nitrogen (NO3-N)	103	99.7 (T3229026A)	97.3 (T3229026A)	2.46

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40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 8/17/23 2:40 PM
SUBMITTED BY: Dan
ANALYZED DATE: 8/18/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 20.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Riley-S	T3229029D	Electrical Conductivity (EC)	EPA 120.1 and	0.520	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	8.83	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	333	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	97.8	91.0 (T3229026A)	94.6 (T3229026A)	3.87
Electrical Conductivity (EC)	100			1.27
Nitrate Nitrogen (NO3-N)	103	99.7 (T3229026A)	97.3 (T3229026A)	2.46

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www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 8/17/23 2:40 PM
SUBMITTED BY: Dan
ANALYZED DATE: 8/18/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 22.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Nakata	T3229029E	Electrical Conductivity (EC)	EPA 120.1 and	0.501	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	7.98	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	320	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	97.8	91.0 (T3229026A)	94.6 (T3229026A)	3.87
Electrical Conductivity (EC)	100			1.27
Nitrate Nitrogen (NO3-N)	103	99.7 (T3229026A)	97.3 (T3229026A)	2.46

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DENELE ANALYTICAL, INC.
865 S. KILROY
TURLOCK, CA 95380
PH# 209-634-9055 FAX# 209-634-9057

DAIRY COMPLIANCE

Client: BIG DE DAIRY, LP
Mailing address: 8415 S. Valentine Ave. Fresno CA 93706
(not facility address)
Phone#: 559-289-1795

Authorized Copy Released To:

hlcdan@yahoo.com

Sampled By: Daniel Roos

Project ID: _____

ANALYSIS TO BE COMPLETED:

IRRIGATION/GROUND WATER

H1 EC*, NO3-N, NH4-N*
H6 EC, TN, TDS
H7 Combination of H1 & H6
H14 EC, NO3-N, NH4-N, Ca, Mg, Na, Bicarb
Carb, SO4, Cl, TDS

PROCESS WASTE WATER

H3 EC*, NH4-N, TKN, TP, K, TDS
H4 EC*, NO3-N, NH4-N, TKN, TP, K, TDS
H5 Ca, Mg, Na, Bicarb, Carb, SO4, Cl
H8 Combination of H3 & H5
H9 Combination of H4 & H5

TILE DRAIN

H2 EC*, NO3-N, TP, NH4-N*, TDS

* Required Field Measurement

____ (Check here if performed)

DISCHARGE WATER

E1 EC*, Temp*, pH*, NO3-N, NH4-N, TKN, TP, K, TDS, Dissolved Oxygen*,
BOD 5, TSS, Total & Fecal Coliforms
E2 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Dissolved Oxygen*,
Total & Fecal Coliforms
E3 EC*, Temp*, pH*, NO3-N, NH4-N*, TP, Total & Fecal Coliforms
E4 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Total & Fecal Coliform

MANURE

M1 % Moisture
M3 TN TP, K, % Moisture
M4 Ca, Mg, Na, Bicarb, Carb, SO4, Cl, Ash
M7 Combination of M3 & M4

PLANT TISSUE

F18 % Moisture, Ash, TN, P, K, DM and as received
F18+ % Moisture, Ash, TN, P, K, DM and as received
(Package also includes NIR DCAD)

F19+ % Moisture, TN (Package includes complete plant tissue analysis)

SOIL

K3 Soluble Phosphorus
K4 1ft NO3, Organic Matter
K5 Pre-Plant (2ft NO3), Fall (1-2ft NO3), Fall (2-3ft NO3)
K6 0-1ft EC, NO3, Soluble P, K, Organic Matter
K7 Combination of K3 & K4
K8 Combination of K3 & K5

H1	H3	M3	F18	OTHER

	Date Collected	Time Collected	Sample ID	Description	Temp	Well Purge	Analysis			
1	8-16-23	1015	MARKARIAN WELL		20.8		X			
2	8-16-23	1025	LG-1-3		22.4			X		
3	8-16-23	1030	RILEY-N		21.4		X			
4	8-16-23	1035	RILEY-S		20.8		X			
5	8-16-23	1040	NAKATA		22.2		X			
6										
7										
8										
9										
10										

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time	(LABORATORY USE ONLY)	
1st		HeartLand Consulting		8-17-23 1440	Logged in By:	LABORATORY NUMBER
2nd		DENELE ANALYTICAL, INC.	8/17/23 1440			T3229029

Required to be submitted to any agency? (YES / NO)

**Denele Analytical, Inc.**

865 South Kilroy Avenue Turlock, CA 95380
Phone (209) 634-9055 - Fax (209) 634-9057
www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 9/20/23 3:00 PM
SUBMITTED BY: Dan
ANALYZED DATE: 9/21/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 22.0c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
Shannon-south	T3263114B	Electrical Conductivity (EC)	EPA 120.1 and	0.713	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	11.1	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	456	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	96.6	94.0 (T3262039B)	98.8 (T3262039B)	4.97
Electrical Conductivity (EC)	96.1			1.08
Nitrate Nitrogen (NO3-N)	97.0	99.0 (W3264003A)	99.6 (W3264003A)	0.604

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DENELE ANALYTICAL, INC.
865 S. KILROY

TURLOCK, CA 95380

PH# 209-634-9055 FAX# 209-634-9057

DAIRY COMPLIANCE

Authorized Copy Released To:

hlcdan@yahoo.com

Client: BIG DE DAIRY, LP

Mailing address: 8415 S. Valentine Ave. Fresno CA 93706

(not facility address)

Phone#: 559-289-1795

Sampled By: Daniel Roos

Project ID: _____

ANALYSIS TO BE COMPLETED:

IRRIGATION/GROUND WATER

H1 EC*, NO3-N, NH4-N*

H6 EC, TN, TDS

H7 Combination of H1 & H6

H14 EC, NO3-N, NH4-N, Ca, Mg, Na, Bicarb
Carb, SO4, Cl, TDS

PROCESS WASTE WATER

H3 EC*, NH4-N, TKN, TP, K, TDS

H4 EC*, NO3-N, NH4-N, TKN, TP, K, TDS

H5 Ca, Mg, Na, Bicarb, Carb, SO4, Cl

H8 Combination of H3 & H5

H9 Combination of H4 & H5

TILE DRAIN

H2 EC*, NO3-N, TP, NH4-N*, TDS

* Required Field Measurement

____ (Check here if performed)

DISCHARGE WATER

E1 EC*, Temp*, pH*, NO3-N, NH4-N, TKN, TP, K, TDS, Dissolved Oxygen*,
BOD 5, TSS, Total & Fecal Coliforms

E2 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Dissolved Oxygen*,
Total & Fecal Coliforms

E3 EC*, Temp*, pH*, NO3-N, NH4-N*, TP, Total & Fecal Coliforms

E4 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Total & Fecal Coliform

MANURE

M1 % Moisture

M3 TN TP, K, % Moisture

M4 Ca, Mg, Na, Bicarb, Carb, SO4, Cl, Ash

M7 Combination of M3 & M4

PLANT TISSUE

F18 % Moisture, Ash, TN, P, K, DM and as received

F18+ % Moisture, Ash, TN, P, K, DM and as received

(Package also includes NIR DCAD)

F19+ % Moisture, TN (Package includes complete plant tissue analysis)

SOIL

K3 Soluble Phosphorus

K4 1ft NO3, Organic Matter

K5 Pre-Plant (2ft NO3), Fall (1-2ft NO3), Fall (2-3ft NO3)

K6 0-1ft EC, NO3, Soluble P, K, Organic Matter

K7 Combination of K3 & K4

K8 Combination of K3 & K5

H1	H3	M3	F18	OTHER

	Date Collected	Time Collected	Sample ID	Description	Temp	Well Purge	Analysis			
1	9-14-23	1620	MARK - EAST - C5						X	
2										
3	9-20-23	0900	SHANNON - SOUTH		22.0		X			
4										
5										
6										
7										
8										
9										
10										

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time	(LABORATORY USE ONLY)	
1st		HeartLand Consulting		9-20-23 1450	Logged In By:	LABORATORY NUMBER
2nd		DENELE ANALYTICAL, INC.	9-20-23 3:00			T3263114

Required to be submitted to any agency? (YES / NO)

**Denele Analytical, Inc.**

865 South Kilroy Avenue Turlock, CA 95380
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www.denelelabs.com

40 N. East Street, Woodland, CA 95776
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Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 10/26/23 3:45 PM
SUBMITTED BY: Dan
ANALYZED DATE: 10/27/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 16.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
D4	T3299055A	Electrical Conductivity (EC)	EPA 120.1 and	0.225	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	2.61	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	144	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	93.2			
Electrical Conductivity (EC)	97.3			0.287
Nitrate Nitrogen (NO3-N)	96.3	93.3 (T3299003A)	93.6 (T3299003A)	0.300

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Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 10/26/23 3:45 PM
SUBMITTED BY: Dan
ANALYZED DATE: 10/27/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 16.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
D3	T3299055B	Electrical Conductivity (EC)	EPA 120.1 and	0.222	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	2.60	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	142	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	93.2			
Electrical Conductivity (EC)	97.3			0.287
Nitrate Nitrogen (NO3-N)	96.3	93.3 (T3299003A)	93.6 (T3299003A)	0.300

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Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 10/26/23 3:45 PM
SUBMITTED BY: Dan
ANALYZED DATE: 10/27/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 16.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
D2	T3299055C	Electrical Conductivity (EC)	EPA 120.1 and	0.202	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	2.33	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	130	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	93.2			
Electrical Conductivity (EC)	97.3			0.287
Nitrate Nitrogen (NO3-N)	96.3	93.3 (T3299003A)	93.6 (T3299003A)	0.300

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40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 10/26/23 3:45 PM
SUBMITTED BY: Dan
ANALYZED DATE: 10/27/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 17.2c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
D1	T3299055D	Electrical Conductivity (EC)	EPA 120.1 and	0.359	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	6.52	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	230	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	93.2			
Electrical Conductivity (EC)	97.3			0.287
Nitrate Nitrogen (NO3-N)	96.3	93.3 (T3299003A)	93.6 (T3299003A)	0.300

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**Denele Analytical, Inc.**

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www.denelelabs.com

40 N. East Street, Woodland, CA 95776
Phone (530) 666-9056 - Fax (530) 666-9058

Compliance Analysis Report

Customer

BIG De DAIRY LP
8415 S Valentine Ave
Fresno, CA 93706

Grower**Consultant:**

Heartland Consulting
P.O. Box 3679
Merced, CA 95344

PURCHASE ORDER:

RECEIVED DATE: 10/26/23 3:45 PM
SUBMITTED BY: Dan
ANALYZED DATE: 10/27/23

Irrigation/ Ground Water (H1)
SOURCE: Well Water

NOTES: Temperature was above qualifying at 16.8c

Sample ID	Lab ID	Analyte	Method Ref	Result	Units
S-Dom.	T3299055F	Electrical Conductivity (EC)	EPA 120.1 and	0.230	mmhos/cm
		Nitrate Nitrogen (NO3-N)	EPA 353.2	2.71	mg/L
		Ammonia Nitrogen (NH3-N)	SM 4500-NH3 D,C	< 0.500	mg/L
		Soluble Salts (SALT-SOL)	Calculation	147	mg/L

Laboratory Quality Control	LCS %	MS %	MSD %	RPD %
Ammonia Nitrogen (NH3-N)	93.2			
Electrical Conductivity (EC)	97.3			0.287
Nitrate Nitrogen (NO3-N)	96.3	93.3 (T3299003A)	93.6 (T3299003A)	0.300

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DENELE ANALYTICAL, INC.
865 S. KILROY
TURLOCK, CA 95380
PH# 209-634-9055 FAX# 209-634-9057

DAIRY COMPLIANCE

Authorized Copy Released To:

hlcdan@yahoo.com

Client: BIG DE DAIRY, LP
Mailing address: 8415 S. Valentine Ave. Fresno CA 93706
(not facility address)

Phone#: 559-289-1795

Sampled By: Daniel Roos

Project ID: _____

ANALYSIS TO BE COMPLETED:

IRRIGATION/GROUND WATER

H1 EC*, NO3-N, NH4-N*
H6 EC, TN, TDS
H7 Combination of H1 & H6
H14 EC, NO3-N, NH4-N, Ca, Mg, Na, Bicarb
Carb, SO4, Cl, TDS

PROCESS WASTE WATER

H3 EC*, NH4-N, TKN, TP, K, TDS
H4 EC*, NO3-N, NH4-N, TKN, TP, K, TDS
H5 Ca, Mg, Na, Bicarb, Carb, SO4, Cl
H8 Combination of H3 & H5
H9 Combination of H4 & H5

TILE DRAIN

H2 EC*, NO3-N, TP, NH4-N*, TDS

* Required Field Measurement

____ (Check here if performed)

DISCHARGE WATER

E1 EC*, Temp*, pH*, NO3-N, NH4-N, TKN, TP, K, TDS, Dissolved Oxygen*,
BOD 5, TSS, Total & Fecal Coliforms
E2 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Dissolved Oxygen*,
Total & Fecal Coliforms
E3 EC*, Temp*, pH*, NO3-N, NH4-N*, TP, Total & Fecal Coliforms
E4 EC*, Temp*, pH*, NO3-N, NH4-N*, Turbidity, TP, Total & Fecal Coliform

MANURE

M1 % Moisture
M3 TN TP, K, % Moisture
M4 Ca, Mg, Na, Bicarb, Carb, SO4, Cl, Ash
M7 Combination of M3 & M4

PLANT TISSUE

F18 % Moisture, Ash, TN, P, K, DM and as received
F18+ % Moisture, Ash, TN, P, K, DM and as received
(Package also includes NIR DCAD)
F19+ % Moisture, TN (Package includes complete plant tissue analysis)

SOIL

K3 Soluble Phosphorus
K4 1ft NO3, Organic Matter
K5 Pre-Plant (2ft NO3), Fall (1-2ft NO3), Fall (2-3ft NO3)
K6 0-1ft EC, NO3, Soluble P, K, Organic Matter
K7 Combination of K3 & K4
K8 Combination of K3 & K5

H1	H2	M3	F18	OTHER

	Date Collected	Time Collected	Sample ID	Description	Temp	Well Purge	Analysis			
1	10-26-23	740	D4		16.8°C		X			
2		745	D3		16.8		X			
3		750	D2		16.8		X			
4		0800	D1		17.2		X			
5		0805	LG-1-4		18.0			X		
6	10-26-23	0810	S-DOM		16.8		X			
7										
8										
9										
10										

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time	(LABORATORY USE ONLY)	
1st		HeartLand Consulting		10-26-23 1540	Logged In By:	LABORATORY NUMBER
2nd		DENELE ANALYTICAL, INC.	10-26-23 3:45			T3299055

Required to be submitted to any agency? (YES / NO)







2023 AR BIG DE DAIRY

Final Audit Report

2024-06-27

Created:	2024-06-27
By:	Daniel Roos (hlcdan@yahoo.com)
Status:	Signed
Transaction ID:	CBJCHBCAABAAIzMyRFcw9EVceplOaTGdoXL0Twwf9nw_

"2023 AR BIG DE DAIRY" History

-  Document created by Daniel Roos (hlcdan@yahoo.com)
2024-06-27 - 9:55:42 PM GMT- IP address: 54.177.154.83
-  Document emailed to tavares.sandy@yahoo.com for signature
2024-06-27 - 9:58:14 PM GMT
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2024-06-27 - 10:00:12 PM GMT- IP address: 69.147.91.11
-  Signer tavares.sandy@yahoo.com entered name at signing as Dan Souza
2024-06-27 - 10:01:49 PM GMT- IP address: 98.97.140.89
-  Document e-signed by Dan Souza (tavares.sandy@yahoo.com)
Signature Date: 2024-06-27 - 10:01:51 PM GMT - Time Source: server- IP address: 98.97.140.89
-  Agreement completed.
2024-06-27 - 10:01:51 PM GMT