Livingston Dairy Consulting, Inc.

1635 E. Propserity Ave., Ste B, Tulare
559-687-1440

Pacheco & Assocaites II WDID 5D545017001
5730 Avenue 256 Tulare, 93274

- [X] Annual Report
- [X] Water Analysis Samples
- [X] Manure Manifest
- [N/A] Facility / Land Map
- [X] CCA Nitrogen Retrofit Report
- [ ]
- [ ]

GEO Tracker Confirmation # **Date:**

Facility Info

Reporting Period: **1/1/2023** **to** **12/31/2023**

Name of the Facility

Dairy Name: Pacheco & Assocaites II WDID 5D545017001

Facility Address: 5730 Avenue 256 Tulare, 93274

Original Operation Date: 6/1/1959

Facility APN's: x148 x020 x001 xxxx

RWQCB Basin Plan Designation: Tulare Lake Basin

☐ Check if any information has changed

Owner(s)

Owner(s) Name: Pacheco & Associates II

Mailing Address: 26301 Road 52 Tulare, CA 93274

Home Phone Number:

Cell Phone Number: 559-972-1684

☐ Check if any information has changed

Operator(s)

Operator(s) Name: Same as owner

Mailing Address:

Home Phone Number:

Cell Phone Number:

☐ Check if any information has changed

Herd Information

	Milk Cows	Dry Cows	Bred Heifers (12-24 mo)	Heifers (3-12 mo)	Calves (0-3 mo)
Open Confinement:	2,864	413	-	-	-
Number Under Roof	-	-	-	-	-
Maximum Number	2,864	413			
Average Number	2,864	413			
Average Live Weight (lbs)	1,400	1,450			

Average Milk Production: 65

Predominant Milk Cow Breed: Holstein

Manure Generated:

Total manure excreted by the herd:	23,852.15	@40% Moisture	*ton/yr*
Total nitrogen from manure:	2,675,782		*lbs*
	260,158		*lbs*
	844,161		*lbs*
Total salt from manure:	-		*lbs*

After Ammonia (30% loss applied)

1,873,047 *lbs per reporting period*

Process Wastewater Generated:

Process wastewater generated:	41,814,400	*gal*
Total nitrogen generated:	112,046	*lbs*
	32,676	*lbs*
	101,134	*lbs*
Total salt (TDS) generated:	780,926	*lbs*

List of Land Application Areas

Field Name	APN	APN Acres	Cropable Acres	Total Harvest	Type of Waste Applied
D1	x118 x050 x016 xxxx	80	80	8	N/A
D2	x118 x050 x025 xxxx, x118 x050 x026 xxxx	76	74	8	N/A
D3	x148 x020 x025 xxxx	39	39	2	P.W. & D.M.
D4	x148 x020 x001 xxxx	159	33	2	P.W. & D.M.
D5	x148 x010 x038 xxxx, x148 x010 x047 xxxx, x148 x010 x048 xxxx	148	110	8	N/A
D6	x148 x010 x038 xxxx	45	19	2	P.W. & D.M.
D7	x148 x010 x035 xxxx, x148 x010 x047 xxxx	76	30	1	P.W. & D.M.
D8	x148 x010 x009 xxxx	19	19	1	P.W. & D.M.
D9-10	x148 x020 x001 xxxx		16	2	P.W. & D.M.
Bixler/Riddle	x115 x001 x012 xxxx, x115 x001 x010 xxxx	91	76	1	N/A
G1	x148 x020 x016 xxxx	158	151	8	N/A
G2	x148 x030 x017 xxxx	97	97	8	N/A
G3	x148 x010 x044 xxxx	76	74	8	N/A
T1	x149 x010 x001 xxxx	354	114	8	N/A
T2-25	x149 x010 x001 xxxx, x119 x130 x005 xxxx, x119 x130 x017 xxxx	630	152	1	P.W. & D.M.
	Total Crop Acres		1,084.00		

List of Land Application Areas

Field Name	APN	APN Acres	Cropable Acres	Total Harvest	Type of Waste Applied
T3	x148 x030 x008 xxxx	319	41	8	N/A
T4-14	x118 x060 x009 xxxx, x118 x060 x008 xxxx	134	70	1	Dry Manure
T5	x119 x130 x015 xxxx, x119 x130 x017 xxxx	513	75	8	N/A
T11	x119 x130 x015 xxxx, x119 x130 x005 xxxx		115	1	Dry Manure
T6	x119 x130 x009 xxxx	347	95	1	Dry Manure
T7	x119 x130 x009 xxxx		100	1	Dry Manure
T8	x119 x130 x009 xxxx		65	8	N/A
T9	x119 x130 x009 xxxx		61	1	Dry Manure
T15-16-23	x119 x130 x005 xxxx, x119 x130 x015 xxxx	376	84	1	Dry Manure
T19	x119 x130 x015 xxxx, x119 x130 x017 xxxx	313	63	1	Dry Manure
T21-29	x119 x130 x005 xxxx, x149 x010 x002 xxxx, x149 x010 x001 xxxx	286	31	1	Dry Manure
T22-24	x119 x130 x005 xxxx, x149 x010 x001 xxxx	276	153	8	N/A
T26	x149 x010 x001 xxxx	10	89	8	N/A
T30	x149 x010 x001 xxxx		26	1	Dry Manure
T36	x148 x030 x008 xxxx	160	77	8	N/A
	Total Crop Acres		1,145.00		

List of Land Application Areas

Field Name	APN	APN Acres	Cropable Acres	Total Harvest	Type of Waste Applied
T39-44	x118 x060 x017 xxxx	227	197	1	Dry Manure
T40	x118 x060 x015 xxxx, x118 x060 x017 xxxx	79	156	1	Dry Manure
T45-46	x118 x060 x016 xxxx	150	139	8	N/A
Zonneveld E	x016 x220 x003 xxxx	160	80	2	Dry Manure
Zonneveld W	x016 x220 x003 xxxx		80	2	Dry Manure
	Total Crop Acres		652.00		

List of Fresh Water Sources

Source Description	Type	Subsurface (Tile) Drainage Sources
Barn Well	Ground Water	No
Beibera (New)	Ground Water	No
Bixler S	Ground Water	No
JD4	Ground Water	No
JD5	Ground Water	No
D10 (New)	Ground Water	No
G1 (New)	Ground Water	No
G2E	Ground Water	No
G2W	Ground Water	No
G3 (JD6)	Ground Water	No
JD1	Ground Water	No
JD2	Ground Water	No
JD3	Ground Water	No
P1	Ground Water	No
P9 (New)	Ground Water	No
P11	Ground Water	No
P18	Ground Water	No
P20	Ground Water	No
P22	Ground Water	No
P15 (New)	Ground Water	No
P31	Ground Water	No
Z1	Ground Water	No
Z2	Ground Water	No
Z3	Ground Water	No
G1 (Old)	Ground Water	No
Zonneveld	Ground Water	No
P4, P6, P2, P3, P8, P7E, P7, P19, P23, P24, P26,	Ground Water	No
D2, D3, D4, D5, D6, P40W, P40E, P27, P46, P5	Ground Water	No
P14, Bixler N, D10 (old), P22 (old), Nat Ga	Ground Water	No
Canal	Surface Water	No

(WINTER) PLANT TISSUE ANALYSIS (Recorded As Received)

Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
D1	Alfalfa	5.99	6.74	0.27	1.84	-	10.23	2-407-852	09/28/23	Other
D2	Alfalfa	6.02	7.20	0.25	1.63	-	11.40	2-407-853	09/28/23	Other
D3	Wheat, Silage	62.60	0.48	0.10	0.70	-	8.95	6-8H53066	06/08/23	Valley Tech
D4	Wheat, Silage	64.50	0.42	0.09	0.77	-	10.70	6-8H53066	06/08/23	Valley Tech
D5	Alfalfa	8.53	5.54	0.25	1.68	-	11.39	2-407-854	09/28/23	Other
D6	Wheat, Silage	66.20	0.42	0.10	0.95	-	12.40	6-8H53066	06/08/23	Valley Tech
D7	W. Fallow	-	-	-	-	-	-	Fallow		-
D8	W. Fallow	-	-	-	-	-	-	Fallow		-
D9-10	Wheat, Silage	63.20	0.44	0.10	0.86	-	9.68	6-8H53066	06/08/23	Valley Tech
Bixler/Riddle	Trees, Pistachios	-	2.81	0.42	3.09	-	-	Book Value		-
G1	Alfalfa	7.46	4.47	0.24	1.76	-	8.58	2-407-861	09/28/23	Other
G2	Alfalfa	7.07	3.31	0.23	2.04	-	12.20	2-407-862	09/28/23	Other
G3	Alfalfa	7.27	2.11	0.21	1.30	-	10.46	2-407-863	09/28/23	Other
T1	Alfalfa	6.48	4.57	0.22	1.87	-	10.44	2-412-889	11/10/23	Other
T2-25	W. Fallow	-	-	-	-	-	-	Fallow		-
Detectable Lim	*Valley Tech*	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
	Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			
Detectable Limits										
Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			

(WINTER) PLANT TISSUE ANALYSIS (Recorded As Received)										
Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
T3	Alfalfa	5.76	5.10	0.25	1.60	-	11.09	2-407-858	09/28/23	Other
T4-14	W. Fallow	-	-	-	-	-	-	Fallow		-
T5	Alfalfa	7.09	4.24	0.23	1.98	-	10.61	2-412-893	11/10/23	Other
T11	W. Fallow	-	-	-	-	-	-	Fallow		-
T6	W. Fallow	-	-	-	-	-	-	Fallow		-
T7	W. Fallow	-	-	-	-	-	-	Fallow		-
T8	Alfalfa	7.02	2.32	0.27	1.98	-	10.17	2-407-857	09/28/23	Other
T9	W. Fallow	-	-	-	-	-	-	Fallow		-
T15-16-23	W. Fallow	-	-	-	-	-	-	Fallow		-
T19	W. Fallow	-	-	-	-	-	-	Fallow		-
T21-29	W. Fallow	-	-	-	-	-	-	Fallow		-
T22-24	Alfalfa	6.93	3.27	0.20	1.80	-	9.71	2-407-856	09/28/23	Other
T26	Alfalfa	6.35	3.08	0.27	1.83	-	10.57	2-407-859	09/28/23	Other
T30	W. Fallow	-	-	-	-	-	-	Fallow		-
T36	Alfalfa	7.21	0.97	0.22	2.70	-	10.77	2-407-860	09/28/23	Other
Detectable Lim Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			
Detectable Limits										
Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*			
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*			

(WINTER) PLANT TISSUE ANALYSIS (Recorded As Received)

Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
T39-44	W. Fallow	-	-	-	-	-	-	Fallow		-
T40	W. Fallow	-	-	-	-	-	-	Fallow		-
T45-46	Alfalfa	6.18	1.02	0.23	2.25	-	11.37	2-407-855	09/28/23	Other
Zonneveld E	Wheat, Silage	63.70	0.41	0.06	0.48	-	11.80	6-8H53066	06/08/23	Valley Tech
Zonneveld W	Wheat, Silage	57.40	0.48	0.10	0.67	-	9.97	6-8H53066	06/08/23	Valley Tech

Detectable Lim	*Valley Tech*	*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
	Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*
Detectable Limits						
Valley Tech		*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
Dellavalle		*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*

(SUMMER) PLANT TISSUE ANALYSIS (Recorded As Received)										
Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
D1	Alfalfa	-	-	-	-	-	-	See Winter		-
D2	Alfalfa	-	-	-	-	-	-	See Winter		-
D3	Corn, Silage	64.20	0.44	0.09	0.33	-	5.46	10-24H70523	10/24/23	Valley Tech
D4	Corn, Silage	64.70	0.46	0.09	0.32	-	4.00	11-8H72228	11/08/23	Valley Tech
D5	Alfalfa	-	-	-	-	-	-	See Winter		-
D6	Corn, Silage	66.10	0.40	0.11	0.45	-	5.95	10-24H70523	10/24/23	Valley Tech
D7	Corn, Silage	61.40	0.44	0.09	0.41	-	4.88	10-24H70523	10/24/23	Valley Tech
D8	Corn, Silage	60.70	0.44	0.10	0.42	-	4.63	10-24H70523	10/24/23	Valley Tech
D9-10	Corn, Silage	64.20	0.43	0.10	0.37	-	5.12	10-24H70523	10/24/23	Valley Tech
Bixler/Riddle	Trees, Pistachios	-	-	-	-	-	-	Trees		-
G1	Alfalfa	-	-	-	-	-	-	See Winter		-
G2	Alfalfa	-	-	-	-	-	-	See Winter		-
G3	Alfalfa	-	-	-	-	-	-	See Winter		-
T1	Alfalfa	-	-	-	-	-	-	See Winter		-
T2-25	Corn, Silage	70.80	0.31	0.08	0.39	-	5.94	9-6H64299	09/06/23	Valley Tech

Detectable Limits					
Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*

(SUMMER) PLANT TISSUE ANALYSIS (Recorded As Received)										
Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
T3	Alfalfa	-	-	-	-	-	-	See Winter		-
T4-14	Corn, Silage	62.20	0.36	0.09	0.39	-	4.95	9-6H64251	09/06/23	Valley Tech
T5	Alfalfa	-	-	-	-	-	-	See Winter		-
T11	Corn, Silage	74.20	0.28	0.06	0.37	-	5.94	10-24H70523	10/24/23	Valley Tech
T6	Corn, Silage	64.90	0.36	0.09	0.47	-	5.45	9-6H64299	09/06/23	Valley Tech
T7	Corn, Silage	63.70	0.39	0.09	0.36	-	5.06	9-6H64251	09/06/23	Valley Tech
T8	Alfalfa	-	-	-	-	-	-	See Winter		-
T9	Corn, Silage	64.30	0.36	0.07	0.38	-	5.03	9-6H64251	09/06/23	Valley Tech
T15-16-23	Corn, Silage	66.70	0.32	0.10	0.43	-	5.22	9-6H64299	09/06/23	Valley Tech
T19	Corn, Silage	64.50	0.33	0.08	0.40	-	5.41	9-6H64251	09/06/23	Valley Tech
T21-29	Corn, Silage	62.50	0.34	0.08	0.33	-	5.22	9-6H64299	09/06/23	Valley Tech
T22-24	Alfalfa	-	-	-	-	-	-	See Winter		-
T26	Alfalfa	-	-	-	-	-	-	See Winter		-
T30	Corn, Silage	63.80	0.33	0.07	0.37	-	4.88	9-6H64299	09/06/23	Valley Tech
T36	Alfalfa	-	-	-	-	-	-	See Winter		-

Detectable Limits					
Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*

(SUMMER) PLANT TISSUE ANALYSIS (Recorded As Received)

Field	Crop	Moist %	N%	TP %	TK%	Salt	TFS	Sample #:	Date:	Source
T39-44	Corn, Silage	63.50	0.33	0.08	0.36	-	4.56	9-6H64251	09/06/23	Valley Tech
T40	Corn, Silage	62.40	0.34	0.09	0.35	-	5.02	9-6H64251	09/06/23	Valley Tech
T45-46	Alfalfa	-	-	-	-	-	-	See Winter		-
Zonneveld E	Corn, Silage	70.20	0.36	0.07	0.24	-	4.77	11-8H72228	11/08/23	Valley Tech
Zonneveld W	Corn, Silage	71.70	0.32	0.06	0.25	-	4.71	11-8H72228	11/08/23	Valley Tech

Detectable Limits					
Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*	*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*	*0.001%*

Winter Crops & Harvest

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
D1	Alfalfa	4/8/22	9/28/23	2-407-852	5.99	6.74	0.27	1.84	-	10.23	Dry Weight
D2	Alfalfa	1/1/21	9/28/23	2-407-853	6.02	7.20	0.25	1.63	-	11.40	Dry Weight
D3	Wheat, Silage	11/20/22	5/30/23	6-8H53066	62.60	0.48	0.10	0.70	-	8.95	Dry Weight
D4	Wheat, Silage	11/21/22	5/30/23	6-8H53066	64.50	0.42	0.09	0.77	-	10.70	Dry Weight
D5	Alfalfa	1/1/21	9/28/23	2-407-854	8.53	5.54	0.25	1.68	-	11.39	Dry Weight
D6	Wheat, Silage	11/21/22	5/30/23	6-8H53066	66.20	0.42	0.10	0.95	-	12.40	Dry Weight
D7	W. Fallow			Fallow	-	-	-	-	-	-	
D8	W. Fallow			Fallow	-	-	-	-	-	-	
D9-10	Wheat, Silage	11/23/22	5/30/23	6-8H53066	63.20	0.44	0.10	0.86	-	9.68	Dry Weight
Bixler/Riddle	Trees, Pistachios	5/1/20	10/15/23	Book Value	-	2.81	0.42	3.09	-	-	Dry Weight
G1	Alfalfa	1/1/20	9/28/23	2-407-861	7.46	4.47	0.24	1.76	-	8.58	Dry Weight
G2	Alfalfa	3/7/21	9/28/23	2-407-862	7.07	3.31	0.23	2.04	-	12.20	Dry Weight
G3	Alfalfa	1/1/21	9/28/23	2-407-863	7.27	2.11	0.21	1.30	-	10.46	Dry Weight
T1	Alfalfa	1/1/21	9/28/23	2-412-889	6.48	4.57	0.22	1.87	-	10.44	Dry Weight
T2-25	W. Fallow			Fallow	-	-	-	-	-	-	

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Winter Crops & Harvest

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
T3	Alfalfa	8/1/22	9/28/23	2-407-858	5.76	5.10	0.25	1.60	-	11.09	Dry Weight
T4-14	W. Fallow			Fallow	-	-	-	-	-	-	
T5	Alfalfa	1/1/19	9/28/23	2-412-893	7.09	4.24	0.23	1.98	-	10.61	Dry Weight
T11	W. Fallow			Fallow	-	-	-	-	-	-	
T6	W. Fallow			Fallow	-	-	-	-	-	-	
T7	W. Fallow			Fallow	-	-	-	-	-	-	
T8	Alfalfa	12/1/18	9/28/23	2-407-857	7.02	2.32	0.27	1.98	-	10.17	Dry Weight
T9	W. Fallow			Fallow	-	-	-	-	-	-	
T15-16-23	W. Fallow			Fallow	-	-	-	-	-	-	
T19	W. Fallow			Fallow	-	-	-	-	-	-	
T21-29	W. Fallow			Fallow	-	-	-	-	-	-	
T22-24	Alfalfa	1/1/21	9/28/23	2-407-856	6.93	3.27	0.20	1.80	-	9.71	Dry Weight
T26	Alfalfa	10/1/18	9/28/23	2-407-859	6.35	3.08	0.27	1.83	-	10.57	Dry Weight
T30	W. Fallow			Fallow	-	-	-	-	-	-	
T36	Alfalfa	10/1/18	9/28/23	2-407-860	7.21	0.97	0.22	2.70	-	10.77	Dry Weight
Detectable L Valley Tech					*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*	
Dellavalle					*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*	

Winter Crops & Harvest

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
T39-44	W. Fallow			Fallow	-	-	-	-	-	-	
T40	W. Fallow			Fallow	-	-	-	-	-	-	
T45-46	Alfalfa	1/1/20	9/28/23	2-407-855	6.18	1.02	0.23	2.25	-	11.37	Dry Weight
Zonneveld E	Wheat, Silage	12/15/22	5/31/23	6-8H53066	63.70	0.41	0.06	0.48	-	11.80	Dry Weight
Zonneveld W	Wheat, Silage	11/26/22	6/5/23	6-8H53066	57.40	0.48	0.10	0.67	-	9.97	Dry Weight

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
D1	Alfalfa			See Winter	-	-	-	-	-	-	
D2	Alfalfa			See Winter	-	-	-	-	-	-	
D3	Corn, Silage	6/26/23	10/11/23	10-24H70523	64.20	0.44	0.09	0.33	-	5.46	Dry Weight
D4	Corn, Silage	6/21/23	10/11/23	11-8H72228	64.70	0.46	0.09	0.32	-	4.00	Dry Weight
D5	Alfalfa			See Winter	-	-	-	-	-	-	
D6	Corn, Silage	6/22/23	10/11/23	10-24H70523	66.10	0.40	0.11	0.45	-	5.95	Dry Weight
D7	Corn, Silage	6/19/23	9/21/23	10-24H70523	61.40	0.44	0.09	0.41	-	4.88	Dry Weight
D8	Corn, Silage	6/20/23	9/21/23	10-24H70523	60.70	0.44	0.10	0.42	-	4.63	Dry Weight
D9-10	Corn, Silage	6/23/23	10/11/23	10-24H70523	64.20	0.43	0.10	0.37	-	5.12	Dry Weight
Bixler/Riddle	Trees, Pistachios			Trees	-	-	-	-	-	-	
G1	Alfalfa			See Winter	-	-	-	-	-	-	
G2	Alfalfa			See Winter	-	-	-	-	-	-	
G3	Alfalfa			See Winter	-	-	-	-	-	-	
T1	Alfalfa			See Winter	-	-	-	-	-	-	
T2-25	Corn, Silage	5/24/23	9/1/23	9-6H64299	70.80	0.31	0.08	0.39	-	5.94	Dry Weight
Detectable L Valley Tech					*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*	
Dellavalle					*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*	

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
T3	Alfalfa			See Winter	-	-	-	-	-	-	
T4-14	Corn, Silage	4/16/23	8/12/23	9-6H64251	62.20	0.36	0.09	0.39	-	4.95	Dry Weight
T5	Alfalfa			See Winter	-	-	-	-	-	-	
T11	Corn, Silage	6/10/23	9/13/23	10-24H70523	74.20	0.28	0.06	0.37	-	5.94	Dry Weight
T6	Corn, Silage	4/21/23	8/14/23	9-6H64299	64.90	0.36	0.09	0.47	-	5.45	Dry Weight
T7	Corn, Silage	4/20/23	8/14/23	9-6H64251	63.70	0.39	0.09	0.36	-	5.06	Dry Weight
T8	Alfalfa			See Winter	-	-	-	-	-	-	
T9	Corn, Silage	4/19/23	8/10/23	9-6H64251	64.30	0.36	0.07	0.38	-	5.03	Dry Weight
T15-16-23	Corn, Silage	4/13/23	8/10/23	9-6H64299	66.70	0.32	0.10	0.43	-	5.22	Dry Weight
T19	Corn, Silage	4/13/23	8/9/23	9-6H64251	64.50	0.33	0.08	0.40	-	5.41	Dry Weight
T21-29	Corn, Silage	4/14/23	8/10/23	9-6H64299	62.50	0.34	0.08	0.33	-	5.22	Dry Weight
T22-24	Alfalfa			See Winter	-	-	-	-	-	-	
T26	Alfalfa			See Winter	-	-	-	-	-	-	
T30	Corn, Silage	4/14/23	8/10/23	9-6H64299	63.80	0.33	0.07	0.37	-	4.88	Dry Weight
T36	Alfalfa			See Winter	-	-	-	-	-	-	

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Field:	Crop	Plant Date	Harvest Date	Lab #	Moisture %	N (mg//kg)	P (mg/kg)	K (mg/kg)	Salt (mg/kg)	TFS	Reporting Basis
T39-44	Corn, Silage	4/15/23	8/12/23	9-6H64251	63.50	0.33	0.08	0.36	-	4.56	Dry Weight
T40	Corn, Silage	4/15/23	8/13/23	9-6H64251	62.40	0.34	0.09	0.35	-	5.02	Dry Weight
T45-46	Alfalfa			See Winter	-	-	-	-	-	-	
Zonneveld E	Corn, Silage	7/4/23	10/31/23	11-8H72228	70.20	0.36	0.07	0.24	-	4.77	Dry Weight
Zonneveld W	Corn, Silage	7/13/23	11/1/23	11-8H72228	71.70	0.32	0.06	0.25	-	4.71	Dry Weight

Detectable L Valley Tech	*0.10%*	*0.05%*	*0.01%*	*0.01%*		*0.05%*
Dellavalle	*0.001%*	*0.01%*	*0.01%*	*0.003%*		*0.001%*

Well / Canal Analysis

General Minerals

Well Name/Number	NO3-N (mg/L)	EC (umhos/cm)	TDS (mg/L)	NH4-N (mg/L)	TN (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	HCO3 (mg/L)	CO3 (mg/L)	SO4 (mg/L)	Cl (mg/L)	Lab #:	Date:	LAB
Barn Well	5.50	275	170	-	5.50	-	-	-	-	-	-	-	VI 2340547	1/31/2023	FGL Enviromental
Belbera (New)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
Bixler S	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
JD4	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
JD5	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
D10 (New)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
G1 (New)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
G2E	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
G2W	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
G3 (JD6)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
JD1	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
JD2	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
JD3	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P1	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P9 (New)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P11	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P18	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P20	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P22	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P15 (New)	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
P31	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
Z1	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
Z2	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
Z3	-	-	-	-	-	-	-	-	-	-	-	-	Used Canal		
G1 (Old)	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
Zonneveld	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
, P7E, P7, P19, P23,	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
D6, P40W, P40E, P2	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
N, D10 (old), P22 (ol	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
Canal	0.01	36	30	-	-	-	-	-	-	-	-	-	VI 2344454	7/11/2023	FGL Enviromental
Detectable Limits															
Dellavalle	*0.01*	*1*	*10*	*0.2*	*NR*	*0.1*	*0.1*	*0.15*	*3*	*0.9*	*0.03*	*0.03*			
FGL Enviromental	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*	*0*			
Valley Tech	*0.1*	*1*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*	*NR*			

Soil Analysis (Winter)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
D1	-	-	-	-	-	-			-
D2	-	-	-	-	-	-			-
D3	-	-	-	-	-	-			-
D4	-	-	-	-	-	-			-
D5	-	-	-	-	-	-			-
D6	-	-	-	-	-	-			-
D7	-	-	-	-	-	-			-
D8	-	-	-	-	-	-			-
D9-10	-	-	-	-	-	-			-
Bixler/Riddle	-	-	-	-	-	-			-
G1	-	-	-	-	-	-			-
G2	-	-	-	-	-	-			-
G3	-	-	-	-	-	-			-
T1	-	-	-	-	-	-			-
T2-25	-	-	-	-	-	-			-

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Winter)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
T3	-	-	-	-	-	-			-
T4-14	-	-	-	-	-	-			-
T5	-	-	-	-	-	-			-
T11	-	-	-	-	-	-			-
T6	-	-	-	-	-	-			-
T7	-	-	-	-	-	-			-
T8	-	-	-	-	-	-			-
T9	-	-	-	-	-	-			-
T15-16-23	-	-	-	-	-	-			-
T19	-	-	-	-	-	-			-
T21-29	-	-	-	-	-	-			-
T22-24	-	-	-	-	-	-			-
T26	-	-	-	-	-	-			-
T30	-	-	-	-	-	-			-
T36	-	-	-	-	-	-			-

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Winter)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
T39-44	-	-	-	-	-	-			-
T40	-	-	-	-	-	-			-
T45-46	-	-	-	-	-	-			-
Zonneveld E	-	-	-	-	-	-			-
Zonneveld W	-	-	-	-	-	-			-

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Summer)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
D1	-	-	-	-	-	-			-
D2	-	-	-	-	-	-			-
D3	-	-	-	-	-	-			-
D4	-	-	-	-	-	-			-
D5	-	-	-	-	-	-			-
D6	-	-	-	-	-	-			-
D7	-	-	-	-	-	-			-
D8	-	-	-	-	-	-			-
D9-10	-	-	-	-	-	-			-
Bixler/Riddle	-	-	-	-	-	-			-
G1	-	-	-	-	-	-			-
G2	-	-	-	-	-	-			-
G3	-	-	-	-	-	-			-
T1	-	-	-	-	-	-			-
T2-25	-	-	-	-	-	-			-

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Summer)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
T3	-	-	-	-	-	-			-
T4-14	-	-	-	-	-	-			-
T5	-	-	-	-	-	-			-
T11	-	-	-	-	-	-			-
T6	-	-	-	-	-	-			-
T7	-	-	-	-	-	-			-
T8	-	-	-	-	-	-			-
T9	-	-	-	-	-	-			-
T15-16-23	-	-	-	-	-	-			-
T19	-	-	-	-	-	-			-
T21-29	-	-	-	-	-	-			-
T22-24	-	-	-	-	-	-			-
T26	-	-	-	-	-	-			-
T30	-	-	-	-	-	-			-
T36	-	-	-	-	-	-			-

Detectable Limits						
Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Soil Analysis (Summer)

Fields:	0/1ft. NO3-N (mg/kg)	1/2 ft. NO3-N (mg/kg)	0/1 ft. Sol. P (mg/kg)	0/1 ft. K (mg/kg)	0/1 ft. EC (ds/m)	OM %	Lab #	Date	Source
T39-44	-	-	-	-	-	-			-
T40	-	-	-	-	-	-			-
T45-46	-	-	-	-	-	-			-
Zonneveld E	-	-	-	-	-	-			-
Zonneveld W	-	-	-	-	-	-			-

Detectable Limits

Valley Tech	*0.1*	*0.1*				
DellaValle	*0.1*	*0.1*	*1.1*	*0.2*	*0.0015*	*0.0001%*

Nutrient Import & Export

Nutrient Export-Did you sell, give away or otherwise remove slurry, process water or dry manure from your property?

___ No

X Yes, Manifest attached (Attachment D)

Total Dry Manure Exported 7,200

Nutrient Import

No Dry manure nutient imports entered

No Process wastewater nutrient imports entered

No Commerical or other nutrient imports entered

Total Process Water Exported

Field Name	Type of Manure Applied	As Is / Dry Weight	Source

Process Water & Manure Analysis

Process Water															
Quarters:	NH4N (mg/L)	TKN (mg/L)	TP (mg/L)	TK (mg/L)	NO3N (mg/L)	NH3N (mg/L)	Ca (mg/L)	Mg (mg/L)	Na (mg/L)	CO3 (mg/L)	HCO3 (mg/L)	SO4 (mg/L)	CL (mg/L)	EC (ds/m)	TDS (mg/L)
1	125.0	373.0	39.7	277.0	1.0	-	-	-	-	-	-	-	-	3	1,910
2	110.0	281.0	48.1	309.0	1.0	-	-	-	-	-	-	-	-	3	2,080
3	72.9	164.0	15.5	109.0	1.0	-	0.0	17.8	49.1	0.0	11.8	32.0	0.0	2	1,120
4	72.9	106.0	14.3	0.0	1.0	-	-	-	-	-	-	-	-	-	1,330

Detectable Limits

Valley Tech	2.0	5.0	0.1	0.2										0.10	10
Dellavalle	0.2	0.7	0.02	0.2	0.01		0.05	0.4	0.10	0.9	3	0.01	0.03	0.001	10

				Inorg N	Org N	P2O5	K2O
Qtr	Sample #:	Sample Date:	Source	lbs / Ac in			
1	3-24L44753	3/24/2023	Valley Tech	28.6	56.2	20.6	75.6
2	5-11L49525	5/11/2023	Valley Tech	25.2	38.8	25.0	84.4
3	8-17L62121	8/17/2023	Valley Tech	16.8	20.6	8.1	29.8
4	10-4L67904	10/4/2023	Valley Tech	16.8	7.5	7.4	0.0

Description	Sample #:	Date:	As Is/ Dry Weight	Source	Material Type
Manure	5-11M49488	5/11/2023	Dry Weight	Valley Tech	Corral Solids
Manure	10-4M67867	10/4/2023	Dry Weight	Valley Tech	Corral Solids

Dry Manure: (As Recv'd)	TN %	TP %	TK %	Ca	Mg	Na	S	CL	Salt	TFS	Moisture %
Corral	1.87	0.68	2.31	-	-	-	-	-	-	-	27.30
Corral	1.50	0.41	1.23	1.96	0.60	0.27	0.37	0.75	-	17.90	47.10

Detectable Limits

Valley Tech	0.01%	0.02%	0.02%								
Dellavalle	0.01%	0.01%	0.003%	0.001%	0.001%	0.001%	0.001%	0.000%		0.001%	0.001%

Nutrient Applications

Field Name/Number: D1 **Acres:** 80.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
4/8/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/18/23	Canal	-	-	-	5.40	-	0.0	-	-	22	-		-
3/26/23	Canal	-	-	-	5.57	-	0.0	-	-	23	-		-
5/17/23	Canal	-	-	-	5.60	-	0.0	-	-	23	-		-
6/19/23	Canal	-	-	-	5.37	-	0.0	-	-	22	-		-
7/15/23	Canal	-	-	-	5.47	-	0.0	-	-	22	-		-
8/14/23	Canal	-	-	-	5.53	-	0.0	-	-	23	-		-
9/8/23	Canal	-	-	-	5.43	-	0.0	-	-	22	-		-
9/28/23	W. Harvest	-	-	-	-	-	(1,253.7)	(50.7)	(342.7)	-	10.23		9.30
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	38.37	0.00	(1,254)	(51)	(343)	157	10.23	0	9.30

Dry Weight
As Received

Field Name/Number: D1 **Acres:** 80

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	156.6
Nutrients Removed at Harvest	-1253.7	-50.7	-342.7	0.0
Nutrient Balance	-1253.6	-50.7	-342.7	156.6

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: D1 **Acres:** 80

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		38.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	4/8/22					
W. Harvest	9/28/23	9.3	T/Ac	(1,253.7)	(116.1)	(411.3)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: D2 **Acres:** 74.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/18/23	Canal	-	-	-	5.55	-	0.0	-	-	23	-		-
3/26/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
5/17/23	Canal	-	-	-	5.41	-	0.0	-	-	22	-		-
6/19/23	Canal	-	-	-	5.70	-	0.0	-	-	23	-		-
7/15/23	Canal	-	-	-	5.48	-	0.0	-	-	22	-		-
8/14/23	Canal	-	-	-	5.37	-	0.0	-	-	22	-		-
9/8/23	Canal	-	-	-	5.52	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(1,334.7)	(47.0)	(301.4)	-	10.23		9.27
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Totals:		0.0		0	38.33	0.00	(1,335)	(47)	(301)	156	10.23	0	9.27

Field Name/Number: D2 **Acres:** 74.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	156.5
Nutrients Removed at Harvest	-1334.7	-20.5	-250.2	0.0
Nutrient Balance	-1334.6	-20.5	-250.2	156.5

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: D2 **Acres:** 74

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		38.3	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/21					
W. Harvest	9/28/23	9.3	T/Ac	(1,334.7)	(107.7)	(361.7)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: D3 **Acres:** 39.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
11/10/22	W. Manure App.	10.26	-	-	-	-	153.3	140.2	474.2	-	-		-
11/20/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/16/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
2/16/23	Process Water	-	-	-	-	1.81	107.6	16.3	113.8	785	-		-
3/21/23	Canal	-	-	-	6.46	-	0.0	-	-	26	-		-
4/30/23	Canal	-	-	-	5.23	-	0.0	-	-	21	-		-
4/30/23	Process Water	-	-	-	-	1.75	45.7	19.0	122.2	823	-		-
5/30/23	W. Harvest	-	-	-	-	-	(243.8)	(53.3)	(356.1)	-	10.23		25.46
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Manure App.	10.26	-	-	-	-	122.8	83.6	251.7	-	-		-
6/12/23	Canal	-	-	-	6.73	-	0.0	-	-	27	-		-
6/26/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/28/23	Canal	-	-	-	6.25	-	0.0	-	-	26	-		-
7/18/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
7/18/23	Process Water	-	-	-	-	1.77	104.9	6.2	43.7	449	-		-
8/14/23	Canal	-	-	-	6.32	-	0.0	-	-	26	-		-
9/15/23	Canal	-	-	-	6.12	-	0.0	-	-	25	-		-
10/11/23	S. Harvest	-	-	-	-	-	(183.9)	(35.6)	(135.0)	-	-		20.72
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Totals:		20.5		0	47.86	5.33	107	176	515	2,252	10.23	0	46.18

Field Name/Number: D3 **Acres:** 39.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	534.4	115.8	834.8	2251.8
Nutrients Removed at Harvest	-427.7	-38.8	-407.7	0.0
Nutrient Balance	106.7	77.0	427.1	2251.8

Winter Nitrogen Crop App / Use Ratio: 1.29 **Summer Nitrogen Crop App / Use Ratio:** 1.28

Field Name/Number: D3 **Acres:** 39

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		10.3	T/Ac	153.3	321.0	569.1
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.8	Ac In /Ac	107.6	37.4	136.6
	Q2	1.7	Ac In /Ac	45.7	43.6	146.7
Well Water		-	Ac In /Ac	-		
Canal		17.1	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	11/20/22					
W. Harvest	5/30/23	25.5	T/Ac	(243.8)	(122.1)	(427.4)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		10.3	T/Ac	122.8	191.3	302.1
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	1.8	Ac In /Ac	104.9	14.2	52.4
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	(0.0)		
Canal		30.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/26/23					
S. Harvest	10/11/23	20.7	T/Ac	(183.9)	(81.5)	(162.0)

Nutrient Applications

Field Name/Number: D4 **Acres:** 33.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
11/21/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/16/23	Canal	-	-	-	5.38	-	0.0	-	-	22	-		-
2/16/23	Process Water	-	-	-	-	1.79	106.5	16.1	112.7	777	-		-
3/21/23	Canal	-	-	-	6.35	-	0.0	-	-	26	-		-
4/30/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
4/30/23	Process Water	-	-	-	-	1.77	46.3	19.3	123.8	833	-		-
5/30/23	W. Harvest	-	-	-	-	-	(163.9)	(36.2)	(300.2)	-	10.23		19.39
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6/13/23	Canal	-	-	-	6.59	-	0.0	-	-	27	-		-
6/21/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/23/23	Canal	-	-	-	6.43	-	0.0	-	-	26	-		-
7/18/23	Canal	-	-	-	5.22	-	0.0	-	-	21	-		-
7/18/23	Process Water	-	-	-	-	1.74	103.3	6.1	43.0	442	-		-
8/14/23	Canal	-	-	-	5.46	-	0.0	-	-	22	-		-
8/14/23	Process Water	-	-	-	-	1.82	108.1	6.4	45.0	462	-		-
9/15/23	Canal	-	-	-	6.19	-	0.0	-	-	25	-		-
10/11/23	S. Harvest	-	-	-	-	-	(174.7)	(33.9)	(124.6)	-	-		19.18
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Totals:		0.0		0	46.92	7.12	26	(22)	(100)	2,706	10.23	0	38.58

Field Name/Number: D4 **Acres:** 33.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	364.3	20.9	269.3	2706.2
Nutrients Removed at Harvest	-338.6	-30.6	-352.6	0.0
Nutrient Balance	25.7	-9.7	-83.3	2706.2

Winter Nitrogen Crop App / Use Ratio: 0.98 **Summer Nitrogen Crop App / Use Ratio:** 1.25

Field Name/Number: D4 **Acres:** 33

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.8	Ac In /Ac	106.5	37.0	135.2
	Q2	1.8	Ac In /Ac	46.3	44.1	148.6
Well Water		-	Ac In /Ac	-		
Canal		17.0	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	11/21/22					
W. Harvest	5/30/23	19.4	T/Ac	(163.9)	(82.9)	(360.2)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	3.6	Ac In /Ac	211.4	28.7	105.6
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0.0		
Canal		29.9	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/21/23					
S. Harvest	10/11/23	19.2	T/Ac	(174.7)	(77.5)	(149.5)

Nutrient Applications

Field Name/Number: D5 **Acres:** 110.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/15/23	Canal	-	-	-	5.81	-	0.0	-	-	24	-		-
3/21/23	Canal	-	-	-	5.66	-	0.0	-	-	23	-		-
5/13/23	Canal	-	-	-	5.62	-	0.0	-	-	23	-		-
6/14/23	Canal	-	-	-	5.76	-	0.0	-	-	24	-		-
7/15/23	Canal	-	-	-	5.71	-	0.0	-	-	23	-		-
8/14/23	Canal	-	-	-	5.78	-	0.0	-	-	24	-		-
9/8/23	Canal	-	-	-	5.64	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(1,086.4)	(48.4)	(329.9)	-	10.23		9.80
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Totals:		0.0		0	39.98	0.00	(1,086)	(48)	(330)	163	10.23	0	9.80

Field Name/Number: D5 **Acres:** 110.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	163.2
Nutrients Removed at Harvest	-1086.4	-21.1	-273.8	0.0
Nutrient Balance	-1086.4	-21.1	-273.8	163.2

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: D5 **Acres:** 110

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		40.0	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/21					
W. Harvest	9/28/23	9.8	T/Ac	(1,086.4)	(110.8)	(395.9)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: D6 **Acres:** 19.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
11/15/22	W. Manure App.	7.89	-	-	-	-	118.0	107.9	365.0	-	-		-
11/21/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/16/23	Canal	-	-	-	5.16	-	0.0	-	-	21	-		-
2/16/23	Process Water	-	-	-	-	1.72	102.1	15.5	108.1	745	-		-
3/21/23	Canal	-	-	-	6.28	-	0.0	-	-	26	-		-
4/30/23	Canal	-	-	-	5.02	-	0.0	-	-	21	-		-
4/30/23	Process Water	-	-	-	-	1.67	43.8	18.3	117.3	790	-		-
5/30/23	W. Harvest	-	-	-	-	-	(233.4)	(54.6)	(528.9)	-	10.23		27.84
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Manure App.	7.89	-	-	-	-	94.6	64.3	193.8	-	-		-
6/15/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
6/22/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/23/23	Canal	-	-	-	6.14	-	0.0	-	-	25	-		-
7/18/23	Canal	-	-	-	5.09	-	0.0	-	-	21	-		-
7/18/23	Process Water	-	-	-	-	1.70	100.8	6.0	41.9	431	-		-
8/14/23	Canal	-	-	-	5.15	-	0.0	-	-	21	-		-
8/14/23	Process Water	-	-	-	-	1.72	101.9	6.0	42.4	436	-		-
9/15/23	Canal	-	-	-	6.70	-	0.0	-	-	27	-		-
10/11/23	S. Harvest	-	-	-	-	-	(248.0)	(66.7)	(275.1)	-	-		30.74
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		15.8		0	46.10	6.81	80	97	65	2,590	10.23	0	58.58

Field Name/Number: D6 **Acres:** 19.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	561.3	95.1	721.0	2589.7
Nutrients Removed at Harvest	-481.4	-52.9	-667.4	0.0
Nutrient Balance	79.9	42.2	53.6	2589.7

Winter Nitrogen Crop App / Use Ratio: 1.16 **Summer Nitrogen Crop App / Use Ratio:** 1.23

Field Name/Number: D6 **Acres:** 19

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		7.9	T/Ac	118.0	247.1	438.0
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.7	Ac In /Ac	102.1	35.5	129.7
	Q2	1.7	Ac In /Ac	43.8	41.8	140.7
Well Water		-	Ac In /Ac	-		
Canal		16.5	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	11/21/22					
W. Harvest	5/30/23	27.8	T/Ac	(233.4)	(125.0)	(634.7)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		7.9	T/Ac	94.6	147.3	232.5
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	3.4	Ac In /Ac	202.6	27.5	101.2
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0.0		
Canal		29.6	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/22/23					
S. Harvest	10/11/23	30.7	T/Ac	(248.0)	(152.7)	(330.1)

Nutrient Applications

Field Name/Number: D7

Acres: 30.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Manure App.	10.00	-	-	-	-	119.8	81.5	245.5	-	-		-
6/7/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
6/19/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/23/23	Canal	-	-	-	5.21	-	0.0	-	-	21	-		-
6/23/23	Process Water	-	-	-	-	1.74	45.5	19.0	121.7	820	-		-
7/18/23	Canal	-	-	-	5.39	-	0.0	-	-	22	-		-
7/18/23	Process Water	-	-	-	-	1.80	30.5	6.3	44.4	456	-		-
8/14/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
8/14/23	Process Water	-	-	-	-	1.77	104.9	6.2	43.7	449	-		-
9/10/23	Canal	-	-	-	6.80	-	0.0	-	-	28	-		-
9/21/23	S. Harvest	-	-	-	-	-	(244.4)	(51.0)	(227.4)	-	-		27.53
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		10.0		0	29.34	5.30	56	62	228	1,844	0.00	0	27.53

Field Name/Number: D7 **Acres:** 30.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	300.8	49.3	377.9	1844.3
Nutrients Removed at Harvest	-244.4	-22.3	-188.8	0.0
Nutrient Balance	56.3	27.0	189.1	1844.3

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.26

Field Name/Number: D7 **Acres:** 30

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		10.0	T/Ac	119.8	186.6	294.5
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	1.7	Ac In /Ac	45.5	43.4	146.1
	Q3	3.6	Ac In /Ac	135.4	28.7	105.7
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0.0		
Canal		29.3	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/19/23					
S. Harvest	9/21/23	27.5	T/Ac	(244.4)	(116.8)	(272.9)

Nutrient Applications

Field Name/Number: D8 **Acres:** 19.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TPS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/5/23	Canal	-	-	-	6.28	-	0.0	-	-	26	-		-
6/20/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/23/23	Canal	-	-	-	5.16	-	0.0	-	-	21	-		-
6/23/23	Process Water	-	-	-	-	1.72	45.1	18.8	120.5	811	-		-
7/18/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
7/18/23	Process Water	-	-	-	-	1.81	107.7	6.4	44.8	461	-		-
8/14/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
8/14/23	Process Water	-	-	-	-	1.77	104.9	6.2	43.7	449	-		-
9/10/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
9/21/23	S. Harvest	-	-	-	-	-	(244.5)	(56.3)	(231.5)	-	-		27.53
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		0.0		0	28.74	5.30	13	(25)	(22)	1,838	0.00	0	27.53

Field Name/Number: D8 **Acres:** 19.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	257.7	13.7	173.5	1838.2
Nutrients Removed at Harvest	-244.5	-24.5	-192.2	0.0
Nutrient Balance	13.2	-10.9	-18.6	1838.2

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.08

Field Name/Number: D8 **Acres:** 19

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	1.7	Ac In /Ac	45.1	43.0	144.7
	Q3	3.6	Ac In /Ac	212.6	28.8	106.2
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	(0.0)		
Canal		28.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/20/23					
S. Harvest	9/21/23	27.5	T/Ac	(244.5)	(128.8)	(277.8)

Nutrient Applications

Field Name/Number: D9-10 **Acres:** 16.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
11/15/22	W. Manure App.	9.38	-	-	-	-	140.1	128.1	433.5	-	-		-
11/23/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/16/23	Canal	-	-	-	5.47	-	0.0	-	-	22	-		-
2/16/23	Process Water	-	-	-	-	1.82	108.2	16.4	114.5	789	-		-
3/21/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
4/30/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
4/30/23	Process Water	-	-	-	-	1.77	46.3	19.3	123.8	833	-		-
5/30/23	W. Harvest	-	-	-	-	-	(256.2)	(60.3)	(501.6)	-	10.23		29.25
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/15/23	Canal	-	-	-	6.79	-	0.0	-	-	28	-		-
6/23/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/25/23	Canal	-	-	-	6.13	-	0.0	-	-	25	-		-
7/18/23	Canal	-	-	-	5.39	-	0.0	-	-	22	-		-
7/18/23	Process Water	-	-	-	-	1.80	106.5	6.3	44.4	456	-		-
8/14/23	Canal	-	-	-	5.22	-	0.0	-	-	21	-		-
8/14/23	Process Water	-	-	-	-	1.74	103.3	6.1	43.0	442	-		-
9/15/23	Canal	-	-	-	5.14	-	0.0	-	-	21	-		-
9/15/23	Process Water	-	-	-	-	1.71	101.6	6.0	42.3	435	-		-
10/11/23	S. Harvest	-	-	-	-	-	(235.4)	(55.4)	(203.7)	-	-		27.63
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		9.4		0	46.06	8.84	#N/A	-	-	#N/A	10.23	0	56.88

Field Name/Number: D9-10 **Acres:** 16.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	606.1	79.5	665.2	3143.0
Nutrients Removed at Harvest	-491.6	-50.5	-585.5	0.0
Nutrient Balance	114.6	29.1	79.7	3143.0

Winter Nitrogen Crop App / Use Ratio: 1.18 **Summer Nitrogen Crop App / Use Ratio:** 1.35

Field Name/Number: D9-10 **Acres:** 16

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		9.4	T/Ac	140.1	293.4	520.2
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	1.8	Ac In /Ac	108.2	37.6	137.3
	Q2	1.8	Ac In /Ac	46.3	44.1	148.6
Well Water		-	Ac In /Ac	-		
Canal		17.4	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	11/23/22					
W. Harvest	5/30/23	29.3	T/Ac	(256.2)	(138.0)	(601.9)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	5.2	Ac In /Ac	311.4	42.2	155.6
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	(0.0)		
Canal		28.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/23/23					
S. Harvest	10/11/23	27.6	T/Ac	(235.4)	(126.8)	(244.5)

Nutrient Applications

Field Name/Number: Bixler/Riddle

Acres: 76.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
5/1/20	W. Planting	-	-	-	-	-	-	-	-	-	-		-
3/15/23	Canal	-	-	-	3.35	-	0.0	-	-	14	-		-
4/20/23	Canal	-	-	-	3.52	-	0.0	-	-	14	-		-
5/11/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
6/14/23	Canal	-	-	-	7.46	-	0.0	-	-	30	-		-
7/20/23	Canal	-	-	-	9.10	-	0.0	-	-	37	-		-
8/17/23	Canal	-	-	-	7.01	-	0.0	-	-	29	-		-
9/16/23	Canal	-	-	-	5.02	-	0.0	-	-	21	-		-
10/1/23	Canal	-	-	-	2.51	-	0.0	-	-	10	-		-
10/15/23	W. Harvest	-	-	-	-	-	(98.4)	(14.7)	(108.2)	-	10.23		1.75
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		0.0		0	43.43	0.00	(98)	(15)	(108)	177	10.23	0	1.75

Field Name/Number: Bixler/Riddle **Acres:** 76.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	177.3
Nutrients Removed at Harvest	-98.4	-6.4	-89.8	0.0
Nutrient Balance	-98.3	-6.4	-89.8	177.3

Winter Nitrogen Crop App / Use Ratio: 0.07 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: Bixler/Riddle **Acres:** 76

Winter Crop **Trees, Pistachios**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		43.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	5/1/20					
W. Harvest	10/15/23	1.8	T/Ac	(98.4)	(33.7)	(129.8)

Summer Crop **Trees, Pistachios**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: G1 **Acres:** 151.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/20	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/11/23	Canal	-	-	-	5.79	-	0.0	-	-	24	-		-
3/21/23	Canal	-	-	-	5.85	-	0.0	-	-	24	-		-
5/10/23	Canal	-	-	-	5.90	-	0.0	-	-	24	-		-
6/14/23	Canal	-	-	-	5.71	-	0.0	-	-	23	-		-
7/13/23	Canal	-	-	-	5.78	-	0.0	-	-	24	-		-
8/13/23	Canal	-	-	-	5.81	-	0.0	-	-	24	-		-
9/6/23	Canal	-	-	-	5.88	-	0.0	-	-	24	-		-
9/28/23	W. Harvest	-	-	-	-	-	(898.1)	(48.3)	(353.3)	-	10.23		10.05
	-	-	-	-	-	-	-	-	-	-	-		-
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Field Name/Number: G1 **Acres:** 151.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	166.2
Nutrients Removed at Harvest	-898.1	-21.1	-293.3	0.0
Nutrient Balance	-898.0	-21.1	-293.3	166.2

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: G1 **Acres:** 151

Winter Crop **Alfalfa**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		40.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/20					
W. Harvest	9/28/23	10.0	T/Ac	(898.1)	(110.7)	(423.9)

Summer Crop **Alfalfa**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: G2 **Acres:** 97.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
3/7/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/18/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
3/26/23	Canal	-	-	-	5.33	-	0.0	-	-	22	-		-
5/17/23	Canal	-	-	-	5.17	-	0.0	-	-	21	-		-
6/15/23	Canal	-	-	-	5.22	-	0.0	-	-	21	-		-
7/15/23	Canal	-	-	-	5.55	-	0.0	-	-	23	-		-
8/13/23	Canal	-	-	-	5.41	-	0.0	-	-	22	-		-
9/4/23	Canal	-	-	-	5.60	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(622.1)	(43.7)	(384.4)	-	10.23		9.40
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Totals:		0.0		0	37.72	0.00	(622)	(44)	(384)	154	10.23	0	9.40

Field Name/Number: G2 **Acres:** 97.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	153.9
Nutrients Removed at Harvest	-622.1	-19.1	-319.1	0.0
Nutrient Balance	-622.0	-19.1	-319.1	153.9

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: G2 **Acres:** 97

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		37.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	3/7/21					
W. Harvest	9/28/23	9.4	T/Ac	(622.1)	(100.0)	(461.3)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: G3 **Acres:** 74.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/18/23	Canal	-	-	-	5.73	-	0.0	-	-	23	-		-
3/26/23	Canal	-	-	-	5.59	-	0.0	-	-	23	-		-
5/17/23	Canal	-	-	-	5.84	-	0.0	-	-	24	-		-
6/19/23	Canal	-	-	-	5.41	-	0.0	-	-	22	-		-
7/15/23	Canal	-	-	-	5.52	-	0.0	-	-	23	-		-
8/14/23	Canal	-	-	-	5.37	-	0.0	-	-	22	-		-
9/8/23	Canal	-	-	-	5.70	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(401.1)	(40.5)	(246.3)	-	10.23		9.49
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Totals:		0.0		0	39.16	0.00	(401)	(40)	(246)	160	10.23	0	9.49

Field Name/Number: G3 **Acres:** 74.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	159.8
Nutrients Removed at Harvest	-401.1	-17.7	-204.5	0.0
Nutrient Balance	-401.0	-17.7	-204.5	159.8

Winter Nitrogen Crop App / Use Ratio: 0.02 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: G3 **Acres:** 74

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		39.2	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/21					
W. Harvest	9/28/23	9.5	T/Ac	(401.1)	(92.7)	(295.6)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T1

Acres: 114.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/15/23	Canal	-	-	-	5.58	-	0.0	-	-	23	-		-
3/21/23	Canal	-	-	-	5.42	-	0.0	-	-	22	-		-
5/13/23	Canal	-	-	-	5.51	-	0.0	-	-	22	-		-
6/14/23	Canal	-	-	-	5.60	-	0.0	-	-	23	-		-
7/15/23	Canal	-	-	-	5.47	-	0.0	-	-	22	-		-
8/12/23	Canal	-	-	-	5.56	-	0.0	-	-	23	-		-
9/8/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
9/28/23	W. Harvest	-	-	-	-	-	(877.7)	(43.1)	(359.0)	-	10.23		9.60
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Totals:		0.0		0	38.58	0.00	(878)	(43)	(359)	157	10.23	0	9.60

Field Name/Number: T1 **Acres:** 114.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	157.5
Nutrients Removed at Harvest	-877.7	-18.8	-298.0	0.0
Nutrient Balance	-877.6	-18.8	-298.0	157.5

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T1 **Acres:** 114

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		38.6	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/21					
W. Harvest	9/28/23	9.6	T/Ac	(877.7)	(98.6)	(430.8)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T2-25 **Acres:** 152.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/28/23	S. Comm Fert App.	-	-	120	-	-	120.0	-	-	-	-		-
5/10/23	Canal	-	-	-	6.47	-	0.0	-	-	26	-		-
5/24/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
5/26/23	Canal	-	-	-	6.65	-	0.0	-	-	27	-		-
6/28/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
7/23/23	Canal	-	-	-	6.54	-	0.0	-	-	27	-		-
8/14/23	Canal	-	-	-	6.61	-	0.0	-	-	27	-		-
9/1/23	S. Harvest	-	-	-	-	-	(204.1)	(52.5)	(262.4)	-	-		33.28
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Totals:		0.0		120	32.83	0.00	(84)	(52)	(262)	134	0.00	0	33.28

Field Name/Number: T2-25 **Acres:** 152.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	120.1	0.0	0.0	134.0
Nutrients Removed at Harvest	-204.1	-22.9	-217.8	0.0
Nutrient Balance	-84.0	-22.9	-217.8	134.0

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.21

Field Name/Number: T2-25 **Acres:** 152

Winter Crop **W. Fallow**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		120.0	lbs/Ac	120.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	120.0		
Canal		32.8	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	5/24/23					
S. Harvest	9/1/23	33.3	T/Ac	(204.1)	(120.2)	(314.9)

Nutrient Applications

Field Name/Number: T3 **Acres:** 41.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
8/1/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/18/23	Canal	-	-	-	5.17	-	0.0	-	-	21	-		-
2/14/23	Canal	-	-	-	5.43	-	0.0	-	-	22	-		-
3/14/23	Canal	-	-	-	5.75	-	0.0	-	-	23	-		-
4/15/23	Canal	-	-	-	5.24	-	0.0	-	-	21	-		-
5/13/23	Canal	-	-	-	5.37	-	0.0	-	-	22	-		-
6/21/23	Canal	-	-	-	5.11	-	0.0	-	-	21	-		-
7/19/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
8/27/23	Canal	-	-	-	5.50	-	0.0	-	-	22	-		-
9/28/23	W. Harvest	-	-	-	-	-	(979.9)	(48.9)	(307.9)	-	11.09		9.61
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Totals:		0.0		0	42.87	0.00	(980)	(49)	(308)	175	11.09	0	9.61

Dry Weight
As Received

Field Name/Number: T3 **Acres:** 41

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	175.0
Nutrients Removed at Harvest	-979.9	-48.9	-307.9	0.0
Nutrient Balance	-979.8	-48.9	-307.9	175.0

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T3 **Acres:** 41

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		42.9	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	8/1/22					
W. Harvest	9/28/23	9.6	T/Ac	(979.9)	(112.0)	(369.5)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	0		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T4-14 **Acres:** 70.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data						Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS	%	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-			-
	W. Fallow	-	-	-	-	-	-	-	-	-	-			-
	-	-	-	-	-	-	-	-	-	-	-			-
6/2/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-			-
4/16/23	S. Planting	-	-	-	-	-	-	-	-	-	-			-
4/17/23	Canal	-	-	-	6.40	-	0.0	-	-	26	-			-
5/9/23	Canal	-	-	-	6.44	-	0.0	-	-	26	-			-
6/2/23	Canal	-	-	-	6.25	-	0.0	-	-	26	-			-
6/19/23	Canal	-	-	-	6.51	-	0.0	-	-	27	-			-
7/9/23	Canal	-	-	-	6.32	-	0.0	-	-	26	-			-
8/1/23	Canal	-	-	-	6.55	-	0.0	-	-	27	-			-
8/12/23	S. Harvest	-	-	-	-	-	(182.2)	(46.0)	(199.5)	-	-			25.37
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Totals:		0.0		100	38.48	0.00	(82)	(46)	(199)	157	0.00		0	25.37

Field Name/Number: T4-14 **Acres:** 70.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	100.1	0.0	0.0	157.1
Nutrients Removed at Harvest	-182.2	-20.1	-165.6	0.0
Nutrient Balance	-82.1	-20.1	-165.6	157.1

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.14

Field Name/Number: T4-14 **Acres:** 70

Winter Crop **W. Fallow**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		38.5	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/16/23					
S. Harvest	8/12/23	25.4	T/Ac	(182.2)	(105.4)	(239.4)

Nutrient Applications

Field Name/Number: T5 **Acres:** 75.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/19	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	6.72	-	0.0	-	-	27	-		-
2/13/23	Canal	-	-	-	6.50	-	0.0	-	-	27	-		-
3/11/23	Canal	-	-	-	6.61	-	0.0	-	-	27	-		-
4/15/23	Canal	-	-	-	6.68	-	0.0	-	-	27	-		-
5/13/23	Canal	-	-	-	6.40	-	0.0	-	-	26	-		-
6/21/23	Canal	-	-	-	6.26	-	0.0	-	-	26	-		-
7/19/23	Canal	-	-	-	6.47	-	0.0	-	-	26	-		-
8/23/23	Canal	-	-	-	6.65	-	0.0	-	-	27	-		-
9/28/23	W. Harvest	-	-	-	-	-	(805.5)	(44.2)	(376.3)	-	11.09		9.51
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Totals:		0.0		0	52.28	0.00	(805)	(44)	(376)	213	11.09	0	9.51

Field Name/Number: T5 **Acres:** 75.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	213.4
Nutrients Removed at Harvest	-805.5	-19.3	-312.3	0.0
Nutrient Balance	-805.4	-19.3	-312.3	213.4

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T5 **Acres:** 75

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		52.3	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/19					
W. Harvest	9/28/23	9.5	T/Ac	(805.5)	(101.1)	(451.5)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T11 **Acres:** 115.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/30/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
5/25/23	Canal	-	-	-	6.39	-	0.0	-	-	26	-		-
6/10/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/12/23	Canal	-	-	-	6.55	-	0.0	-	-	27	-		-
6/30/23	Canal	-	-	-	6.43	-	0.0	-	-	26	-		-
7/25/23	Canal	-	-	-	6.48	-	0.0	-	-	26	-		-
8/26/23	Canal	-	-	-	6.69	-	0.0	-	-	27	-		-
9/13/23	S. Harvest	-	-	-	-	-	(184.7)	(37.3)	(240.6)	-	-		32.83
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Totals:		0.0		100	32.53	0.00	(85)	(37)	(241)	133	0.00	0	32.83

Field Name/Number: T11 **Acres:** 115.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	100.1	0.0	0.0	132.8
Nutrients Removed at Harvest	-184.7	-16.3	-199.7	0.0
Nutrient Balance	-84.6	-16.3	-199.7	132.8

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.12

Field Name/Number: T11 **Acres:** 115

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		32.5	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	6/10/23					
S. Harvest	9/13/23	32.8	T/Ac	(184.7)	(85.4)	(288.7)

Nutrient Applications

Field Name/Number: T6 **Acres:** 95.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/7/23	S. Comm Fert App.	-	-	120	-	-	120.0	-	-	-	-		-
4/21/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/23/23	Canal	-	-	-	6.61	-	0.0	-	-	27	-		-
5/29/23	Canal	-	-	-	6.42	-	0.0	-	-	26	-		-
6/7/23	Canal	-	-	-	6.50	-	0.0	-	-	27	-		-
6/21/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
7/8/23	Canal	-	-	-	6.70	-	0.0	-	-	27	-		-
7/29/23	Canal	-	-	-	6.64	-	0.0	-	-	27	-		-
8/14/23	S. Harvest	-	-	-	-	-	(197.3)	(49.8)	(254.7)	-	-		27.28
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Totals:		0.0		120	39.43	0.00	(77)	(50)	(255)	161	0.00	0	27.28

Field Name/Number: T6 **Acres:** 95.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	120.1	0.0	0.0	160.9
Nutrients Removed at Harvest	-197.3	-21.7	-211.5	0.0
Nutrient Balance	-77.2	-21.7	-211.5	160.9

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.25

Field Name/Number: T6 **Acres:** 95

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		120.0	lbs/Ac	120.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	120.0		
Canal		39.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/21/23					
S. Harvest	8/14/23	27.3	T/Ac	(197.3)	(114.0)	(305.7)

Nutrient Applications

Field Name/Number: T7

Acres: 100.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
4/10/23	S. Manure App.	12.00	-	-	-	-	143.7	97.8	294.5	-	-		-
4/20/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/22/23	Canal	-	-	-	6.47	-	0.0	-	-	26	-		-
5/19/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
6/12/23	Canal	-	-	-	6.57	-	0.0	-	-	27	-		-
6/29/23	Canal	-	-	-	6.39	-	0.0	-	-	26	-		-
7/20/23	Canal	-	-	-	6.28	-	0.0	-	-	26	-		-
8/3/23	Canal	-	-	-	6.34	-	0.0	-	-	26	-		-
8/14/23	S. Harvest	-	-	-	-	-	(135.9)	(30.5)	(125.7)	-	-		17.49
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Totals:		12.0		0	38.68	0.00	8	67	169	158	0.00	0	17.49

Field Name/Number: T7 **Acres:** 100.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	143.8	42.7	244.5	157.9
Nutrients Removed at Harvest	-135.9	-13.3	-104.3	0.0
Nutrient Balance	7.9	29.4	140.2	157.9

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.11

Field Name/Number: T7 **Acres:** 100

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		12.0	T/Ac	143.7	223.9	353.5
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	(0.0)		
Canal		38.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/20/23					
S. Harvest	8/14/23	17.5	T/Ac	(135.9)	(69.8)	(150.8)

Nutrient Applications

Field Name/Number: T8 **Acres:** 65.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
12/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	5.71	-	0.0	-	-	23	-		-
2/12/23	Canal	-	-	-	5.42	-	0.0	-	-	22	-		-
3/11/23	Canal	-	-	-	5.75	-	0.0	-	-	23	-		-
4/15/23	Canal	-	-	-	5.59	-	0.0	-	-	23	-		-
5/13/23	Canal	-	-	-	5.67	-	0.0	-	-	23	-		-
6/21/23	Canal	-	-	-	5.30	-	0.0	-	-	22	-		-
7/19/23	Canal	-	-	-	5.47	-	0.0	-	-	22	-		-
8/23/23	Canal	-	-	-	5.79	-	0.0	-	-	24	-		-
9/28/23	W. Harvest	-	-	-	-	-	(449.5)	(52.4)	(384.5)	-	11.09		9.71
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Totals:		0.0		0	44.70	0.00	(449)	(52)	(385)	182	11.09	0	9.71

Field Name/Number: T8 **Acres:** 65.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	182.5
Nutrients Removed at Harvest	-449.5	-22.8	-319.2	0.0
Nutrient Balance	-449.4	-22.8	-319.2	182.5

Winter Nitrogen Crop App / Use Ratio: 0.02 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T8 **Acres:** 65

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		44.7	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	12/1/18					
W. Harvest	9/28/23	9.7	T/Ac	(449.5)	(119.9)	(461.4)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T9 **Acres:** 61.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/10/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
4/19/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/22/23	Canal	-	-	-	6.08	-	0.0	-	-	25	-		-
5/19/23	Canal	-	-	-	6.30	-	0.0	-	-	26	-		-
6/10/23	Canal	-	-	-	6.13	-	0.0	-	-	25	-		-
6/23/23	Canal	-	-	-	6.17	-	0.0	-	-	25	-		-
7/8/23	Canal	-	-	-	6.26	-	0.0	-	-	26	-		-
8/3/23	Canal	-	-	-	6.48	-	0.0	-	-	26	-		-
8/10/23	S. Harvest	-	-	-	-	-	(188.6)	(37.7)	(199.9)	-	-		26.41
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Totals:		0.0		100	37.42	0.00	(88)	(38)	(200)	153	0.00	0	26.41

Field Name/Number: T9 **Acres:** 61.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	100.1	0.0	0.0	152.7
Nutrients Removed at Harvest	-188.6	-16.5	-165.9	0.0
Nutrient Balance	-88.5	-16.5	-165.9	152.7

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.10

Field Name/Number: T9 **Acres:** 61

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		37.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/19/23					
S. Harvest	8/10/23	26.4	T/Ac	(188.6)	(86.4)	(239.9)

Nutrient Applications

Field Name/Number: T15-16-23 **Acres:** 84.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
5/29/23	S. Comm Fert App.	-	-	110	-	-	110.0	-	-	-	-		-
4/13/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/15/23	Canal	-	-	-	6.22	-	0.0	-	-	25	-		-
5/10/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
5/29/23	Canal	-	-	-	6.47	-	0.0	-	-	26	-		-
6/20/23	Canal	-	-	-	6.60	-	0.0	-	-	27	-		-
7/19/23	Canal	-	-	-	6.31	-	0.0	-	-	26	-		-
8/2/23	Canal	-	-	-	6.69	-	0.0	-	-	27	-		-
8/10/23	S. Harvest	-	-	-	-	-	(207.7)	(64.2)	(274.1)	-	-		32.15
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Totals:		0.0		110	38.91	0.00	#N/A	-	-	#N/A	0.00	0	32.15

Field Name/Number: T15-16-23 **Acres:** 84.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	110.1	0.0	0.0	158.8
Nutrients Removed at Harvest	-207.7	-28.0	-227.5	0.0
Nutrient Balance	-97.6	-28.0	-227.5	158.8

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.09

Field Name/Number: T15-16-23 **Acres:** 84

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		110.0	lbs/Ac	110.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	110.0		
Canal		38.9	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/13/23					
S. Harvest	8/10/23	32.2	T/Ac	(207.7)	(147.1)	(328.9)

Nutrient Applications

Field Name/Number: T19 **Acres:** 63.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
5/20/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
4/13/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/15/23	Canal	-	-	-	6.27	-	0.0	-	-	26	-		-
5/1/23	Canal	-	-	-	6.52	-	0.0	-	-	27	-		-
5/20/23	Canal	-	-	-	6.69	-	0.0	-	-	27	-		-
6/5/23	Canal	-	-	-	6.35	-	0.0	-	-	26	-		-
6/28/23	Canal	-	-	-	6.44	-	0.0	-	-	26	-		-
7/24/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
8/9/23	S. Harvest	-	-	-	-	-	(180.3)	(42.2)	(216.7)	-	-		27.02
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Totals:		0.0		100	38.84	0.00	(80)	(42)	(217)	159	0.00	0	27.02

Field Name/Number: T19 **Acres:** 63.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	100.1	0.0	0.0	158.5
Nutrients Removed at Harvest	-180.3	-18.4	-179.9	0.0
Nutrient Balance	-80.2	-18.4	-179.9	158.5

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.15

Field Name/Number: T19 **Acres:** 63

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		38.8	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/13/23					
S. Harvest	8/9/23	27.0	T/Ac	(180.3)	(96.6)	(260.1)

Nutrient Applications

Field Name/Number: T21-29 **Acres:** 31.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Comm Fert App.	-	-	120	-	-	120.0	-	-	-	-		-
4/14/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/16/23	Canal	-	-	-	6.41	-	0.0	-	-	26	-		-
5/9/23	Canal	-	-	-	6.76	-	0.0	-	-	28	-		-
6/1/23	Canal	-	-	-	6.24	-	0.0	-	-	25	-		-
6/18/23	Canal	-	-	-	6.84	-	0.0	-	-	28	-		-
7/14/23	Canal	-	-	-	6.59	-	0.0	-	-	27	-		-
7/29/23	Canal	-	-	-	6.33	-	0.0	-	-	26	-		-
8/10/23	S. Harvest	-	-	-	-	-	(215.1)	(52.6)	(212.7)	-	-		31.87
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Totals:		0.0		120	39.17	0.00	(95)	(53)	(213)	160	0.00	0	31.87

Field Name/Number: T21-29 **Acres:** 31.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	120.1	0.0	0.0	159.9
Nutrients Removed at Harvest	-215.1	-22.9	-176.6	0.0
Nutrient Balance	-95.0	-22.9	-176.6	159.9

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.15

Field Name/Number: T21-29 **Acres:** 31

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		120.0	lbs/Ac	120.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	120.0		
Canal		39.2	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/14/23					
S. Harvest	8/10/23	31.9	T/Ac	(215.1)	(120.4)	(255.3)

Nutrient Applications

Field Name/Number: T22-24 **Acres:** 153.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/21	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	5.89	-	0.0	-	-	24	-		-
2/12/23	Canal	-	-	-	5.80	-	0.0	-	-	24	-		-
3/10/23	Canal	-	-	-	5.72	-	0.0	-	-	23	-		-
4/13/23	Canal	-	-	-	5.75	-	0.0	-	-	23	-		-
5/13/23	Canal	-	-	-	5.84	-	0.0	-	-	24	-		-
6/14/23	Canal	-	-	-	5.87	-	0.0	-	-	24	-		-
7/15/23	Canal	-	-	-	5.70	-	0.0	-	-	23	-		-
8/23/23	Canal	-	-	-	5.63	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(627.3)	(39.3)	(344.9)	-	11.09		9.60
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Totals:		0.0		0	46.21	0.00	(627)	(39)	(345)	189	11.09	0	9.60

Field Name/Number: T22-24 **Acres:** 153.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	188.6
Nutrients Removed at Harvest	-627.3	-17.2	-286.3	0.0
Nutrient Balance	-627.2	-17.2	-286.3	188.6

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T22-24 **Acres:** 153

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		46.2	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/21					
W. Harvest	9/28/23	9.6	T/Ac	(627.3)	(90.0)	(413.9)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T26 **Acres:** 89.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
10/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	5.81	-	0.0	-	-	24	-		-
2/13/23	Canal	-	-	-	5.48	-	0.0	-	-	22	-		-
3/11/23	Canal	-	-	-	5.39	-	0.0	-	-	22	-		-
4/15/23	Canal	-	-	-	5.60	-	0.0	-	-	23	-		-
5/13/23	Canal	-	-	-	5.69	-	0.0	-	-	23	-		-
6/21/23	Canal	-	-	-	5.54	-	0.0	-	-	23	-		-
7/19/23	Canal	-	-	-	5.42	-	0.0	-	-	22	-		-
8/23/23	Canal	-	-	-	5.51	-	0.0	-	-	22	-		-
9/28/23	W. Harvest	-	-	-	-	-	(573.3)	(50.5)	(339.8)	-	11.09		9.30
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Totals:		0.0		0	44.44	0.00	(573)	(51)	(340)	181	11.09	0	9.30

Field Name/Number: T26 **Acres:** 89.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	181.4
Nutrients Removed at Harvest	-573.3	-22.1	-282.1	0.0
Nutrient Balance	-573.2	-22.1	-282.1	181.4

Winter Nitrogen Crop App / Use Ratio: 0.01 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T26 **Acres:** 89

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		44.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	10/1/18					
W. Harvest	9/28/23	9.3	T/Ac	(573.3)	(115.7)	(407.7)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T30 **Acres:** 26.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Comm Fert App.	-	-	110	-	-	110.0	-	-	-	-		-
4/14/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/16/23	Canal	-	-	-	6.42	-	0.0	-	-	26	-		-
5/9/23	Canal	-	-	-	6.22	-	0.0	-	-	25	-		-
6/1/23	Canal	-	-	-	6.73	-	0.0	-	-	27	-		-
6/18/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
7/14/23	Canal	-	-	-	6.12	-	0.0	-	-	25	-		-
7/29/23	Canal	-	-	-	6.32	-	0.0	-	-	26	-		-
8/10/23	S. Harvest	-	-	-	-	-	(203.5)	(44.7)	(230.3)	-	-		30.88
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		0.0		110	38.44	0.00	(93)	(45)	(230)	157	0.00	0	30.88

Field Name/Number: T30 **Acres:** 26.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	110.1	0.0	0.0	156.9
Nutrients Removed at Harvest	-203.5	-19.5	-191.2	0.0
Nutrient Balance	-93.4	-19.5	-191.2	156.9

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.12

Field Name/Number: T30 **Acres:** 26

Winter Crop **W. Fallow**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		110.0	lbs/Ac	110.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	110.0		
Canal		38.4	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/14/23					
S. Harvest	8/10/23	30.9	T/Ac	(203.5)	(102.4)	(276.4)

Nutrient Applications

Field Name/Number: T36 **Acres:** 77.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expacted Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
10/1/18	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	5.51	-	0.0	-	-	22	-		-
2/13/23	Canal	-	-	-	5.44	-	0.0	-	-	22	-		-
3/11/23	Canal	-	-	-	5.65	-	0.0	-	-	23	-		-
4/15/23	Canal	-	-	-	5.34	-	0.0	-	-	22	-		-
5/11/23	Canal	-	-	-	5.54	-	0.0	-	-	23	-		-
6/21/23	Canal	-	-	-	5.61	-	0.0	-	-	23	-		-
7/19/23	Canal	-	-	-	5.41	-	0.0	-	-	22	-		-
8/23/23	Canal	-	-	-	5.58	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(182.0)	(41.9)	(507.8)	-	11.09		9.40
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Totals:		0.0		0	44.07	0.00	(182)	(42)	(508)	180	11.09	0	9.40

Field Name/Number: T36 **Acres:** 77.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	179.9
Nutrients Removed at Harvest	-182.0	-18.3	-421.5	0.0
Nutrient Balance	-181.9	-18.3	-421.5	179.9

Winter Nitrogen Crop App / Use Ratio: 0.04 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T36 **Acres:** 77

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		44.1	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	10/1/18					
W. Harvest	9/28/23	9.4	T/Ac	(182.0)	(95.9)	(609.3)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: T39-44 **Acres:** 197.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
4/1/23	S. Manure App.	10.15	-	-	-	-	121.6	82.7	249.2	-	-		-
4/15/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/17/23	Canal	-	-	-	6.19	-	0.0	-	-	25	-		-
5/13/23	Canal	-	-	-	6.31	-	0.0	-	-	26	-		-
6/7/23	Canal	-	-	-	6.26	-	0.0	-	-	26	-		-
6/29/23	Canal	-	-	-	6.28	-	0.0	-	-	26	-		-
7/22/23	Canal	-	-	-	6.22	-	0.0	-	-	25	-		-
8/12/23	S. Harvest	-	-	-	-	-	(112.0)	(27.1)	(120.6)	-	4.56		16.85
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Totals:		10.2		0	31.26	0.00	10	56	129	128	4.56	0	16.85

Dry Weight
As Received

Field Name/Number: T39-44 **Acres:** 197

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	121.7	82.7	249.2	127.6
Nutrients Removed at Harvest	-112.0	-27.1	-120.6	0.0
Nutrient Balance	9.7	55.6	128.6	127.6

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.15

Field Name/Number: T39-44 **Acres:** 197

Winter Crop **W. Fallow**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		10.2	T/Ac	121.6	189.4	299.0
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	8.715E-15		
Canal		31.3	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/15/23					
S. Harvest	8/12/23	16.9	T/Ac	(112.0)	(62.0)	(144.7)

Nutrient Applications

Field Name/Number: T40 **Acres:** 156.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
	W. Fallow	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/7/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
4/15/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
4/17/23	Canal	-	-	-	6.46	-	0.0	-	-	26	-		-
5/13/23	Canal	-	-	-	6.51	-	0.0	-	-	27	-		-
6/7/23	Canal	-	-	-	6.41	-	0.0	-	-	26	-		-
6/29/23	Canal	-	-	-	6.37	-	0.0	-	-	26	-		-
7/22/23	Canal	-	-	-	6.47	-	0.0	-	-	26	-		-
8/13/23	S. Harvest	-	-	-	-	-	(175.2)	(48.7)	(181.1)	-	4.56		25.89
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Totals:		0.0		100	32.22	0.00	(75)	(49)	(181)	132	4.56	0	25.89

Field Name/Number: T40 **Acres:** 156.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	100.1	0.0	0.0	131.5
Nutrients Removed at Harvest	-175.2	-21.2	-150.3	0.0
Nutrient Balance	-75.2	-21.2	-150.3	131.5

Winter Nitrogen Crop App / Use Ratio: #N/A **Summer Nitrogen Crop App / Use Ratio:** 1.18

Field Name/Number: T40 **Acres:** 156

Winter Crop **W. Fallow**

Nutrient Summary :		Applied		N		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	#N/A					
W. Harvest	1/1/2000	#N/A	T/Ac	#N/A	#N/A	#N/A

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		32.2	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	4/15/23					
S. Harvest	8/13/23	25.9	T/Ac	(175.2)	(111.5)	(217.3)

Nutrient Applications

Field Name/Number: T45-46

Acres: 139.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
	-	-	-	-	-	-	-	-	-	-	-		-
1/1/20	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	Canal	-	-	-	5.72	-	0.0	-	-	23	-		-
2/12/23	Canal	-	-	-	5.59	-	0.0	-	-	23	-		-
3/10/23	Canal	-	-	-	5.70	-	0.0	-	-	23	-		-
4/13/23	Canal	-	-	-	5.55	-	0.0	-	-	23	-		-
5/13/23	Canal	-	-	-	5.49	-	0.0	-	-	22	-		-
6/14/23	Canal	-	-	-	5.53	-	0.0	-	-	23	-		-
7/15/23	Canal	-	-	-	5.74	-	0.0	-	-	23	-		-
8/23/23	Canal	-	-	-	5.66	-	0.0	-	-	23	-		-
9/28/23	W. Harvest	-	-	-	-	-	(193.7)	(44.8)	(429.6)	-	-		9.54
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		0.0		0	44.99	0.00	(194)	(45)	(430)	184	0.00	0	9.54

Field Name/Number: T45-46 **Acres:** 139.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	0.1	0.0	0.0	183.6
Nutrients Removed at Harvest	-193.7	-19.5	-356.6	0.0
Nutrient Balance	-193.6	-19.5	-356.6	183.6

Winter Nitrogen Crop App / Use Ratio: 0.04 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: T45-46 **Acres:** 139

Winter Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		-	T/Ac	-	-	-
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		45.0	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/20					
W. Harvest	9/28/23	9.5	T/Ac	(193.7)	(102.5)	(515.5)

Summer Crop **Alfalfa**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		-	Ac In /Ac	-		
Atm. Depos.		#N/A		#N/A		
S. Planting	#N/A					
S. Harvest	#N/A	#N/A	T/Ac	#N/A	#N/A	#N/A

Nutrient Applications

Field Name/Number: Zonneveld E **Acres:** 80.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
12/1/23	W. Manure App.	13.75	-	-	-	-	205.5	187.9	635.8	-	-		-
12/15/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/3/23	Canal	-	-	-	6.46	-	0.0	-	-	26	-		-
4/13/23	Canal	-	-	-	6.59	-	0.0	-	-	27	-		-
5/6/23	Canal	-	-	-	6.40	-	0.0	-	-	26	-		-
5/31/23	W. Harvest	-	-	-	-	-	(210.2)	(31.3)	(241.6)	-	-		25.40
	-	-	-	-	-	-	-	-	-	-	-		-
8/1/23	S. Comm Fert App.	-	-	100	-	-	100.0	-	-	-	-		-
6/22/23	Canal	-	-	-	6.69	-	0.0	-	-	27	-		-
7/4/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/6/23	Canal	-	-	-	6.79	-	0.0	-	-	28	-		-
8/1/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
9/1/23	Canal	-	-	-	6.56	-	0.0	-	-	27	-		-
9/26/23	Canal	-	-	-	6.86	-	0.0	-	-	28	-		-
10/31/23	S. Harvest	-	-	-	-	-	(186.1)	(33.8)	(126.1)	-	4.56		25.80
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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Totals:		13.8		100	52.99	0.00	(91)	123	268	216	4.56	0	51.20

Field Name/Number: Zonneveld E **Acres:** 80.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	305.6	82.0	527.7	216.3
Nutrients Removed at Harvest	-396.3	-28.4	-305.2	0.0
Nutrient Balance	-90.6	53.6	222.6	216.3

Winter Nitrogen Crop App / Use Ratio: 1.01 **Summer Nitrogen Crop App / Use Ratio:** 1.11

Field Name/Number: Zonneveld E **Acres:** 80

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		13.8	T/Ac	205.5	430.4	762.9
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		19.5	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	12/15/22					
W. Harvest	5/31/23	25.4	T/Ac	(210.2)	(71.8)	(289.9)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		100.0	lbs/Ac	100.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	100.0		
Canal		33.5	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	7/4/23					
S. Harvest	10/31/23	25.8	T/Ac	(186.1)	(77.5)	(151.3)

Nutrient Applications

Field Name/Number: Zonneveld W

Acres: 80.00

Date	Event / Source	Dry Manure Applied (tons/ac)	Moist. %	Chem Fert total lbs	Fresh Water Applied (ac-in/ac)	Lagoon Water Applied (ac-in/ac)	Lab Sample Data					Yield	
							N (lbs/Ac)	Total P (lbs/Ac)	Total K (lbs/Ac)	Salt (Lbs/Ac)	TFS %	Expected Yield (tons/ac)	Actual Yield (tons/ac)
11/15/22	W. Manure App.	15.00	-	-	-	-	224.2	205.0	693.6	-	-		-
11/26/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
2/3/23	Canal	-	-	-	6.40	-	0.0	-	-	26	-		-
4/13/23	Canal	-	-	-	6.53	-	0.0	-	-	27	-		-
5/6/23	Canal	-	-	-	6.63	-	0.0	-	-	27	-		-
6/5/23	W. Harvest	-	-	-	-	-	(244.5)	(51.9)	(339.8)	-	-		25.40
	-	-	-	-	-	-	-	-	-	-	-		-
8/1/23	S. Comm Fert App.	-	-	110	-	-	110.0	-	-	-	-		-
6/22/23	Canal	-	-	-	6.73	-	0.0	-	-	27	-		-
7/13/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/14/23	Canal	-	-	-	6.46	-	0.0	-	-	26	-		-
8/1/23	Canal	-	-	-	6.59	-	0.0	-	-	27	-		-
9/1/23	Canal	-	-	-	6.73	-	0.0	-	-	27	-		-
9/26/23	Canal	-	-	-	6.43	-	0.0	-	-	26	-		-
11/1/23	S. Harvest	-	-	-	-	-	(191.9)	(34.0)	(149.4)	-	4.56		30.00
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		15.0		110	52.49	0.00	(102)	119	204	214	4.56	0	55.40

Field Name/Number: Zonneveld W **Acres:** 80.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	334.3	89.5	575.7	214.3
Nutrients Removed at Harvest	-436.4	-37.5	-406.1	0.0
Nutrient Balance	-102.1	52.0	169.7	214.3

Winter Nitrogen Crop App / Use Ratio: 0.95 **Summer Nitrogen Crop App / Use Ratio:** 1.18

Field Name/Number: Zonneveld W **Acres:** 80

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		15.0	T/Ac	224.2	469.5	832.3
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	-	Ac In /Ac	-	-	-
	Q2	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	-		
Canal		19.6	Ac In /Ac	0.0		
Atm. Depos.		Yes		7.0		
W. Planting	11/26/22					
W. Harvest	6/5/23	25.4	T/Ac	(244.5)	(118.9)	(407.7)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		110.0	lbs/Ac	110.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	-	Ac In /Ac	-	-	-
	Q4	-	Ac In /Ac	-	-	-
Well Water		-	Ac In /Ac	110.0		
Canal		32.9	Ac In /Ac	0.1		
Atm. Depos.		Yes		7.0		
S. Planting	7/13/23					
S. Harvest	11/1/23	30.0	T/Ac	(191.9)	(77.8)	(179.3)

Notes

Without allowance for the significant amount of rainfall during the winter months of 2022/2023, the irrigation logs on each field page of the annual report, reflect canal and/or well used only during that time frame. The facility did not irrigate during the "Significant Storm Events".

It is inaccurate to present "salt" application without acknowledging that there is substantial uptake and utilization of "salts" by crops. If it is possible to calculate "salt" application, it is also possible to calculate "salt" utilization. That calculation should be included in this report. To calculate "salt" utilization is a lengthy process and cannot be done with the constituents required in the Revised General Order sampling requirements.

The signature(s) affixed to this report does not affirmatively refer to those references to "salt" that we know to be incorrect.

J.P. _____ *(Initial)*

Exception Reporting

Manure , Process Water and Other Dairy Waste Discharges:

The following is a summary of all manure and process water 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 water discharges occurred during the reporting period

Storm Water Discharges:

The follow 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, storm water discharges occurred durging the reporting period

Land Application Area To Surface Water Discharges:

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

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

Nutrient Management Plan (NMP) & Written Agreement Statement

Nutrient Management Plan Statement:

Was the faciltiy NMP updated in the reporting period? Yes

Was the facility's NMP developed and approved by a certified nutrient management specialist? Yes

Written Agreements:

Are there any written agreements with third parties to receive manure or process water that are new or were revised within the repoting period? No

Owner and/or Operator Certification

**I certify under penalty of law that all information submitted as part of this document is accurate and true. Certification signatures by a California Registered Professional have been supplied as needed in Part II. I have personally examined and am familiar with the information submitted in Parts I and II of 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.*

Frank Pacheco

Signature of Owner of Facility

Signature of Operator of Facility

Pacheco & Associates II

Frank Pacheco

Print Name

Same as owner

Print Name

5/12/24

Date

Date

Pacheco & Assoc

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

February 16, 2023

Lab No. : **VI 2340547**
Customer No. : **4018505**

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Barn Well	01/31/2023	01/31/2023	VI 2340547-001	DW

Sampling and Receipt Information:

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

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

Test Summary

	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

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

KD: JRD

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S. Title: Laboratory Director Date: 2023-02-17

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CA ELAP Certification No. 2810

February 16, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Barn Well
Project : W-6 Pacheco & Assoc

Lab No. : VI 2340547-001
Customer No. : 4018505

Sampled On : January 31, 2023 at 13:10
Sampled By : Marlene / Kaylin
Received On : January 31, 2023 at 14:03
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	Ul	02/10/2023	09:50	sta	EPA 351.2	02/12/2023	19:43	lcr
Nitrate Nitrogen	5.5	0.4	mg/L	10	1		02/01/2023	13:00	lfs	SM 4500-NO3 F	02/01/2023	17:04	lfs
Nitrogen, Total as Nitrogen	5.5	0.5	mg/L		1	l	02/10/2023	09:50	sta	EPA 351.2	02/12/2023	19:43	lcr
Nitrate + Nitrite as N	5.5	0.4	mg/L	10	1		02/01/2023	13:00	lfs	SM 4500-NO3 F	02/01/2023	17:04	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	Ul	02/10/2023	09:50	sta	EPA 351.2	02/12/2023	19:43	lcr
Conductivity	275	1	umhos/cm	1600[2]	1		02/15/2023	13:59	sta		02/15/2023	13:59	sta
Solids, Total Dissolved (TDS)	170	20	mg/L	1000[2]	1		02/03/2023	11:24	ctl	SM 2540 C	02/06/2023	13:02	ctl

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

ND=Non-Detected, RL=Reporting Level , Dil.=Dilution
MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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CA ELAP Certification No. 2810

February 16, 2023
Livingston Dairy Consulting, Inc.

Lab No. : VI 2340547
Customer No. : 4018505

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2510B	02/15/2023:201667STA	Blank	umhos/cm		ND	<1	
		(VI 2340657-002)	Dup	umhos/cm		1.03%	5	
Solids, Total Dissolved	2540CE	02/03/2023:201214CTL	Blank	mg/L		ND	<20	
			LCS	mg/L	990.8	100 %	90-110	
		(VI 2340568-001)	Dup	mg/L		2.7%	5	
		(VI 2340568-001)	Dup	mg/L		1.6%	5	
Nitrogen, Total Kjeldahl	351.2	02/10/2023:201482STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	93.0%	73-124	
			MS	mg/L	12.00	75.3%	54-136	
		(VI 2340549-001)	MSD	mg/L	12.00	79.7%	54-136	
			MSRPD	mg/L	12.00	5.7%	≤27	
			MS	mg/L	12.00	26.9%	<Â¼	
		(VI 2340550-001)	MSD	mg/L	12.00	42.9%	54-136	435
			MSRPD	mg/L	12.00	46.4%	≤27	435
Nitrate + Nitrite as N	4500NO3F	02/01/2023:201107LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	93.1%	80-120	
			MS	mg/L	5.609	91.9%	66-125	
		(VI 2340560-001)	MSD	mg/L	5.609	95.0%	66-125	
			MSRPD	mg/L	5.609	2.6%	≤30.4	
Nitrate Nitrogen	4500NO3F	02/01/2023:201107LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	93.1%	80-120	
			MS	mg/L	5.609	91.9%	66-125	
		(VI 2340560-001)	MSD	mg/L	5.609	95.0%	66-125	
			MSRPD	mg/L	5.609	2.6%	≤30.4	

Definition

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

Explanation

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

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FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

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Laboratory Copy (1 of 3)

42086:03/01/2022

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Client: **Livingston Dairy Consulting, Inc.**
Address: Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Phone: (559)687-1440 Fax:
Contact Person: Noreen Livingston
Project Name: W-6 Pacheco & Assoc.
Purchase Order Number:
Quote Number: VI 20210208-01
Sampler(s) Marlene & Kaylin

Sampling Fee: _____ Pickup Fee: _____
Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: VI 2340547 4-18505

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Dairy Analysis-W-6-Conductivity,NO3-N,Total N,TDS 16oz(P)	Sampling-W-6 - Total N - Split Bottle	***VI Lab to Split for Total N*** 8oz(P)-H2SO4
1	Barn Well	1/31	1:10PM	G	DW	P			1	1	
2				G					1	1	
3				G					1	1	
4				G					1	1	
5				G					1	1	
6				G					1	1	
7				G					1	1	
8				G					1	1	
9				G					1	1	
10				G					1	1	

Remarks:

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
[signature]	1/31/23	1:33	[signature]	1/31/23	1403	[signature]	1/31/23	1710

Received By:	Date:	Time:	Received By:	Date:	Time:	Received By:	Date:	Time:
[signature]	1/31/23	1:33	[signature]	1/31/23	1403	[signature]		

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Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH VI

1. Number of ice chests/packages received: 1 Shipping tracking # GTC
2. Were samples received in a chilled condition? Temps: 10.1 / 9.3 / ____ / ____ / ____
   Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

3. Do the number of bottles received agree with the COC?	Yes	No	N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5. VOAs checked for Headspace?	Yes	No	N/A
6. Were sample custody seals intact?	Yes	No	N/A
7. If required, was sample split for pH analysis?	Yes	No	N/A
8. Were all analyses within holding times at time of receipt?	Yes	No	
9. Verify sample date, time and sampler name	Yes	No	

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): CA

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 2c / ____ / ____ / ____ / ____
   Acceptable is above freezing to 6° C. If many packages are received at one time check for tests/H.T.'s/rushes/
2. Shipping tracking numbers: 550722593 590 584

3. Do the number of bottles received agree with the COC?	Yes	No	N/A
4. Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5. Were sample custody seals intact?	Yes	No	N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1. Were all requested analyses understood and acceptable?	Yes	No		
2. Did bottle labels correspond with the client's ID's?	Yes	No		
3. Were all bottles requiring sample preservation properly preserved? [Exception: Oil & Grease, VOA and CrVI verified in lab]	Yes	No	N/A	FGL
4. VOAs checked for Headspace?	Yes	No	N/A	
5. Have rush or project due dates been checked and accepted?	Yes	No	N/A	
6. Were all analyses within holding times at time of receipt?	Yes	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): MDC

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted:_____ Phone Number:_____
   Initiated By:_____ Date:_____
   Problem:
   Resolution:

2. Person Contacted:_____ Phone Number: _____
   Initiated By:_____
   Problem:
   Resolution:

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

(4018505)
Livingston Dairy Consulting, Inc.
VI 2340547
iv 02/01/2023 09:27:28
VI_2340547

HACKWOOD CREEK - CANAL

FGL ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

August 3, 2023

Lab No. : **VI 2344454**
Customer No. : **4018505**

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Canal-Packwood Creek	07/11/2023	07/11/2023	VI 2344454-001	AGW

Sampling and Receipt Information:

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

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

Test Summary

EPA 351.2	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 2540 C	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-H+B	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
SM 4500-NO3 F	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)

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

KD: EHB

Approved By **Kelly A. Dunnahoo, B.S.** Digitally signed by Kelly A. Dunnahoo, B.S.
Title: Laboratory Director
Date: 2023-08-03

Page 1 of 3

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CA ELAP Certification No. 2810

August 3, 2023

Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Description : Canal-Packwood Creek
Project : W-6 Canal-Packwood Creek Livingston

Lab No. : VI 2344454-001
Customer No. : 4018505

Sampled On : July 11, 2023 at 08:30
Sampled By : Bruce / Noreen
Received On : July 11, 2023 at 11:38
Matrix : Ag Water

Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
Dairy Analysis													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:24	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	16:12	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	Calc.	07/31/2023	19:24	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	07/12/2023	13:00	lfs	SM 4500-NO3 F	07/12/2023	16:12	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	19:24	lcr
Conductivity	36	1	umhos/cm		1		07/18/2023	14:57	amm	SM 4500-H+B	07/18/2023	16:11	amm
Solids, Total Dissolved (TDS)	30	20	mg/L		1		07/13/2023	11:00	ctl	SM 2540 C	07/14/2023	11:00	ctl

DQF Flags Definition:
U Constituent results were non-detect.

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

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Laboratory Copy (1 of 2)

Client: **Livingston Dairy Consulting, Inc.**
Address: Livingston Dairy Consulting, Inc
1635 E. Prosperity Suite B
Tulare, CA 93274

Phone: (559)687-1440 Fax:
Contact Person: Noreen Livingston
Project Name: W-6 Canal-Packwood Creek
Purchase Order Number: Livingston
Quote Number: VI 20210208-01

Sampler(s) BRUCE / NOREEN

Sampling Fee: _____ Pickup Fee: _____
Compositor Setup Date: ___/___/___ Time: ___/___

Lab Number: VI 2314454 4-18505

42086:04/01/2023

TEST DESCRIPTION - See Reverse side for Container, Preservative and Sampling information

Samp Num	Location Description	Date Sampled	Time Sampled	Method of Sampling: Composite(C) Grab(G)	Type of Sample **SEE REVERSE SIDE**	Potable(P) Non-Potable(NP) Ag Water(AgW)	Bacti Type: Other(O) System(SYS) Source(SR) Waste(W)	Bacti Reason: Routine(ROUT) Repeat(RPT) Replace(RPL) Other(O) Special(SPL)	Dairy Analysis-W-6-Conductivity,NO3-N,Total N,TDS 16oz(P)	Bottles/Containers Split Fee 8oz(P)-H2SO4
1	Canal-Packwood Creek	7/11/23	8:30 AM	G	AgW	NP			1	1
2				G					1	1
3				G					1	1
4				G					1	1
5				G					1	1
6				G					1	1
7				G					1	1
8				G					1	1
9				G					1	1
10				G					1	1

Remarks:

Relinquished	Date:	Time:	Relinquished	Date:	Time:	Relinquished	Date:	Time:
[signature]	7/11/23	11:30	ADH	7/11/23	17:10	GW	7/12/23	1010
Received By:	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**	**Received By:**	**Date:**	**Time:**
ADH	7/12/23	1130	GW	7/11/23	17:10	[signature]	7/12/23	1010

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Phone: (559) 734-9473
Fax: (559) 734-8435

Inter-Laboratory Condition Upon Receipt (Attach to COC)

Sample Receipt at: STK CC CH VI

1. Number of ice chests/packages received: 1 Shipping tracking # LTC
2. Were samples received in a chilled condition? Temps: PCL / 7.4 / ____ / ____ / ____
   Surface water SWTR bact samples: A sample that has a temperature upon receipt of >10° C, whether iced or not, should be flagged unless the time since sample collection has been less than two hours.

3.	Do the number of bottles received agree with the COC?	Yes	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5.	VOAs checked for Headspace?	Yes	No	N/A
6.	Were sample custody seals intact?	Yes	No	N/A
7.	If required, was sample split for pH analysis?	Yes	No	N/A
8.	Were all analyses within holding times at time of receipt?	Yes	No	
9.	Verify sample date, time and sampler name	Yes	No	

Sign and date the COC, place in a ziplock and put in the same ice chest as the samples.
Sample Receipt Review completed by (initials): ADA

Sample Receipt at SP:

1. Were samples received in a chilled condition? Temps: 5 / 4 4 / 4 / ____
   Acceptable is above freezing to 6 C. If many packages are received at one time check for tests/H.T.'s/rushes/
2. Shipping tracking numbers:
   975745133, 975745345, 975745137, 975745144

3.	Do the number of bottles received agree with the COC?	Yes	No	N/A
4.	Were samples received intact? (i.e. no broken bottles, leaks etc.)	Yes	No	
5.	Were sample custody seals intact?	Yes	No	N/A

Sign and date the COC, obtain LIMS sample numbers, select methods/tests and print labels.

Sample Verification, Labeling and Distribution:

1.	Were all requested analyses understood and acceptable?	Yes	No		
2.	Did bottle labels correspond with the client's ID's?	Yes	No		
3.	Were all bottles requiring sample preservation properly preserved? [Exception: Oil & Grease, VOA and CrVI verified in lab]	Yes	No	N/A	FGL
4.	VOAs checked for Headspace?	Yes	No	N/A	
5.	Have rush or project due dates been checked and accepted?	Yes	No	N/A	
6.	Were all analyses within holding times at time of receipt?	Yes	No		

Attach labels to the containers and include a copy of the COC for lab delivery.
Sample Receipt, Login and Verification completed by (initials): [illegible]

Discrepancy Documentation:

Any items above which are "No" or do not meet specifications (i.e. temps) must be resolved.

1. Person Contacted:_____ Phone Number:_____
   Initiated By:_____ Date:_____
   Problem:
   Resolution:

2. Person Contacted:_____
   Initiated By:_____
   Problem:
   Resolution:

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

(4-18-05)
Livingston Dairy Consulting, Inc.
VI 2344454
iv 07/12/2023 09:04:56
VI 2344454
2344454

here

Livingston Dairy Consulting, Inc.

FIELD ACTIVITY REPORT

Facility Name: Pacheco & Associates II
5730 Ave 256, Tulare
Tulare County

2023

Sample Collection Equipment:
Bottle Container

Sample Container: (Circle one)
Bottle Container: 8 fl oz 16 fl oz 32 fl oz

Sample Collection Location: (Circle one)
Discharge Pipe Spigot/Faucet

Sample Collection Method: (Circle one) *All Samples are labeled with the facility name, date, contents, location and description ** Please see the Sample and Anylsis Plan for more detailed descriptions.

Well: Sample taken at the Discharge Pipe, Spigot or Faucet using a sample container provided by laboratory

Sample Type:

Date	Well Name	Time	PH	Temp	Ammonium
1-31	Barn well	1:10	65	68	~~0~~

Sample Preservation Method: (Circle one) **Ice Chest Refrigerator Ice Pack**

Livingston Dairy Contuling, Inc. 2020

Manure/Process Wastewater Tracking Manifest For Existing Milk Cow Dairies

Instructions:

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

Operator Information:

Name of Operator: Frank Pacheco

Name of Dairy Facility: Pacheco & Associates II Dairy

Facility Address: 26301 Rd. 52 Tulare, CA 93274
Number and Street City Zip Code

Contact Person Name: 559-686-3816
Name Phone Number

Manure/Process Wastewater Hauler Information:

Name of Hauling Company/Person: _____

Address of Hauling Company /Person: _____
Number and Street City Zip Code

Contact Person: _____
Name Phone Number

Destination Information:

Composting Facility / Broker / Farmer / Other (identify) Heifer Ranch (please circle one)

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

Pacheco & Associates II Heifer Ranch
Name Number and Street City Zip Code Phone Number

Manure/Process Wastewater Destination Address or Assessor's Parcel Number:

147-030-010, 148-020-023
Number and Street City Zip Code Assessor's Parcel Number

Dates Hauled: _____

Amount Hauled:

Enter the amount of manure hauled in tons or cubic yards (indicate the units used), the manure solids content (if amount reported in tons) or manure density (if amount reported in cubic yards), and the method used to calculate the amount:

- Manure: 7,200 Tons or Cubic Yards (indicate which units used)
- Manure Moisture % : _____
- Method used to determine amount of manure: _____

Enter the amount of process wastewater hauled in gallons and the method used to determine the amount.

- Process Wastewater: _____ Gallons
- Method used to determine volume of process wastewater: _____

Written Agreement:

Does the Operator have a written agreement (in compliance with Land Application Specification C.2 of Waste Discharge Requirements General Order No. R5-2007-0035) with any party that receives process wastewater from the Operator for its own use? (please check one)

_____ Yes _____ No

If the answer is no, the Operator agrees to have such a written agreement with any such party for any process wastewater transferred after 31 December 2007 to such party.

_____ (Operator shall provide initials here to acknowledge this requirement).

Certification:

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

Operator's Signature: Frank Pacheco Date: 5/12/24

Hauler's Signature: _____ Date: _____

Livingston Dairy Consulting, Inc.

1635 E. Prosperity Ave. Ste. B
Tulare, CA 93274
559-687-1440

Sunday, April 21, 2024

Re: 2023 NMP
Pacheco & Assocaites II WDID 5D545017001
5730 Avenue 256 Tulare, 93274

Enclosed is the 2023/2024 Nutrient Budget for your facility to comply with the California Regional Water Quality Control Board General Oder No. R5-2007-0035.

***2023 Whole Farm Nitrogen Balance**

The whole farm nitrogen balance for the crop year 2022 was **0.28**
Nitrogen Summary will show the balances for each field and for the whole farm.

***Ranges for the Whole Farm Nitrogen Balance**

Factor	Status	Evaluation
> 1.65	Excessive	Too much nitrogen applied
1.4 - 1.65	Slightly High	Nitrogen is satisfactory to slightly high
0.9 - 1.4	Normal	Normal to slightly low
< 0.9	Low	Low nitrogen status, additional nitrogen needed

***Nutrient Management Plan/ Nutrient Budget Certification**

This Nutrient Budget was prepared by a Certified Crop Advisor as required by the California Regional Water Quality Control Board.

Butch Brazil
Certified Crop Advisor #35629

This Nutrient Management Plan / Nutrient Budget is based on samples collected and analyzed by a third party laboratory. This Certified Crop Advisor was not involved in oversight of outside laboratory sample collection, transportation, or analyses. Interpretation of the data is based on submitted information. Where data was incomplete, book values and / or historical data was used. The third party laboratory or Certified Crop Advisor was not involved with the agronomic growth of the crops and the Nutrient Budget is based on information provided by the owner.