

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: Kootstra Dairy Farms

Physical address of dairy:

13628 Adobe RD Number and Street	Bakersfield City	Kern County	93307 Zip Code
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Street and nearest cross street (if no address): _____

Date facility was originally placed in operation: 01/01/1960

Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

0185-0240-0020-0015	0185-0270-0003-0006	0185-0270-0005-0011	0185-0270-0013-0005	0185-0310-0003-0000	0185-0310-0004-0019
0185-0310-0011-0000	0445-0011-0001-0006	0445-0011-0003-0002	0445-0011-0005-0017	0445-0012-0002-0006	0445-0012-0003-0009
0445-0012-0005-0005	0445-0012-0007-0001	0445-0012-0009-0007	0445-0012-0010-0009		

B. OPERATORS

Kootstra, Perrin

Operator name: <u>Kootstra, Perrin</u>	Telephone no.: <u>(661) 831-7987</u>		
		Landline	Cellular
13628 Adobe RD Mailing Address Number and Street	Bakersfield City	CA	93307
		State	Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Kootstra, Perrin

Legal owner name: <u>Kootstra, Perrin</u>	Telephone no.: <u>(661) 831-7987</u>		
		Landline	Cellular
13628 Adobe RD Mailing Address Number and Street	Bakersfield City	CA	93307
		State	Zip Code

This owner is responsible for paying permit fees.

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Kootstra Family Trust

Legal owner name: <u>Kootstra Family Trust</u>	Telephone no.: <u>(661) 831-7987</u>
	Landline
13628 Adobe RD	Cellular
Mailing Address Number and Street	CA
	93307
	City
	State
	Zip Code

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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	1,200	220	200	0	0	0
Number under roof	0	0	0	0	0	0
Maximum number	1,300	230	210	0	0	0
Average number	1,250	225	208	0	0	0
Avg live weight (lbs)	1,350	1,400	1,000	0		

Predominant milk cow breed: Holstein

Average milk production: 64 pounds per cow per day

B. MANURE GENERATED

Total manure excreted by the herd: 36,595.33 tons per reporting period

Total nitrogen from manure: 468,518.37 lbs per reporting period

After ammonia losses (30% loss applied): 327,962.86 lbs per reporting period

Total phosphorus from manure: 77,616.94 lbs per reporting period

Total potassium from manure: 234,459.03 lbs per reporting period

Total salt from manure: 640,301.25 lbs per reporting period

C. PROCESS WASTEWATER GENERATED

Process wastewater generated: 1,980,000 gallons

Total nitrogen generated: 1,768.17 lbs

$$\begin{aligned}
 & 1,980,000 \text{ gallons applied} \\
 & + 0 \text{ gallons exported} \\
 & - 0 \text{ gallons imported} \\
 & = 1,980,000 \text{ gallons generated}
 \end{aligned}$$

Total phosphorus generated: 237.92 lbs

Total potassium generated: 2,288.60 lbs

Total salt generated: 15,917.75 lbs

D. FRESH WATER SOURCES

Source Description	Type
D-2	Ground water
D-N	Ground water
D-S	Ground water
Kern Island	Surface water
P-1	Ground water

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Source Description	Type
P-2	Ground water
P-3	Ground water
R-1	Ground water
R-2	Ground water
R-3	Ground water
R-4	Ground water
R-5	Ground water
R-6	Ground water
R-7	Ground water
R-8	Ground water

E. SUBSURFACE (TILE) DRAINAGE SOURCES

No subsurface (tile) drainage sources entered.

F. NUTRIENT IMPORTS

No dry manure nutrient imports entered.

No process wastewater nutrient imports entered.

No commercial or other nutrient imports entered.

G. NUTRIENT EXPORTS

No solid nutrient exports entered.

No liquid nutrient exports entered.

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APPLICATION AREA**A. LIST OF LAND APPLICATION AREAS**

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
D-2	132	115	1	none	0185-0270-0003-0006 0185-0270-0005-0011
D-3	122	118	1	none	0185-0270-0013-0005
P-1	120	113	1	process wastewater	0185-0310-0003-0000
P-2	80	74	1	process wastewater	0185-0310-0004-0019
P-3	80	77	1	process wastewater	0185-0310-0004-0019
P-4	80	76	1	none	0185-0310-0011-0000
R-1	160	146	1	none	0445-0011-0001-0006
R-10	160	146	1	none	0445-0012-0010-0009
R-11	160	146	0	none	0445-0012-0002-0006
R-12	160	146	0	none	0445-0012-0005-0005
R-13	160	146	2	none	0445-0012-0010-0009
R-14	15	12	1	none	0445-0012-0010-0009
R-15	20	18	1	none	0445-0012-0010-0009
R-16	118	114	1	none	0445-0012-0010-0009
R-2	160	146	1	none	0445-0011-0001-0006
R-3	160	146	1	none	0445-0011-0005-0017
R-4	160	146	1	none	0445-0011-0001-0006
R-5	160	146	0	none	0445-0011-0001-0006
R-6	160	146	0	none	0445-0011-0003-0002 0445-0011-0005-0017
R-7	160	146	1	none	0445-0012-0003-0009
R-8	160	146	2	none	0445-0012-0007-0001 0445-0012-0009-0007
R-9	160	146	1	none	0445-0012-0010-0009
Totals for areas that were used for application	280	264	3		
Totals for areas that were not used for application	2,567	2,351	17		
Land application area totals	2,847	2,615	20		

B. CROPS AND HARVESTS

D-2

Field name: D-2

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05/09/2023: Corn, silage

Crop: Corn, silage Acres planted: 115 Plant date: 05/09/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/09/2023	2,110.00 <i>ton</i>	As-is		57.6	2,700.00	2,400.00	7,500.00		6.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	20.00	228.00	116.00	140.00	0.00
Total actual harvest content	18.35	99.08	88.07	275.22	1,042.45

D-3Field name: D-3

05/16/2023: Corn, silage

Crop: Corn, silage Acres planted: 118 Plant date: 05/16/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
08/09/2023	2,285.00 <i>ton</i>	As-is		51.6	3,200.00	900.00	7,500.00		6.90

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	20.00	228.00	116.00	140.00	0.00
Total actual harvest content	19.36	123.93	34.86	290.47	1,293.39

P-1Field name: P-1

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06/17/2023: Corn, silage

Crop: Corn, silage Acres planted: 113 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 (%)
08/09/2023	2,141.00 <i>ton</i>	As-is		61.5	3,400.00	2,500.00	8,600.00		7.80

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	16.00	182.40	92.80	112.00	0.00
Total actual harvest content	18.95	128.84	94.73	325.89	1,137.95

P-2Field name: P-2

11/12/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 74 Plant date: 11/12/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
06/07/2023	925.00 <i>ton</i>	As-is		63.7	5,700.00	2,900.00	9,500.00		8.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	129.60	45.60	199.20	0.00
Total actual harvest content	12.50	142.50	72.50	237.50	789.53

P-3Field name: P-3

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P-3

11/12/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 77 Plant date: 11/12/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
06/07/2023	1,001.00 <i>ton</i>	As-is		60.5	6,600.00	3,100.00	11,200.00		17.20

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	16.00	172.80	60.80	265.60	0.00
Total actual harvest content	13.00	171.60	80.60	291.20	1,766.44

P-4Field name: P-4

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 76 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	599.20 <i>ton</i>	As-is		4.1	31,400.00	2,700.00	30,500.00		13.04

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	224.00	30.00	160.00	0.00
Total actual harvest content	7.88	495.13	42.57	480.94	1,971.90

R-1Field name: R-1

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11/12/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 146 Plant date: 11/12/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
06/07/2023	1,375.00 <i>ton</i>	As-is		67.6	6,600.00	3,600.00	11,100.00		11.80

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	129.60	45.60	199.20	0.00
Total actual harvest content	9.42	124.32	67.81	209.08	720.12

R-10Field name: R-10

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 146 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	1,899.20 <i>ton</i>	As-is		4.5	27,900.00	2,800.00	26,000.00		11.08

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	11.50	257.60	34.50	184.00	0.00
Total actual harvest content	13.01	725.86	72.85	676.43	2,752.90

R-13Field name: R-13

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R-13

11/14/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 146 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	1,185.00 ton	As-is		58.1	7,900.00	3,200.00	11,700.00		11.80

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	108.00	38.00	166.00	0.00
Total actual harvest content	8.12	128.24	51.95	189.92	802.59

07/16/2023: Corn, silage

Crop: Corn, silage Acres planted: 146 Plant date: 07/16/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/04/2023	1,909.00 ton	As-is		59.3	5,200.00	2,000.00	7,000.00		6.20

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	11.50	131.10	66.70	80.50	0.00
Total actual harvest content	13.08	135.98	52.30	183.05	659.89

R-14

Field name: R-14

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 12 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	114.50 ton	As-is		4.9	26,600.00	2,300.00	26,500.00		12.01

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	224.00	30.00	160.00	0.00
Total actual harvest content	9.54	507.62	43.89	505.71	2,179.60

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R-15

Field name: R-15

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay

Acres planted: 18 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	136.00 <i>ton</i>	As-is		4.9	26,600.00	2,300.00	26,500.00		12.01

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	224.00	30.00	160.00	0.00
Total actual harvest content	7.56	401.96	34.76	400.44	1,725.92

R-16

Field name: R-16

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay

Acres planted: 114 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	1,192.30 <i>ton</i>	As-is		4.9	26,600.00	2,300.00	26,500.00		12.01

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	224.00	30.00	160.00	0.00
Total actual harvest content	10.46	556.41	48.11	554.31	2,389.10

R-2

Field name: R-2

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11/13/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 146 Plant date: 11/13/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
06/07/2023	1,550.00 <i>ton</i>	As-is		61.2	6,300.00	3,100.00	10,600.00		9.20

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	129.60	45.60	199.20	0.00
Total actual harvest content	10.62	133.77	65.82	225.07	757.93

R-3Field name: R-3

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 146 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	1,245.30 <i>ton</i>	As-is		4.1	31,400.00	2,700.00	30,500.00		13.04

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	268.80	36.00	192.00	0.00
Total actual harvest content	8.53	535.65	46.06	520.30	2,133.28

R-4Field name: R-4

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11/14/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 146 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 (%)
06/07/2023	1,599.00 <i>ton</i>	As-is		58.8	8,000.00	2,900.00	11,300.00		12.40

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	12.00	129.60	45.60	199.20	0.00
Total actual harvest content	10.95	175.23	63.52	247.52	1,119.04

R-7Field name: R-7

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 146 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	1,315.00 <i>ton</i>	As-is		5.5	32,200.00	2,500.00	32,000.00		11.20

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	224.00	30.00	160.00	0.00
Total actual harvest content	9.01	580.04	45.03	576.44	1,906.57

R-8Field name: R-8

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R-8

11/14/2022: Wheat, silage, boot stage

Crop: Wheat, silage, boot stage Acres planted: 146 Plant date: 11/14/2022

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
05/07/2023	1,425.00 ton	As-is		67.3	4,800.00	1,300.00	8,900.00		13.70

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	10.00	108.00	38.00	166.00	0.00
Total actual harvest content	9.76	93.70	25.38	173.73	874.50

07/16/2023: Corn, silage

Crop: Corn, silage Acres planted: 146 Plant date: 07/16/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
10/04/2023	2,145.00 ton	As-is		53.8	6,200.00	2,900.00	6,900.00		7.30

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	11.50	131.10	66.70	80.50	0.00
Total actual harvest content	14.69	182.18	85.21	202.75	990.99

R-9

Field name: R-9

01/01/2023: Alfalfa, hay

Crop: Alfalfa, hay Acres planted: 146 Plant date: 01/01/2023

Harvest date	Yield	Reporting basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
12/31/2023	1,356.00 ton	As-is		4.5	27,900.00	2,800.00	26,000.00		11.08

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Salt (lbs/acre)
Anticipated harvest content	11.50	257.60	34.50	184.00	0.00
Total actual harvest content	9.29	518.25	52.01	482.96	1,965.53

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NUTRIENT BUDGET**A. LAND APPLICATIONS**

D-2 - 05/09/2023: Corn, silage

Field name: D-2

Crop: Corn, silage

Plant date: 05/09/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application			Precipitation 24 hours following
05/10/2023	Surface (irrigation)	No precipitation	No precipitation			No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.34	0.00	0.00	274.14	11,880,000.00 gal
Application event totals		0.34	0.00	0.00	274.14	
06/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.34	0.00	0.00	274.14	11,880,000.00 gal
Application event totals		0.34	0.00	0.00	274.14	
06/10/2023	Sidedress	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Sidedress	Solid commercial fertilizer	50.00	0.00	0.00	0.00	
Application event totals		50.00	0.00	0.00	0.00	
06/13/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	276.63	11,988,000.00 gal
Application event totals		0.35	0.00	0.00	276.63	
06/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	279.12	12,096,000.00 gal
Application event totals		0.35	0.00	0.00	279.12	

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D-2 - 05/09/2023: 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
Nitrogen	Liquid commercial fertilizer	50.00	0.00	0.00	0.00	
D-2	Ground water	0.34	0.00	0.00	274.14	11,880,000.00 gal
Application event totals		50.34	0.00	0.00	274.14	
07/19/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.34	0.00	0.00	274.14	11,880,000.00 gal
Application event totals		0.34	0.00	0.00	274.14	
08/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.09	0.00	0.00	73.52	3,186,000.00 gal
Application event totals		0.09	0.00	0.00	73.52	

D-3 - 05/16/2023: Corn, silage

Field name: D-3

Crop: Corn, silage

Plant date: 05/16/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.37	0.00	0.00	291.46	12,960,000.00 gal
Application event totals		0.37	0.00	0.00	291.46	
06/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	279.31	12,420,000.00 gal
Application event totals		0.35	0.00	0.00	279.31	

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D-3 - 05/16/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
06/18/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	276.89	12,312,000.00 gal
Application event totals		0.35	0.00	0.00	276.89	
06/18/2023	Sidedress	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Sidedress	Solid commercial fertilizer	75.00	0.00	0.00	0.00	
Application event totals		75.00	0.00	0.00	0.00	
06/30/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	279.31	12,420,000.00 gal
Application event totals		0.35	0.00	0.00	279.31	
07/12/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Nitrogen	Liquid commercial fertilizer	50.00	0.00	0.00	0.00	
D-2	Ground water	0.35	0.00	0.00	281.74	12,528,000.00 gal
Application event totals		50.35	0.00	0.00	281.74	
07/24/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.35	0.00	0.00	279.31	12,420,000.00 gal
Application event totals		0.35	0.00	0.00	279.31	
08/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
D-2	Ground water	0.09	0.00	0.00	71.65	3,186,000.00 gal
Application event totals		0.09	0.00	0.00	71.65	

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P-1 - 06/17/2023: Corn, silage

Field name: P-1

Crop: Corn, silage

Plant date: 06/17/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/18/2023	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
P-1	Ground water	0.06	0.00	0.00	140.70	4,140,000.00 gal
P-2	Ground water	0.06	0.00	0.00	93.74	4,140,000.00 gal
P-3	Ground water	0.03	0.00	0.00	66.77	4,140,000.00 gal
Application event totals		0.15	0.00	0.00	301.21	
06/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.04	0.00	0.00	99.92	2,940,000.00 gal
P-2	Ground water	0.04	0.00	0.00	66.57	2,940,000.00 gal
P-3	Ground water	0.02	0.00	0.00	47.42	2,940,000.00 gal
Application event totals		0.11	0.00	0.00	213.90	
06/17/2023	Sidedress	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Sidedress	Solid commercial fertilizer	50.00	0.00	0.00	0.00	
Application event totals		50.00	0.00	0.00	0.00	
07/01/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.05	0.00	0.00	104.00	3,060,000.00 gal
P-2	Ground water	0.05	0.00	0.00	69.29	3,060,000.00 gal
P-3	Ground water	0.02	0.00	0.00	49.35	3,060,000.00 gal
Application event totals		0.11	0.00	0.00	222.64	

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P-1 - 06/17/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
07/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Nitrogen	Liquid commercial fertilizer	75.00	0.00	0.00	0.00	
Lagoon	Process wastewater	1.89	0.23	1.13	7.23	420,000.00 gal
P-1	Ground water	0.05	0.00	0.00	106.03	3,120,000.00 gal
P-2	Ground water	0.05	0.00	0.00	70.64	3,120,000.00 gal
P-3	Ground water	0.02	0.00	0.00	50.32	3,120,000.00 gal
Application event totals		77.01	0.23	1.13	234.23	
07/27/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.04	0.00	0.00	101.96	3,000,000.00 gal
P-2	Ground water	0.04	0.00	0.00	67.93	3,000,000.00 gal
P-3	Ground water	0.02	0.00	0.00	48.39	3,000,000.00 gal
Application event totals		0.11	0.00	0.00	218.27	

P-2 - 11/12/2022: Wheat, silage, boot stage

Field name: P-2

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/24/2022	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
P-2	Ground water	0.14	0.00	0.00	207.45	6,000,000.00 gal
P-3	Ground water	0.07	0.00	0.00	147.77	6,000,000.00 gal
Application event totals		0.20	0.00	0.00	355.23	

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P-2 - 11/12/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
12/11/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	9.69	1.32	13.48	94.19	720,000.00 gal
P-2	Ground water	0.10	0.00	0.00	153.51	4,440,000.00 gal
P-3	Ground water	0.05	0.00	0.00	109.35	4,440,000.00 gal
Application event totals		9.84	1.32	13.48	357.05	
02/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.10	0.00	0.00	151.44	4,380,000.00 gal
P-3	Ground water	0.05	0.00	0.00	107.88	4,380,000.00 gal
Application event totals		0.15	0.00	0.00	259.32	
03/11/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.10	0.00	0.00	151.44	4,380,000.00 gal
P-3	Ground water	0.05	0.00	0.00	107.88	4,380,000.00 gal
Application event totals		0.15	0.00	0.00	259.32	
04/26/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.10	0.00	0.00	155.59	4,500,000.00 gal
P-3	Ground water	0.05	0.00	0.00	110.83	4,500,000.00 gal
Application event totals		0.15	0.00	0.00	266.42	
05/12/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.10	0.00	0.00	149.37	4,320,000.00 gal
P-3	Ground water	0.05	0.00	0.00	106.40	4,320,000.00 gal
Application event totals		0.15	0.00	0.00	255.76	

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P-3 - 11/12/2022: Wheat, silage, boot stage

Field name: P-3

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/29/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.13	0.00	0.00	195.38	5,880,000.00 gal
P-3	Ground water	0.06	0.00	0.00	139.18	5,880,000.00 gal
Application event totals		0.19	0.00	0.00	334.56	
12/15/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Lagoon	Process wastewater	10.87	1.48	15.11	105.60	840,000.00 gal
P-2	Ground water	0.10	0.00	0.00	151.52	4,560,000.00 gal
P-3	Ground water	0.05	0.00	0.00	107.93	4,560,000.00 gal
Application event totals		11.02	1.48	15.11	365.06	
02/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.09	0.00	0.00	139.56	4,200,000.00 gal
P-3	Ground water	0.05	0.00	0.00	99.41	4,200,000.00 gal
Application event totals		0.14	0.00	0.00	238.97	
03/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.10	0.00	0.00	149.53	4,500,000.00 gal
P-3	Ground water	0.05	0.00	0.00	106.51	4,500,000.00 gal
Application event totals		0.15	0.00	0.00	256.04	

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P-3 - 11/12/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
04/30/2023	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
P-2	Ground water	0.10	0.00	0.00	147.53	4,440,000.00 gal
P-3	Ground water	0.05	0.00	0.00	105.09	4,440,000.00 gal
Application event totals		0.14	0.00	0.00	252.63	
05/16/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-2	Ground water	0.08	0.00	0.00	123.61	3,720,000.00 gal
P-3	Ground water	0.04	0.00	0.00	88.05	3,720,000.00 gal
Application event totals		0.12	0.00	0.00	211.66	

P-4 - 01/01/2023: Alfalfa, hay

Field name: P-4

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/12/2023	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
P-1	Ground water	0.07	0.00	0.00	160.69	3,180,000.00 gal
P-2	Ground water	0.07	0.00	0.00	107.06	3,180,000.00 gal
P-3	Ground water	0.03	0.00	0.00	76.26	3,180,000.00 gal
Application event totals		0.17	0.00	0.00	344.00	
03/16/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	157.66	3,120,000.00 gal
P-2	Ground water	0.07	0.00	0.00	105.04	3,120,000.00 gal
P-3	Ground water	0.03	0.00	0.00	74.82	3,120,000.00 gal
Application event totals		0.17	0.00	0.00	337.51	

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P-4 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/01/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	169.78	3,360,000.00 gal
P-2	Ground water	0.07	0.00	0.00	113.12	3,360,000.00 gal
P-3	Ground water	0.04	0.00	0.00	80.58	3,360,000.00 gal
Application event totals		0.18	0.00	0.00	363.48	
06/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	166.75	3,300,000.00 gal
P-2	Ground water	0.07	0.00	0.00	111.10	3,300,000.00 gal
P-3	Ground water	0.04	0.00	0.00	79.14	3,300,000.00 gal
Application event totals		0.18	0.00	0.00	356.99	
07/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	163.72	3,240,000.00 gal
P-2	Ground water	0.07	0.00	0.00	109.08	3,240,000.00 gal
P-3	Ground water	0.04	0.00	0.00	77.70	3,240,000.00 gal
Application event totals		0.18	0.00	0.00	350.50	
08/16/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	169.78	3,360,000.00 gal
P-2	Ground water	0.07	0.00	0.00	113.12	3,360,000.00 gal
P-3	Ground water	0.04	0.00	0.00	80.58	3,360,000.00 gal
Application event totals		0.18	0.00	0.00	363.48	

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P-4 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/18/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	166.75	3,300,000.00 gal
P-2	Ground water	0.07	0.00	0.00	111.10	3,300,000.00 gal
P-3	Ground water	0.04	0.00	0.00	79.14	3,300,000.00 gal
Application event totals		0.18	0.00	0.00	356.99	
10/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
P-1	Ground water	0.07	0.00	0.00	157.66	3,120,000.00 gal
P-2	Ground water	0.07	0.00	0.00	105.04	3,120,000.00 gal
P-3	Ground water	0.03	0.00	0.00	74.82	3,120,000.00 gal
Application event totals		0.17	0.00	0.00	337.51	

R-1 - 11/12/2022: Wheat, silage, boot stage

Field name: R-1

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/16/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.13	0.00	0.00	138.23	5,750,000.00 gal
R-2	Ground water	0.13	0.00	0.00	139.22	5,750,000.00 gal
R-3	Ground water	0.13	0.00	0.00	88.15	5,750,000.00 gal
Application event totals		0.39	0.00	0.00	365.60	

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R-1 - 11/12/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
12/04/2022	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
R-1	Ground water	0.11	0.00	0.00	110.59	4,600,000.00 gal
R-2	Ground water	0.11	0.00	0.00	111.37	4,600,000.00 gal
R-3	Ground water	0.11	0.00	0.00	70.52	4,600,000.00 gal
Application event totals		0.32	0.00	0.00	292.48	
02/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	111.79	4,650,000.00 gal
R-2	Ground water	0.11	0.00	0.00	112.59	4,650,000.00 gal
R-3	Ground water	0.11	0.00	0.00	71.28	4,650,000.00 gal
Application event totals		0.32	0.00	0.00	295.66	
03/06/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	111.79	4,650,000.00 gal
R-2	Ground water	0.11	0.00	0.00	112.59	4,650,000.00 gal
R-3	Ground water	0.11	0.00	0.00	71.28	4,650,000.00 gal
Application event totals		0.32	0.00	0.00	295.66	
04/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	112.99	4,700,000.00 gal
R-2	Ground water	0.11	0.00	0.00	113.80	4,700,000.00 gal
R-3	Ground water	0.11	0.00	0.00	72.05	4,700,000.00 gal
Application event totals		0.32	0.00	0.00	298.84	

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R-1 - 11/12/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/06/2023	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
R-1	Ground water	0.10	0.00	0.00	102.17	4,250,000.00 gal
R-2	Ground water	0.10	0.00	0.00	102.90	4,250,000.00 gal
R-3	Ground water	0.10	0.00	0.00	65.15	4,250,000.00 gal
Application event totals		0.29	0.00	0.00	270.22	

R-10 - 01/01/2023: Alfalfa, hay

Field name: R-10

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.49	0.00	0.00	180.25	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	180.25	
03/04/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.49	0.00	0.00	177.25	14,160,000.00 gal
Application event totals		0.49	0.00	0.00	177.25	
04/28/2023	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
R-8	Ground water	0.51	0.00	0.00	187.76	15,000,000.00 gal
Application event totals		0.51	0.00	0.00	187.76	

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R-10 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/23/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	186.26	14,880,000.00 gal
Application event totals		0.51	0.00	0.00	186.26	
06/18/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	184.76	14,760,000.00 gal
Application event totals		0.51	0.00	0.00	184.76	
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
R-8	Ground water	0.51	0.00	0.00	187.76	15,000,000.00 gal
Application event totals		0.51	0.00	0.00	187.76	
08/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	186.26	14,880,000.00 gal
Application event totals		0.51	0.00	0.00	186.26	
09/04/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	184.76	14,760,000.00 gal
Application event totals		0.51	0.00	0.00	184.76	
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
R-8	Ground water	0.49	0.00	0.00	180.25	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	180.25	

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R-10 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/15/2023	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
R-8	Ground water	0.45	0.00	0.00	165.23	13,200,000.00 gal
Application event totals		0.45	0.00	0.00	165.23	

R-13 - 11/14/2022: Wheat, silage, boot stage

Field name: R-13

Crop: Wheat, silage, boot stage Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/17/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.40	0.00	0.00	158.89	11,700,000.00 gal
Application event totals		0.40	0.00	0.00	158.89	
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
R-7	Ground water	0.40	0.00	0.00	156.45	11,520,000.00 gal
Application event totals		0.40	0.00	0.00	156.45	
02/04/2023	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
R-7	Ground water	0.39	0.00	0.00	155.23	11,430,000.00 gal
Application event totals		0.39	0.00	0.00	155.23	
03/07/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.41	0.00	0.00	161.34	11,880,000.00 gal
Application event totals		0.41	0.00	0.00	161.34	

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R-13 - 11/14/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
04/17/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.41	0.00	0.00	163.78	12,060,000.00 gal
Application event totals		0.41	0.00	0.00	163.78	
05/16/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.39	0.00	0.00	152.78	11,250,000.00 gal
Application event totals		0.39	0.00	0.00	152.78	

R-13 - 07/16/2023: Corn, silage

Field name: R-13

Crop: Corn, silage

Plant date: 07/16/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/09/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.47	0.00	0.00	184.56	13,590,000.00 gal
Application event totals		0.47	0.00	0.00	184.56	
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
R-7	Ground water	0.55	0.00	0.00	217.56	16,020,000.00 gal
Application event totals		0.55	0.00	0.00	217.56	
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
R-7	Ground water	0.56	0.00	0.00	220.01	16,200,000.00 gal
Application event totals		0.56	0.00	0.00	220.01	

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R-13 - 07/16/2023: 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
R-7	Ground water	0.56	0.00	0.00	221.23	16,290,000.00 gal
Application event totals		0.56	0.00	0.00	221.23	
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
R-7	Ground water	0.56	0.00	0.00	223.67	16,470,000.00 gal
Application event totals		0.56	0.00	0.00	223.67	
08/23/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.57	0.00	0.00	224.90	16,560,000.00 gal
Application event totals		0.57	0.00	0.00	224.90	
09/07/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.56	0.00	0.00	222.45	16,380,000.00 gal
Application event totals		0.56	0.00	0.00	222.45	
09/19/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.57	0.00	0.00	226.12	16,650,000.00 gal
Application event totals		0.57	0.00	0.00	226.12	

R-14 - 01/01/2023: Alfalfa, hay

Field name: R-14

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application	Precipitation 24 hours following
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R-14 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/14/2023	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
R-8	Ground water	0.45	0.00	0.00	164.48	1,080,000.00 gal
Application event totals		0.45	0.00	0.00	164.48	
03/12/2023	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
R-8	Ground water	0.48	0.00	0.00	173.62	1,140,000.00 gal
Application event totals		0.48	0.00	0.00	173.62	
05/07/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.53	0.00	0.00	208.19	1,260,000.00 gal
Application event totals		0.53	0.00	0.00	208.19	
05/31/2023	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
R-8	Ground water	0.55	0.00	0.00	201.03	1,320,000.00 gal
Application event totals		0.55	0.00	0.00	201.03	
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
R-8	Ground water	0.53	0.00	0.00	191.89	1,260,000.00 gal
Application event totals		0.53	0.00	0.00	191.89	
07/21/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.55	0.00	0.00	201.03	1,320,000.00 gal
Application event totals		0.55	0.00	0.00	201.03	

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R-14 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/19/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.54	0.00	0.00	196.46	1,290,000.00 gal
Application event totals		0.54	0.00	0.00	196.46	
09/12/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.54	0.00	0.00	196.46	1,290,000.00 gal
Application event totals		0.54	0.00	0.00	196.46	
10/04/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.50	0.00	0.00	182.76	1,200,000.00 gal
Application event totals		0.50	0.00	0.00	182.76	
10/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.10	0.00	0.00	36.55	240,000.00 gal
Application event totals		0.10	0.00	0.00	36.55	

R-15 - 01/01/2023: Alfalfa, hay

Field name: R-15

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/14/2023	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
R-8	Ground water	0.45	0.00	0.00	164.48	1,620,000.00 gal
Application event totals		0.45	0.00	0.00	164.48	

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R-15 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
03/12/2023	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
R-8	Ground water	0.50	0.00	0.00	182.76	1,800,000.00 gal
Application event totals		0.50	0.00	0.00	182.76	
05/07/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.52	0.00	0.00	188.85	1,860,000.00 gal
Application event totals		0.52	0.00	0.00	188.85	
06/01/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.48	0.00	0.00	176.66	1,740,000.00 gal
Application event totals		0.48	0.00	0.00	176.66	
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
R-8	Ground water	0.49	0.00	0.00	179.71	1,770,000.00 gal
Application event totals		0.49	0.00	0.00	179.71	
07/21/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.50	0.00	0.00	182.76	1,800,000.00 gal
Application event totals		0.50	0.00	0.00	182.76	
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
R-8	Ground water	0.50	0.00	0.00	182.76	1,800,000.00 gal
Application event totals		0.50	0.00	0.00	182.76	

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R-15 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
09/12/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	185.80	1,830,000.00 gal
Application event totals		0.51	0.00	0.00	185.80	
10/05/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.47	0.00	0.00	170.57	1,680,000.00 gal
Application event totals		0.47	0.00	0.00	170.57	

R-16 - 01/01/2023: Alfalfa, hay

Field name: R-16

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/09/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.52	0.00	0.00	188.53	11,760,000.00 gal
Application event totals		0.52	0.00	0.00	188.53	
03/08/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.50	0.00	0.00	180.83	11,280,000.00 gal
Application event totals		0.50	0.00	0.00	180.83	
05/03/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	184.68	11,520,000.00 gal
Application event totals		0.51	0.00	0.00	184.68	

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R-16 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/27/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	185.64	11,580,000.00 gal
Application event totals		0.51	0.00	0.00	185.64	
06/24/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	186.60	11,640,000.00 gal
Application event totals		0.51	0.00	0.00	186.60	
07/17/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	184.68	11,520,000.00 gal
Application event totals		0.51	0.00	0.00	184.68	
08/14/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.52	0.00	0.00	188.53	11,760,000.00 gal
Application event totals		0.52	0.00	0.00	188.53	
09/08/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.52	0.00	0.00	188.53	11,760,000.00 gal
Application event totals		0.52	0.00	0.00	188.53	
09/30/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.51	0.00	0.00	186.60	11,640,000.00 gal
Application event totals		0.51	0.00	0.00	186.60	

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R-16 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/20/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-8	Ground water	0.40	0.00	0.00	144.28	9,000,000.00 gal
Application event totals		0.40	0.00	0.00	144.28	

R-2 - 11/13/2022: Wheat, silage, boot stage

Field name: R-2

Crop: Wheat, silage, boot stage

Plant date: 11/13/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/21/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.13	0.00	0.00	138.23	5,750,000.00 gal
R-2	Ground water	0.13	0.00	0.00	139.22	5,750,000.00 gal
R-3	Ground water	0.13	0.00	0.00	88.15	5,750,000.00 gal
Application event totals		0.39	0.00	0.00	365.60	
12/08/2022	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
R-1	Ground water	0.11	0.00	0.00	114.19	4,750,000.00 gal
R-2	Ground water	0.11	0.00	0.00	115.01	4,750,000.00 gal
R-3	Ground water	0.11	0.00	0.00	72.82	4,750,000.00 gal
Application event totals		0.33	0.00	0.00	302.01	
02/12/2023	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
R-1	Ground water	0.11	0.00	0.00	110.59	4,600,000.00 gal
R-2	Ground water	0.11	0.00	0.00	111.37	4,600,000.00 gal
R-3	Ground water	0.11	0.00	0.00	70.52	4,600,000.00 gal
Application event totals		0.32	0.00	0.00	292.48	

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R-2 - 11/13/2022: Wheat, silage, boot stage

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)
R-1	Ground water	0.11	0.00	0.00	112.99
R-2	Ground water	0.11	0.00	0.00	113.80
R-3	Ground water	0.11	0.00	0.00	72.05
Application event totals		0.32	0.00	0.00	298.84
04/21/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)
R-1	Ground water	0.11	0.00	0.00	111.79
R-2	Ground water	0.11	0.00	0.00	112.59
R-3	Ground water	0.11	0.00	0.00	71.28
Application event totals		0.32	0.00	0.00	295.66
05/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)
R-1	Ground water	0.10	0.00	0.00	102.17
R-2	Ground water	0.10	0.00	0.00	102.90
R-3	Ground water	0.10	0.00	0.00	65.15
Application event totals		0.29	0.00	0.00	270.22

R-3 - 01/01/2023: Alfalfa, hay

Field name: R-3

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following
02/10/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)
R-6	Ground water	0.07	0.00	0.00	156.48
Application event totals		0.07	0.00	0.00	156.48

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R-3 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
03/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	169.62	12,780,000.00 gal
Application event totals		0.07	0.00	0.00	169.62	
04/08/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	167.23	12,600,000.00 gal
Application event totals		0.07	0.00	0.00	167.23	
04/30/2023	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
R-6	Ground water	0.07	0.00	0.00	172.00	12,960,000.00 gal
Application event totals		0.07	0.00	0.00	172.00	
05/25/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	170.81	12,870,000.00 gal
Application event totals		0.07	0.00	0.00	170.81	
06/20/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	172.00	12,960,000.00 gal
Application event totals		0.07	0.00	0.00	172.00	
07/16/2023	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
R-6	Ground water	0.07	0.00	0.00	171.41	12,915,000.00 gal
Application event totals		0.07	0.00	0.00	171.41	

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R-3 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	172.00	12,960,000.00 gal
Application event totals		0.07	0.00	0.00	172.00	
09/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	172.00	12,960,000.00 gal
Application event totals		0.07	0.00	0.00	172.00	
10/02/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-6	Ground water	0.07	0.00	0.00	170.81	12,870,000.00 gal
Application event totals		0.07	0.00	0.00	170.81	

R-4 - 11/14/2022: Wheat, silage, boot stage

Field name: R-4

Crop: Wheat, silage, boot stage

Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/26/2022	Pipeline	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.13	0.00	0.00	139.43	5,800,000.00 gal
R-2	Ground water	0.13	0.00	0.00	140.43	5,800,000.00 gal
R-3	Ground water	0.13	0.00	0.00	88.91	5,800,000.00 gal
Application event totals		0.40	0.00	0.00	368.78	

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R-4 - 11/14/2022: Wheat, silage, boot stage

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
R-1	Ground water	0.11	0.00	0.00	115.39	4,800,000.00 gal
R-2	Ground water	0.11	0.00	0.00	116.22	4,800,000.00 gal
R-3	Ground water	0.11	0.00	0.00	73.58	4,800,000.00 gal
Application event totals		0.33	0.00	0.00	305.19	
02/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	112.99	4,700,000.00 gal
R-2	Ground water	0.11	0.00	0.00	113.80	4,700,000.00 gal
R-3	Ground water	0.11	0.00	0.00	72.05	4,700,000.00 gal
Application event totals		0.32	0.00	0.00	298.84	
03/14/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	112.39	4,675,000.00 gal
R-2	Ground water	0.11	0.00	0.00	113.19	4,675,000.00 gal
R-3	Ground water	0.11	0.00	0.00	71.67	4,675,000.00 gal
Application event totals		0.32	0.00	0.00	297.25	
04/25/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.11	0.00	0.00	114.19	4,750,000.00 gal
R-2	Ground water	0.11	0.00	0.00	115.01	4,750,000.00 gal
R-3	Ground water	0.11	0.00	0.00	72.82	4,750,000.00 gal
Application event totals		0.33	0.00	0.00	302.01	

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R-4 - 11/14/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-1	Ground water	0.10	0.00	0.00	103.37	4,300,000.00 gal
R-2	Ground water	0.10	0.00	0.00	104.11	4,300,000.00 gal
R-3	Ground water	0.10	0.00	0.00	65.92	4,300,000.00 gal
Application event totals		0.29	0.00	0.00	273.40	

R-7 - 01/01/2023: Alfalfa, hay

Field name: R-7

Crop: Alfalfa, hay

Plant date: 01/01/2023

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/20/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
03/23/2023	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
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
04/27/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	

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R-7 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/25/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
06/20/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
07/14/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
08/10/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	
09/09/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	

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R-7 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/05/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.17	0.00	0.00	114.47	7,320,000.00 gal
R-5	Ground water	0.29	0.00	0.00	110.46	7,320,000.00 gal
Application event totals		0.46	0.00	0.00	224.93	

R-8 - 11/14/2022: Wheat, silage, boot stage

Field name: R-8

Crop: Wheat, silage, boot stage Plant date: 11/14/2022

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
10/21/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-4	Ground water	0.13	0.00	0.00	91.48	5,850,000.00 gal
R-5	Ground water	0.23	0.00	0.00	88.27	5,850,000.00 gal
R-3	Ground water	0.13	0.00	0.00	89.68	5,850,000.00 gal
Application event totals		0.50	0.00	0.00	269.44	
12/08/2022	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
R-4	Ground water	0.11	0.00	0.00	74.28	4,750,000.00 gal
R-5	Ground water	0.19	0.00	0.00	71.68	4,750,000.00 gal
R-3	Ground water	0.11	0.00	0.00	72.82	4,750,000.00 gal
Application event totals		0.41	0.00	0.00	218.77	

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R-8 - 11/14/2022: Wheat, silage, boot stage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/14/2023	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
R-3	Ground water	0.11	0.00	0.00	72.05	4,700,000.00 gal
R-4	Ground water	0.11	0.00	0.00	73.50	4,700,000.00 gal
R-5	Ground water	0.19	0.00	0.00	70.92	4,700,000.00 gal
Application event totals		0.40	0.00	0.00	216.47	
03/17/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.11	0.00	0.00	73.58	4,800,000.00 gal
R-4	Ground water	0.11	0.00	0.00	75.06	4,800,000.00 gal
R-5	Ground water	0.19	0.00	0.00	72.43	4,800,000.00 gal
Application event totals		0.41	0.00	0.00	221.08	
04/22/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.11	0.00	0.00	70.52	4,600,000.00 gal
R-4	Ground water	0.11	0.00	0.00	71.94	4,600,000.00 gal
R-5	Ground water	0.18	0.00	0.00	69.41	4,600,000.00 gal
Application event totals		0.39	0.00	0.00	211.86	
05/15/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.10	0.00	0.00	66.68	4,350,000.00 gal
R-4	Ground water	0.10	0.00	0.00	68.03	4,350,000.00 gal
R-5	Ground water	0.17	0.00	0.00	65.64	4,350,000.00 gal
Application event totals		0.37	0.00	0.00	200.35	

R-8 - 07/16/2023: Corn, silage

Field name: R-8

Crop: Corn, silage

Plant date: 07/16/2023

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R-8 - 07/16/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
05/16/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.11	0.00	0.00	74.81	4,880,000.00 gal
R-4	Ground water	0.11	0.00	0.00	76.31	4,880,000.00 gal
R-5	Ground water	0.20	0.00	0.00	73.64	4,880,000.00 gal
Application event totals		0.42	0.00	0.00	224.76	
07/06/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.08	0.00	0.00	55.19	3,600,000.00 gal
R-4	Ground water	0.08	0.00	0.00	56.30	3,600,000.00 gal
R-5	Ground water	0.14	0.00	0.00	54.32	3,600,000.00 gal
Application event totals		0.31	0.00	0.00	165.81	
07/20/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.08	0.00	0.00	53.96	3,520,000.00 gal
R-4	Ground water	0.08	0.00	0.00	55.05	3,520,000.00 gal
R-5	Ground water	0.14	0.00	0.00	53.12	3,520,000.00 gal
Application event totals		0.30	0.00	0.00	162.12	
08/03/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.08	0.00	0.00	55.80	3,640,000.00 gal
R-4	Ground water	0.08	0.00	0.00	56.92	3,640,000.00 gal
R-5	Ground water	0.15	0.00	0.00	54.93	3,640,000.00 gal
Application event totals		0.31	0.00	0.00	167.65	

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R-8 - 07/16/2023: Corn, silage

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/17/2022	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.08	0.00	0.00	56.41	3,680,000.00 gal
R-4	Ground water	0.08	0.00	0.00	57.55	3,680,000.00 gal
R-3	Ground water	0.08	0.00	0.00	56.41	3,680,000.00 gal
Application event totals		0.25	0.00	0.00	170.38	
09/01/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.08	0.00	0.00	56.11	3,660,000.00 gal
R-4	Ground water	0.08	0.00	0.00	57.24	3,660,000.00 gal
R-5	Ground water	0.15	0.00	0.00	55.23	3,660,000.00 gal
Application event totals		0.31	0.00	0.00	168.57	
09/15/2022	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-3	Ground water	0.07	0.00	0.00	49.05	3,200,000.00 gal
R-4	Ground water	0.07	0.00	0.00	50.04	3,200,000.00 gal
R-5	Ground water	0.13	0.00	0.00	48.29	3,200,000.00 gal
Application event totals		0.27	0.00	0.00	147.38	

R-9 - 01/01/2023: Alfalfa, hay

Field name:	R-9	Plant date:	01/01/2023			
Crop:	Alfalfa, hay					
Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
02/09/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.49	0.00	0.00	195.56	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	195.56	

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R-9 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
03/12/2023	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
R-7	Ground water	0.50	0.00	0.00	196.78	14,490,000.00 gal
Application event totals		0.50	0.00	0.00	196.78	
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
R-7	Ground water	0.49	0.00	0.00	193.12	14,220,000.00 gal
Application event totals		0.49	0.00	0.00	193.12	
05/02/2023	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
R-7	Ground water	0.50	0.00	0.00	198.01	14,580,000.00 gal
Application event totals		0.50	0.00	0.00	198.01	
06/01/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.50	0.00	0.00	199.23	14,670,000.00 gal
Application event totals		0.50	0.00	0.00	199.23	
07/11/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.49	0.00	0.00	195.56	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	195.56	
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
R-7	Ground water	0.50	0.00	0.00	199.23	14,670,000.00 gal
Application event totals		0.50	0.00	0.00	199.23	

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R-9 - 01/01/2023: Alfalfa, hay

Application date	Application method	Precipitation 24 hours prior	Precipitation during application		Precipitation 24 hours following	
08/06/2023	Surface (irrigation)	No precipitation	No precipitation		No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.50	0.00	0.00	196.78	14,490,000.00 gal
Application event totals		0.50	0.00	0.00	196.78	
09/02/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.49	0.00	0.00	195.56	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	195.56	
09/27/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.49	0.00	0.00	195.56	14,400,000.00 gal
Application event totals		0.49	0.00	0.00	195.56	
10/23/2023	Surface (irrigation)	No precipitation	No precipitation	No precipitation	No precipitation	
Source description	Material type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
R-7	Ground water	0.47	0.00	0.00	185.78	13,680,000.00 gal
Application event totals		0.47	0.00	0.00	185.78	

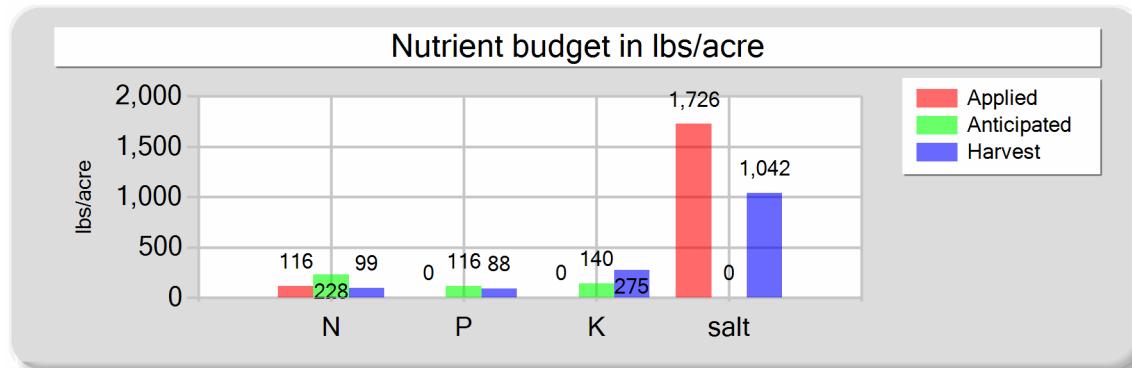
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Reporting period 01/01/2023 to 12/31/2023.

B. NUTRIENT BUDGET

D-2 - 05/09/2023: Corn, silage

Field name: D-2 Crop: Corn, silage Plant date: 05/09/2023



	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	100.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	2.17	0.00	0.00	1,725.83
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	116.17	0.00	0.00	1,725.83
Anticipated crop nutrient removal	228.00	116.00	140.00	0.00
Actual crop nutrient removal	99.08	88.07	275.22	1,042.45
Nutrient balance	17.09	-88.07	-275.22	683.38
Applied to removed ratio	1.17	0.00	0.00	1.66

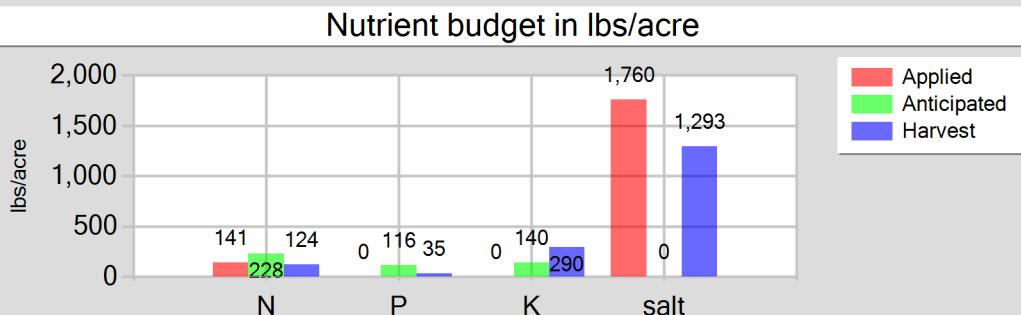
Fresh water applied
74,790,000.00 gallons
2,754.26 acre-inches
23.95 inches/acre
Process wastewater applied
0.00 gallons
0.00 acre-inches
0.00 inches/acre
Total harvests for the crop
1 harvests

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D-3 - 05/16/2023: Corn, silage

Field name: D-3 Crop: Corn, silage Plant date: 05/16/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	125.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	2.21	0.00	0.00	1,759.68
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	141.21	0.00	0.00	1,759.68
Anticipated crop nutrient removal	228.00	116.00	140.00	0.00
Actual crop nutrient removal	123.93	34.86	290.47	1,293.39
Nutrient balance	17.28	-34.86	-290.47	466.29
Applied to removed ratio	1.14	0.00	0.00	1.36

Fresh water applied

78,246,000.00 <i>gallons</i>
2,881.53 <i>acre-inches</i>
24.42 <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>

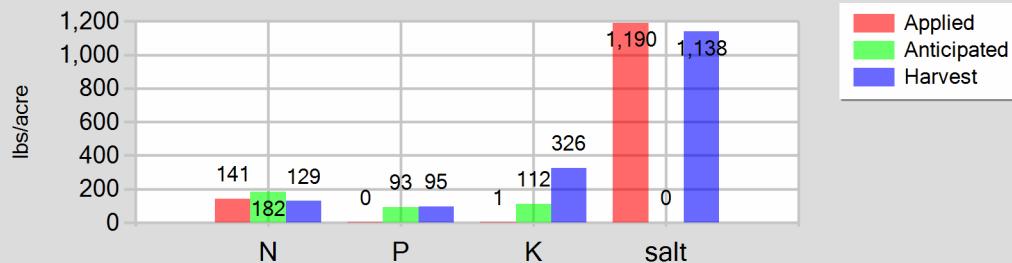
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Reporting period 01/01/2023 to 12/31/2023.

P-1 - 06/17/2023: Corn, silage

Field name: P-1 Crop: Corn, silage Plant date: 06/17/2023

Nutrient budget in lbs/acre



	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	48,780,000.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	1,796.40 acre-inches
Commercial fertilizer / Other	125.00	0.00	0.00	0.00	15.90 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	1.89	0.23	1.13	7.23	
Fresh water	0.60	0.00	0.00	1,183.02	
Atmospheric deposition	14.00	0.00	0.00	0.00	
Total nutrients applied	141.49	0.23	1.13	1,190.25	Process wastewater applied
Anticipated crop nutrient removal	182.40	92.80	112.00	0.00	420,000.00 gallons
Actual crop nutrient removal	128.84	94.73	325.89	1,137.95	15.47 acre-inches
Nutrient balance	12.65	-94.51	-324.76	52.30	0.14 inches/acre
Applied to removed ratio	1.10	0.00	0.00	1.05	Total harvests for the crop
					1 harvests

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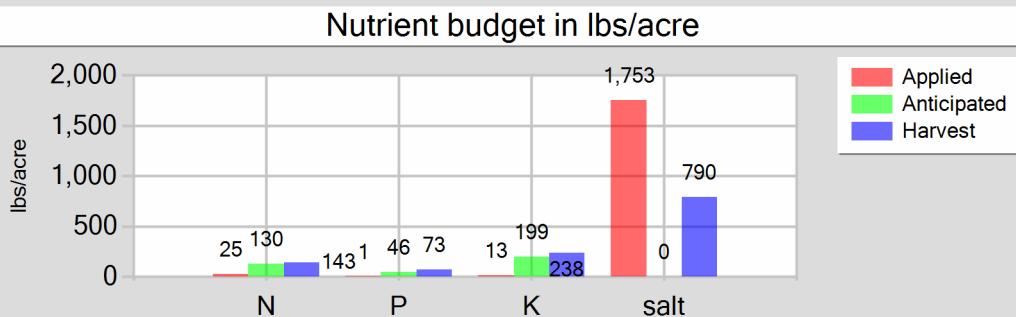
Reporting period 01/01/2023 to 12/31/2023.

P-2 - 11/12/2022: Wheat, silage, boot stage

Field name: P-2

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	9.69	1.32	13.48	94.19
Fresh water	0.95	0.00	0.00	1,658.91
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	24.64	1.32	13.48	1,753.09
Anticipated crop nutrient removal	129.60	45.60	199.20	0.00
Actual crop nutrient removal	142.50	72.50	237.50	789.53
Nutrient balance	-117.86	-71.18	-224.02	963.57
Applied to removed ratio	0.17	0.02	0.06	2.22

Fresh water applied

56,040,000.00 gallons
2,063.76 acre-inches
27.89 inches/acre

Process wastewater applied

720,000.00 gallons
26.52 acre-inches
0.36 inches/acre

Total harvests for the crop

1 harvests

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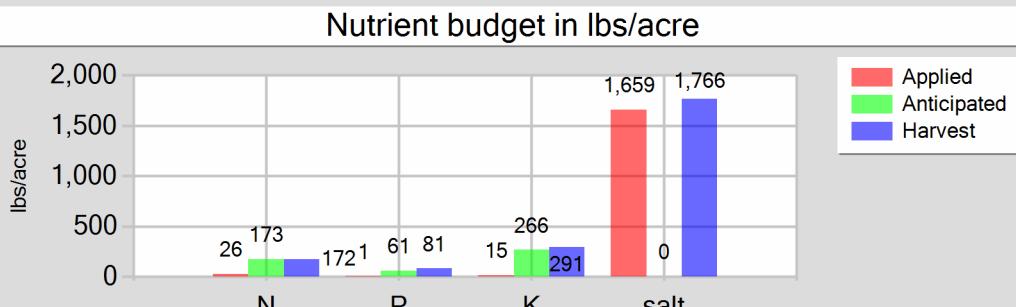
Reporting period 01/01/2023 to 12/31/2023.

P-3 - 11/12/2022: Wheat, silage, boot stage

Field name: P-3

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	54,600,000.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	2,010.73 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	26.11 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	10.87	1.48	15.11	105.60	Process wastewater applied
Fresh water	0.89	0.00	0.00	1,553.31	840,000.00 gallons
Atmospheric deposition	14.00	0.00	0.00	0.00	30.93 acre-inches
Total nutrients applied	25.76	1.48	15.11	1,658.91	0.40 inches/acre
Anticipated crop nutrient removal	172.80	60.80	265.60	0.00	Total harvests for the crop
Actual crop nutrient removal	171.60	80.60	291.20	1,766.44	1 harvests
Nutrient balance	-145.84	-79.12	-276.09	-107.53	
Applied to removed ratio	0.15	0.02	0.05	0.94	

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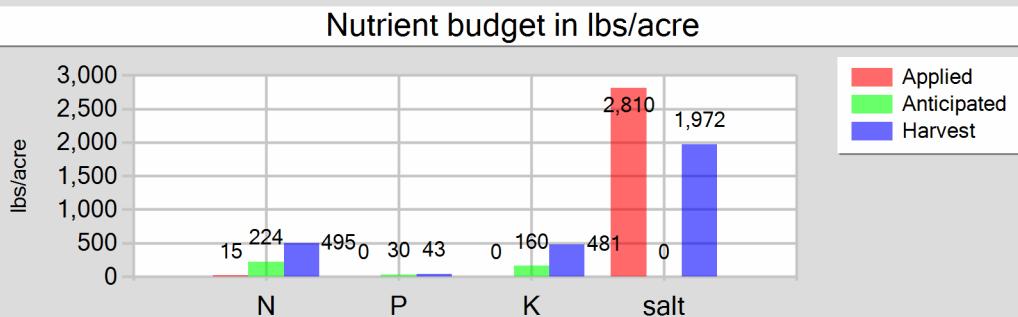
Reporting period 01/01/2023 to 12/31/2023.

P-4 - 01/01/2023: Alfalfa, hay

Field name: P-4

Crop: Alfalfa, hay

Plant date: 01/01/2023



	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	0.00	0.00	0.00	0.00
Fresh water	1.43	0.00	0.00	2,810.45
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	15.43	0.00	0.00	2,810.45
Anticipated crop nutrient removal	224.00	30.00	160.00	0.00
Actual crop nutrient removal	495.13	42.57	480.94	1,971.90
Nutrient balance	-479.70	-42.57	-480.94	838.55
Applied to removed ratio	0.03	0.00	0.00	1.43

Fresh water applied

77,940,000.00 *gallons*
2,870.27 *acre-inches*
37.77 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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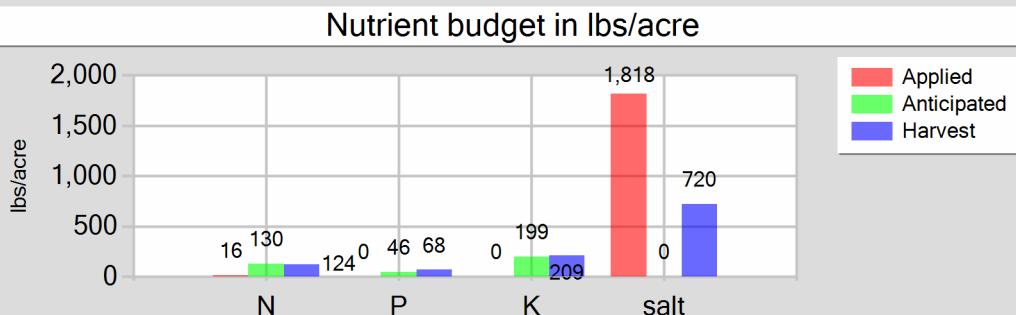
Reporting period 01/01/2023 to 12/31/2023.

R-1 - 11/12/2022: Wheat, silage, boot stage

Field name: R-1

Crop: Wheat, silage, boot stage

Plant date: 11/12/2022



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	1.96	0.00	0.00	1,818.45
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	15.96	0.00	0.00	1,818.45
Anticipated crop nutrient removal	129.60	45.60	199.20	0.00
Actual crop nutrient removal	124.32	67.81	209.08	720.12
Nutrient balance	-108.35	-67.81	-209.08	1,098.32
Applied to removed ratio	0.13	0.00	0.00	2.53

Fresh water applied

85,800,000.00 *gallons*
3,159.72 *acre-inches*
21.64 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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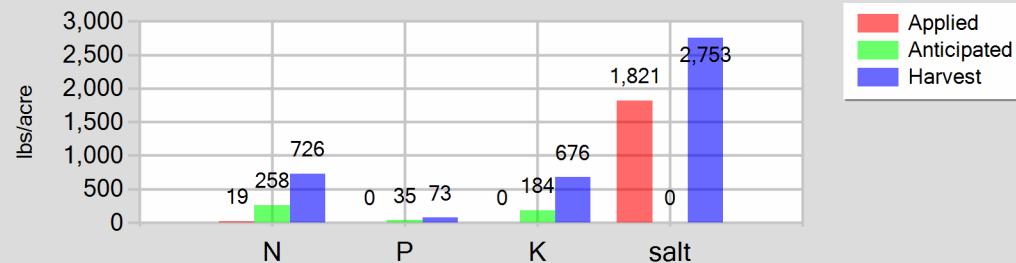
R-10 - 01/01/2023: Alfalfa, hay

Field name: R-10

Crop: Alfalfa, hay

Plant date: 01/01/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	4.99	0.00	0.00	1,820.55
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	18.99	0.00	0.00	1,820.55
Anticipated crop nutrient removal	257.60	34.50	184.00	0.00
Actual crop nutrient removal	725.86	72.85	676.43	2,752.90
Nutrient balance	-706.87	-72.85	-676.43	-932.36
Applied to removed ratio	0.03	0.00	0.00	0.66

Fresh water applied

145,440,000.00 *gallons*
5,356.06 *acre-inches*
36.69 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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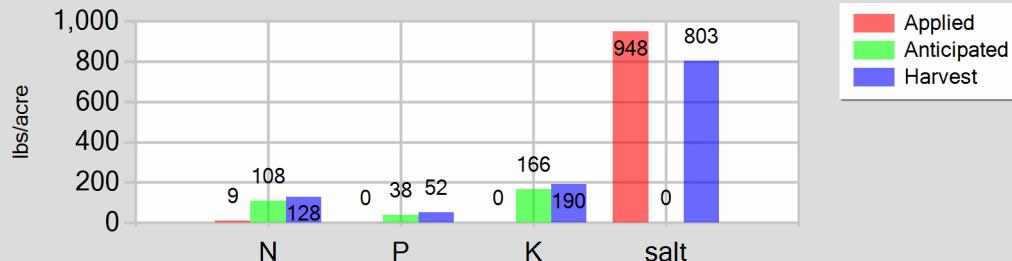
R-13 - 11/14/2022: Wheat, silage, boot stage

Field name: R-13

Crop: Wheat, silage, boot stage

Plant date: 11/14/2022

Nutrient budget in lbs/acre



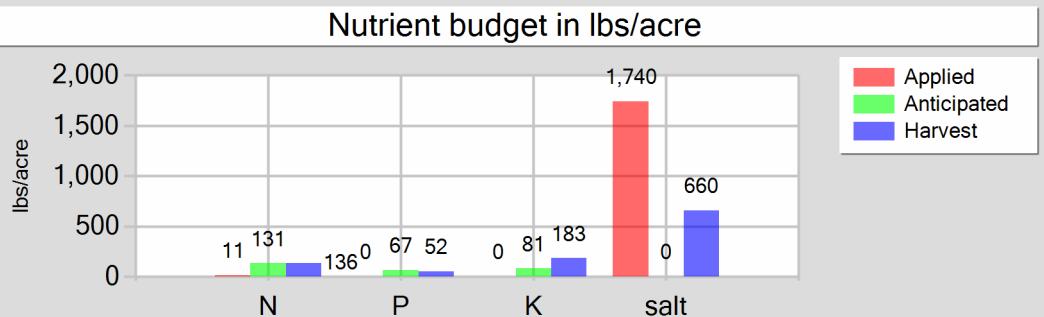
	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)	Fresh water applied
Existing soil nutrient content	0.00	0.00	0.00	0.00	69,840,000.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	2,571.97 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	17.62 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	2.40	0.00	0.00	948.47	
Atmospheric deposition	7.00	0.00	0.00	0.00	
Total nutrients applied	9.40	0.00	0.00	948.47	
Anticipated crop nutrient removal	108.00	38.00	166.00	0.00	
Actual crop nutrient removal	128.24	51.95	189.92	802.59	
Nutrient balance	-118.84	-51.95	-189.92	145.89	
Applied to removed ratio	0.07	0.00	0.00	1.18	
Process wastewater applied					
0.00 gallons					
0.00 acre-inches					
0.00 inches/acre					
Total harvests for the crop					
1 harvests					

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R-13 - 07/16/2023: Corn, silage

Field name: R-13 Crop: Corn, silage Plant date: 07/16/2023



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	4.40	0.00	0.00	1,740.49
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	11.40	0.00	0.00	1,740.49
Anticipated crop nutrient removal	131.10	66.70	80.50	0.00
Actual crop nutrient removal	135.98	52.30	183.05	659.89
Nutrient balance	-124.59	-52.30	-183.05	1,080.61
Applied to removed ratio	0.08	0.00	0.00	2.64

Fresh water applied
128,160,000.00 *gallons*
4,719.70 *acre-inches*
32.33 *inches/acre*

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

Total harvests for the crop
1 *harvests*

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

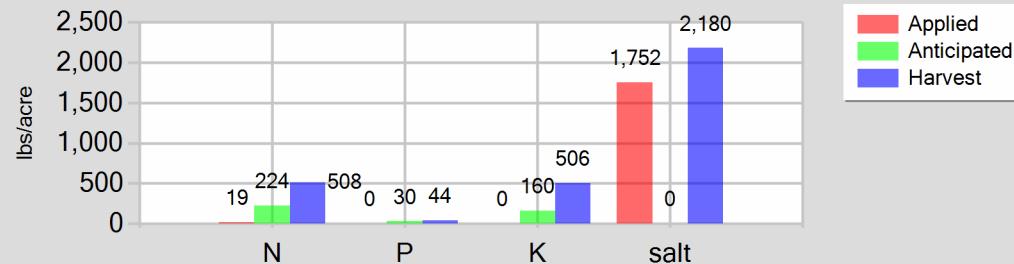
R-14 - 01/01/2023: Alfalfa, hay

Field name: R-14

Crop: Alfalfa, hay

Plant date: 01/01/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	4.76	0.00	0.00	1,752.48
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	18.76	0.00	0.00	1,752.48
Anticipated crop nutrient removal	224.00	30.00	160.00	0.00
Actual crop nutrient removal	507.62	43.89	505.71	2,179.60
Nutrient balance	-488.86	-43.89	-505.71	-427.13
Applied to removed ratio	0.04	0.00	0.00	0.80

Fresh water applied

11,400,000.00 *gallons*
419.82 *acre-inches*
34.99 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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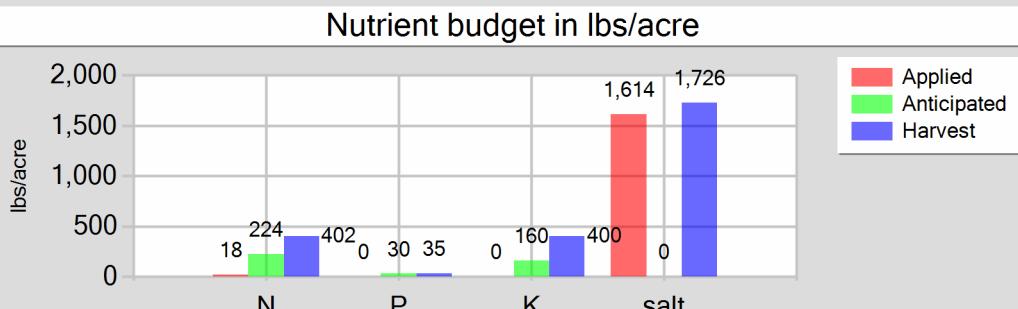
Reporting period 01/01/2023 to 12/31/2023.

R-15 - 01/01/2023: Alfalfa, hay

Field name: R-15

Crop: Alfalfa, hay

Plant date: 01/01/2023



	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	0.00	0.00	0.00	0.00
Fresh water	4.42	0.00	0.00	1,614.34
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	18.42	0.00	0.00	1,614.34
Anticipated crop nutrient removal	224.00	30.00	160.00	0.00
Actual crop nutrient removal	401.96	34.76	400.44	1,725.92
Nutrient balance	-383.53	-34.76	-400.44	-111.58
Applied to removed ratio	0.05	0.00	0.00	0.94

Fresh water applied

15,900,000.00 *gallons*
585.54 *acre-inches*
32.53 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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

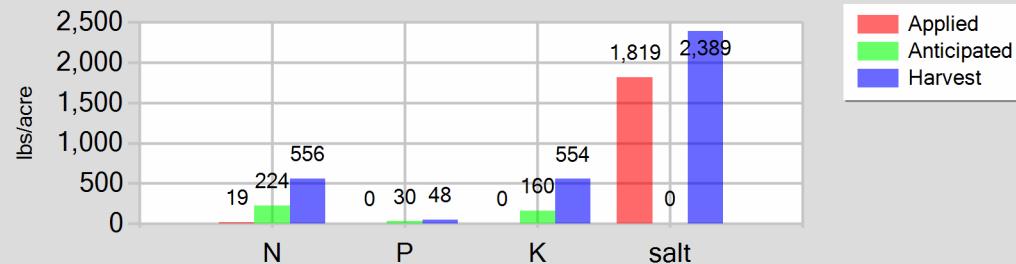
R-16 - 01/01/2023: Alfalfa, hay

Field name: R-16

Crop: Alfalfa, hay

Plant date: 01/01/2023

Nutrient budget in lbs/acre



	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	113,460,000.00 <i>gallons</i>
Plowdown credit	0.00	0.00	0.00	0.00	4,178.35 <i>acre-inches</i>
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	36.65 <i>inches/acre</i>
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	4.98	0.00	0.00	1,818.90	
Atmospheric deposition	14.00	0.00	0.00	0.00	
Total nutrients applied	18.98	0.00	0.00	1,818.90	Process wastewater applied
Anticipated crop nutrient removal	224.00	30.00	160.00	0.00	0.00 <i>gallons</i>
Actual crop nutrient removal	556.41	48.11	554.31	2,389.10	0.00 <i>acre-inches</i>
Nutrient balance	-537.42	-48.11	-554.31	-570.20	0.00 <i>inches/acre</i>
Applied to removed ratio	0.03	0.00	0.00	0.76	Total harvests for the crop
					1 <i>harvests</i>

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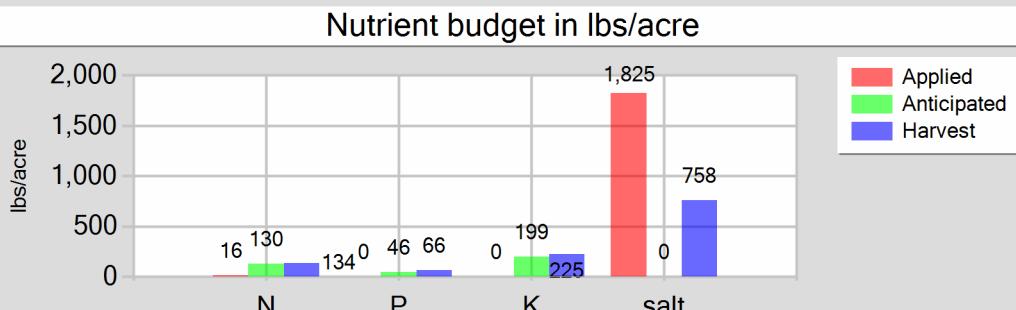
Reporting period 01/01/2023 to 12/31/2023.

R-2 - 11/13/2022: Wheat, silage, boot stage

Field name: R-2

Crop: Wheat, silage, boot stage

Plant date: 11/13/2022



	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	86,100,000.00 gallons
Plowdown credit	0.00	0.00	0.00	0.00	3,170.77 acre-inches
Commercial fertilizer / Other	0.00	0.00	0.00	0.00	21.72 inches/acre
Dry manure	0.00	0.00	0.00	0.00	
Process wastewater	0.00	0.00	0.00	0.00	
Fresh water	1.97	0.00	0.00	1,824.80	
Atmospheric deposition	14.00	0.00	0.00	0.00	
Total nutrients applied	15.97	0.00	0.00	1,824.80	Process wastewater applied
Anticipated crop nutrient removal	129.60	45.60	199.20	0.00	0.00 gallons
Actual crop nutrient removal	133.77	65.82	225.07	757.93	0.00 acre-inches
Nutrient balance	-117.80	-65.82	-225.07	1,066.88	0.00 inches/acre
Applied to removed ratio	0.12	0.00	0.00	2.41	Total harvests for the crop
					1 harvests

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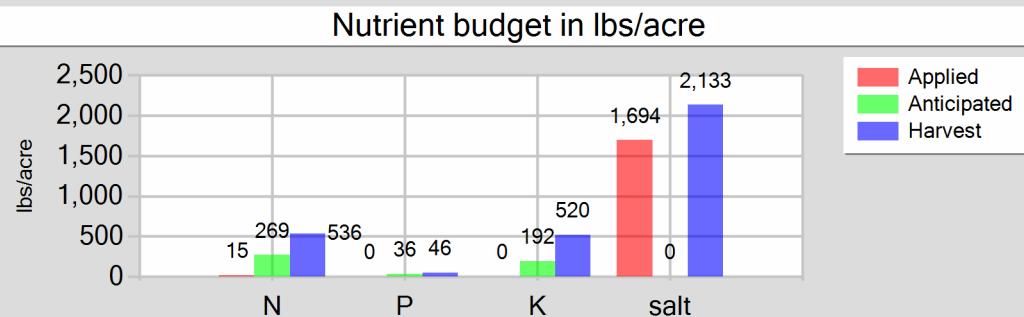
Reporting period 01/01/2023 to 12/31/2023.

R-3 - 01/01/2023: Alfalfa, hay

Field name: R-3

Crop: Alfalfa, hay

Plant date: 01/01/2023



	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	0.00	0.00	0.00	0.00
Fresh water	0.73	0.00	0.00	1,694.37
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	14.73	0.00	0.00	1,694.37
Anticipated crop nutrient removal	268.80	36.00	192.00	0.00
Actual crop nutrient removal	535.65	46.06	520.30	2,133.28
Nutrient balance	-520.92	-46.06	-520.30	-438.91
Applied to removed ratio	0.03	0.00	0.00	0.79

Fresh water applied

127,665,000.00 *gallons*
4,701.47 *acre-inches*
32.20 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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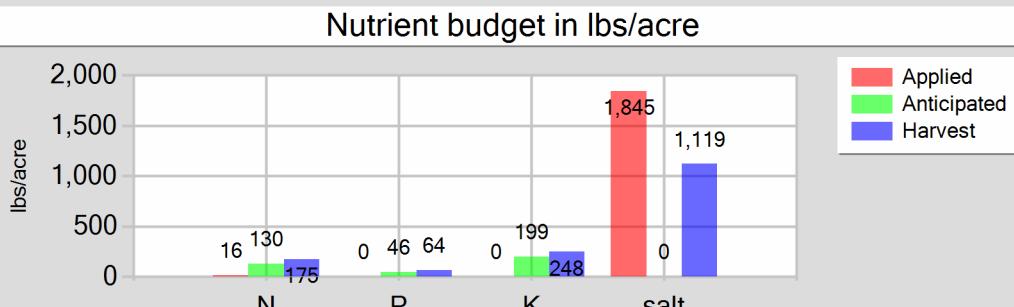
Reporting period 01/01/2023 to 12/31/2023.

R-4 - 11/14/2022: Wheat, silage, boot stage

Field name: R-4

Crop: Wheat, silage, boot stage

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	0.00	0.00	0.00	0.00
Fresh water	1.99	0.00	0.00	1,845.47
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	15.99	0.00	0.00	1,845.47
Anticipated crop nutrient removal	129.60	45.60	199.20	0.00
Actual crop nutrient removal	175.23	63.52	247.52	1,119.04
Nutrient balance	-159.24	-63.52	-247.52	726.43
Applied to removed ratio	0.09	0.00	0.00	1.65

Fresh water applied

87,075,000.00 *gallons*
3,206.68 *acre-inches*
21.96 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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

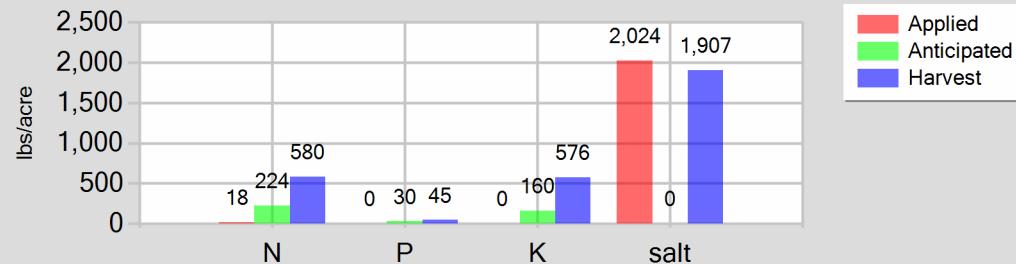
R-7 - 01/01/2023: Alfalfa, hay

Field name: R-7

Crop: Alfalfa, hay

Plant date: 01/01/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	4.14	0.00	0.00	2,024.35
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	18.14	0.00	0.00	2,024.35
Anticipated crop nutrient removal	224.00	30.00	160.00	0.00
Actual crop nutrient removal	580.04	45.03	576.44	1,906.57
Nutrient balance	-561.90	-45.03	-576.44	117.78
Applied to removed ratio	0.03	0.00	0.00	1.06

Fresh water applied

131,760,000.00 *gallons*
4,852.27 *acre-inches*
33.23 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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

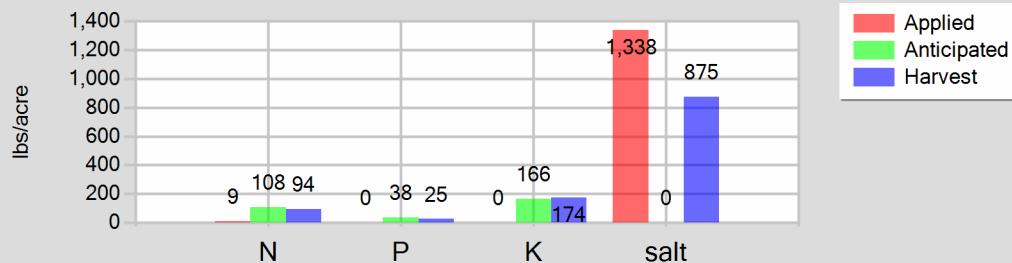
R-8 - 11/14/2022: Wheat, silage, boot stage

Field name: R-8

Crop: Wheat, silage, boot stage

Plant date: 11/14/2022

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	2.49	0.00	0.00	1,337.97
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	9.49	0.00	0.00	1,337.97
Anticipated crop nutrient removal	108.00	38.00	166.00	0.00
Actual crop nutrient removal	93.70	25.38	173.73	874.50
Nutrient balance	-84.21	-25.38	-173.73	463.47
Applied to removed ratio	0.10	0.00	0.00	1.53

Fresh water applied

87,150,000.00 *gallons*
3,209.44 *acre-inches*
21.98 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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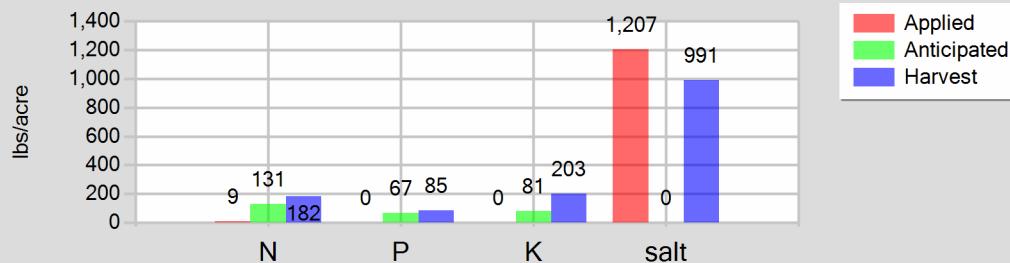
R-8 - 07/16/2023: Corn, silage

Field name: R-8

Crop: Corn, silage

Plant date: 07/16/2023

Nutrient budget in lbs/acre



	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total salt (lbs/acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commercial fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	2.18	0.00	0.00	1,206.67
Atmospheric deposition	7.00	0.00	0.00	0.00
Total nutrients applied	9.18	0.00	0.00	1,206.67
Anticipated crop nutrient removal	131.10	66.70	80.50	0.00
Actual crop nutrient removal	182.18	85.21	202.75	990.99
Nutrient balance	-173.00	-85.21	-202.75	215.68
Applied to removed ratio	0.05	0.00	0.00	1.22

Fresh water applied

78,540,000.00 *gallons*
2,892.36 *acre-inches*
19.81 *inches/acre*

Process wastewater applied

0.00 *gallons*
0.00 *acre-inches*
0.00 *inches/acre*

Total harvests for the crop

1 *harvests*

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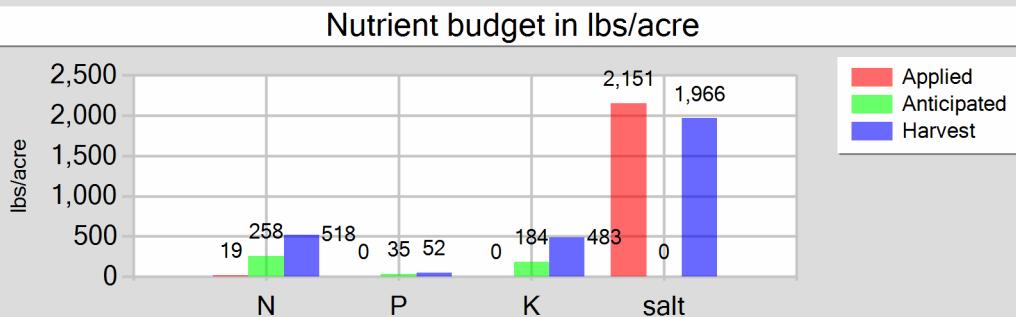
Reporting period 01/01/2023 to 12/31/2023.

R-9 - 01/01/2023: Alfalfa, hay

Field name: R-9

Crop: Alfalfa, hay

Plant date: 01/01/2023



	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	0.00	0.00	0.00	0.00
Fresh water	5.43	0.00	0.00	2,151.17
Atmospheric deposition	14.00	0.00	0.00	0.00
Total nutrients applied	19.43	0.00	0.00	2,151.17
Anticipated crop nutrient removal	257.60	34.50	184.00	0.00
Actual crop nutrient removal	518.25	52.01	482.96	1,965.53
Nutrient balance	-498.82	-52.01	-482.96	185.64
Applied to removed ratio	0.04	0.00	0.00	1.09

Fresh water applied

158,400,000.00 <i>gallons</i>
5,833.33 <i>acre-inches</i>
39.95 <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**

22I1382

Sample and source description: 22I1382

Sample date: 09/21/2022 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 34.7 %

	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	13,000.00	2,300.00	14,600.00	8,100.00	5,700.00	2,600.00	2,600.00	6,000.00		0.00
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10.00

23F0744

Sample and source description: 23F0744

Sample date: 06/06/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 34.6 %

	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	14,100.00	3,400.00	26,300.00	8,900.00	5,100.00	3,900.00	3,500.00	9,000.00		0.00
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10.00

23L0895

Sample and source description: 23L0895

Sample date: 12/13/2023 Material type: Corral solids Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 27.0 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Calcium (mg/kg)	Magnesium (mg/kg)	Sodium (mg/kg)	Sulfur (mg/kg)	Chloride (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	11,100.00	1,600.00	12,200.00							0.00
DL	0.01	0.01	0.01							10.00

B. PROCESS WASTEWATER ANALYSES

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

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

22J1602

Sample and source description: 22J1602

Sample date: 10/25/2022 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 (μ mhos/cm)	TDS (mg/L)
Value	119.00	103.00	0.00	0.40	16.30	166.00	91.40	27.40	123.00	795.00	0.00	45.50	197.00		1,160
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10

23A0755

Sample and source description: 23A0755

Sample date: 01/30/2023 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 (μ mhos/cm)	TDS (mg/L)
Value	558.00	220.00	0.00	0.80	89.10	466.00									3,400
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

23C0858

Sample and source description: 23C0858

Sample date: 03/28/2023 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 (μ mhos/cm)	TDS (mg/L)
Value	85.40	63.30	0.00	1.00	21.30	143.00									1,120
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

23F0719

Sample and source description: 23F0719

Sample date: 06/06/2023 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 (μ mhos/cm)	TDS (mg/L)
Value	60.70	11.90	0.00	0.30	7.34	36.40	53.30	21.90	19.00	155.00	0.00	28.90	14.00		233
DL	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01		10

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

23H1007

Sample and source description: 23H1007

Sample date: 08/09/2023 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 (μ hos/cm)	TDS (mg/L)
Value	15.30	10.40	0.00	0.20	2.46	14.50									193
DL	0.01	0.01	0.01	0.01	0.01	0.01									10

C. FRESH WATER ANALYSES

D-2

22G1547

Sample description: 22G1547

Sample date: 07/20/2022 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 (μ hos/cm)	TDS (mg/L)
Value	0.40										530.00	
DL	0.01										10.00	

D-N

23H1005

Sample description: 23H1005

Sample date: 08/10/2023 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 (μ hos/cm)	TDS (mg/L)
Value	0.40			60.60	8.10	82.00	126.00	0.00	89.20	88.10	767.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

D-S

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D-S

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.40			61.80	8.20	83.00	124.00	0.00	89.30	88.50	772.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

Kern Island

23H1006

Sample description: 23H1006

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.00										67.40	
DL	0.01										10.00	

P-1

22H0624

Sample description: 22H0624

Sample date: 08/03/2022 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.20			58.60	3.40	79.00	98.10	0.00	85.60	104.00	767.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

P-2

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P-2

22H0623

Sample description: 22H0623

Sample date: 08/03/2022 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.20										511.00	
DL	0.01										10.00	

P-3

22H0623

Sample description: 22H0623

Sample date: 08/03/2022 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.10										364.00	
DL	0.01										10.00	

R-1

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.40			55.40	7.50	71.00	84.30	0.00	44.90	118.00	701.00	
DL	0.10			0.01	1.00	0.01	0.01	0.01	0.01	0.01	10.00	

R-2

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R-2

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.40			55.00	7.40	70.00	83.50	0.00	45.00	117.00	706.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

R-3

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.40			23.20	6.00	60.00	96.50	0.00	54.30	32.80	447.00	
DL	0.01			0.01	0.01	0.01	0.10	0.01	0.01	0.01	10.00	

R-4

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.40			23.00	5.90	59.00	93.70	0.00	54.30	33.90	456.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

R-5

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R-5

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.70			25.20	7.00	53.00	111.00	0.00	61.30	18.70	440.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

R-6

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.10			20.50	4.70	56.00	96.20	0.00	40.00	26.40	387.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

R-7

23H1005

Sample description: 23H1005

Sample date: 08/09/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.60			21.10	5.70	53.00	104.00	0.00	50.10	17.30	396.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

R-8

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R-8

23H1005

Sample description: 23H1005

Sample date: 08/10/2023 Source of analysis: Lab analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnesium (mg/L)	Sodium (mg/L)	Bicarbonate (mg/L)	Carbonate (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.60			21.00	5.70	52.00	109.00	0.00	44.00	11.00	365.00	
DL	0.01			0.01	0.01	0.01	0.01	0.01	0.01	0.01	10.00	

D. SOIL ANALYSES

No soil analyses entered.

E. PLANT TISSUE ANALYSES

D-2 - 05/09/2023: Corn, silage

23H1031

Sample and source description: 23H1031

Sample date: 08/09/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 57.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	2,700.00	2,400.00	7,500.00		6.70
DL	0.01	0.01	0.01		0.01

D-3 - 05/16/2023: Corn, silage

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D-3 - 05/16/2023: Corn, silage

23H1031

Sample and source description: 23H1031

Sample date: 08/09/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 51.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	3,200.00	900.00	7,500.00		6.90
DL	0.01	0.01	0.01		0.01

P-1 - 06/17/2023: Corn, silage

23H1031

Sample and source description: 23H1031

Sample date: 08/09/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 61.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	3,400.00	2,500.00	8,600.00		7.80
DL	0.01	0.01	0.01		0.01

P-2 - 11/12/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 63.7 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,700.00	2,900.00	9,500.00		8.70
DL	0.01	0.01	0.01		0.01

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P-3 - 11/12/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 60.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,600.00	3,100.00	11,200.00		17.20
DL	0.01	0.01	0.01		0.01

P-4 - 01/01/2023: Alfalfa, hay

2-429-361

Sample and source description: 2-429-361

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	31,400.00	2,700.00	30,500.00		13.04
DL	0.01	0.01	0.01		0.01

R-1 - 11/12/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 67.6 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,600.00	3,600.00	11,100.00		11.80
DL	0.01	0.01	0.01		0.01

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R-10 - 01/01/2023: Alfalfa, hay

2-429-348

Sample and source description: 2-429-348

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	27,900.00	2,800.00	26,000.00		11.08
DL	0.01	0.01	0.01		0.01

R-13 - 11/14/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 58.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	7,900.00	3,200.00	11,700.00		11.80
DL	0.01	0.01	0.01		0.01

R-13 - 07/16/2023: Corn, silage

23J0378

Sample and source description: 23J0378

Sample date: 10/04/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 59.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,200.00	2,000.00	7,000.00		6.20
DL	0.01	0.01	0.01		0.01

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R-14 - 01/01/2023: Alfalfa, hay

2-429-347

Sample and source description: 2-429-347

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	26,600.00	2,300.00	26,500.00		12.01
DL	0.01	0.01	0.01		0.01

R-15 - 01/01/2023: Alfalfa, hay

2-429-347

Sample and source description: 2-429-347

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	26,600.00	2,300.00	26,500.00		12.01
DL	0.01	0.01	0.01		0.01

R-16 - 01/01/2023: Alfalfa, hay

2-429-347

Sample and source description: 2-429-347

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.9 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	26,600.00	2,300.00	26,500.00		12.01
DL	0.01	0.01	0.01		0.01

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R-2 - 11/13/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 61.2 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,300.00	3,100.00	10,600.00		9.20
DL	0.01	0.01	0.01		0.01

R-3 - 01/01/2023: Alfalfa, hay

2-429-361

Sample and source description: 2-429-361

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.1 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	31,400.00	2,700.00	30,500.00		13.04
DL	0.01	0.01	0.01		0.01

R-4 - 11/14/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 58.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	8,000.00	2,900.00	11,300.00		12.40
DL	0.01	0.01	0.01		0.01

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R-7 - 01/01/2023: Alfalfa, hay

2-429-360

Sample and source description: 2-429-360

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 5.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	32,200.00	2,500.00	32,000.00		11.20
DL	0.01	0.01	0.01		0.01

R-8 - 11/14/2022: Wheat, silage, boot stage

23F0941

Sample and source description: 23F0941

Sample date: 06/07/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 67.3 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	4,800.00	1,300.00	8,900.00		13.70
DL	0.01	0.01	0.01		0.01

R-8 - 07/16/2023: Corn, silage

23J0378

Sample and source description: 23J0378

Sample date: 10/04/2023 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 53.8 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,200.00	2,900.00	6,900.00		7.30
DL	0.01	0.01	0.01		0.01

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R-9 - 01/01/2023: Alfalfa, hay

2-429-348

Sample and source description: 2-429-348

Sample date: 06/23/2024 Source of analysis: Lab analysis Method of reporting: As-is

Moisture: 4.5 %

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	27,900.00	2,800.00	26,000.00		11.08
DL	0.01	0.01	0.01		0.01

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

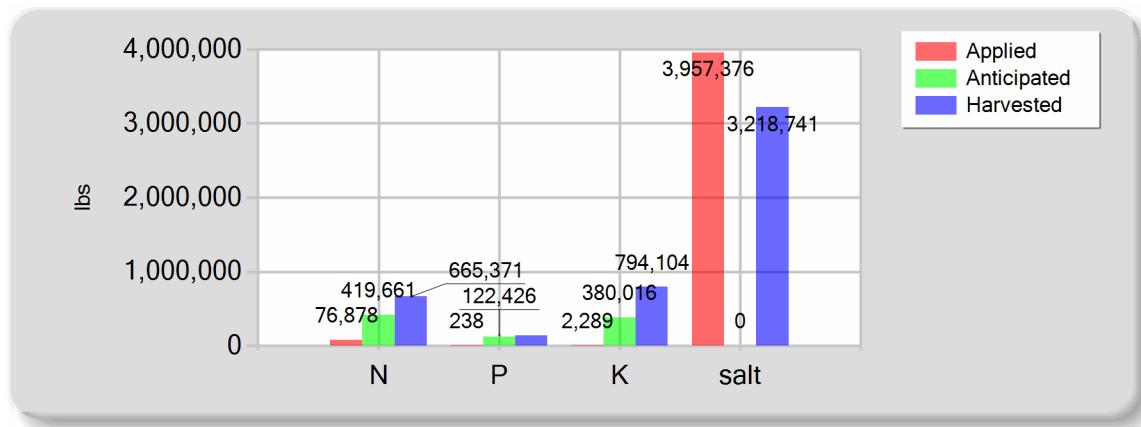
No subsurface (tile) drainage analyses entered.

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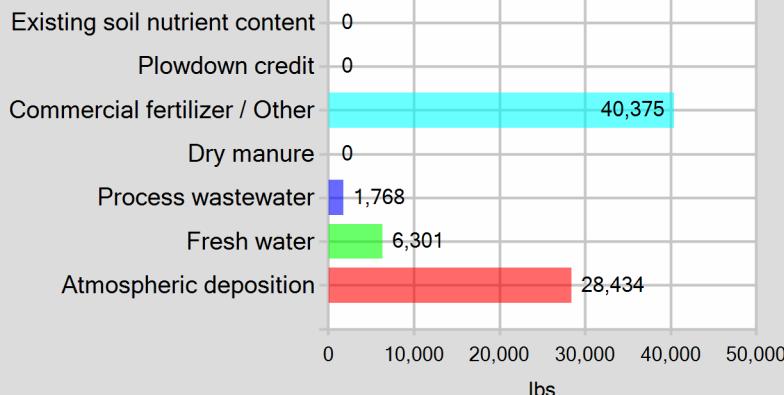
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE**A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE**

	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	40,375.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	1,768.17	237.92	2,288.60	15,917.75
Fresh water	6,300.94	0.00	0.00	3,941,458.60
Atmospheric deposition	28,434.00	0.00	0.00	0.00
Total nutrients applied	76,878.11	237.92	2,288.60	3,957,376.36
Anticipated crop nutrient removal	419,661.20	122,425.60	380,015.60	0.00
Actual crop nutrient removal	665,371.32	138,068.70	794,104.30	3,218,740.82
Nutrient balance	-588,493.21	-137,830.78	-791,815.70	738,635.53
Applied to removed ratio	0.12	0.00	0.00	1.23

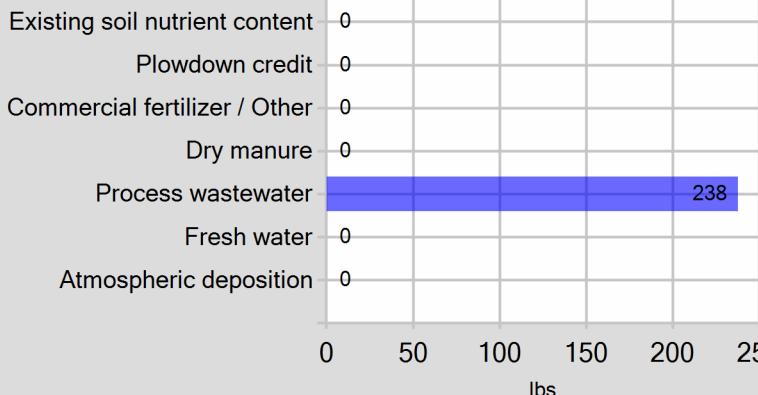
B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE

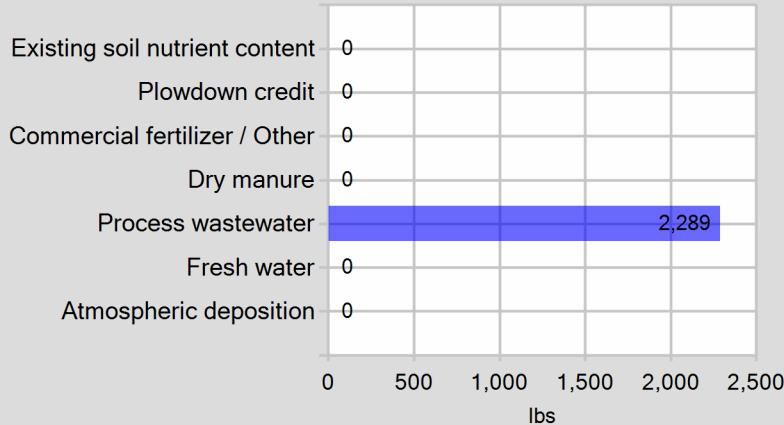
Pounds of nitrogen applied



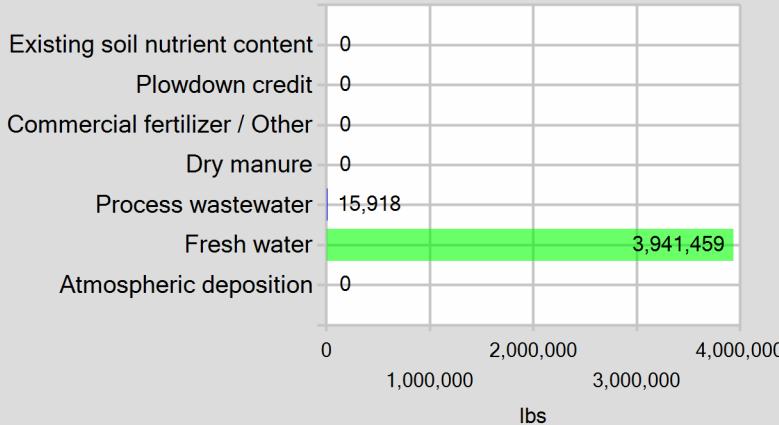
Pounds of phosphorus applied



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

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

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

ADDITIONAL NOTES

A. NOTES

Well 9 is down.

Wells P-1, P-2, P-3 and D-2 were shut down before samples could be taken. Switched to canal water.

Alfalfa labs are from hay baled in 2023.

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

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

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

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

SIGNATURE OF OWNER OF FACILITY

SIGNATURE OF OPERATOR OF FACILITY

Kootstra Family Trust

Perrin Kootstra

PRINT OR TYPE NAME

PRINT OR TYPE NAME

DATE

DATE

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

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

ATTACHMENTS

A. REQUIRED ATTACHMENTS

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

Annual Dairy Facility Assessment

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

Manure/Process Wastewater Tracking Manifests

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

Corrective Actions Documents

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

Groundwater Monitoring

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

Storm Water Monitoring

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

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

CERTIFICATION

A. OWNER AND/OR OPERATOR CERTIFICATION

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

Sanne

SIGNATURE OF OWNER OF FACILITY

Kooistra Family Trust

PRINT OR TYPE NAME

7-1-24

DATE

See Below

SIGNATURE OF OPERATOR OF FACILITY

Perrin Kooistra

PRINT OR TYPE NAME

7-1-24

DATE

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: Kootstra Dairy Farms

Physical address of dairy:

13628 Adobe RD Number and Street	Bakersfield City	Kern County	93307 Zip Code
-------------------------------------	---------------------	----------------	-------------------

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

Date facility was originally placed in operation: 01/01/1960

Regional Water Quality Control Board Basin Plan designation: Tulare Basin

County Assessor Parcel Number(s) for dairy facility:

X185-X240-X020-X015	X185-X270-X003-X006	X185-X270-X005-X011	X185-X270-X013-X005	X185-X310-X003-X000	X185-X310-X004-X019
X185-X310-X011-X000	X445-X011-X001-X006	X445-X011-X003-X002	X445-X011-X005-X017	X445-X012-X002-X006	X445-X012-X003-X009
X445-X012-X005-X005	X445-X012-X007-X001	X445-X012-X009-X007	X445-X012-X010-X009		

B. OPERATORS

Kootstra, Perrin

Operator name: <u>Kootstra, Perrin</u>	Telephone no.: <u>(661) 831-7987</u>		
	Landline	Cellular	
13628 Adobe RD Mailing Address Number and Street	Bakersfield City	CA State	93307 Zip Code

This operator is responsible for paying permit fees.

C. OWNERS

Kootstra, Perrin

Legal owner name: <u>Kootstra, Perrin</u>	Telephone no.: <u>(661) 831-7987</u>		
	Landline	Cellular	
13628 Adobe RD Mailing Address Number and Street	Bakersfield City	CA State	93307 Zip Code

This owner is responsible for paying permit fees.

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

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

APPLICATION AREA**A. LIST OF LAND APPLICATION AREAS**

Field name	Controlled acres	Cropable acres	Total harvests	Type of waste applied	Parcel number
D-2	132	115	1	none	X185-X270-X003-X006 X185-X270-X005-X011
D-3	122	118	1	none	X185-X270-X013-X005
P-1	120	113	1	process wastewater	X185-X310-X003-X000
P-2	80	74	1	process wastewater	X185-X310-X004-X019
P-3	80	77	1	process wastewater	X185-X310-X004-X019
P-4	80	76	1	none	X185-X310-X011-X000
R-1	160	146	1	none	X445-X011-X001-X006
R-10	160	146	1	none	X445-X012-X010-X009
R-11	160	146	0	none	X445-X012-X002-X006
R-12	160	146	0	none	X445-X012-X005-X005
R-13	160	146	2	none	X445-X012-X010-X009
R-14	15	12	1	none	X445-X012-X010-X009
R-15	20	18	1	none	X445-X012-X010-X009
R-16	118	114	1	none	X445-X012-X010-X009
R-2	160	146	1	none	X445-X011-X001-X006
R-3	160	146	1	none	X445-X011-X005-X017
R-4	160	146	1	none	X445-X011-X001-X006
R-5	160	146	0	none	X445-X011-X001-X006
R-6	160	146	0	none	X445-X011-X003-X002 X445-X011-X005-X017
R-7	160	146	1	none	X445-X012-X003-X009
R-8	160	146	2	none	X445-X012-X007-X001 X445-X012-X009-X007
R-9	160	146	1	none	X445-X012-X010-X009
Totals for areas that were used for application	280	264	3		
Totals for areas that were not used for application	2,567	2,351	17		
Land application area totals	2,847	2,615	20		

B. CROPS AND HARVESTS

D-2

Field name: D-2

Report of Dairy Canal Water Analysis

Kootstra Dairy Farms
13628 Adobe Road
Bakersfield
00-0018430

CA
08
93307

E-mail: martyverhoeven@gmail.com
Copy To:

Lab No.: 23H1006
Sampled By: Marty Verhoeven
Requested By: Perrin (Pepper) Kootstra
Submitted Date: 08/10/23
Reported Date: 08/15/23
Project: 13628 Adobe Rd, Bakersfield
Crop ID:

	Date Sampled	Time Sampled	EC μmhos/cm	EC mmhos/cm	NO ₃ -N mg/L	TDS mg/L
1	Kern Island (Standpipe)	8/9/23	12:57	67.4	0.07	ND
						56

ND = None Detected

Approved By: *Boaz M. Grullend*
Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02



08/10/23 08:07

21H1006

WATER WORK REQUESTBill To: 18430 08

Purchase Order No. _____ Results Needed By _____

Client **Kootstra Dairy Farms**
Address 13628 Adobe Road
City, State, Zip Bakersfield, CA 93307
Email: perrinkootstra@yahoo.com

Copy to: martyverhoeven@gmail.com

Requested by/Cell: Perrin "Pepper" Kootstra 661-809-5437

Facility: 13628 Adobe Rd, Bakersfield

Date sampled 08/09/23Sampled by Marty Verhoeven QA/QC Document Copy of Chain RWQCB**DESCRIPTION OF SAMPLES**

<u>Kern Island</u> <u>Kern River</u>	
1.	Sampled From: <u>Groundwater</u>
2.	Sampled From: _____
3.	Sampled From: _____
4.	Sampled From: _____
5.	Sampled From: _____
6.	Sampled From: _____
7.	Sampled From: _____
8.	Sampled From: _____
9.	Sampled From: _____
10.	Sampled From: _____

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	<u>MM</u>	DLI	8/09/23 11:51	8/09/23 3:17 p.m.
Second	<u>Marty Verhoeven</u>	DLI	08/09/23 3:17 p.m.	
Third	<u>MM</u>	DLI	8/10 8:07	
Fourth				

I guarantee that to the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorney's fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; to order accounts will be charged a delinquent fee of 2% per month (annually 24%) or \$5.00 per month, whichever is greater. If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternative to Litigation, Inc. (CAL). If the dispute is not resolved in mediation, then arbitration, reasonable attorney's fees of Dellavalle Laboratory.

Invoicing Information:**Price List 2022**

Sampling Hrs	Miles	Consulting	Shipping	\$	In
				\$	Out
Amt Paid	Rec By	Check No.	Date		

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

etfaupdate 2020

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Laboratory

IR Thermometer SN: 221511274
Correction Factor: 0°C
Calibration Due: 9/26/2023
Location: Hanford

Report of Dairy Well Water Analysis

Kootstra Dairy Farms
13628 Adobe Road
Bakersfield CA 93307
00-0018430 08

E-mail: martyverhoeven@gmail.com

Copy To:

Lab No.: 23H1005
Sampled By: Marty Verhoeven
Requested By: Perlin (Pepper) Kootstra
Submitted Date: 08/10/23
Reported Date: 08/15/23
Project: 13628 Adobe Rd, Bakersfield
Crop ID:

Sampled	Date	Time	EC μmhos/cm	EC mmhos/cm	NO ₃ -N mg/L	Field NH ₄ -N mg/L	CO ₃ as CaCO ₃		HCO ₃ as CaCO ₃	Cl mg/L	SO ₄ mg/L	Ca mg/L	Mg mg/L	Na mg/L	pH at 25°C	unit
							TDS mg/L	Caco ₃ mg/L								
1 R-1 (Standpipe)	8/9/23	11:30	701	0.70	0.4	ND	395	ND	84.3	118	44.9	55.4	7.5	71	8.1	
2 R-2 (Standpipe)	8/9/23	11:40	706	0.71	0.4	ND	420	ND	83.5	117	45.0	55.0	7.4	70	8.0	
3 R-3 (Standpipe)	8/9/23	11:59	447	0.45	0.4	ND	260	ND	96.5	32.8	54.3	23.2	6.0	60	8.1	
4 R-4 (Standpipe)	8/9/23	12:02	456	0.46	0.4	ND	267	ND	93.7	33.9	54.3	23.0	5.9	59	8.1	
5 R-5 (Standpipe)	8/9/23	12:06	440	0.44	0.7	ND	253	ND	111	18.7	61.3	25.2	7.0	53	8.1	
6 R-6 (Standpipe)	8/9/23	12:28	387	0.39	0.1	ND	230	ND	96.2	26.4	40.0	20.5	4.7	56	8.2	
7 R-7 (Standpipe)	8/9/23	12:14	396	0.40	0.6	ND	227	ND	104	17.3	50.1	21.1	5.7	53	8.1	
8 R-8 (Standpipe)	8/9/23	12:17	365	0.37	0.6	ND	210	ND	109	11	44.0	21.0	5.7	52	8.1	
9 D-N (Valve @ Well)	8/9/23	13:05	767	0.77	0.4	ND	665	ND	126	88.1	89.2	60.6	8.1	82	8.0	
10 D-S (Valve @ Well)	8/9/23	13:10	772	0.77	0.4	ND	690	ND	124	88.5	89.3	61.8	8.2	83	8.0	

* = Field NH₄-N not Taken.

ND = None Detected

Approved By: Becky Muriel

Laboratory Director/Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02

08/10/23 07:59

23H1005



g

WATER WORK REQUEST

 Bill To: Acct No. Cons.

Purchase Order No. _____ Results Needed By _____

 Client: **Kootstra Dairy Farms**
 Address: 13628 Adobe Road
 City, State, Zip: Bakersfield, CA 93307
 Email: perrinkootstra@yahoo.com

Copy to: martyverhoeven@gmail.com

Requested by/Cell: Perrin "Pepper" Kootstra 661-809-5437

Facility: 13628 Adobe Rd, Bakersfield

Date sampled: 08/09/23Sampled by: Marty Verhoeven
 QA/QC Document Copy of Chain RWQCB

DESCRIPTION OF SAMPLES

1.	R-1	Sampled From: <u>Stringer</u>
2.	R-2	Sampled From: "
3.	R-3	Sampled From: "
4.	R-4	Sampled From: "
5.	R-5	Sampled From: "
6.	R-6	Sampled From: "
7.	R-7	Sampled From: "
8.	R-8	Sampled From: "
9.	R-N	Sampled From: <u>interior well</u>
10.	Rd 0.5	Sampled From: "

DELLALVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728

www.dellavalleelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

 No. of Samples **10** No. Bottles **10**
 Water Type: Drinking Wastewater
 Ag Water Ground Water Mon. Well
 Supply Water Other _____

Analysis and Bottles Required: (Please Indicate Analysis)

- DWW1: (EC, pH, NO₃-N, NH₄-N Field Test)
 (1) 1L plastic, unpreserved (white)
- DWW2: (DWW1 Plus SO₄, CO₃, HCO₃, Cl, Ca, Mg, Na, TDS)
 (1) 1L plastic, unpreserved (white)
- DCW1: (EC, NO₃-N, TDS)
 (1) 1L plastic, unpreserved (white)
- DPW1: (EC, pH, NO₃-N, NH₄-N, TKN, TDS, TP, TK)
 (1) 1L plastic, unpreserved (white)
- DPW2: (DPW1 Plus Ca, Mg, Na, HCO₃, CO₃, SO₄, Cl)
 (1) 1L plastic, unpreserved (white)

 Other

Date Sampled	Time Sampled	Field NH ₄ -N (mg/L)	Received Temp °C
8-9-23	1130	0	0.1/0.2
8-9-23	1140	0	3.8/-0.9
8-9-23	1150	0	0.6/-0.1
8-9-23	1202	0	1.9/0.3
8-9-23	1206	0	1.6/-0.7
8-9-23	1228	0	1.2/0.4
8-9-23	1244	0	0.9/-0.5
8-9-23	1247	0	1.3/0.4
8-9-23	105	0	3.1/-0.3
8-9-23	110	0	0.8/-0.5

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	<u>M. Janis</u>	WFC	8-9-23 1130	8-9-23 3:17p.m.
Second	<u>M. Janis</u>	DLI	08/09/23 3:17p.m.	
Third	<u>M. Janis</u>	DLI	8/10 7:59	
Fourth				

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorney's fees. It is understood that payment is expected to cash with samples unless terms have been previously arranged. Terms are net 30 days; credit accounts will be charged a default charge of 2% per month (annually 24%) or \$5.00 per month, whichever is greater.

If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellalvalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternatives to Litigation, Inc. (CAL). If the dispute is not resolved in mediation, then arbitration, reasonable attorneys' fees of Dellalvalle Laboratory.

Price List 2022

Invoicing Information:			Shipping
Sampling Hrs	Miles	Consulting	\$ <input type="text"/> In
			\$ <input type="text"/> Out
Amt Paid	Rec By	Check No.	Date <input type="text"/>

Signature _____

Sample received in cooler with ice?

[] Yes [] No

cttupdate 3020

 IR Thermometer SN: 200560723
 Correction Factor: 0°C
 Calibration Due: 9/26/2023
 Location: Laboratory

 IR Thermometer SN: 221511274
 Correction Factor: 0°C
 Calibration Due: 9/26/2023
 Location: Hanford

Report of Dairy Well Water Analysis

Lab No.: 22H0624

Sampled By: Marty Verhoeven

Requested By: Perrin (Pepper) Kootstra

Submitted Date: 08/04/22

Reported Date: 08/12/22

Project: 13628 Adobe Rd, Bakersfield

Crop ID:

E-mail: martyverhoeven@gmail.com

Copy To:

1	Well P-1 (Standpipe)	8/3/22	12:45	767	0.77	0.2	ND	397	ND	98.1	104	85.6	58.6	3.4	79	8.2	pH at 25°C
																	mg/L

* = Field NH₄-N not Taken.

ND = None Detected

Approved By:

Beth M. Friisland

Laboratory Director/Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02

08/04/22 07:40

22H0624

WATER WORK REQUEST

Bill To: 18430 08

Purchase Order No. _____ Results Needed By _____

Client **Kootstra Dairy Farms**
 Address 13628 Adobe Road
 City, State, Zip Bakersfield, CA 93307
 Email: perrinkootstra@yahoo.com

Copy to: martyverhoeven@gmail.com

Requested by/Cell: Perrin "Pepper" Kootstra 661-809-5437

Facility: 13628 Adobe Rd, Bakersfield

Date sampled 8/3/2022

Sampled by Marty Verhoeven

QA/QC Document Copy of Chain RWQCB

DESCRIPTION OF SAMPLES

1. Well P-I Sampled From: Shampoo

2. Sampled From:

3. If Out of Temperature Compliance
 Proceed: Yes No

5. Ok'd by

Date 8/3/22 client

7. Sampled From:

8. Sampled From:

9. Sampled From:

10. Sampled From:

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	<i>Marta</i>	W	8/3/22 12:45	8/3/22 3:50pm
Second	<i>VR</i>	DL	8/3/22 3:50pm	
Third	<i>Marta</i>	PAWS	8/3 6:00pm	
Fourth	<i>Marta</i>	AT	8/4 8:30am	

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

Invoicing Information:

Price List 2022

			Shipping
Sampling Hrs	Miles	Consulting	\$ <input type="text"/> In <input type="text"/> Out
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Amt Paid

Rec By

Check No.

Date

Signature

Sample received in cooler with ice?
 Yes No

2022 Update 2022

Report of Dairy Well Water Analysis

Kootstra Dairy Farms
13628 Adobe Road
Bakersfield
00-0018430

CA
08
93307

E-mail: martyverhoeven@gmail.com

Copy To:

Lab No.: 22H0623
Sampled By: M. Verhoeven
Requested By: Perin (Pepper) Kootstra
Submitted Date: 08/04/22
Reported Date: 08/10/22
Project: 13628 Adobe Rd, Bakersfield
Crop ID:

	Date Sampled	Time Sampled	EC μmhos/cm	EC mmhos/cm	NO ₃ -N mg/L	Field NH ₄ -N mg/L	Total NH ₄ -N at 25°C mg/L	pH unit
1	Well P-2	8/3/22	12:40	511	0.51	0.2	ND	8.2
2	Well P-3	8/3/22	12:30	364	0.36	0.1	ND	8.4

* = Field NH₄-N not Taken.

ND = None Detected

Approved By:

Brett Verhoeven

Laboratory Director/Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02

08/04/22 07:40

22H0623

WATER WORK REQUEST

Bill To: 18430 08

Purchase Order No. _____ Results Needed By _____

Client **Kootstra Dairy Farms**
 Address **13628 Adobe Road**
 City, State, Zip **Bakersfield, CA 93307**
 Email: **perrinkootstra@yahoo.com**

Copy to: **martyverhoeven@gmail.com**

Requested by/Cell: **Perrin "Pepper" Kootstra 661-809-5437**

Facility: **13628 Adobe Rd, Bakersfield**

Date sampled **8-3-22**

Sampled by **mh**

QA/QC Document Copy of Chain RWQCB

DESCRIPTION OF SAMPLES

1. **Lett P-1** Sampled From: **Steel pipe**
 2. **" P-2** Sampled From: **" "**
 3. **" P-3** Sampled From: **" "**

4.

If Out of Temperature Compliance
 Proceed: Yes No

6. **Ok'd by**

Date **8/3/22** **Initials** **mh**

7.

Sampled From: **Steel pipe**

8.

Sampled From: **Steel pipe**

9.

Sampled From: **Steel pipe**

10.

Sampled From: **Steel pipe**

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	mh	CS	8-3-22 1230	8-3-22 3:50pm
Second	YR	DLI	8-3-22 3:50pm	
Third	MH	DLI	8-3-22 6:00	
Fourth	mh	DLI	8-3-22 6:00	

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

Invoicing Information:

Price List 2022

			Shipping
Sampling Hrs	Miles	Consulting	\$ In
 	 	 	 Out
 	 	 	
 	 	 	

Amt Paid Rec By Check No. Date

Signature _____
 Sample received in cooler with ice?

Yes No

ctt:uplate 20/20

Report of Dairy Well Water Analysis

Kootstra Dairy Farms
13628 Adobe Road
Bakersfield
00-0018430

CA 93307
08

E-mail: martyverhoeven@gmail.com
Copy To: perrinkootstra@yahoo.com

Lab No.: 22G1547
Sampled By: Marty Verhoeven
Requested By: Perrin (Pepper) Kootstra
Submitted Date: 07/21/22
Reported Date: 07/26/22
Project: 13628 Adobe Rd, Bakersfield
Crop ID:

	Date Sampled	Time Sampled	EC μmhos/cm	EC mmhos/cm	NO ₃ -N mg/L	Field NH ₄ -N mg/L	Total NH ₄ -N mg/L	pH at 25°C unit
1	D-2	7/20/22	12:39	530	0.53	0.4	ND	8.1
2	R-2 (Air Valve)	7/20/22	13:28	655	0.65	0.3	ND	8.2
3	R-3 (Air Valve)	7/20/22	13:33	415	0.42	0.1	ND	8.2
4	R-4 (Air Valve)	7/20/22	13:36	407	0.41	0.3	ND	8.2
5	R-5 (Air Valve)	7/20/22	13:40	414	0.41	0.6	ND	8.2
6	R-7 (Air Valve)	7/20/22	13:52	364	0.36	0.5	ND	8.2

* = Field NH₄-N not Taken.

ND = None Detected

Approved By:

Boett M. Friedland

Laboratory Director/Technical Manager

ELAP Certification #1595

A2LA Certification #6440.02



07/21/22 07:00

22G1547

WATER WORK REQUEST

Bill To: 18430 Cops: 08

Purchase Order No. Results Needed By

Client **Kootstra Dairy Farms**
 Address 13628 Adobe Road
 City, State, Zip Bakersfield, CA 93307
 Email: perrinkootstra@yahoo.com

Copy to: martyverhoeven@gmail.com

Requested by/Cell: Perrin "Pepper" Kootstra 661-809-5437

Facility: 13628 Adobe Rd, Bakersfield

Date sampled 7-20-22Sampled by M. Kootstra QA/QC Document Copy of Chain RWQCB

DESCRIPTION OF SAMPLES

1.	<u>D-2</u>	Sampled From:
2.	<u>R-1</u>	Sampled From: <u>Acvalve</u>
2.3	<u>R-2</u>	Sampled From: " "
3.4	<u>R-3</u>	Sampled From: " "
4.5	<u>R-4</u>	Sampled From: " "
5.6	<u>R-5</u>	Sampled From: " "
7.	<u>R-6</u>	Sampled From: " "
6.8	<u>R-7</u>	Sampled From: " "
9.	<u>R-8</u>	Sampled From: " "
10.		Sampled From:

DELLAVALLE LABORATORY, INC 2-21-221910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
 www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

No. of Samples 76 No. Bottles 76

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

Analysis and Bottles Required: (Please Indicate Analysis)

- DWW1: (EC, pH, NO₃-N, NH₄-N Field Test)
 (1) 1L plastic, unpreserved (white)
- DWW2: (DWW1 Plus SO₄, CO₃, HCO₃, Cl, Ca, Mg, Na, TDS)
 (1) 1L plastic, unpreserved (white)
- DCW1: (EC, NO₃-N, TDS)
 (1) 1L plastic, unpreserved (white)
- DPW1: (EC, pH, NO₃-N, NH₄-N, TKN, TDS, TP, TK)
 (1) 1L plastic, unpreserved (white)
- DPW2: (DPW1 Plus Ca, Mg, Na, HCO₃, CO₃, SO₄, Cl)
 (1) 1L plastic, unpreserved (white)

 Other

Date Sampled	Time Sampled	Field NH4-N (mg/L)	Received Temp °C
7-20-22	1239	0	13.3
7-20-22	123	0	
7-20-22	128	0	12.6
7-20-22	133	0	12.7
7-20-22	136	0	15.3
7-20-22	140	0	14.8
7-20-22	148	0	
7-20-22	152	0	11.4
7-20-22	159	0	

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date-Time)
First	<u>M. Kootstra</u>	WFGS	7-20-22 1239	7-20-22 140
Second	<u>M. Kootstra</u>	DLI	7/20/22 3:49 PM	
Third	<u>M. Kootstra</u>	PMFS	7/20/22 6:00 PM	7-20-22
Fourth	<u>M. Kootstra</u>	DLI	7/21/22 07:00	

I guarantee that no the client, or on behalf of the client sampled, have the right to conduct the above requested services. Should be found that I or on behalf of the client, or any other party, have been previously engaged. Items are not 30 days regular analysis will be charged a late charge fee of 25% for items analyzed 24-7 or \$5.00 per item, whichever is greater. If payment is not made when due and a legal dispute arises regarding the products or services of DellaValle Laboratory, Inc. it will be submitted to mediation under the Rules and Procedures of the American Arbitration Association. In the event of a dispute that is not resolved in mediation, then arbitration, non-removable attorney's fees of DellaValle Laboratory, Inc. will be charged to the client.

Invoicing Information:

Price List 2022

			Shipping
Sampling Hrs	Miles	Consulting	\$ <u>8</u> In \$ <u>0</u> Out
Amt Paid	Rec By	Check No.	Date

Signature

Sample received in cooler with ice?

 Yes No

envelope 2020