Livingston Dairy Consulting, Inc.

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

A&M Farms **WDID 5C10NC00061**
10350 W. Manning Ave. Fresno, CA 93706

X	Annual Report
X	Water Analysis Samples
N/A	Manure Manifest
N/A	Facility / Land Map
N/A	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: A&M Farms WDID 5C10NC00061

Facility Address: 10350 W. Manning Ave. Fresno, CA 93706

Original Operation Date: 6/26/2004

Facility APN's: x035 x070 x028 xxxx

RWQCB Basin Plan Designation: Tulare Lake Basin

☐ Check if any information has changed

Owner(s)

Owner(s) Name: Lucy Arieas or Marie Meneses

Mailing Address: 10470 W. Manning Ave. Fresno, CA 93706

Home Phone Number: 559-994-8331

Cell Phone Number:

☐ 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:	1,789	239	789	501	-
Number Under Roof	-	-	-	-	-
Maximum Number	1,789	239	789	501	
Average Number	1,789	239	789	501	
Average Live Weight (lbs)	1,400	1,450	950	630	

Average Milk Production: 68

Predominant Milk Cow Breed: Holstein

Manure Generated:

Total manure excreted by the herd:	9,485.70	@40% Moisture	*ton/yr*
Total nitrogen from manure:	826,907		*lbs*
	70,975		*lbs*
	302,971		*lbs*
Total salt from manure:	3,803,773		*lbs*

After Ammonia (30% loss applied)

578,835 *lbs per reporting period*

Process Wastewater Generated:

Process wastewater generated:	26,119,400	*gal*
Total nitrogen generated:	59,006	*lbs*
	36,501	*lbs*
	124,890	*lbs*
Total salt (TDS) generated:	790,033	*lbs*

List of Land Application Areas

Field Name	APN	APN Acres	Cropable Acres	Total Harvest	Type of Waste Applied
1W	x035 x070 x028 xxxx	634	82	2	P.W. & D.M.
1E	x035 x070 x028 xxxx		71	2	P.W. & D.M.
2 (Trees)	x035 x070 x028 xxxx		43	0	N/A
3W	x035 x070 x028 xxxx		78	2	P.W. & D.M.
3E	x035 x070 x028 xxxx		78	2	P.W. & D.M.
4W	x035 x070 x028 xxxx		75	2	P.W. & D.M.
4E	x035 x070 x028 xxxx		75	2	P.W. & D.M.
5A (Trees)	x035 x070 x028 xxxx		11	0	N/A
5B (Trees)	x035 x070 x028 xxxx		11	0	N/A
Total Crop Acres			524.00		

List of Fresh Water Sources

Source Description	Type	Subsurface (Tile) Drainage Sources
Barn S (1)	Ground Water	No
Barn N (2)	Ground Water	No
Domestic	Ground Water	No
Meneses Dom	Ground Water	No
Trailer Well	Ground Water	No
1	Ground Water	No
2	Ground Water	No
3	Ground Water	No
4	Ground Water	No
5	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**
1W	Wheat, Silage	60.20	0.52	0.11	0.56	-	8.98	33725 030	05/17/23	Other
1E	Wheat, Silage	67.30	0.47	0.12	0.76	-	8.35	33760 199	05/25/23	Other
2 (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
3W	Wheat, Silage	62.40	0.47	0.11	0.73	-	8.54	33818 094	06/07/23	Other
3E	Wheat, Silage	59.60	0.51	0.10	0.56	-	6.24	33761 108	05/25/23	Other
4W	Wheat, Silage	65.40	0.48	0.10	0.57	-	9.34	33725 029	05/17/23	Other
4E	Wheat, Silage	68.30	0.47	0.13	0.75	-	8.59	33760 200	05/25/23	Other
5A (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
5B (Trees)	Trees, Almonds	-	6.50	2.50	8.50	-	-	Book Value		-
0										
0										
0										
0										
0										
0										

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**
1W	Corn, Silage	65.90	0.45	0.12	0.51	-	6.03	34448 223	10/03/23	Other
1E	Corn, Silage	69.20	0.39	0.08	0.41	-	5.23	34492 151	10/10/23	Other
2 (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
3W	Corn, Silage	66.90	0.42	0.08	0.37	-	5.05	34492 152	10/16/23	Other
3E	Corn, Silage	68.00	0.32	0.09	0.37	-	4.49	34492 153	10/17/23	Other
4W	Corn, Silage	60.90	0.47	0.12	0.45	-	5.19	34448 222	10/09/23	Other
4E	Corn, Silage	66.90	0.46	0.10	0.43	-	5.03	34537 154	10/23/23	Other
5A (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-
5B (Trees)	Trees, Almonds	-	-	-	-	-	-	Trees		-

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
1W	Wheat, Silage	11/26/22	5/12/23	33725 030	60.20	0.52	0.11	0.56	-	8.98	Dry Weight
1E	Wheat, Silage	11/20/22	5/20/23	33760 199	67.30	0.47	0.12	0.76	-	8.35	Dry Weight
2 (Trees)	Trees, Almonds	1/1/20	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
3W	Wheat, Silage	11/30/22	4/29/23	33818 094	62.40	0.47	0.11	0.73	-	8.54	Dry Weight
3E	Wheat, Silage	12/1/22	5/15/23	33761 108	59.60	0.51	0.10	0.56	-	6.24	Dry Weight
4W	Wheat, Silage	12/2/22	5/10/23	33725 029	65.40	0.48	0.10	0.57	-	9.34	Dry Weight
4E	Wheat, Silage	12/5/22	5/5/23	33760 200	68.30	0.47	0.13	0.75	-	8.59	Dry Weight
5A (Trees)	Trees, Almonds	1/1/20	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	Dry Weight
5B (Trees)	Trees, Almonds	1/1/20	11/1/23	Book Value	-	6.50	2.50	8.50	-	-	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
1W	Corn, Silage	7/2/23	10/12/23	34448 223	65.90	0.45	0.12	0.51	-	6.03	Dry Weight
1E	Corn, Silage	6/29/23	10/1/23	34492 151	69.20	0.39	0.08	0.41	-	5.23	Dry Weight
2 (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
3W	Corn, Silage	7/1/23	10/15/23	34492 152	66.90	0.42	0.08	0.37	-	5.05	Dry Weight
3E	Corn, Silage	7/5/23	10/5/23	34492 153	68.00	0.32	0.09	0.37	-	4.49	Dry Weight
4W	Corn, Silage	6/2/23	10/4/23	34448 222	60.90	0.47	0.12	0.45	-	5.19	Dry Weight
4E	Corn, Silage	7/4/23	10/10/23	34537 154	66.90	0.46	0.10	0.43	-	5.03	Dry Weight
5A (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	
5B (Trees)	Trees, Almonds			Trees	-	-	-	-	-	-	

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 S (1)	1.90	0	-	-	-	-	-	-	-	-	-	-	23L0856	12/13/2023	Dellavalle
Barn N (2)	2.00	0	-	-	-	-	-	-	-	-	-	-	23L0856	12/13/2023	Dellavalle
Domestic	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
Meneses Dom	2.70	520	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
Traller Well	-	-	-	-	-	-	-	-	-	-	-	-	Non-Op		
1	2.70	518	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
2	2.70	515	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
3	2.70	517	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
4	2.80	510	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
5	2.80	508	-	-	-	-	-	-	-	-	-	-	23I1593	9/29/2023	Dellavalle
Canal	0.04	36	68	-	-	-	-	-	-	-	-	-	BSK	7/1/2023	Other

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
1W	16	-	18.00	160.00	1.92	-	305611		Dellavalle
1E	37	-	69.00	632.00	5.78	-	305611		Dellavalle
2 (Trees)	11	-	16.00	315.00	4.01	-	307849		Dellavalle
3W	2	-	36.00	498.00	1.09	-	305611		Dellavalle
3E	1	-	29.00	623.00	0.91	-	305611		Dellavalle
4W	5	-	23.00	439.00	1.46	-	305611		Dellavalle
4E	3	-	22.00	494.00	1.14	-	305611		Dellavalle
5A (Trees)	16	-	28.00	526.00	8.65	-	307849		Dellavalle
5B (Trees)	16	-	28.00	526.00	8.65	-	307849		Dellavalle

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
1W	-	-	-	-	-	-			-
1E	-	-	-	-	-	-			-
2 (Trees)	-	-	-	-	-	-			-
3W	-	-	-	-	-	-			-
3E	-	-	-	-	-	-			-
4W	-	-	-	-	-	-			-
4E	-	-	-	-	-	-			-
5A (Trees)	-	-	-	-	-	-			-
5B (Trees)	-	-	-	-	-	-			-

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?

X No

___ Yes, Manifest attached (Attachment D)

Total Dry Manure Exported

Nutrient Import

No Dry manure nutient imports entered

No Process wastewater nutrient imports entered

Total Process Water Exported

No Commerical or other nutrient imports entered

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	66.8	129.0	33.6	201.0	0.6	-	-	-	-	-	-	-	-	2	3,860
2	149.0	229.0	58.8	420.0	0.5	-	-	-	-	-	-	-	-	4	2,370
3	130.0	188.0	54.1	356.0	0.2	-	-	-	-	-	-	-	-	3	2,000
4	152.0	233.0	63.8	397.0	0.7	-	-	-	-	-	-	-	-	-	2,200
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	23C0863	3/28/2023	Dellavalle	15.3	14.1	17.5	54.9
2	23F2638	6/30/2023	Dellavalle	33.9	18.1	30.5	114.7
3	23I1595	9/26/2023	Dellavalle	29.5	13.1	28.1	97.2
4	23L0853	12/13/2023	Dellavalle	34.6	18.4	33.1	108.4

Description	Sample #:	Date:	As is/ Dry Weight	Source	Material Type
Manure	23I1632	9/26/2023	Dry Weight	Dellavalle	Corral Solids
Manure	23I1633	9/26/2023	Dry Weight	Dellavalle	Corral Solids

Dry Manure: (As Recv'd)	TN %	TP %	TK %	Ca	Mg	Na	S	CL	Salt	TFS	Moisture %
Corral	1.41	0.38	1.63	-	-	-	-	-	-	-	26.15
Corral	1.20	0.36	1.56	1.55	0.59	0.46	0.44	1.40	0.46	36.40	29.96
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: 1W **Acres:** 82.00

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.	10.98	-	-	-	-	123.9	84.3	358.3	-	-		-
11/26/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/20/23	5.00	-	-	-	5.36	-	3.4	-	-	-	-		-
1/20/23	Process Water	-	-	-	-	1.71	35.1	13.0	77.8	1,494	-		-
2/13/23	5.00	-	-	-	5.39	-	3.4	-	-	-	-		-
2/13/23	Process Water	-	-	-	-	1.72	35.3	13.1	78.2	1,502	-		-
3/14/23	5.00	-	-	-	5.45	-	3.5	-	-	-	-		-
3/14/23	Process Water	-	-	-	-	1.74	35.7	13.2	79.1	1,518	-		-
5/12/23	W. Harvest	-	-	-	-	-	(241.9)	(51.7)	(258.5)	-	8.98		23.20
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
5/25/23	S. Manure App.	10.98	-	-	-	-	105.8	79.9	342.9	-	-		-
6/15/23	5.00	-	-	-	6.82	-	4.3	-	-	-	-		-
7/2/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/20/23	5.00	-	-	-	6.67	-	4.2	-	-	-	-		-
8/6/23	5.00	-	-	-	5.42	-	3.4	-	-	-	-		-
8/6/23	Process Water	-	-	-	-	1.73	51.5	21.2	139.3	782	-		-
9/2/23	5.00	-	-	-	5.33	-	3.4	-	-	-	-		-
9/2/23	Process Water	-	-	-	-	1.70	50.7	20.8	137.0	770	-		-
9/20/23	5.00	-	-	-	5.48	-	3.5	-	-	-	-		-
9/20/23	Process Water	-	-	-	-	1.74	52.1	21.4	140.8	791	-		-
10/12/23	S. Harvest	-	-	-	-	-	(250.8)	(65.1)	(285.3)	-	6.03		28.07
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		22.0		0	45.94	10.33	27	150	809	6,857	15.01	0	51.27

Dry Weight
As Received

Field Name/Number: 1W **Acres:** 82

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	519.2	266.9	1353.2	6856.9
Nutrients Removed at Harvest	-492.7	-116.8	-543.8	0.0
Nutrient Balance	26.5	150.1	809.4	6856.9

Winter Nitrogen Crop App / Use Ratio: 1.02 **Summer Nitrogen Crop App / Use Ratio:** 1.14

Field Name/Number: 1W **Acres:** 82

Winter Crop	**Wheat, Silage**					
Nutrient Summary :		**Applied**		**N**		
W. Manure App.		11.0	T/Ac	123.9	193.0	429.9
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	5.2	Ac In /Ac	106.1	90.0	282.0
	Q2	-	Ac In /Ac	-	-	-
Well Water		16.21	Ac In /Ac	10.3		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/26/22					
W. Harvest	5/12/23	23.2	T/Ac	(241.9)	(118.4)	(310.2)

Summer Crop	**Corn, Silage**					
Nutrient Summary :		**Applied**		**N**		
S. Manure App.		11.0	T/Ac	105.8	183.1	411.4
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	5.2	Ac In /Ac	154.3	145.1	500.4
	Q4	-	Ac In /Ac	-	-	-
Well Water		29.7	Ac In /Ac	18.865731		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	7/2/23					
S. Harvest	10/12/23	28.1	T/Ac	(250.8)	(149.1)	(342.3)

Nutrient Applications

Field Name/Number: 1E **Acres:** 71.00

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)
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
11/15/22	W. Manure App.	10.56	-	-	-	-	119.2	81.1	344.8	-	-		-
11/20/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/14/23	5.00	-	-	-	5.51	-	3.5	-	-	-	-		-
1/14/23	Process Water	-	-	-	-	1.75	36.1	13.4	79.9	1,534	-		-
2/16/23	5.00	-	-	-	5.54	-	3.5	-	-	-	-		-
3/24/23	Process Water	-	-	-	-	1.76	36.3	13.4	80.4	1,544	-		-
4/18/23	5.00	-	-	-	6.61	-	4.2	-	-	-	-		-
5/8/23	5.00	-	-	-	6.88	-	4.4	-	-	-	-		-
5/20/23	W. Harvest	-	-	-	-	-	(216.7)	(57.2)	(350.7)	-	8.98		23.01
	-	-	-	-	-	-	-	-	-	-	-		-
5/25/23	S. Manure App.	11.27	-	-	-	-	108.6	82.1	352.0	-	-		-
6/15/23	5.00	-	-	-	6.67	-	4.2	-	-	-	-		-
6/29/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/8/23	5.00	-	-	-	6.81	-	4.3	-	-	-	-		-
8/1/23	5.00	-	-	-	5.48	-	3.5	-	-	-	-		-
8/1/23	Process Water	-	-	-	-	1.74	52.0	21.4	140.6	790	-		-
8/20/23	5.00	-	-	-	6.54	-	4.1	-	-	-	-		-
9/13/23	5.00	-	-	-	5.37	-	3.4	-	-	-	-		-
9/13/23	Process Water	-	-	-	-	1.71	51.1	21.0	138.0	775	-		-
10/1/23	S. Harvest	-	-	-	-	-	(213.1)	(45.3)	(224.8)	-	6.03		27.24
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**21.8**		**0**	**55.42**	**6.97**	**9**	**130**	**560**	**4,644**	**15.01**	**0**	**50.25**

Field Name/Number: 1E **Acres:** 71.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K (lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	438.4	101.4	942.7	4643.7
Nutrients Removed at Harvest	-429.8	-44.7	-477.8	0.0
Nutrient Balance	8.6	56.7	465.0	4643.7

Winter Nitrogen Crop App / Use Ratio: 0.99 **Summer Nitrogen Crop App / Use Ratio:** 1.12

Field Name/Number: 1E **Acres:** 71

Winter Crop	**Wheat, Silage**					
Nutrient Summary :		**Applied**		**N**		
W. Manure App.		10.6	T/Ac	119.2	185.8	413.8
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	3.5	Ac In /Ac	72.3	61.4	192.3
	Q2	-	Ac In /Ac	-	-	-
Well Water		24.5	Ac In /Ac	15.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/20/22					
W. Harvest	5/20/23	23.0	T/Ac	(216.7)	(131.0)	(420.8)

Summer Crop	**Corn, Silage**					
Nutrient Summary :		**Applied**		**N**		
S. Manure App.		11.3	T/Ac	108.6	188.0	422.4
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	3.5	Ac In /Ac	103.1	97.0	334.3
	Q4	-	Ac In /Ac	-	-	-
Well Water		30.9	Ac In /Ac	19.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	6/29/23					
S. Harvest	10/1/23	27.2	T/Ac	(213.1)	(103.7)	(269.8)

Nutrient Applications

Field Name/Number: 2 (Trees) **Acres:** 43.00

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	-	-	-	-	-	-	-	-	-	-		-
3/4/23	2.00	-	-	-	1.64	-	1.0	-	-	-	-		-
4/3/23	2.00	-	-	-	1.75	-	1.1	-	-	-	-		-
5/7/23	2.00	-	-	-	5.60	-	3.4	-	-	-	-		-
6/8/23	2.00	-	-	-	8.22	-	5.0	-	-	-	-		-
7/9/23	2.00	-	-	-	8.12	-	5.0	-	-	-	-		-
8/10/23	2.00	-	-	-	6.17	-	3.8	-	-	-	-		-
9/4/23	2.00	-	-	-	4.88	-	3.0	-	-	-	-		-
10/4/23	2.00	-	-	-	2.93	-	1.8	-	-	-	-		-
11/1/23	W. Harvest	-	-	-	-	-	(260.0)	(100.0)	(340.0)	-	8.98		2.00
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	39.30	0.00	(236)	(100)	(340)	-	8.98	0	2.00

Field Name/Number: 2 (Trees) **Acres:** 43.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	24.1	0.0	0.0	0.0
Nutrients Removed at Harvest	-260.0	-43.6	-282.2	0.0
Nutrient Balance	-235.9	-43.6	-282.2	0.0

Winter Nitrogen Crop App / Use Ratio: 0.12 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 2 (Trees) **Acres:** 43

Winter Crop **Trees, Almonds**

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		39.3	Ac In /Ac	24.1		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/20					
W. Harvest	11/1/23	2.0	T/Ac	(260.0)	(229.0)	(408.0)

Summer Crop **Trees, Almonds**

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: 3W **Acres:** 78.00

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.	6.41	-	-	-	-	72.3	49.2	209.2	-	-		-
11/30/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/15/23	3.00	-	-	-	5.27	-	3.2	-	-	-	-		-
1/15/23	Process Water	-	-	-	-	1.54	31.6	11.7	70.0	1,345	-		-
2/14/23	3.00	-	-	-	5.44	-	3.3	-	-	-	-		-
2/14/23	Process Water	-	-	-	-	1.59	32.6	12.1	72.3	1,388	-		-
3/20/23	3.00	-	-	-	5.37	-	3.3	-	-	-	-		-
3/20/23	Process Water	-	-	-	-	1.57	57.0	11.9	71.4	1,371	-		-
4/11/23	3.00	-	-	-	6.08	-	3.7	-	-	-	-		-
4/29/23	W. Harvest	-	-	-	-	-	(211.2)	(46.9)	(325.3)	-	8.98		22.29
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
9/1/23	S. Comm Fert App.	-	-	80	-	-	80.0	-	-	-	-		-
6/14/23	3.00	-	-	-	6.80	-	4.2	-	-	-	-		-
7/1/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/12/23	3.00	-	-	-	5.57	-	3.4	-	-	-	-		-
7/12/23	Process Water	-	-	-	-	1.63	48.6	19.9	131.2	737	-		-
8/8/23	3.00	-	-	-	5.54	-	3.4	-	-	-	-		-
8/8/23	Process Water	-	-	-	-	1.62	48.3	19.8	130.4	733	-		-
9/1/23	3.00	-	-	-	6.97	-	4.3	-	-	-	-		-
9/20/23	3.00	-	-	-	6.56	-	4.0	-	-	-	-		-
10/15/23	S. Harvest	-	-	-	-	-	(230.6)	(45.4)	(201.5)	-	6.03		27.42
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		6.4		80	53.60	7.93	(39)	32	158	5,573	15.01	0	49.72

Field Name/Number: 3W **Acres:** 78.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	403.2	54.4	568.2	5573.2
Nutrients Removed at Harvest	-441.8	-40.3	-437.3	0.0
Nutrient Balance	-38.6	14.1	130.9	5573.2

Winter Nitrogen Crop App / Use Ratio: 1.01 **Summer Nitrogen Crop App / Use Ratio:** 1.23

Field Name/Number: 3W **Acres:** 78

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		6.4	T/Ac	72.3	112.7	251.1
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	4.7	Ac In /Ac	121.3	81.8	256.4
	Q2	-	Ac In /Ac	-	-	-
Well Water		22.2	Ac In /Ac	13.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	11/30/22					
W. Harvest	4/29/23	22.3	T/Ac	(211.2)	(107.5)	(390.3)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		80.0	lbs/Ac	80.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	3.2	Ac In /Ac	96.8	91.0	313.9
	Q4	-	Ac In /Ac	-	-	-
Well Water		31.4	Ac In /Ac	99.2		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	7/1/23					
S. Harvest	10/15/23	27.4	T/Ac	(230.6)	(103.9)	(241.8)

Nutrient Applications

Field Name/Number: 3E **Acres:** 78.00

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)
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
11/25/22	W. Manure App.	10.26	-	-	-	-	115.7	78.8	334.8	-	-		-
12/1/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/20/23	3.00	-	-	-	5.20	-	3.2	-	-	-	-		-
1/20/23	Process Water	-	-	-	-	1.52	31.2	11.6	69.1	1,327	-		-
2/15/23	3.00	-	-	-	5.27	-	3.2	-	-	-	-		-
2/15/23	Process Water	-	-	-	-	1.54	31.6	11.7	70.0	1,345	-		-
3/16/23	3.00	-	-	-	5.34	-	3.3	-	-	-	-		-
3/16/23	Process Water	-	-	-	-	1.56	56.7	11.9	70.9	1,362	-		-
4/20/23	3.00	-	-	-	6.02	-	3.7	-	-	-	-		-
5/15/23	W. Harvest	-	-	-	-	-	(236.9)	(46.6)	(259.3)	-	8.98		23.09
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Manure App.	10.26	-	-	-	-	98.8	74.7	320.4	-	-		-
6/26/23	3.00	-	-	-	6.73	-	4.1	-	-	-	-		-
7/5/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/20/23	3.00	-	-	-	6.93	-	4.2	-	-	-	-		-
8/9/23	3.00	-	-	-	5.57	-	3.4	-	-	-	-		-
8/9/23	Process Water	-	-	-	-	1.63	48.6	19.9	131.2	737	-		-
9/4/23	3.00	-	-	-	5.47	-	3.3	-	-	-	-		-
9/4/23	Process Water	-	-	-	-	1.60	59.2	19.6	128.8	724	-		-
9/20/23	3.00	-	-	-	6.90	-	4.2	-	-	-	-		-
10/5/23	S. Harvest	-	-	-	-	-	(180.6)	(48.8)	(207.7)	-	6.03		28.22
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**20.5**		**0**	**53.43**	**7.83**	**57**	**133**	**658**	**5,495**	**15.01**	**0**	**51.31**

Field Name/Number: 3E **Acres:** 78.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	474.5	99.5	934.1	5494.8
Nutrients Removed at Harvest	-417.5	-41.6	-387.7	0.0
Nutrient Balance	57.0	57.9	546.4	5494.8

Winter Nitrogen Crop App / Use Ratio: 1.08 **Summer Nitrogen Crop App / Use Ratio:** 1.29

Field Name/Number: 3E **Acres:** 78

Winter Crop **Wheat, Silage**

Nutrient Summary :		**Applied**		**N**		
W. Manure App.		10.3	T/Ac	115.7	180.4	401.7
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	4.6	Ac In /Ac	119.5	80.4	252.1
	Q2	-	Ac In /Ac	-	-	-
Well Water		21.8	Ac In /Ac	13.4		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	12/1/22					
W. Harvest	5/15/23	23.1	T/Ac	(236.9)	(106.8)	(311.2)

Summer Crop **Corn, Silage**

Nutrient Summary :		**Applied**		**N**		
S. Manure App.		10.3	T/Ac	98.8	171.1	384.5
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	3.2	Ac In /Ac	107.8	90.5	312.0
	Q4	-	Ac In /Ac	-	-	-
Well Water		31.6	Ac In /Ac	19.3		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	7/5/23					
S. Harvest	10/5/23	28.2	T/Ac	(180.6)	(111.7)	(249.2)

Nutrient Applications

Field Name/Number: 4W **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)
	-	-	-	-	-	-	-	-	-	-	-		-
11/25/22	W. Manure App.	10.00	-	-	-	-	112.8	76.8	326.4	-	-		-
12/2/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/12/23	4.00	-	-	-	5.22	-	3.3	-	-	-	-		-
1/12/23	Process Water	-	-	-	-	1.66	34.1	12.6	75.6	1,453	-		-
2/15/23	4.00	-	-	-	5.38	-	3.4	-	-	-	-		-
2/15/23	Process Water	-	-	-	-	1.71	35.2	13.0	78.0	1,498	-		-
3/20/23	4.00	-	-	-	5.28	-	3.4	-	-	-	-		-
3/20/23	Process Water	-	-	-	-	1.68	61.2	12.8	76.6	1,471	-		-
4/19/23	4.00	-	-	-	6.03	-	3.8	-	-	-	-		-
5/10/23	W. Harvest	-	-	-	-	-	(223.8)	(48.3)	(267.3)	-	8.98		23.27
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/20/23	S. Comm Fert App.	-	-	90	-	-	90.0	-	-	-	-		-
5/20/23	4.00	-	-	-	6.19	-	3.9	-	-	-	-		-
6/2/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
6/20/23	4.00	-	-	-	6.29	-	4.0	-	-	-	-		-
7/15/23	4.00	-	-	-	5.31	-	3.4	-	-	-	-		-
7/15/23	Process Water	-	-	-	-	1.69	50.5	20.7	136.5	767	-		-
8/4/23	4.00	-	-	-	5.18	-	3.3	-	-	-	-		-
8/4/23	Process Water	-	-	-	-	1.65	33.9	20.2	133.1	748	-		-
9/1/23	4.00	-	-	-	5.25	-	3.3	-	-	-	-		-
9/1/23	Process Water	-	-	-	-	1.67	34.4	20.5	134.8	757	-		-
9/20/23	4.00	-	-	-	6.09	-	3.9	-	-	-	-		-
10/4/23	S. Harvest	-	-	-	-	-	(265.3)	(66.3)	(254.2)	-	6.03		28.27
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**10.0**		**90**	**56.22**	**10.06**	**(1)**	**62**	**440**	**6,693**	**15.01**	**0**	**51.53**

Field Name/Number: 4W **Acres:** 75.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	487.8	77.1	797.7	6692.8
Nutrients Removed at Harvest	-489.1	-50.0	-432.9	0.0
Nutrient Balance	-1.2	27.1	364.8	6692.8

Winter Nitrogen Crop App / Use Ratio: 1.18 **Summer Nitrogen Crop App / Use Ratio:** 1.23

Field Name/Number: 4W **Acres:** 75

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		10.0	T/Ac	112.8	175.9	391.7
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	5.1	Ac In /Ac	130.5	88.1	276.2
	Q2	-	Ac In /Ac	-	-	-
Well Water		21.9	Ac In /Ac	13.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	12/2/22					
W. Harvest	5/10/23	23.3	T/Ac	(223.8)	(110.6)	(320.7)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		-	T/Ac	-	-	-
S. Comm Fert App.		90.0	lbs/Ac	90.0	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	5.0	Ac In /Ac	118.8	140.7	485.2
	Q4	-	Ac In /Ac	-	-	-
Well Water		34.3	Ac In /Ac	111.8		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	6/2/23					
S. Harvest	10/4/23	28.3	T/Ac	(265.3)	(151.9)	(305.0)

Nutrient Applications

Field Name/Number: 4E **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)
11/25/22	W. Manure App.	10.00	-	-	-	-	112.8	76.8	326.4	-	-		-
12/5/22	W. Planting	-	-	-	-	-	-	-	-	-	-		-
1/18/23	4.00	-	-	-	5.28	-	3.4	-	-	-	-		-
1/18/23	Process Water	-	-	-	-	1.68	34.6	12.8	76.6	1,471	-		-
2/10/23	4.00	-	-	-	5.15	-	3.3	-	-	-	-		-
2/10/23	Process Water	-	-	-	-	1.64	33.7	12.5	74.7	1,435	-		-
3/9/23	4.00	-	-	-	5.25	-	3.3	-	-	-	-		-
3/9/23	Process Water	-	-	-	-	1.67	34.4	12.7	76.1	1,462	-		-
4/18/23	4.00	-	-	-	6.16	-	3.9	-	-	-	-		-
5/5/23	W. Harvest	-	-	-	-	-	(214.0)	(57.4)	(340.4)	-	8.98		22.65
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
6/1/23	S. Manure App.	12.00	-	-	-	-	115.7	87.4	374.9	-	-		-
6/20/23	4.00	-	-	-	6.48	-	4.1	-	-	-	-		-
7/4/23	S. Planting	-	-	-	-	-	-	-	-	-	-		-
7/15/23	4.00	-	-	-	5.57	-	3.5	-	-	-	-		-
7/15/23	Process Water	-	-	-	-	1.77	53.0	21.7	143.1	804	-		-
8/8/23	4.00	-	-	-	5.48	-	3.5	-	-	-	-		-
8/8/23	Process Water	-	-	-	-	1.74	52.0	21.4	140.6	790	-		-
9/8/23	4.00	-	-	-	5.44	-	3.5	-	-	-	-		-
9/8/23	Process Water	-	-	-	-	1.73	64.2	21.2	139.8	785	-		-
9/25/23	4.00	-	-	-	6.71	-	4.3	-	-	-	-		-
10/10/23	S. Harvest	-	-	-	-	-	(258.8)	(57.7)	(240.1)	-	6.03		28.12
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		22.0		0	51.52	10.24	60	151	772	6,746	15.01	0	50.77

Field Name/Number: 4E **Acres:** 75.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	533.1	116.3	1122.4	6746.1
Nutrients Removed at Harvest	-472.8	-50.3	-481.9	0.0
Nutrient Balance	60.3	66.1	640.5	6746.1

Winter Nitrogen Crop App / Use Ratio: 1.10 **Summer Nitrogen Crop App / Use Ratio:** 1.20

Field Name/Number: 4E **Acres:** 75

Winter Crop **Wheat, Silage**

Nutrient Summary :		Applied		N		
W. Manure App.		10.0	T/Ac	112.8	175.9	391.7
W. Comm Fert App.		-	lbs/Ac	-		
Process Water	Q1	5.0	Ac In /Ac	102.6	87.0	272.8
	Q2	-	Ac In /Ac	-	-	-
Well Water		21.8	Ac In /Ac	13.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	12/5/22					
W. Harvest	5/5/23	22.7	T/Ac	(214.0)	(131.6)	(408.5)

Summer Crop **Corn, Silage**

Nutrient Summary :		Applied		N		
S. Manure App.		12.0	T/Ac	115.7	200.2	449.8
S. Comm Fert App.		-	lbs/Ac	-	-	-
Process Water	Q2	-	Ac In /Ac	-	-	-
	Q3	5.2	Ac In /Ac	169.2	147.4	508.2
	Q4	-	Ac In /Ac	-	-	-
Well Water		29.7	Ac In /Ac	18.8		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
S. Planting	7/4/23					
S. Harvest	10/10/23	28.1	T/Ac	(258.8)	(132.2)	(288.2)

Nutrient Applications

Field Name/Number: 5A (Trees) **Acres:** 11.00

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	-	-	-	-	-	-	-	-	-	-		-
3/1/23	3.00	-	-	-	1.69	-	1.0	-	-	-	-		-
4/6/23	3.00	-	-	-	1.93	-	1.2	-	-	-	-		-
5/8/23	3.00	-	-	-	5.78	-	3.5	-	-	-	-		-
6/10/23	3.00	-	-	-	8.19	-	5.0	-	-	-	-		-
7/11/23	3.00	-	-	-	8.68	-	5.3	-	-	-	-		-
8/9/23	3.00	-	-	-	6.75	-	4.1	-	-	-	-		-
9/4/23	3.00	-	-	-	4.82	-	2.9	-	-	-	-		-
10/2/23	3.00	-	-	-	2.89	-	1.8	-	-	-	-		-
11/1/23	W. Harvest	-	-	-	-	-	(260.0)	(100.0)	(340.0)	-	8.98		2.00
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		**0.0**		**0**	**40.73**	**0.00**	**(235)**	**(100)**	**(340)**	**-**	**8.98**	**0**	**2.00**

Field Name/Number: 5A (Trees) **Acres:** 11.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K (lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	24.9	0.0	0.0	0.0
Nutrients Removed at Harvest	-260.0	-43.6	-282.2	0.0
Nutrient Balance	-235.1	-43.6	-282.2	0.0

Winter Nitrogen Crop App / Use Ratio: 0.12 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 5A (Trees) **Acres:** 11

Winter Crop	**Trees, Almonds**					
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		40.7	Ac In /Ac	24.9		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/20					
W. Harvest	11/1/23	2.0	T/Ac	(260.0)	(229.0)	(408.0)

Summer Crop	**Trees, Almonds**					
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: 5B (Trees) **Acres:** 11.00

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	-	-	-	-	-	-	-	-	-	-		-
3/4/23	3.00	-	-	-	1.93	-	1.2	-	-	-	-		-
4/8/23	3.00	-	-	-	1.93	-	1.2	-	-	-	-		-
5/6/23	3.00	-	-	-	5.78	-	3.5	-	-	-	-		-
6/10/23	3.00	-	-	-	8.68	-	5.3	-	-	-	-		-
7/9/23	3.00	-	-	-	8.44	-	5.2	-	-	-	-		-
8/11/23	3.00	-	-	-	6.27	-	3.8	-	-	-	-		-
9/4/23	3.00	-	-	-	4.82	-	2.9	-	-	-	-		-
10/2/23	3.00	-	-	-	2.41	-	1.5	-	-	-	-		-
11/1/23	W. Harvest	-	-	-	-	-	(260.0)	(100.0)	(340.0)	-	8.98		2.00
	-	-	-	-	-	-	-	-	-	-	-		-
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	-	-	-	-	-	-	-	-	-	-	-		-
Totals:		0.0		0	40.25	0.00	#N/A	-	-	#N/A	8.98	0	2.00

Field Name/Number: 5B (Trees) **Acres:** 11.00

	Total N (lbs/ac)	Total P (lbs/ac)	Total K Lbs/ac)	Total Salts (lbs/ac)
Nutrients Applied	24.6	0.0	0.0	0.0
Nutrients Removed at Harvest	-260.0	-43.6	-282.2	0.0
Nutrient Balance	-235.4	-43.6	-282.2	0.0

Winter Nitrogen Crop App / Use Ratio: 0.12 **Summer Nitrogen Crop App / Use Ratio:** #N/A

Field Name/Number: 5B (Trees) **Acres:** 11

Winter Crop **Trees, Almonds**

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		40.2	Ac In /Ac	24.6		
Canal		-	Ac In /Ac	-		
Atm. Depos.		Yes		7.0		
W. Planting	1/1/20					
W. Harvest	11/1/23	2.0	T/Ac	(260.0)	(229.0)	(408.0)

Summer Crop **Trees, Almonds**

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

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.

(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? No

Was the facility's NMP developed and approved by a certified nutrient management specialist? No

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.

Lucy Arieas

Signature of Owner of Facility

Lucy Arieas

Signature of Operator of Facility

Lucy Arieas or Marie Meneses

Print Name

Same as owner

Print Name

4-19-24

Date

4-19-24

Date

DELLAVALLE™
LABORATORY INC

A & M Farms
10350 W Manning Ave
Fresno, CA 93706

Account# 00-0015732
Account Manager: Ben Nydam
Submitted By: Lucy Areias & Marie Meneses
Ranch: 10350 W. Manning Ave, Fresno

Received: 12/13/2023 14:15
Reported: 12/20/2023 12:09

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23L0856-01	Barn Well N	Water			12/13/2023 10:30
23L0856-02	Barn Well S	Water			12/13/2023 10:30

Default Cooler — Temperature on Receipt °C: 14.7
Containers Intact
COC/Labels Agree
Received On Ice

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFarland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

DELLAVALLE™
LABORATORY INC

A & M Farms
10350 W Manning Ave
Fresno, CA 93706

Account# 00-0015732
Account Manager: Ben Nydam
Submitted By: Lucy Areias & Marie Meneses
Ranch: 10350 W. Manning Ave, Fresno

Received: 12/13/2023 14:15
Reported: 12/20/2023 12:09

Sample Results

Sample: Barn Well N
23L0856-01 (Water)

Sampled: 12/13/2023 10:30
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.33**	mmhos/cm	0.01	1		12/14/23 20:12	SM 2510 B		BEL0660
Electrical Conductivity umhos	**332**	umhos/cm	10.0	1		12/14/23 20:12	SM 2510 B		BEL0660
Ammonia (as N)	*	mg/L	0.00	1		12/13/23 10:30	Field		BEL0578
Nitrate Nitrogen as NO3N	**2.0**	mg/L	0.1	1	10	12/15/23 05:40	EPA 300.0		BEL0594
Temperature	**25.0**	units	0.0	1		12/14/23 20:12	SM 4500-H+	H	BEL0660
pH	**8.4**	units	1.0	1		12/14/23 20:12	SM 4500-H+	H	BEL0660

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Received: 12/13/2023 14:15
Reported: 12/20/2023 12:09

Sample Results
(Continued)

Sample: Barn Well S
23L0856-02 (Water)

Sampled: 12/13/2023 10:30
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.33**	mmhos/cm	0.01	1		12/14/23 20:13	SM 2510 B		BEL0660
Electrical Conductivity umhos	**330**	umhos/cm	10.0	1		12/14/23 20:13	SM 2510 B		BEL0660
Ammonia (as N)	*	mg/L	0.00	1		12/13/23 10:30	Field		BEL0578
Nitrate Nitrogen as NO3N	**1.9**	mg/L	0.1	1	10	12/15/23 06:01	EPA 300.0		BEL0594
Temperature	**25.0**	units	0.0	1		12/14/23 20:13	SM 4500-H+	H	BEL0660
pH	**8.4**	units	1.0	1		12/14/23 20:13	SM 4500-H+	H	BEL0660

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Quality Control

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0594										
Blank (BEL0594-BLK1)					Prepared & Analyzed: 12/14/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEL0594-BLK2)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEL0594-BLK3)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEL0594-BLK4)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
Blank (BEL0594-BLK5)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	ND		0.1	mg/L						
LCS (BEL0594-BS1)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	4.6		0.1	mg/L	5.000		91.6	90-110		
LCS (BEL0594-BS2)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	5.2		0.1	mg/L	5.000		105	90-110		
LCS (BEL0594-BS3)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	4.6		0.1	mg/L	5.000		92.1	90-110		
LCS (BEL0594-BS4)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	4.7		0.1	mg/L	5.000		93.9	90-110		
Duplicate (BEL0594-DUP1)		**Source: 23L0838-01**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	8.5		0.1	mg/L		8.4			0.603	10
Duplicate (BEL0594-DUP2)		**Source: 23L0856-02**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	2.0		0.1	mg/L		1.9			1.63	10
Duplicate (BEL0594-DUP3)		**Source: 23L0892-03**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	4.5		0.1	mg/L		4.6			1.08	10
Duplicate (BEL0594-DUP4)		**Source: 23L0910-05**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	8.0		0.1	mg/L		8.0			0.212	10
Matrix Spike (BEL0594-MS1)		**Source: 23L0838-01**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	13.8		0.1	mg/L	5.000	8.4	107	90-110		
Matrix Spike (BEL0594-MS2)		**Source: 23L0856-02**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	6.8		0.1	mg/L	5.000	1.9	96.3	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0594 (Continued)										
Matrix Spike (BEL0594-MS3)		**Source: 23L0892-03**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	9.4		0.1	mg/L	5.000	4.6	95.9	90-110		
Matrix Spike (BEL0594-MS4)		**Source: 23L0910-05**			Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	12.9		0.1	mg/L	5.000	8.0	97.7	90-110		
Reference (BEL0594-SRM1)					Prepared & Analyzed: 12/14/2023					
Nitrate Nitrogen as NO3N	9.2			mg/L	10.00		92.2	90-110		
Reference (BEL0594-SRM2)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	9.3			mg/L	10.00		92.7	90-110		
Reference (BEL0594-SRM3)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	9.3			mg/L	10.00		93.3	90-110		
Reference (BEL0594-SRM4)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	9.4			mg/L	10.00		93.6	90-110		
Reference (BEL0594-SRM5)					Prepared: 12/14/2023 Analyzed: 12/15/2023					
Nitrate Nitrogen as NO3N	9.4			mg/L	10.00		94.1	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0660										
Blank (BEL0660-BLK1)					Prepared & Analyzed: 12/14/2023					
Temperature	25.0		0.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
pH	5.4		1.0	units						
Blank (BEL0660-BLK2)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	ND		0.01	mmhos/cm						
Temperature	25.0		0.0	units						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
pH	7.9		1.0	units						
Blank (BEL0660-BLK3)					Prepared & Analyzed: 12/14/2023					
Temperature	25.0		0.0	units						
Electrical Conductivity	ND		0.01	mmhos/cm						
Electrical Conductivity umhos	ND		10.0	umhos/cm						
pH	7.6		1.0	units						
Duplicate (BEL0660-DUP1)		**Source: 23L0860-03**			Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	0.24		0.01	mmhos/cm		0.24			0.750	10
pH	9.0		1.0	units		9.0			0.111	10
Electrical Conductivity umhos	241		10.0	umhos/cm		239			0.750	10
Duplicate (BEL0660-DUP2)		**Source: 23L0863-01**			Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	0.58		0.01	mmhos/cm		0.58			0.933	10
Electrical Conductivity umhos	582		10.0	umhos/cm		576			0.933	10
pH	7.6		1.0	units		7.6			0.396	10
Reference (BEL0660-SRM1)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	428			umhos/cm	426.0		101	90-110		
Reference (BEL0660-SRM2)					Prepared & Analyzed: 12/14/2023					
pH	7.5			units	7.520		100	67021-101.3		
Reference (BEL0660-SRM3)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	1020			umhos/cm	1000		102	90-110		
Electrical Conductivity umhos	1020			umhos/cm	1000		102	90-110		
Reference (BEL0660-SRM4)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	1040			umhos/cm	1000		104	90-110		
Electrical Conductivity umhos	1040			umhos/cm	1000		104	90-110		
Reference (BEL0660-SRM5)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity	1030			umhos/cm	1000		103	90-110		

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Quality Control
(Continued)

Analyte	Result	Qual	Reporting Limit	Units	Spike Level	Source Result	%REC	%REC Limits	RPD	RPD Limit
Batch: BEL0660 (Continued)										
Reference (BEL0660-SRM5)					Prepared & Analyzed: 12/14/2023					
Electrical Conductivity umhos	1030			umhos/cm	1000		103	90-110		
Reference (BEL0660-SRM6)					Prepared & Analyzed: 12/14/2023					
pH	4.0			units	4.000		101	97.5-102.5		
Reference (BEL0660-SRM7)					Prepared & Analyzed: 12/14/2023					
pH	4.0			units	4.000		101	97.5-102.5		

12/13/23 14:15 23L0856

WATER WORK REQUEST

Acct No.	Consultant No.	PO No.
15732	08	

No. Bottles 0 No. of Samples 2

Client A & M Farms
Address 10350 W. Manning Ave
City, State, ZIP Fresno, CA 93706
Cell/Office Phone 559-994-8331

Email amfarms@yahoo.com

Copy to :en/marlene/datatech@livingstondairyconsulting.c

Requested By Lucy Areias & Marie Meneses

Project/Ranch 10350 W. Manning Ave, Fresno

ID Crop

Water Type Ag Water

Sampled By

Sampling Notes:

Lab Analysis & Bottles Required

DWW1

Lab/Office Notes:

DESCRIPTION OF SAMPLES

		Date Sampled	Time Sampled			Received Temp °C
1.	Barn Well N	12-13-23	1030			14.7
2.	Barn Well S	12-13-23	1030			14.6
3.						
4.						
5.						
6.						
7.						
8.						
9.						
10.						

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 03/06/2024
Location: Laboratory

Sample(s) Out of Temperature Compliance
Proceed: [ ] Yes [ ] No
Approved by: Lucy Areias (Client)
Initial and Date: (DLI)

[X] QA/QC Doc [X] Copy of Chain [ ] RWQCB [ ] CO Health Dept [ ] State Forms

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date Time)	Relinquished (Date/Time)
First	Lucy Areias	A&M Farms	12-13-23 2:15pm	
Second				
Third				
Fourth	KS	DLE	12 13 23 1415	

Shipping $

12/13/23 14:15 23L0856

Shipping Information: Shipped In □ Picked-Up □ Walk In □ DLI Sampler □ Other □ _____

□ Samples refridgerated before pick up | □ Picked up samples placed in Ice chest

Container: Ice Chest □ Box □ None □ | **Refrigerant:** Wet Ice □ Blue Ice □ None □

Samples Preserved with HNO_3 or H_2SO_4 were: □ Received Preserved □ Preserved Upon Receipt at Laboratory

	Type of Container(s) Received	Sample Number 1	2	3	4	5	6	7	8	9	10
	Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
Plastics	250 mL unpreserved (White) Plastic										
Plastics	250 mL HNO_3 (Red) Plastic										
Plastics	* pH Value										
Plastics	250 mL H_2SO_4 (Yellow) Plastic										
Plastics	* pH Value										
Plastics	500 mL unpreserved (White) Plastic										
Plastics	1 L unpreserved (White) Plastic										
Plastics	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
Special	PO4-P Kit										
Special	Other:										
	Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*										
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
Plastics	250 mL unpreserved (White) Plastic										
Plastics	250 mL HNO_3 (Red) Plastic										
Plastics	250 mL H_2SO_4 (Yellow) Plastic										
Plastics	500 mL HNO_3 (Red)										
Plastics	1 L unpreserved (White) Plastic										
Plastics	1 L unpreserved (BOD) (Purple) Plastic										
Plastics	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
VOA Vials	40mL AG VOA unpreserved (White) (Set of 3)										
VOA Vials	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
VOA Vials	40mL VOA, H_3PO_4 (Set of 3)										
VOA Vials	40 mL VOA, HCl (Blue) (Set of 3)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
Glass	250 mL AG H_2SO_4 (Yellow)										
Glass	250 mL AG $Na_2S_2O_3$ (Green)										
Glass	250 mL AG $Na_2S_2O_3$ + MCAA										
Glass	500 mL glass unpreserved (White)										
Glass	500 mL AG HCl (Blue)										
Glass	1 L AG unpreserved (White)										
Glass	1 L AG H_2SO_4 (Yellow)										
Glass	1 L AG $Na_2S_2O_3$ (Green)										
Glass	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
Special	Cyanide - 500 mL NaOH										
Special	Asbestos - 1L P wrapped in foil (Set of 2)										
Special	Sulfide - 1 L AG or P NaOH + ZnAc										
Special	Chlorite/Bromate - 250 mL AG with EDA										
Special	HAA5 - 250mL AG Ammonium Chlorite										
Special	DO KIT										
Special	Other:										
Special	Other:										

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Ranch: 10350 W Manning, Fresno CA 93706

Received: 09/26/2023 10:45
Reported: 09/29/2023 11:29

Samples in this Report

Lab ID	Sample	Matrix	Sampled By	Crop	Date Sampled
23I1593-01	Meneses Well	Ag Water			09/26/2023 9:00
23I1593-02	Well 1	Ag Water			09/26/2023 9:00
23I1593-03	Well 2	Ag Water			09/26/2023 9:00
23I1593-04	Well 3	Ag Water			09/26/2023 9:05
23I1593-05	Well 4	Ag Water			09/26/2023 9:00
23I1593-06	Well 5	Ag Water			09/26/2023 9:10

Default Cooler Temperature on Receipt °C: 16.3
Containers Intact
COC/Labels Agree

Notes and Definitions

Item	Definition
H	Hold Time Exceeded
MCL	Drinking Water Maximum Contaminant Level
ND	Analyte NOT DETECTED at or above the reporting limit.
NES	Not Enough Sample
*	Not Taken
RPD	Relative Percent Difference
%REC	Percent Recovery
Source	Sample that was matrix spiked or duplicated.

Scott McFarland

Laboratory Director/Technical Manager

ELAP Certification #1595
A2LA Certification #6440.02

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Sample Results

Sample: Meneses Well
23I1593-01 (Water)

Sampled: 9/26/2023 9:00
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.52**	mmhos/cm	0.01	1		09/28/23 15:41	SM 2510 B		BEI0978
Electrical Conductivity umhos	**520**	umhos/cm	10.0	1		09/28/23 15:41	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:00	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.7**	mg/L	0.1	1	10	09/27/23 23:02	EPA 300.0		BEI0985
Temperature	**25.0**	units	0.0	1		09/28/23 15:41	SM 4500-H+	H	BEI0978
pH	**8.5**	units	1.0	1		09/28/23 15:41	SM 4500-H+	H	BEI0978

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Sample Results
(Continued)

Sample: Well 1
23I1593-02 (Water)

Sampled: 9/26/2023 9:00
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.52**	mmhos/cm	0.01	1		09/28/23 15:42	SM 2510 B		BEI0978
Electrical Conductivity umhos	**518**	umhos/cm	10.0	1		09/28/23 15:42	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:00	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.7**	mg/L	0.1	1	10	09/27/23 23:23	EPA 300.0		BEI0985
Temperature	**25.0**	units	0.0	1		09/28/23 15:42	SM 4500-H+	H	BEI0978
pH	**8.6**	units	1.0	1		09/28/23 15:42	SM 4500-H+	H	BEI0978

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Sample Results
(Continued)

Sample: Well 2
23I1593-03 (Water)

Sampled: 9/26/2023 9:00
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.51**	mmhos/cm	0.01	1		09/28/23 15:43	SM 2510 B		BEI0978
Electrical Conductivity umhos	**515**	umhos/cm	10.0	1		09/28/23 15:43	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:00	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.7**	mg/L	0.1	1	10	09/27/23 23:43	EPA 300.0		BEI0985
Temperature	**25.0**	units	0.0	1		09/28/23 15:43	SM 4500-H+	H	BEI0978
pH	**8.6**	units	1.0	1		09/28/23 15:43	SM 4500-H+	H	BEI0978

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Sample Results
(Continued)

Sample: Well 3
23I1593-04 (Water)

Sampled: 9/26/2023 9:05
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.52**	mmhos/cm	0.01	1		09/28/23 15:45	SM 2510 B		BEI0978
Electrical Conductivity umhos	**517**	umhos/cm	10.0	1		09/28/23 15:45	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:05	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.7**	mg/L	0.1	1	10	09/28/23 02:26	EPA 300.0		BEI0985
Temperature	**25.0**	units	0.0	1		09/28/23 15:45	SM 4500-H+	H	BEI0978
pH	**8.6**	units	1.0	1		09/28/23 15:45	SM 4500-H+	H	BEI0978

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Reported: 09/29/2023 11:29

Sample Results
(Continued)

Sample: Well 4
23I1593-05 (Water)

Sampled: 9/26/2023 9:00
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.51**	mmhos/cm	0.01	1		09/28/23 15:46	SM 2510 B		BEI0978
Electrical Conductivity umhos	**510**	umhos/cm	10.0	1		09/28/23 15:46	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:00	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.8**	mg/L	0.1	1	10	09/26/23 22:05	EPA 300.0		BEI0916
Temperature	**25.0**	units	0.0	1		09/28/23 15:46	SM 4500-H+	H	BEI0978
pH	**8.6**	units	1.0	1		09/28/23 15:46	SM 4500-H+	H	BEI0978

DELLAVALLE™
LABORATORY INC

A & M Farms
10350 W Manning Ave
Fresno, CA 93706

Account# 00-0015732
Account Manager: Ben Nydam
Submitted By: Lucy Areias & Marie Meneses
Ranch: 10350 W Manning, Fresno CA 93706

Received: 09/26/2023 10:45
Reported: 09/29/2023 11:29

Sample Results
(Continued)

Sample: Well 5
23I1593-06 (Water)

Sampled: 9/26/2023 9:10
Sampled By:

Analyte	Result	Units	Reporting Limit	DIL	DW MCL	Date/Time Analyzed	Method	Notes	Batch
Electrical Conductivity	**0.51**	mmhos/cm	0.01	1		09/28/23 15:48	SM 2510 B		BEI0978
Electrical Conductivity umhos	**508**	umhos/cm	10.0	1		09/28/23 15:48	SM 2510 B		BEI0978
Ammonia (as N)	ND	mg/L	0.00	1		09/26/23 09:10	Field		BEI0915
Nitrate Nitrogen as NO3N	**2.8**	mg/L	0.1	1	10	09/26/23 22:25	EPA 300.0		BEI0916
Temperature	**25.0**	units	0.0	1		09/28/23 15:48	SM 4500-H+	H	BEI0978
pH	**8.6**	units	1.0	1		09/28/23 15:48	SM 4500-H+	H	BEI0978

09/26/23 10:45 2311593

DELLAVALLE LABORATORY, INC.

1910 W. McKinley Avenue, Suite 110 • Fresno, CA 93728
www.dellavallelab.com 559 233-6129 • 800 228-9896 • Fax 559 268-8174

WATER WORK REQUEST

Bill To: Acct No. 15732 Cons. 08

Purchase Order No. ______ Results Needed By ______

No. of Samples: 6

Water Type: [X] Drinking [ ] Wastewater [✓] Ag Water [ ] Ground Water [ ] Mon. Well [ ] Supply Water [ ] Other

Client: A & M Farms
Address: 10350 W. Manning Ave
City, State, Zip: Fresno, CA
Email: amfarms@yahoo.com
Copy to: noreen@livingstondairyconsulting.com, marlene@livingstondairyconsulting.com, datatech@livingstondairyconsulting.com
Requested by/Cell: Lucy Areias & Marie Meneses
Facility: 10350 W. Manning, Fresno CA 93706
Date sampled ______
Sampled by ______

[✓] QA/QC Document [✓] Copy of Chain [ ] RWQCB

Analysis and Bottles Required: *(Please Indicate Analysis)*

- [✓] DWW1: (EC, pH, NO_3-N, NH_4-N Field Test) *(1) 1 L plastic, unpreserved (white)*
- [ ] DWW2: (DWW1 Plus SO_4, CO_3, HCO_3, Cl, Ca, Mg, Na, TDS) *(1) 1 L plastic, unpreserved (white)*
- [ ] DCW1: (EC, NO_3-N, TDS) *(1) 1 L plastic, unpreserved (white)*
- [ ] DPW1: (EC, pH, NO_3-N, NH_4-N, TKN, TDS, TP, TK) *(1) 1 L plastic, unpreserved (white)*
- [ ] DPW2: (DPW1 Plus Ca, Mg, Na, HCO_3, CO_3, SO_4, Cl) *(1) 1 L plastic, unpreserved (white)*
- [ ] Other ______

DESCRIPTION OF SAMPLES

#	Description	Sampled From	Date Sampled	Time Sampled	Field NH_4-N (mg/L)	Received Temp °C
1.	Meneses well		9.26	900	0	16.3
2.	Well 1		9.26	9:00	0	16.7
3.	Well 2		9.26	9:00	0	16.5
4.	Well 3		9.26	9:05	0	16.6
5.	Well 4		9.26	9:00	0	17.3
6.	Well 5		9.26	9:10	0	16.1
7.						
8.						
9.						
10.						

IR Thermometer SN: 200560723
Correction Factor: 0°C
Calibration Due: 12/22/2023
Location: Laboratory

CHAIN OF CUSTODY

Carrier	Signature	Company	Received (Date/Time)	Relinquished (Date/Time)
First	Lucy Areias	A & M Farms	9-26-23 10:45am	
Second				
Third				
Fourth	KS	DLI	9-26-23 10:45	

I guarantee that as the client, or on behalf of the client named, I have the authority to contract the above requested services. Should it be found that I do not have such authority, I agree to be personally liable for all costs and, if there should be action against me for this breach, reasonable attorneys' fees. It is understood that payment is expected to be cash with samples unless terms have been previously arranged. Terms are net 30 days; overdue accounts will be charged a dated damage fee of 2% per month (annually 24 %) or $1.00 per month whichever is greater.
If payment is not made when due and a legitimate dispute exists concerning the product or services of Dellavalle Laboratory, Inc., it will be submitted to mediation under the Rules and Procedures of Creative Alternatives to Litigation, Inc. (cal). If the dispute is not resolved in mediation, then the dispute will be submitted to binding arbitration through cal under its Rules and Procedures. The parties will equally bear the costs of mediation/arbitration. If, however, the mediator declares that no legitimate dispute exists, then debtor will pay all mediation and arbitration costs, and in the event of arbitration, reasonable attorneys' fees of Dellavalle Laboratory.

Invoicing Information: *Shipping*
Invoicing
___ Sampling Hrs ___ Miles ___ Consulting ___ $ ______ In $ ______ Out
Amt Paid ______ Rec By ______ Check No. ______ Date ______

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

coc update 2020

09/26/23 10:45 23-01593

Shipping Information: Shipped In ☐ Picked-Up ☐ Walk In ☐ DLI Sampler ☐ Other ☐ _____

☐ Samples refrigerated before pick up ☐ Picked up samples placed in ice chest

Container: Ice Chest ☐ Box ☐ None ☐ **Refrigerant:** Wet Ice ☐ Blue Ice ☐ None ☐

Samples Preserved with HNO_3 or H_2SO_4 were: ☐ Received Preserved ☐ Preserved Upon Receipt at Laboratory

	Type of Container(s) Received	Sample Number 1	2	3	4	5	6	7	8	9	10
Sample Containers for Internal (DLI) Use *(Containers that go into the Lab)*											
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic	\	/	\	\	/	/				
	250 mL HNO_3 (Red) Plastic										
	* pH Value										
	250 mL H_2SO_4 (Yellow) Plastic										
	* pH Value										
	500 mL unpreserved (White) Plastic										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
Special	500mL unpreserved (White) Glass										
	PO4-P Kit										
	Other:										
Sample Containers for Subcontracted ("Send Out") Analyses *(Containers that go in the Subcontract ("Send Out") Refrigerator)*											
Plastics	100 mL sterile plastic $Na_2S_2O_3$ (Green)										
	250 mL unpreserved (White) Plastic										
	250 mL HNO_3 (Red) Plastic										
	250 mL H_2SO_4 (Yellow) Plastic										
	500 mL HNO_3 (Red)										
	1 L unpreserved (White) Plastic										
	1 L unpreserved (BOD) (Purple) Plastic										
	1 L HNO_3 (Red)										
VOA Vials	40 mL VOA, $Na_2S_2O_3$ + MCAA (EPA531)										
	40 mL VOA, $Na_2S_2O_3$ (EPA547)										
	40mL AG VOA unpreserved (White) (Set of 3)										
	40 mL AG VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
	40mL VOA, H_3PO_4 (Set of 3)										
	40 mL VOA, HCl (Blue) (Set of 3)										
	40 mL VOA, $Na_2S_2O_3$ (Green) (Set of 3)										
Glass	250 mL AG unpreserved (White)										
	250 mL AG H_2SO_4 (Yellow)										
	250 mL AG $Na_2S_2O_3$ (Green)										
	250 mL AG $Na_2S_2O_3$ + MCAA										
	500 mL glass unpreserved (White)										
	500 mL AG HCl (Blue)										
	1 L AG unpreserved (White)										
	1 L AG H_2SO_4 (Yellow)										
	1 L AG $Na_2S_2O_3$ (Green)										
	1 L AG HCl (Blue)										
Special	Cr^{6+} - 50mL Plastic w/Borate/HCO_3/CO_3										
	Cyanide - 500 mL NaOH										
	Asbestos - 1L P wrapped in foil (Set of 2)										
	Sulfide - 1 L AG or P NaOH + ZnAc										
	Chlorite/Bromate - 250 mL AG with EDA										
	HAA5 - 250mL AG Ammonium Chlorite										
	DO KIT										
	Other:										

2023 KINGS RIVER WATERSHED CANAL RESULTS

GOULD CANAL

					Sample Month and Results											
Constituent	Lab	BPO	RL	Units	January	February	March	April	May	June	July	August	September	October	November	December
Physical Parameters/General Chemistry																
Flow	KRWA			cfs	30	0	0	0	0	216	182	125	0	0	0	0
EC	Field	700		umhos/cm	46				53.2	33	68.4	40.2				
pH	Field	6.5-8.3		pH	9.25				8.1	7.42	6.55	7.2				
Dissolved Oxygen	Field	5/7		mg/L	9.89				10.3	12.13	9.43	9.6				
Temperature	Field	Δ < 5º C		°C	13.8				17.0	10.8	17.8	20.3				
Turbidity	BSK	No adv eff.	0.2	NTU	1.1				2.6	1	2.7	1.2				
TDS	BSK	450	10	mg/L	40				36.0	36	36	25.0				
TSS	BSK	-	10	mg/L	ND				ND	ND	ND	ND				
Hardness (as CaCO3)	BSK	-	2.5	mg/L	14				17.0	14	9.7	12.0				
TOC	BSK	-	0.3	mg/L	2.1				1.5	1.7	1.4	1.5				
Pathogens																
E. Coli	BSK	320		MPN/100mL	2				70	11	46	70				
Fecal Coliform	BSK	400		MPN/100mL	2				70	70	11	70				
Nutrients																
Nitrate (+ Nitrite) - N	BSK	10	0.05	mg/L	0.018				0.094	0.039	0.037	0.06				
Total Kjeldahl Nitrogen	BSK		0.5	mg/L	0.02				0.15	0.15	0.4	0.26				
Ammonia - N	BSK	chart	0.1	mg/L	ND				ND	ND	ND	ND				
Unionized Ammonia	BSK	chart	0.0015	mg/L	ND				ND	ND	ND	ND				
Orthophosphate - P	BSK	-	0.01	mg/L	ND				0.0071	ND	0.0088	ND				
Phosphorus	BSK		0.1	mg/L	0.013				0.0089	0.0089	0.0055	0.014				
Water Column Toxicity																
Toxicity, minnow	PER	> 80%	(96h test)	% survival	100				100	100	100	100				
Toxicity, water flea	PER	> 80%	(48h test)	% survival	100				100	100	100	100				
Toxicity, algae	PER		(48h test)	cells/mL	4530000				4490000	4520000	4620000	3770000				
Toxicity, algae (control)	PER		(48h test)	cells/mL	4460000				2340000	2840000	2850000	3110000				
Pesticide Evaluation Protocol																
Imidacloprid	BSK			ug/L					ND	ND	ND	ND				
Chlorpyrifos	BSK			ug/L					ND	ND	ND	ND				
Cyfluthrin	BSK			ug/L					ND	ND		ND				
Cypermethrin	BSK			ug/L					ND	ND		ND				
Malathion	BSK			ug/L						ND		ND				
Clothianidin	EMA			ug/L								ND				
Paraquat dichloride	BSK			ug/L					ND		ND					
Oxyfluorfen	BSK			ug/L	ND											
Fenpropathrin	BSK			ug/L					2.9							
Carbaryl	BSK			ug/L					ND							
Pendimethalin	BSK			ug/L												
Pyraclostrobin	BSK			ug/L												
Pyrethrins	BSK			ug/L												
Pyridaben	BSK			ug/L												
Bifenthrin	BSK			ug/L												
Chlorothalonil	BSK			ug/L												
Dimethoate	BSK			ug/L												
Cyhalothrin, Total lambda-	BSK			ug/L												
Metconazole	BSK			ug/L												
Methomyl	BSK			ug/L												
Permethrin, cis-	BSK			ug/L												
Thiamethoxam	BSK			ug/L												
Esfenvalerate	BSK			ug/L												
Flumioxazin	BSK			ug/L												
Mancozeb	BSK			ug/L												
Diuron	BSK			ug/L												