Annual Report - General Order No. R5-2007-0035
Reporting peroid 1/1/2020 to 12/31/2020.

DAIRY FACILITY INFORMATION

A. NAME OF DAIRY OR BUSINESS OPERATING THE DAIRY: HackerDairy

Physical Address of dairy:

Number and Street	City	County	Zip Code

Street and nearest cross street (if no address):

Date facility was originally placed in operation: 4/23/2022

Regional Water Quality Control Board Basin Plan designation:

County Assessor Parcel Number(s) for dairy facility:

No Parcels entered.

B. OPERATORS

Spencer Nylund

Operator name: Spencer Nylund Telephone no.: (209) 634-7520

Number and Street	City	County	Zip Code
P.O. Box 1029	Hilmar		95324

This operator is responsible for paying permit fees.

C. OWNERS

Spencer Nylund			
Operator name:	Spencer Nylund	Telephone no.:	(209) 634-7520
P.O. Box 1029	Hilmar		95324
Number and Street	City	County	Zip Code

This owner is responsible for paying permit fees.

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AVAILABLE NUTRIENTS

A. HERD INFORMATION:

	Milk Cows	Dry Cows	Bred Heifers (15-24 mo.)	Heifers (7-14 mo. to breeding)	Calves (4-6 mo.)	Calves (0-3 mo.)
Number open confinement	0	0	0	0	0	0
Number under roof	0	0	0	0	0	0
Maximum number	0	0	0	0	0	0
Average number	0	0	0	0	0	0
Avg live weight (lbs)	0	0	0	0		

Predominant milk cow breed:

Average milk production: 0 pounds per cow per day

B. MANURE GENERATED:

Total manure excreted by the herd: 0 *tons per reporting period*

Total nitrogen from manure: 0 *lbs per reporting period* After ammonia losses (30% loss applied): 0.00 *lbs per reporting period*

Total phosphorus from manure: 0 *lbs per reporting period*

Total potassium from manure: 0 *lbs per reporting period*

Total salt from manure: 0 *lbs per reporting period*

C. PROCESS WASTEWATER GENERATED:

Process wastewater generated:	5,700,000	*gallons*
Total nitrogen generated:	21,867.57	*gallons*
Total phosphorus generated:	1,364.75	*gallons*
Total potassium generated:	23,700.13	*gallons*
Total salt generated:	382,344.53	*gallons*

	4,860,000	*gallons applied*
+	840,000	*gallons exported*
-	0	*gallons imported*
=	5,700,000	*gallons generated*

D. FRESH WATER SOURCES:

Source Description	Type
Canal	Surface water
Well 5	Ground water

Well 6	Ground water

E. SUBSURFACE (TILE) DRAINAGE SOURCES:

Source Description
Tile Drain 1

F. NUTRIENT IMPORTS:

Date	Material Type/ Description	Quantity (tons)	Reporting basis	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
5/9/2020	Dry manure: Separator solids/ UN32	41.61	dry-weight	56.00	19,400.00	5,300.00	21,800.00	0.00	0.00

No process wastewater nutrient imports entered.

Date	Material Type/ Description	Quantity	Reporting basis	Moisture (%)	N (%)	P (%)	K (%)	Salt (%)
2020-05-09	Commercial fertilizer/ Other: Solid commercial fertilizer/ UN32	41.61 tons	dry-weight	0.00	32.00	0.00	0.00	0.00

Material Type	N (lbs)	P (lbs)	K (lbs)	Salt (lbs)
Commercial fertilizer / Other	26,603.77	0.00	0.00	0.00
Dry Manure	710.37	194.07	798.25	0.00
Process wastewater	0.00	0.00	0.00	0.00
Total Import for all materials	27,314.14	194.07	798.25	0.00

G. NUTRIENT EXPORTS:

Date	Material type	Quantity	Reporting basis	Moisture (%)	Density (lbs/cu ft)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
	Dry manure: Corral solids	1,898.00 tons	dry-weight	56.00		19,400.00	5,280.00	21,800.00		0.00
	Dry manure: Corral solids	1,839.00 tons	dry-weight	35.60		24,000.00	10,000.00	48,000.00		0.00

Date	Material type	Quantity	Kjeldahl-N (mg/L)	Ammonium-N (mg/L)	Ammonia-N (mg/L)	Nitrate-N (mg/L)	P (mg/L)	K (mg/L)	EC (µmhos/cm)	TDS (mg/L)
2020-01-25	Process wastewater	420,000.00 gals	484.00	0	0	0	71.90	997.00	8,000.00	8800
2020-02-12	Process wastewater	420,000.00 gals	484.00	0	0	0	71.90	997.00	8,000.00	8800

Material Type	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)

Dry Manure	89,249.82	32,505.19	150,105.57	0.00
Process wastewater	3,392.74	504.00	6,988.77	61,686.24
Total Import for all materials	92,642.57	33,009.19	157,094.34	61,686.24

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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
Field 1	22	22	2	process wastewater	
Field 2	17	17	2	process wastewater	
Field 17	290	290	0	manure	
Totals for areas that were used for applications	329	329	4		
Totals for areas that were not used for applications	0	0	0		
Land application area totals	329	329	4		

B. CROPS AND HARVETS:

Field 1

Field name: Field 1

11/1/2019 Oats silage-soft dough

Crop: Oats silage-soft dough Acres planted: 22 Plant date: 11/1/2019

Harvest date	Yield	Reporting Basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
4/20/2020	391.00 tons	As Is		72.20%	5,000.00	1,390.00	13,600.00		12.50%

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total Salt (lbs/acre)
Anticipated harvest content	16.00	160.00	25.60	132.80	0.00
Total actual harvest content	17.77	177.73	49.41	483.42	1,235.20

5/7/2020 Corn silage

Crop: Corn silage Acres planted: 22 Plant date: 5/7/2020

Harvest date	Yield	Reporting Basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
8/29/2020	569.00 tons	As Is		65.00%	6,640.00	950.00	9,100.00		6.71%

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	45.00	198.00	0.00
Total actual harvest content	25.86	343.47	49.14	470.72	1,214.82

Field 2

Field name: Field 2

11/1/2019 Oats silage-soft dough

Crop: Oats silage-soft dough Acres planted: 17 Plant date: 11/1/2019

Harvest date	Yield	Reporting Basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
4/20/2020	275.00 tons	As Is		66.80%	5,970.00	930.00	9,300.00		8.28%

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total Salt (lbs/acre)

Anticipated harvest content	16.00	160.00	25.60	132.80	0.00
Total actual harvest content	16.18	193.15	30.09	300.88	889.37

5/7/2020 Corn silage

Crop: Corn silage Acres planted: 17 Plant date: 5/7/2020

Harvest date	Yield	Reporting Basis	Density (lbs/cu ft)	Moisture (%)	N (mg/kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS (%)
8/29/2020	440.00 tons	As Is		71.00%	5,450.00	1,040.00	12,200.00		9.52%

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	45.00	198.00	0.00
Total actual harvest content	25.88	282.12	53.84	631.53	1,429.12

Field 17

Field name: Field 17

6/1/2020 Corn silage

Crop: Corn silage Acres planted: 290 Plant date: 6/1/2020

No harvests entered for this crop.

	Yield (tons/acre)	Total N (lbs/acre)	Total P (lbs/acre)	Total K (lbs/acre)	Total Salt (lbs/acre)
Anticipated harvest content	30.00	240.00	45.00	198.00	0.00
Total actual harvest content	0.00	0.00	0.00	0.00	0.00

Nutrient Budget

A. LAND APPLICATIONS:

Field 1 - 11/1/2019: Oats silage-soft dough

Field name: Field 1

Crop: Oats silage-soft dough Plant date: 11/1/2019

Application date	Application method	Precipitation 24 hours prior:	Precipitation during application	Precipitation 24 hours following
10/10/2019	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Field Sample	Existing soil nutrient content	600.00	240.00	600.00	144.00	
Plowdown Ex1	Plowdown credit	250.00	250.00	250.00	250.00	
Canal	Freshwater	0.00	0.00	0.00	322.61	2,430,000.00 gals
Application event totals		850.00	490.00	850.00	716.61	

11/20/2019	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	66.09	9.82	136.14	1,201.68	360,000.00 gals
Well 6	Freshwater	14.31	0.00	0.00	0.00	756,000.00 gals
Application event totals		80.40	9.82	136.14	1,201.68	

1/10/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	78.06	5.32	113.75	799.75	420,000.00 gals
Application event totals		78.06	5.32	113.75	799.75	

Field 1 - 5/7/2020: Corn silage

Field name: Field 1

Crop: Corn silage Plant date: 5/7/2020

Application date	Application method	Precipitation 24 hours prior:	Precipitation during application	Precipitation 24 hours following
5/7/2020	Sidedress	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Dry manure: Separator solids	Dry manure: Separator solids	0.43	0.12	0.48	0.00	
Application event totals		0.43	0.12	0.48	0.00	

6/4/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Freshwater	0.00	0.00	0.00	365.63	2,754,000.00 gals
Application event totals		0.00	0.00	0.00	365.63	

6/14/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Freshwater	0.00	0.00	0.00	258.09	1,944,000.00 gals
Application event totals		0.00	0.00	0.00	258.09	

6/24/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	94.48	2.16	45.62	1,963.20	570,000.00 gals
Application event totals		94.48	2.16	45.62	1,963.20	

7/20/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	149.19	3.41	72.03	3,099.79	900,000.00 gals
Application event totals		149.19	3.41	72.03	3,099.79	

Field 2 - 11/1/2019: Oats silage-soft dough

Field name: Field 2

Crop: Oats silage-soft dough Plant date: 11/1/2019

Application date	Application method	Precipitation 24 hours prior:	Precipitation during application	Precipitation 24 hours following
10/9/2019	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Freshwater	0.00	0.00	0.00	742.03	4,318,920.00 gals

Application event totals		0.00	0.00	0.00	742.03	

1/12/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	144.32	9.84	210.29	1,478.54	600,000.00 gals
Well 5	Freshwater	24.28	0.00	0.00	5.01	1,020,000.00 gals
Application event totals		168.60	9.84	210.29	1,483.54	

2/22/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	86.59	5.90	126.18	887.12	360,000.00 gals
Application event totals		86.59	5.90	126.18	887.12	

Field 2 - 5/7/2020: Corn silage

Field name: Field 2

Crop: Corn silage Plant date: 5/7/2020

Application date	Application method	Precipitation 24 hours prior:	Precipitation during application	Precipitation 24 hours following
4/26/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Canal	Freshwater	0.00	0.00	0.00	890.66	5,184,000.00 gals
Application event totals		0.00	0.00	0.00	890.66	

5/7/2020	Sidedress	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Commercial	Commercial fertilizer/ Other: Solid commercial fertilizer	16.00	0.00	0.00	0.00	
Application event totals		16.00	0.00	0.00	0.00	

6/4/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	257.42	5.88	124.29	5,348.65	1,200,000.00 gals

Canal	Freshwater	0.00	0.00	0.00	1,113.32	6,480,000.00 gals
Application event totals		257.42	5.88	124.29	6,461.97	

8/6/2020	Surface (irragation)	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Wastewater	Process wastewater	96.53	2.21	46.61	2,005.75	450,000.00 gals
Application event totals		96.53	2.21	46.61	2,005.75	

Field 17 - 6/1/2020: Corn silage

Field name: Field 17

Crop: Corn silage Plant date: 6/1/2020

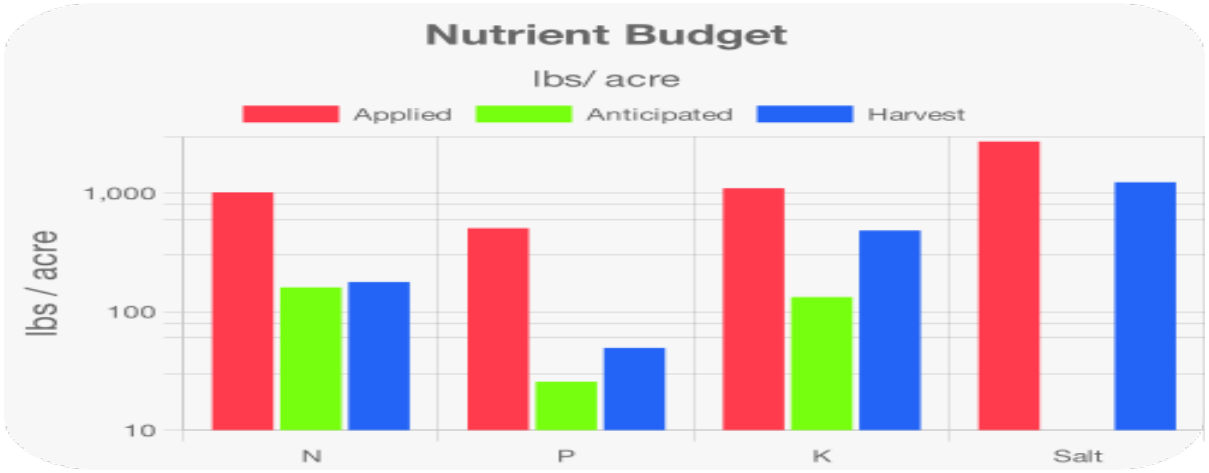
Application date	Application method	Precipitation 24 hours prior:	Precipitation during application	Precipitation 24 hours following
5/6/2020	Broadcast/incorporate	No Precipitation	No Precipitation	No Precipitation

Source description	Material Type	N (lbs/acre)	P (lbs/acre)	K (lbs/acre)	Salt (lbs/acre)	Amount
Solid Manure	Corral solids	194.80	53.02	218.90	0.00	3,309.00 tons
Application event totals		194.80	53.02	218.90	0.00	

B. NUTRIENT BUDGET

Field 1 - 11/1/2019: Oats silage-soft dough

Field name: Field 1 Crop: Oats silage-soft dough Plant date: 11/1/2019



	Total N (lbs/ acre)	Total P (lbs/ acre)	Total K (lbs/ acre)	Total salt (lbs/ acre)
Existing soil nutrient content	600.00	240.00	600.00	144.00
Plowdown credit	250.00	250.00	250.00	250.00
Commerical fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	144.16	15.14	249.89	2,001.43
Fresh water	14.31	0.00	0.00	322.61
Atmospheric deposition	7	0.00	0.00	0.00
Total nutrients applied	1,015.47	505.14	1,099.89	2,718.05
Anticipated crop nutrient removal	160.00	25.60	132.80	0.00
Actual crop nutrient removal	177.73	49.41	483.42	1,235.20
Nutrient balance	837.74	455.73	616.48	1,482.84
Applied to removed ratio	5.71	10.22	2.28	2.20

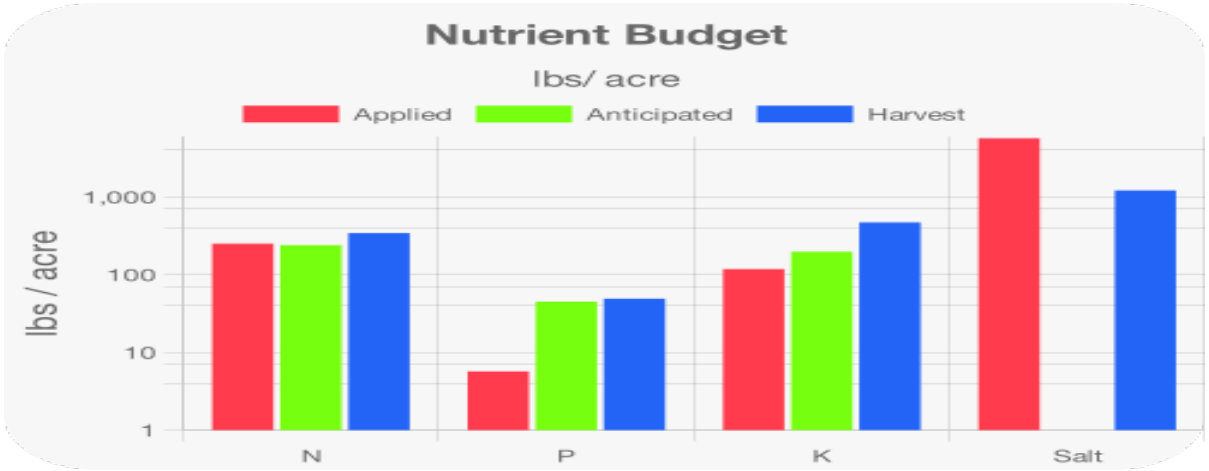
Fresh water applied	
3,186,000.00	*gallons*
117.33	*acre-inches*
5.33	*inces/acre*

Process wastewater applied	
780,000.00	*gallons*
28.72	*acre-inches*
1.31	*inces/acre*

Total harvests for the crop	
1	*harvest*

Field 1 - 5/7/2020: Corn silage

Field name: Field 1 Crop: Corn silage Plant date: 5/7/2020

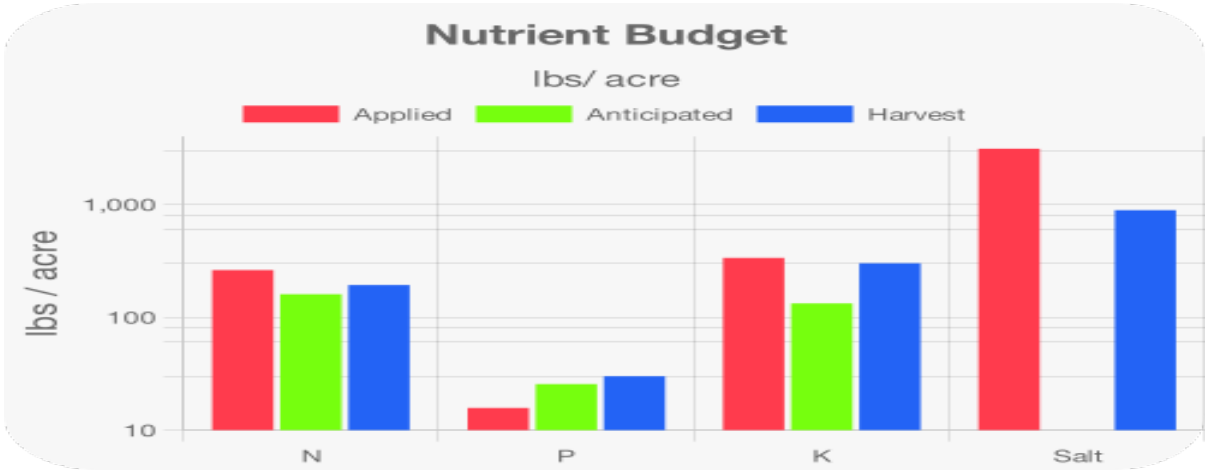


	Total N (lbs/ acre)	Total P (lbs/ acre)	Total K (lbs/ acre)	Total salt (lbs/ acre)
Existing soil nutrient content	0.00	0.00	0.00	0.00
Plowdown credit	0.00	0.00	0.00	0.00
Commerical fertilizer / Other	0.43	0.12	0.48	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	243.67	5.57	117.65	5,062.99
Fresh water	0.00	0.00	0.00	623.71
Atmospheric deposition	7	0.00	0.00	0.00
Total nutrients applied	251.10	5.69	118.13	5,686.70
Anticipated crop nutrient removal	240.00	45.00	198.00	0.00
Actual crop nutrient removal	343.47	49.14	470.72	1,214.82
Nutrient balance	-92.37	-43.45	-352.59	4,471.89
Applied to removed ratio	0.73	0.12	0.25	4.68

Fresh water applied	
4,698,000.00	*gallons*
173.01	*acre-inches*
7.86	*inces/acre*
Process wastewater applied	
1,470,000.00	*gallons*
54.14	*acre-inches*
2.46	*inces/acre*
Total harvests for the crop	
1	*harvest*

Field 2 - 11/1/2019: Oats silage-soft dough

Field name: Field 2 Crop: Oats silage-soft dough Plant date: 11/1/2019



	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
Commerical fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	230.91	15.74	336.47	2,365.66
Fresh water	24.28	0.00	0.00	747.04
Atmospheric deposition	7	0.00	0.00	0.00
Total nutrients applied	262.20	15.74	336.47	3,112.70
Anticipated crop nutrient removal	160.00	25.60	132.80	0.00
Actual crop nutrient removal	193.15	30.09	300.88	889.37
Nutrient balance	69.05	-14.35	35.59	2,223.33
Applied to removed ratio	1.36	0.52	1.12	3.50

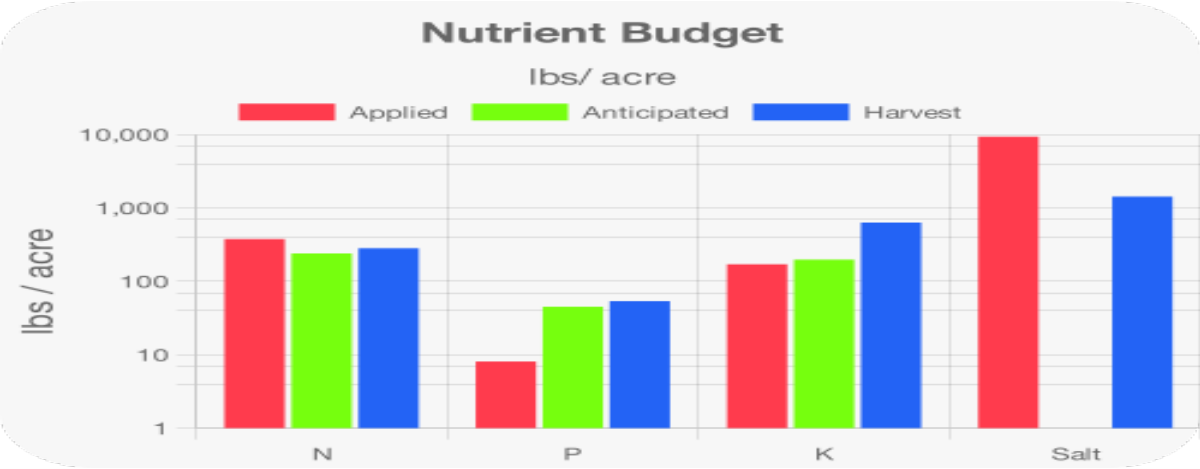
Fresh water applied	
5,338,920.00	*gallons*
196.61	*acre-inches*
11.57	*inces/acre*

Process wastewater applied	
960,000.00	*gallons*
35.35	*acre-inches*
2.08	*inces/acre*

Total harvests for the crop	
1	*harvest*

Field 2 - 5/7/2020: Corn silage

Field name: Field 2 Crop: Corn silage Plant date: 5/7/2020



	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
Commerical fertilizer / Other	16.00	0.00	0.00	0.00
Dry manure	0.00	0.00	0.00	0.00
Process wastewater	353.95	8.09	170.90	7,354.40
Fresh water	0.00	0.00	0.00	2,003.98
Atmospheric deposition	7	0.00	0.00	0.00
Total nutrients applied	376.95	8.09	170.90	9,358.38
Anticipated crop nutrient removal	240.00	45.00	198.00	0.00
Actual crop nutrient removal	282.12	53.84	631.53	1,429.12
Nutrient balance	94.83	-45.74	-460.63	7,929.26
Applied to removed ratio	1.34	0.15	0.27	6.55

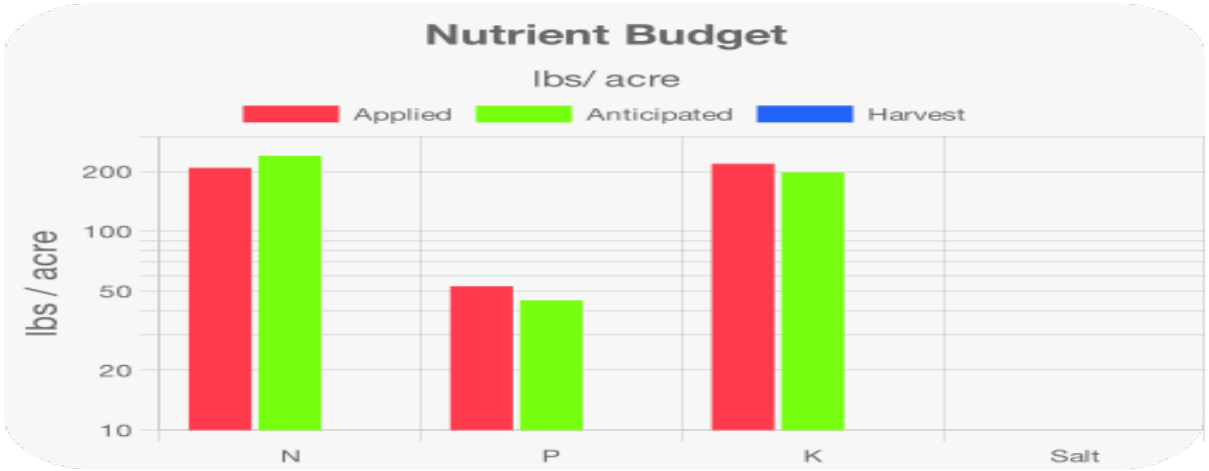
Fresh water applied	
11,664,000.00	*gallons*
429.55	*acre-inches*
25.27	*inces/acre*

Process wastewater applied	
1,650,000.00	*gallons*
60.76	*acre-inches*
3.57	*inces/acre*

Total harvests for the crop	
1	*harvest*

Field 17 - 6/1/2020: Corn silage

Field name: Field 17 Crop: Corn silage Plant date: 6/1/2020



	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
Commerical fertilizer / Other	0.00	0.00	0.00	0.00
Dry manure	194.80	53.02	218.90	0.00
Process wastewater	0.00	0.00	0.00	0.00
Fresh water	0.00	0.00	0.00	0.00
Atmospheric deposition	14	0.00	0.00	0.00
Total nutrients applied	208.80	53.02	218.90	0.00
Anticipated crop nutrient removal	240.00	45.00	198.00	0.00
Actual crop nutrient removal	0.00	0.00	0.00	0.00
Nutrient balance	208.80	53.02	218.90	0.00
Applied to removed ratio	0.00	0.00	0.00	0.00

Fresh water applied	
0.00	*gallons*
0.00	*acre-inches*
0.00	*inces/acre*

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

Total harvests for the crop	
0	*harvest*

Nutrient Analyses

A. Manure Analyses

Manure Caetano

Sample source and description: Manure Caetano

Sample date: 3/9/2020 Material type: Corral solids Source of analysis: Lab Analysis Method of Reporting: dry-weight

Moisture: 56.00%

	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	19,400.00	5,280.00	21,800.00	0.00	0.00	0.00	0.00	0.00		0.00
DL	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00		50.00

B. PROCESS WASTEWATER ANALYSES

Lagoon

Sample source and description: Lagoon

Sample date: 11/12/2019 Material type: Process wastewater Source of analysis: Lab Analysis pH: 0.00

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	484.00	336.00	0.00	0.00	71.90	997.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,000.00	8,800.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10

Lagoon

Sample source and description: Lagoon

Sample date: 3/9/2020 Material type: Process wastewater Source of analysis: Lab Analysis pH: 0.00

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	490.00	263.00	0.00	0.00	33.40	714.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	6,000.00	5,020.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10

Lagoon

Sample source and description: Lagoon

Sample date: 5/18/2020 Material type: Process wastewater Source of analysis: Lab Analysis pH: 0.00

	Kjeldahl-N (mg/L)	NH4-N (mg/L)	NH3-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	Total K (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	437.00	374.00	0.00	0.00	9.99	211.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	8,310.00	9,080.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10

C. FRESH WATER ANALYSES

Canal

Canal Water

Sample source and description: Canal Water

Sample date: 9/22/2020 Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	259.00	350.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10.00

Well 5

Irrigation Water

Sample source and description: Irrigation Water

Sample date: 8/6/2020 Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	48.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,660.00	10.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10.00

Well 6

Irrigation Water

Sample source and description: Irrigation Water

Sample date: 8/6/2020 Source of analysis: Lab Analysis

	Total N (mg/L)	NH4-N (mg/L)	Nitrate-N (mg/L)	Calcium (mg/L)	Magnes. (mg/L)	Sodium (mg/L)	Bicarb. (mg/L)	Carb, (mg/L)	Sulfate (mg/L)	Chloride (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	49.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1,730.00	0.00
DL	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	0.50	1.00	10.00

D. SOIL ANALYSES

Field 1

Soil Sample C

Sample source and description: Soil Sample C

Sample date: 11/12/2019 Source of analysis: Lab Analysis

	Nitrate-N (mg/kg)	Total P (mg/kg)	Soluable P (mg/kg)	K (mg/kg)	EC (µmhos/cm)	Organic matter (%)	Total salt (mg/kg)
Value	50.00	50.00	20.00	50.00	20.00	20.00	
DL	5.00	5.00	5.00	5.00	5.00	5.00	

Soil Sample B

Sample source and description: Soil Sample B

Sample date: 11/12/2019 Source of analysis: Lab Analysis

	Nitrate-N (mg/kg)	Total P (mg/kg)	Soluable P (mg/kg)	K (mg/kg)	EC (µmhos/cm)	Organic matter (%)	Total salt (mg/kg)
Value	50.00	50.00	20.00	50.00	20.00	20.00	
DL	5.00	5.00	5.00	5.00	5.00	5.00	

Soil Sample A

Sample source and description: Soil Sample A

Sample date: 11/12/2019 Source of analysis: Lab Analysis

	Nitrate-N (mg/kg)	Total P (mg/kg)	Soluable P (mg/kg)	K (mg/kg)	EC (µmhos/cm)	Organic matter (%)	Total salt (mg/kg)
Value	50.00	50.00	20.00	50.00	20.00	20.00	
DL	5.00	5.00	5.00	5.00	5.00	5.00	

E. PLANT TISSUE ANALYSES

Field 1 - Fri Nov 01 2019 00:00:00 GMT-0700 (Pacific Daylight Time): Oats silage-soft dough

Oats silage-soft dough

Sample source and description: Oats silage-soft dough

Sample date: 5/5/2020 Source of analysis: Lab Analysis Method of Reporting: As Is

Moisture: 72.20%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,000.00	1,390.00	13,600.00		12.50
DL	100.00	100.00	100.00		0.01

Field 1 - Thu May 07 2020 00:00:00 GMT-0700 (Pacific Daylight Time): Corn silage

Corn silage

Sample source and description: Corn silage

Sample date: 8/28/2020 Source of analysis: Lab Analysis Method of Reporting: As Is

Moisture: 65.00%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	6,640.00	950.00	9,100.00		6.71
DL	100.00	100.00	100.00		0.01

Field 2 - Fri Nov 01 2019 00:00:00 GMT-0700 (Pacific Daylight Time): Oats silage-soft dough

Oats silage-soft dough

Sample source and description: Oats silage-soft dough

Sample date: 5/5/2020 Source of analysis: Lab Analysis Method of Reporting: As Is

Moisture: 66.80%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,970.00	930.00	9,300.00		8.28
DL	100.00	100.00	100.00		0.01

Field 2 - Thu May 07 2020 00:00:00 GMT-0700 (Pacific Daylight Time): Corn silage

Corn silage

Sample source and description: Corn silage

Sample date: 8/28/2020 Source of analysis: Lab Analysis Method of Reporting: As Is

Moisture: 71.00%

	Total N (mg/kg)	Total P (mg/kg)	Total K (mg/kg)	Total salt (mg/kg)	TFS (%)
Value	5,450.00	1,040.00	12,200.00		9.52
DL	100.00	100.00	100.00		0.01

F. SUBSURFACE (TILE) DRAINAGE ANALYSES

Tile Drain 1

Q1

Sample source and description: Q1

Sample date: 10/10/2019 Source of analysis: Lab Analysis

	NH4-N (mg/L)	Nitrate-N (mg/L)	Total P (mg/L)	EC (µmhos/cm)	TDS (mg/L)
Value	50.00	20.00	50.00	50.00	50
DL	5.00	5.00	5.00	5.00	5

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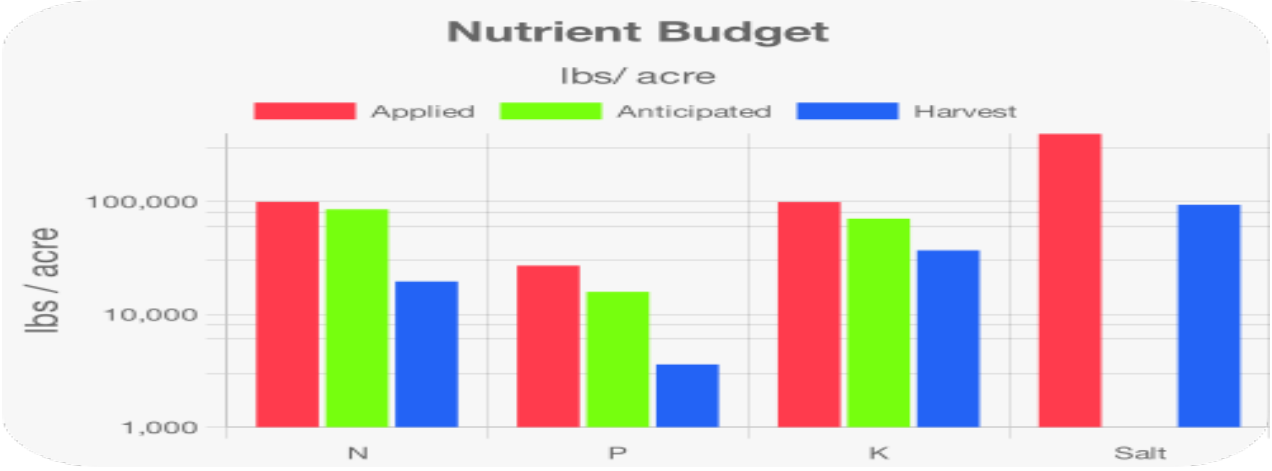
NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

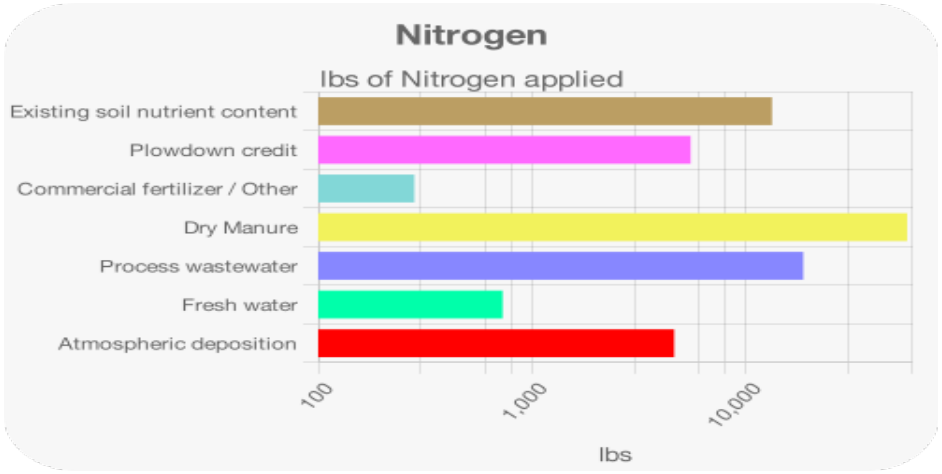
A. SUMMARY OF NUTRIENT APPLICATIONS, POTENTIAL REMOVAL, AND BALANCE

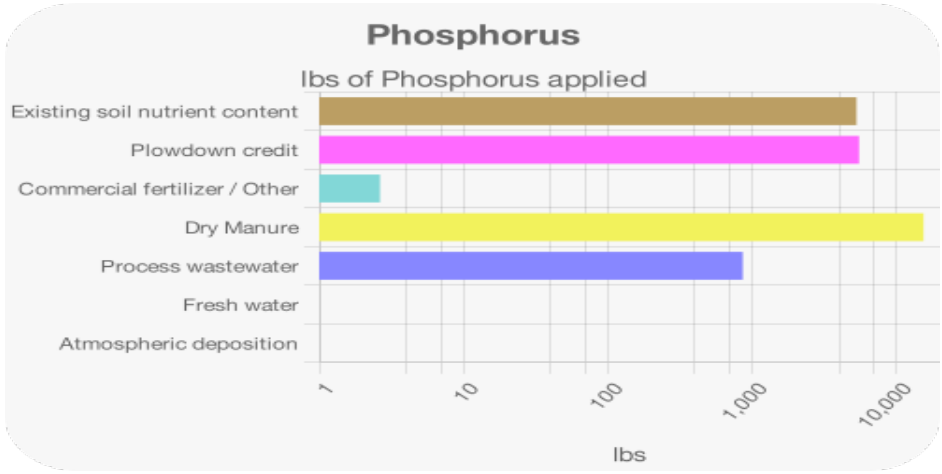
	Total N (lbs)	Total P (lbs)	Total K (lbs)	Total salt (lbs)
Existing soil nutrient content	13,200.00	5,280.00	13,200.00	3,168.00
Plowdown credit	5,500.00	5,500.00	5,500.00	5,500.00
Commerical fertilizer /Other	281.46	2.64	10.56	0.00
Dry Manure	56,491.25	15,374.94	63,479.86	0.00
Process wastewater	18,474.83	860.74	16,711.36	320,658.29
Fresh water	727.64	0.00	0.00	67,586.34
Atmospheric deposition	4606	0	0	0
Total nutrients applied	99,281.17	27,018.32	98,901.78	396,912.63
Anticipated crop nutrient removal	85,200.00	15,803.40	70,321.20	0.00
Actual crop nutrient removal	19,545.82	3,594.78	36,842.00	93,314.75
Nutrient balance	79,735.35	23,423.54	62,059.78	303,597.88
Applied to removed ratio	5.08	7.52	2.68	4.25

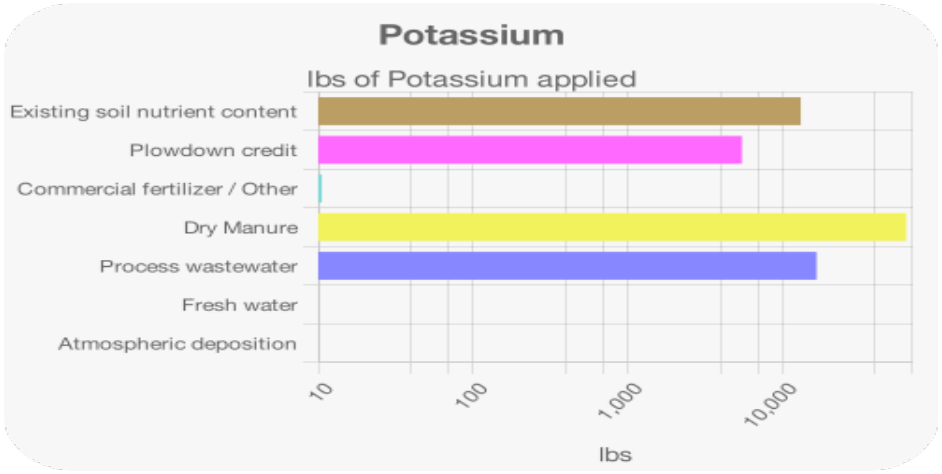
B. POUNDS OF NUTRIENT APPLIED VS. CROP REMOVAL

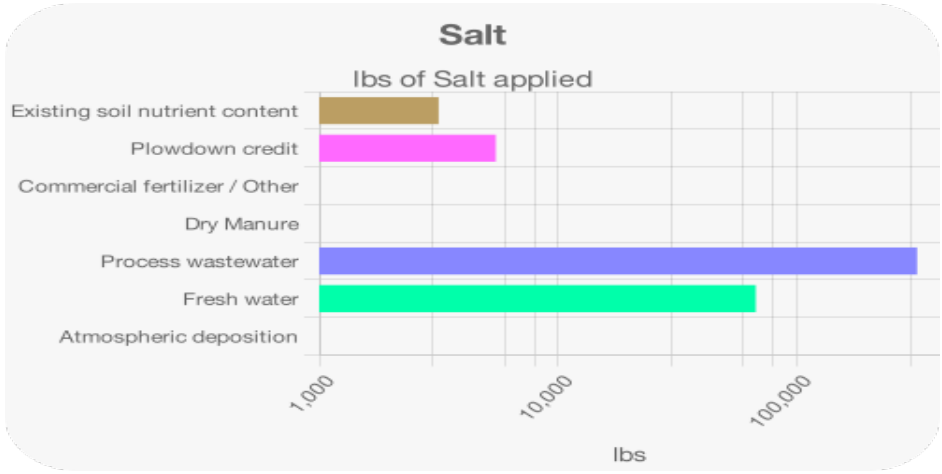


C. POUNDS OF NUTRIENT APPLIED BY MATERIAL TYPE









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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.

Discharge date	Location	Map reference #	Method of measuring discharge	Rationale for sample locations	Volume
2019-10-11 00:30:00.000	Sumwhere	133769420	Eyeball	It was wet there.	1337 cubic yd

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.

Discharge date	Location	Map reference #	Method of measuring discharge	Rationale for sample locations	Duration (min)	Volume
2019-10-11 00:30:00.000	Sumwhere	133769420	Eyeball	It was wet there.	20	1337 gals

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.

Discharge date	Location	Map reference #	Method of measuring discharge	Rationale for sample locations	Source of discharge	Volume
10/11/2019 00:30:00.000	Sumwhere	133769420	Eyeball	It was wet there.	Storm water	1337 gals

NUTRIENT MANAGEMENT PLAN AND EXPORT AGREEMENT STATEMENTS

A. NUTRIENT MANAGEMENT PLAN STATEMENTS

Was the facility's NMP updated in the reporting period? No

Was the facility's NMP developed by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? No

Was the facility's NMP approved by a certified nutrient management planner (specialist) as specified in Attachment C of the General Order? No

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

ADDITIONAL NOTES

A. NOTES

CERTIFICATION

A. 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
PRINT OR TYPE NAME	PRINT OR TYPE NAME
DATE	DATE

ATTACHMENTS

A. REQUIRED ATTACHMENTS

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.