



# Poplar Lane Dairy

## 2023 Annual Report

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<input checked="" type="checkbox"/>	Report Form	<input type="checkbox"/> NA	Attachment H
<input checked="" type="checkbox"/>	Attachment A	<input type="checkbox"/> NA	Attachment I
<input checked="" type="checkbox"/>	Attachment B	<input type="checkbox"/> NA	Attachment J
<input checked="" type="checkbox"/>	Attachment C	<input type="checkbox"/> NA	Manure Tracking Manifests
<input checked="" type="checkbox"/>	Attachment D	<input type="checkbox"/> NA	New or Revised Waste Water Agreements
<input checked="" type="checkbox"/>	Attachment E	<input type="checkbox"/> X	Groundwater Monitoring Samples
<input checked="" type="checkbox"/>	Attachment F	<input type="checkbox"/> NA	Monitoring Well Report
<input checked="" type="checkbox"/>	Attachment G	<input type="checkbox"/> X	Owner/Operator Change Form

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Enclosed are the required documents to be submitted to the Regional Water Quality Control Board Central Valley Region in compliance with Order No. R5-2013-0122 Waste Discharge Requirements, General Order for Existing Milk Cow Dairies for July 1, 2024.

(See attached delivery confirmation)

# Annual Report

## Poplar Lane Dairy 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

### Facility Information:

Name of Dairy	Poplar Lane Dairy
Facility Address	5387 Kent Avenue, Hanford CA 93230

### Owner/Operator as of 12/31/2023

Operator Name	Case Anker
Operator Phone	(559) 901-8636
Owner Name	Case Anker
Owner Phone	(559) 901-8636

1. Beginning and end dates of the annual reporting period: crops harvested January 1, 2023 through December 31, 2023.
2. Maximum and average number and type of animals (see Attachment A).
3. Estimated amount of total manure and process wastewater generated by the facility (see Attachment A).
4. Estimated amount of total manure and process wastewater applied to each land application area (see Attachment B).
5. Quantified ratio of total nitrogen applied to land application areas and total nitrogen removed by crop harvest (see Attachment B).
6. Estimated amount of total manure and process wastewater transferred to other persons by the facility (see Attachment C).
7. Total number of acres and the Assessor Parcel Numbers for all land application areas that were not used for application of manure or process wastewater (see Attachment D).
8. Total number of acres and the Assessor Parcel Numbers for all land application areas that were used for land application of manure and process wastewater (see Attachment D).

### 9. Summary of manure and process wastewater discharges from the production area

Provide a summary of all manure and wastewater discharges from the production area to surface water or to land areas (land application areas or otherwise) when not in accordance with the facility's Nutrient Management Plan, that occurred during the annual reporting period, including the date, time, location, approximate volume, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.  
 Yes. \_\_\_\_\_ Number of discharges occurred (see Attachment H).

**Poplar Lane Dairy 2023**  
**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD**  
**CENTRAL VALLEY REGION**

**10. Summary of storm water discharges from the production area**

Provide a summary of all storm water discharges from the production area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, duration, location, a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.  
 Yes. \_\_\_\_\_ Number of discharges occurred (see Attachment I).

**11. Summary of discharges from the land application area**

Provide a summary of all discharges from the land application area to surface water, that occurred during the annual reporting period, including the date, time, approximate volume, location, source of discharge (i.e. tailwater, wastewater or blended wastewater), a map showing discharge and sample locations, rationale for sample locations, and method of measuring discharge flows:

- No discharges occurred during the reporting period.  
 Yes. \_\_\_\_\_ Number of discharges occurred (see Attachment J).

**12. Nutrient Management Plan update**

Has the NMP been updated, and if so, was it updated by a Certified Nutrient Management Specialist?

- No.  
 Yes, the new NMP was developed and approved by a Certified Nutrient Management Specialist.

**13. Manure/Process Wastewater Tracking Manifests**

Did you sell, give away, or otherwise remove manure or process wastewater from your property?

- No.  
 Yes, see attached manifests.

**14. Written Agreements**

Any process wastewater transferred to a third party that receives process wastewater from your dairy for its own use must have a written agreement consistent with State requirements. Attach copies of revised and/or new agreements not submitted previously. Do not resubmit agreements submitted previously.

- Not applicable; no written agreements.  
 No changes in agreement(s).  
 Yes, a new or revised agreement is attached.

**15. Laboratory Analyses for Discharges**

If you answered Yes to items #9, 10, or 11 above, attach copies of all laboratory analyses for all discharges (manure, process wastewater or tailwater), surface water (upstream and downstream of a discharge), and storm water, including chain-of-custody forms and laboratory quality assurance/quality control results, as applicable. (Results for Manure and process wastewater, storm water, and/or storm water are provided).

- Not Applicable.  
 Yes, provided with Attachment H, I, or J for #9, 10 and 11, respectively.

**16. Tabulated Nutrient Analytical Data**

Attach tabulated analytical data for samples of manure, process wastewater, irrigation water, soil, and plant tissue. The data shall be tabulated to clearly show sample dates, constituents analyzed, constituent concentrations, and detection limits (see Attachment E).

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**17. Record-Keeping Results**

Attach results of the Record-Keeping Requirements for the production and land application areas specified in Record-Keeping Requirements. These include:

- \* Records documenting any corrective actions taken to correct deficiencies noted as a result of the inspections required in the Monitoring Requirements. Deficiencies not corrected in 30 days must be accompanied by an explanation of the factors preventing immediate correction.
- \* Records of the date, time, and estimated volume of any overflow or bypass of the wastewater storage or conveyance structures.
- \* Expected and actual crop yields (see Attachment F).
- \* Identification of crop, acreage, and dates of planting and harvest for each field (see Attachment F).
- \* Dates, locations, and approximate weight and moisture content of manure applied to each field (see Attachment B).
- \* Dates, locations, and volume of process wastewater applied to each field (see Attachment B).
- \* Whether precipitation occurred, or standing water was present at the time of manure and process wastewater applications and for 24 hours prior to and following applications (see Attachment G).
- \* Total amount of nitrogen, phosphorus, and potassium actually applied to each field, including documentation of calculations for the total amount applied (see Attachment B).

**18. Groundwater Monitoring Section**

X Groundwater monitoring results are attached.

— Monitoring Well results are attached, if applicable.

A. All dischargers must attach groundwater information for supply wells and subsurface (tile) drainage systems including the location of sample collection and all field and laboratory data, including all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results).

B. Dischargers who have monitoring well systems shall include all laboratory analyses (including chain-of-custody forms and laboratory quality assurance/quality control results) and tabular and graphical summaries of the monitoring data. Data shall be tabulated to clearly show the sample dates, constituents analyzed, constituent concentrations, detection limits, depth to groundwater and groundwater elevations. Graphical summaries of groundwater gradients and flow directions shall also be included. Each groundwater monitoring report shall include a summary data table for all historical and current groundwater elevations and analytical results. The groundwater monitoring results shall be certified by a California registered professional.

**19. Storm Water Reporting Section**

X No significant discharges of storm water occurred from the land application areas.

— Yes, significant discharge(s) of storm water occurred from land application areas. The following information shall be submitted for those discharges.

— It was not possible to collect any of the required samples or perform visual observations due to adverse climatic conditions.

**20. Mortality Management Practices**

\* Dead cows are picked up and disposed of by rendering service.

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CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD  
CENTRAL VALLEY REGION

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

**Same as owner**

Signature of Operator of Facility

Case Anker

Print Name

Title and Date

DocuSigned by:



902935767D704B8

Signature of Owner of Facility

Case Anker

Print Name

6/25/2024

Title and Date



**INNOVATIVE AG SERVICES**

## Poplar Lane Dairy 2023

### Estimated Manure and Nutrients Generated (Attachment A)

Animal Type	Maximum No. of Head	Average No. of Head*	Housing Type	Weight	Total Manure Produced (tons/year)	NITROGEN	PHOSPHORUS	POTASSIUM	SALTS
						Net (LB) Available for Land Application			
Hol Milk Cows	2,245	2,188	Milk Freestall -	1,400	55,529.01	790,633.80	135,765.40	183,682.60	1,442,307.72
Hol Dry Cows	320	312	Flushed	1,450	4,552.74	56,940.00	7,971.60	37,580.40	80,353.73
Hol Heifers(15-24)	1,200	1,170	Flushed	1,000	12,213.07	162,279.00	25,623.00	76,869.00	301,326.48
Hol Heifers (7-14)	1,000	975	Flushed	750	9,376.84	92,527.50	15,658.50	53,381.25	117,705.66
Hol Calves (4-6)	425	414	Flushed	300	1,435.54	21,155.40	6,044.40	12,088.80	9,912.82
	<b>5,190</b>	<b>5,059</b>			<b>83,107.21</b>	<b>1,123,535.70</b>	<b>191,062.90</b>	<b>363,602.05</b>	<b>1,951,606.40</b>

\* The Average No. of Head is used to calculate manure and nutrient production

### Estimated Amount of Total Process Wastewater and Nutrients Generated

Total Gallons of Process Wastewater Generated***	Average TKN Concentration (mg/L)*	Average Total Phosphorus Concentration (mg/L)*	Average Potassium Concentration (mg/L)*	Average Total Dissolved Solids (mg/L)*	Total Nitrogen Generated (lb)**	Total Phosphorus Generated (lb)**	Total Potassium Generated (lb)**	Total Salt Generated (lb)**
44,709,555	521.00	62.80	721.25	5,892.50	194,036.34	23,388.64	268,615.57	2,194,547.2

\* The average Total Kjeldahl Nitrogen, Total Phosphorus, Total Potassium, and Total Salt concentrations are based on an average of all process wastewater sample results for the year.

\*\* The total pounds of Nitrogen, Phosphorus, Potassium and Total Dissolved Solids generated = Average Concentration (mg/L) X Total Gallons of Wastewater Generated X 8.33 X 0.000001.

\*\*\* The total gallons of process wastewater generated is calculated as the total gallons of process wastewater applied to all land application areas (Attachment B) plus the total gallons of process wastewater transferred offsite (Attachment C).



## Poplar Lane Dairy 2023

### Nutrient Applications (Attachment B)

Field Name: C1

Wheat, 66 Acres Planted on 11/22/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/25/2022	Ground Water: Well Avg	4.00	Acre Inches	16.05			mg/L	958		0	0	19,482		
09/25/2022	Waste Water: Main Lagoon	1.25	Acre Inches	382.00	52.80	508.00	mg/L	2,240,230	7,129	985	9,480	84,722		
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%		924					
04/15/2023	Ground Water: Well Avg	4.50	Acre Inches	17.23			mg/L	1,158		0	0	25,976		
04/15/2023	Waste Water: Main Lagoon	0.80	Acre Inches	527.00	66.50	852.00	mg/L	1,433,747	6,294	794	10,175	76,555		
05/12/2023	Harvest	22.10	Tons	64.20	1.36	0.20	0.92 %							14,203
<b>Acre Inches Applied:</b>		<b>10.55</b>		<b>Totals:</b>				<b>3,673,977</b>	<b>16,462</b>	<b>1,779</b>	<b>19,655</b>	<b>206,735</b>		<b>14,203</b>
<b>Season Nitrogen Ratio:</b>		<b>1.16</b>		<b>Lbs Per Acre:</b>				<b>249</b>	<b>27</b>	<b>298</b>	<b>3,132</b>			<b>215</b>

# Poplar Lane Dairy 2023

## Nutrient Applications (Attachment B)

Field Name: C1

Corn, 66 Acres Planted on 06/15/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/24/2023	Ground Water: Well Avg	5.50	Acre Inches	17.23			mg/L			1,415	0	0	31,749	
05/24/2023	Waste Water: Main Lagoon	1.00	Acre Inches	527.00	66.50	852.00	mg/L		1,792,184	7,867	993	12,720	95,694	
07/10/2023	Ground Water: Well Avg	5.60	Acre Inches	17.23			mg/L			1,441	0	0	32,326	
07/22/2023	Ground Water: Well Avg	5.75	Acre Inches	17.23			mg/L			1,479	0	0	33,192	
07/22/2023	Waste Water: Main Lagoon	0.60	Acre Inches	569.00	51.80	496.00	mg/L		1,075,310	5,097	464	4,443	56,342	
08/02/2023	Ground Water: Well Avg	5.80	Acre Inches	17.23			mg/L			1,492	0	0	33,480	
08/02/2023	Waste Water: Main Lagoon	0.75	Acre Inches	569.00	51.80	496.00	mg/L		1,344,138	6,371	580	5,553	70,427	
08/16/2023	Ground Water: Well Avg	5.70	Acre Inches	17.23			mg/L			1,467	0	0	32,903	
08/16/2023	Waste Water: Main Lagoon	0.40	Acre Inches	569.00	51.80	496.00	mg/L		716,874	3,398	310	2,962	37,561	
08/31/2023	Ground Water: Well Avg	5.40	Acre Inches	17.23			mg/L			1,389	0	0	31,172	
09/26/2023	Harvest	32.60	Tons	66.80	1.59	0.28	1.35	%						22,716
<b>Acre Inches Applied:</b>		<b>36.50</b>		<b>Totals:</b>					<b>4,928,505</b>	<b>31,415</b>	<b>2,346</b>	<b>25,678</b>	<b>454,846</b>	<b>22,716</b>
<b>Season Nitrogen Ratio:</b>		<b>1.38</b>		<b>Lbs Per Acre:</b>					<b>476</b>	<b>36</b>	<b>389</b>	<b>6,892</b>	<b>344</b>	



# Poplar Lane Dairy 2023

## Nutrient Applications (Attachment B)

Field Name: C2

Corn, 88 Acres Planted on 04/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00		%			1,232					
01/08/2023	Ground Water: Well Avg	4.50	Acre Inches	17.23		mg/L			1,544	0	0	34,635		
01/08/2023	Waste Water: Main Lagoon	1.00	Acre Inches	438.00	52.90	931.00	mg/L	2,389,578	8,718	1,053	18,532	112,066		
05/15/2023	Ground Water: Well Avg	4.60	Acre Inches	17.23		mg/L			1,578	0	0	35,405		
06/04/2023	Ground Water: Well Avg	4.80	Acre Inches	17.23		mg/L			1,646	0	0	36,944		
06/04/2023	Waste Water: Main Lagoon	0.50	Acre Inches	527.00	66.50	852.00	mg/L	1,194,789	5,245	662	8,480	63,796		
06/15/2023	Ground Water: Well Avg	5.10	Acre Inches	17.23		mg/L			1,749	0	0	39,253		
06/15/2023	Waste Water: Main Lagoon	0.30	Acre Inches	527.00	66.50	852.00	mg/L	716,874	3,147	397	5,088	38,277		
06/26/2023	Ground Water: Well Avg	5.50	Acre Inches	17.23		mg/L			1,887	0	0	42,332		
06/26/2023	Waste Water: Main Lagoon	0.25	Acre Inches	569.00	51.80	496.00	mg/L	597,395	2,832	258	2,468	31,301		
07/04/2023	Ground Water: Well Avg	5.60	Acre Inches	17.23		mg/L			1,921	0	0	43,102		
07/04/2023	Waste Water: Main Lagoon	0.50	Acre Inches	569.00	51.80	496.00	mg/L	1,194,789	5,663	516	4,937	62,601		
07/17/2023	Ground Water: Well Avg	5.10	Acre Inches	17.23		mg/L			1,749	0	0	39,253		
07/30/2023	Harvest	31.20	Tons	70.80	1.75	0.33	1.75 %						28,060	
Acre Inches Applied:		37.75		Totals:				6,093,425	38,911	2,886	39,505	578,966	28,060	
Season Nitrogen Ratio:		1.39		Lbs Per Acre:				442	33	449	6,579	319		



## Poplar Lane Dairy 2023

### Nutrient Applications (Attachment B)

Field Name: C3

Wheat, 78 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			1,092				
02/09/2023	Ground Water: Well Avg	4.50	Acre Inches	17.23			mg/L			1,368	0	0	30,699	
02/09/2023	Waste Water: Main Lagoon	1.00	Acre Inches	438.00	52.90	931.00	mg/L			2,118,035	7,727	934	16,426	99,331
04/15/2023	Ground Water: Well Avg	5.00	Acre Inches	17.23			mg/L			1,520	0	0	34,110	
04/15/2023	Waste Water: Main Lagoon	1.00	Acre Inches	527.00	66.50	852.00	mg/L			2,118,035	9,298	1,173	15,032	113,093
05/11/2023	Harvest	20.70	Tons	66.80	1.47	0.43	2.05	%						15,760
<b>Acre Inches Applied:</b>		<b>11.50</b>		<b>Totals:</b>				<b>4,236,071</b>	<b>21,005</b>	<b>2,107</b>	<b>31,458</b>	<b>277,234</b>	<b>15,760</b>	
<b>Season Nitrogen Ratio:</b>		<b>1.33</b>		<b>Lbs Per Acre:</b>				<b>269</b>	<b>27</b>	<b>403</b>	<b>3,554</b>	<b>202</b>		

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C3

Corn, 78 Acres Planted on 06/19/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/23/2023	Ground Water: Well Avg	5.50 Acre Inches	17.23		mg/L			1,672	0	0	37,521		
05/23/2023	Waste Water: Main Lagoon	0.20 Acre Inches	527.00	66.50	852.00	mg/L	423,607	1,860	235	3,006	22,618		
07/07/2023	Ground Water: Well Avg	5.60 Acre Inches	17.23		mg/L			1,703	0	0	38,204		
07/22/2023	Ground Water: Well Avg	5.70 Acre Inches	17.23		mg/L			1,733	0	0	38,885		
07/22/2023	Waste Water: Main Lagoon	0.20 Acre Inches	569.00	51.80	496.00	mg/L	423,607	2,008	183	1,750	22,195		
08/07/2023	Ground Water: Well Avg	5.80 Acre Inches	17.23		mg/L			1,764	0	0	39,568		
08/07/2023	Waste Water: Main Lagoon	0.30 Acre Inches	569.00	51.80	496.00	mg/L	635,411	3,012	275	2,625	33,293		
08/22/2023	Ground Water: Well Avg	5.40 Acre Inches	17.23		mg/L			1,642	0	0	36,839		
08/22/2023	Waste Water: Main Lagoon	0.20 Acre Inches	569.00	51.80	496.00	mg/L	423,607	2,008	183	1,750	22,195		
09/05/2023	Ground Water: Well Avg	5.10 Acre Inches	17.23		mg/L			1,551	0	0	34,793		
09/05/2023	Waste Water: Main Lagoon	0.20 Acre Inches	569.00	51.80	496.00	mg/L	423,607	2,008	183	1,750	22,195		
10/06/2023	Harvest	31.30 Tons	71.60	1.09	0.25	1.33 %							15,115
<b>Acre Inches Applied:</b>		<b>34.20</b>	<b>Totals:</b>				<b>2,329,839</b>	<b>20,959</b>	<b>1,057</b>	<b>10,883</b>	<b>348,306</b>		<b>15,115</b>
<b>Season Nitrogen Ratio:</b>		<b>1.39</b>	<b>Lbs Per Acre:</b>				<b>269</b>	<b>14</b>	<b>140</b>	<b>4,465</b>			<b>194</b>

## Poplar Lane Dairy 2023

### Nutrient Applications (Attachment B)

Field Name: C4

Wheat, 84 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			1,176				
03/13/2023	Surface Water: Kaweah	5.20	Acre Inches	0.00			mg/L			0	0	0	3,952	
03/13/2023	Waste Water: Main Lagoon	1.10	Acre Inches	438.00	52.90	931.00	mg/L		2,509,057	9,154	1,105	19,459	117,670	
04/15/2023	Surface Water: Kaweah	5.20	Acre Inches	0.00			mg/L			0	0	0	3,952	
04/15/2023	Waste Water: Main Lagoon	1.00	Acre Inches	527.00	66.50	852.00	mg/L		2,280,961	10,013	1,263	16,188	121,792	
05/10/2023	Harvest	20.40	Tons	61.00	1.13	0.18	0.72	%						15,104
<b>Acre Inches Applied:</b>		<b>12.50</b>		<b>Totals:</b>				<b>4,790,019</b>	<b>20,343</b>	<b>2,369</b>	<b>35,647</b>	<b>247,367</b>	<b>15,104</b>	
<b>Season Nitrogen Ratio:</b>		<b>1.35</b>		<b>Lbs Per Acre:</b>				<b>242</b>	<b>28</b>	<b>424</b>	<b>2,945</b>	<b>180</b>		

**Poplar Lane Dairy 2023  
Nutrient Applications (Attachment B)**

**Field Name:** C4

Corn, 84 Acres Planted on 06/18/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
				% Moist.	Nitrogen	Phos.	Potass.	Units								
05/13/2023	Corral Solids: Main Corral	3.00	Tons	32.70	2.95	0.84	2.86	%	252		10,006	2,846	9,701	0		
05/23/2023	Surface Water: Kaweah	5.50	Acre Inches		0.00			mg/L			0	0	0	4,180		
07/04/2023	Surface Water: Kaweah	6.00	Acre Inches		0.00			mg/L			0	0	0	4,560		
07/25/2023	Surface Water: Kaweah	5.80	Acre Inches		0.00			mg/L			0	0	0	4,408		
08/08/2023	Surface Water: Kaweah	5.75	Acre Inches		0.00			mg/L			0	0	0	4,370		
08/08/2023	Waste Water: Main Lagoon	0.20	Acre Inches	569.00	51.80	496.00		mg/L		456,192	2,162	197	1,885	23,902		
09/07/2023	Ground Water: Well Avg	5.40	Acre Inches		17.23			mg/L			1,768	0	0	39,673		
09/21/2023	Ground Water: Well Avg	5.30	Acre Inches		17.23			mg/L			1,735	0	0	38,938		
10/06/2023	Harvest	32.80	Tons	71.00	0.72	0.25	1.28	%							11,569	
<b>Acre Inches Applied:</b>		<b>33.95</b>							<b>Totals:</b>	<b>252</b>	<b>456,192</b>	<b>15,672</b>	<b>3,042</b>	<b>11,586</b>	<b>120,032</b>	<b>11,569</b>
<b>Season Nitrogen Ratio:</b>		<b>1.35</b>							<b>Lbs Per Acre:</b>		<b>187</b>	<b>36</b>	<b>138</b>	<b>1,429</b>	<b>138</b>	

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

**Field Name:** C5

Wheat, 73 Acres Planted on 11/22/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
				% Moist.	Nitrogen	Phos.	Potass.	Units							
11/01/2022	Corral Solids: Main Corral	3.00	Tons	22.10	2.84	0.77	2.71	%	219		9,690	2,624	9,247	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,022				
03/15/2023	Surface Water: Kaweah	5.50	Acre Inches		0.00			mg/L			0	0	0	3,632	
03/15/2023	Waste Water: Main Lagoon	0.70	Acre Inches		438.00	52.90	931.00	mg/L		1,387,585	5,063	612	10,761	65,075	
04/15/2023	Surface Water: Kaweah	5.50	Acre Inches		0.00			mg/L			0	0	0	3,632	
04/15/2023	Waste Water: Main Lagoon	0.70	Acre Inches		527.00	66.50	852.00	mg/L		1,387,585	6,091	769	9,848	74,091	
05/11/2023	Harvest	23.30	Tons	67.20	1.41	0.44	2.22	%							15,733
<b>Acre Inches Applied:</b>		<b>12.40</b>		<b>Totals:</b>					<b>219</b>	<b>2,775,169</b>	<b>21,866</b>	<b>4,004</b>	<b>29,856</b>	<b>146,431</b>	<b>15,733</b>
<b>Season Nitrogen Ratio:</b>		<b>1.39</b>		<b>Lbs Per Acre:</b>							<b>300</b>	<b>55</b>	<b>409</b>	<b>2,006</b>	<b>216</b>



# Poplar Lane Dairy 2023

## Nutrient Applications (Attachment B)

Field Name: C5

Corn, 73 Acres Planted on 06/18/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/23/2023	Surface Water: Kaweah	5.50	Acre Inches	0.00		mg/L			0	0	0	0	3,632	
07/04/2023	Ground Water: Well Avg	5.40	Acre Inches	17.23		mg/L			1,537	0	0	0	34,478	
07/25/2023	Ground Water: Well Avg	5.10	Acre Inches	17.23		mg/L			1,451	0	0	0	32,562	
07/25/2023	Waste Water: Main Lagoon	0.20	Acre Inches	569.00	51.80	496.00	mg/L	396,453	1,879	171	1,638	20,772		
08/08/2023	Ground Water: Well Avg	5.50	Acre Inches	17.23		mg/L			1,565	0	0	0	35,116	
08/08/2023	Waste Water: Main Lagoon	0.20	Acre Inches	569.00	51.80	496.00	mg/L	396,453	1,879	171	1,638	20,772		
09/07/2023	Ground Water: Well Avg	5.30	Acre Inches	17.23		mg/L			1,508	0	0	0	33,839	
09/07/2023	Waste Water: Main Lagoon	0.20	Acre Inches	569.00	51.80	496.00	mg/L	396,453	1,879	171	1,638	20,772		
09/21/2023	Ground Water: Well Avg	5.10	Acre Inches	17.23		mg/L			1,451	0	0	0	32,562	
10/06/2023	Harvest	31.20	Tons	71.30	0.72	0.23	1.21	%						9,374
Acre Inches Applied:		32.50		Totals:				1,189,358	13,149	512	4,914	234,507		9,374
Season Nitrogen Ratio:		1.40		Lbs Per Acre:				180	7	67	3,212		128	

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C6

Wheat, 49 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			686				
03/17/2023	Ground Water: Well Avg	4.20	Acre Inches	17.23			mg/L			802	0	0	18,000	
03/17/2023	Waste Water: Main Lagoon	0.90	Acre Inches	438.00	52.90	931.00	mg/L		1,197,505	4,369	528	9,287	56,160	
04/15/2023	Ground Water: Well Avg	4.50	Acre Inches	17.23			mg/L			859	0	0	19,285	
04/15/2023	Waste Water: Main Lagoon	0.50	Acre Inches	527.00	66.50	852.00	mg/L		665,280	2,920	368	4,722	35,523	
05/10/2023	Harvest	18.10	Tons	59.50	1.01	0.16	0.64	%						7,256
Acre Inches Applied:		10.10		Totals:				1,862,785	9,637	896	14,009	128,968		7,256
Season Nitrogen Ratio:		1.33		Lbs Per Acre:						197	18	286	2,632	148

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C6

Corn, 49 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/14/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			55	0	0	5,487		
05/14/2023	Waste Water: Main Lagoon	1.10	Acre Inches	527.00	66.50	852.00	mg/L	1,463,617	6,425	811	10,388	78,150		
07/04/2023	Surface Water: Lakeside	5.80	Acre Inches	0.90		mg/L			58	0	0	5,785		
07/21/2023	Surface Water: Lakeside	5.75	Acre Inches	0.90		mg/L			57	0	0	5,736		
07/31/2023	Surface Water: Lakeside	5.40	Acre Inches	0.90		mg/L			54	0	0	5,387		
07/31/2023	Waste Water: Main Lagoon	1.00	Acre Inches	569.00	51.80	496.00	mg/L	1,330,561	6,307	574	5,497	69,716		
08/14/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			55	0	0	5,487		
08/28/2023	Surface Water: Lakeside	5.20	Acre Inches	0.90		mg/L			52	0	0	5,187		
09/26/2023	Harvest	30.00	Tons	63.50	1.51	0.27	1.20	%						16,204
Acre Inches Applied:		35.25		Totals:				2,794,177	13,063	1,385	15,885	180,934		16,204
Season Nitrogen Ratio:		0.81		Lbs Per Acre:					267	28	324	3,693		331



**Poplar Lane Dairy 2023  
Nutrient Applications (Attachment B)**

Field Name: C7

Wheat, 35 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			490				
03/01/2023	Surface Water: Lakeside	5.30	Acre Inches		0.90		mg/L			38	0	0	3,776	
03/01/2023	Waste Water: Main Lagoon	1.10	Acre Inches	438.00	52.90	931.00	mg/L		1,045,441	3,814	461	8,108	49,029	
04/15/2023	Surface Water: Lakeside	5.10	Acre Inches		0.90		mg/L			36	0	0	3,634	
04/15/2023	Waste Water: Main Lagoon	1.00	Acre Inches	527.00	66.50	852.00	mg/L		950,400	4,172	526	6,745	50,747	
05/10/2023	Harvest	18.70	Tons	58.90	1.15	0.19	0.70	%						6,187
<b>Acre Inches Applied:</b>		<b>12.50</b>		<b>Totals:</b>				<b>1,995,841</b>	<b>8,550</b>	<b>987</b>	<b>14,853</b>	<b>107,186</b>	<b>6,187</b>	
<b>Season Nitrogen Ratio:</b>		<b>1.38</b>		<b>Lbs Per Acre:</b>				<b>244</b>	<b>28</b>	<b>424</b>	<b>3,062</b>	<b>177</b>		

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

**Field Name:** C7

Corn, 35 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/14/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
05/14/2023	Waste Water: Main Lagoon	0.90	Acre Inches	527.00	66.50	852.00	mg/L	855,360	3,755	474	6,071	45,672		
07/04/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
07/21/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
07/21/2023	Waste Water: Main Lagoon	1.00	Acre Inches	569.00	51.80	496.00	mg/L	950,400	4,505	410	3,927	49,797		
07/31/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
08/14/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
08/28/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			39	0	0	0	3,919	
09/26/2023	Harvest	27.60	Tons	64.90	1.46	0.31	1.11	%						9,901
<b>Acre Inches Applied:</b>				<b>Totals:</b>				<b>1,805,761</b>	<b>8,495</b>	<b>884</b>	<b>9,997</b>	<b>118,983</b>	<b>9,901</b>	
<b>Season Nitrogen Ratio:</b>				<b>Lbs Per Acre:</b>				<b>243</b>	<b>25</b>	<b>286</b>	<b>3,400</b>	<b>283</b>		

**Poplar Lane Dairy 2023  
Nutrient Applications (Attachment B)**

Field Name: C8

Wheat, 25 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/29/2022	Ground Water: Well Avg	4.00	Acre Inches	16.05		mg/L			363	0	0	7,380		
09/29/2022	Waste Water: Main Lagoon	0.70	Acre Inches	630.00	54.10	586.00	mg/L		475,200	2,494	214	2,320	26,284	
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00		%			350					
04/15/2023	Surface Water: Lakeside	5.00	Acre Inches	0.90		mg/L			26	0	0	2,545		
04/15/2023	Waste Water: Main Lagoon	0.80	Acre Inches	527.00	66.50	852.00	mg/L		543,086	2,384	301	3,854	28,998	
05/10/2023	Harvest	18.90	Tons	56.90	1.10	0.17	0.66 %							4,480
<b>Acre Inches Applied:</b>			<b>10.50</b>	<b>Totals:</b>				<b>1,018,286</b>	<b>5,616</b>	<b>515</b>	<b>6,174</b>	<b>65,206</b>	<b>4,480</b>	
<b>Season Nitrogen Ratio:</b>			<b>1.25</b>	<b>Lbs Per Acre:</b>				<b>225</b>	<b>21</b>	<b>247</b>	<b>2,608</b>	<b>179</b>		



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C8

Corn, 25 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data			Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/15/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			28	0	0	2,799	
05/15/2023	Waste Water: Main Lagoon	1.10	Acre Inches	527.00	66.50	852.00	mg/L	746,743	3,278	414	5,300	39,872	
07/04/2023	Surface Water: Lakeside	5.40	Acre Inches	0.90		mg/L			28	0	0	2,748	
07/21/2023	Surface Water: Lakeside	5.70	Acre Inches	0.90		mg/L			29	0	0	2,901	
07/31/2023	Surface Water: Lakeside	5.60	Acre Inches	0.90		mg/L			28	0	0	2,850	
08/14/2023	Surface Water: Lakeside	5.30	Acre Inches	0.90		mg/L			27	0	0	2,698	
08/14/2023	Waste Water: Main Lagoon	1.00	Acre Inches	569.00	51.80	496.00	mg/L	678,858	3,218	293	2,805	35,569	
08/28/2023	Surface Water: Lakeside	5.10	Acre Inches	0.90		mg/L			26	0	0	2,596	
09/26/2023	Harvest	29.00	Tons	65.80	1.68	0.28	1.25 %						8,331
<b>Acre Inches Applied:</b>		<b>34.70</b>		<b>Totals:</b>					<b>1,425,601</b>	<b>6,662</b>	<b>707</b>	<b>8,104</b>	<b>92,033</b>
<b>Season Nitrogen Ratio:</b>		<b>0.80</b>		<b>Lbs Per Acre:</b>					<b>266</b>	<b>28</b>	<b>324</b>	<b>3,681</b>	<b>333</b>



## Poplar Lane Dairy 2023

### Nutrient Applications (Attachment B)

Field Name: C9

Wheat, 38 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			532				
02/27/2023	Surface Water: Lakeside	4.50	Acre Inches	0.90			mg/L			35	0	0	3,481	
02/27/2023	Waste Water: Main Lagoon	1.00	Acre Inches	438.00	52.90	931.00	mg/L		1,031,863	3,765	455	8,002	48,392	
04/15/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90			mg/L			43	0	0	4,255	
04/15/2023	Waste Water: Main Lagoon	0.70	Acre Inches	527.00	66.50	852.00	mg/L		722,304	3,171	400	5,126	38,568	
05/10/2023	Harvest	19.50	Tons	56.80	0.93	0.15	0.59	%						5,960
<b>Acre Inches Applied:</b>		<b>11.70</b>		<b>Totals:</b>					1,754,168	7,545	855	13,129	94,696	<b>5,960</b>
<b>Season Nitrogen Ratio:</b>		<b>1.27</b>		<b>Lbs Per Acre:</b>						199	22	345	2,492	<b>157</b>

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C9

Corn, 38 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/16/2023	Surface Water: Lakeside	5.10	Acre Inches	0.90		mg/L			40	0	0	3,945		
05/16/2023	Waste Water: Main Lagoon	0.70	Acre Inches	527.00	66.50	852.00	mg/L	722,304	3,171	400	5,126	38,568		
07/04/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90		mg/L			43	0	0	4,255		
07/21/2023	Surface Water: Lakeside	5.70	Acre Inches	0.90		mg/L			44	0	0	4,410		
07/31/2023	Surface Water: Lakeside	5.60	Acre Inches	0.90		mg/L			43	0	0	4,332		
07/31/2023	Waste Water: Main Lagoon	0.20	Acre Inches	569.00	51.80	496.00	mg/L	206,373	978	89	853	10,813		
08/14/2023	Surface Water: Lakeside	5.30	Acre Inches	0.90		mg/L			41	0	0	4,100		
08/28/2023	Surface Water: Lakeside	5.20	Acre Inches	0.90		mg/L			40	0	0	4,023		
10/04/2023	Harvest	30.10	Tons	71.20	0.62	0.24	1.22 %							4,104
<b>Acre Inches Applied:</b>		<b>33.30</b>		<b>Totals:</b>				<b>928,677</b>	<b>4,400</b>	<b>489</b>	<b>5,979</b>	<b>74,445</b>	<b>4,104</b>	
<b>Season Nitrogen Ratio:</b>		<b>1.07</b>		<b>Lbs Per Acre:</b>				<b>116</b>	<b>13</b>	<b>157</b>	<b>1,959</b>	<b>108</b>		



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C10

Wheat, 9 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/10/2022	Corral Solids: Main Corral	3.00 Tons	22.10	2.84	0.77	2.71	%	27		1,195	323	1,140	0	
10/15/2022	Ground Water: Well Avg	4.00 Acre Inches		16.05			mg/L			131	0	0	2,657	
01/01/2023	Atmospheric Deposit	14.00 Pounds		100.00			%			126				
04/15/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L			10	0	0	1,008	
05/10/2023	Harvest	18.90 Tons	62.00	1.00	0.14	0.65	%							1,289
<b>Acre Inches Applied:</b>		<b>9.50</b>	<b>Totals:</b>					<b>27</b>		<b>1,461</b>	<b>323</b>	<b>1,140</b>	<b>3,664</b>	<b>1,289</b>
<b>Season Nitrogen Ratio:</b>		<b>1.13</b>	<b>Lbs Per Acre:</b>							<b>162</b>	<b>36</b>	<b>127</b>	<b>407</b>	<b>143</b>

Field Name: C10

Corn, 9 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data					Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/16/2023	Corral Solids: Main Corral	3.00 Tons	32.70	2.95	0.84	2.86	%	27		1,072	305	1,039	0	
05/23/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L			10	0	0	1,008	
07/04/2023	Surface Water: Lakeside	5.80 Acre Inches		0.90			mg/L			11	0	0	1,063	
07/21/2023	Surface Water: Lakeside	5.75 Acre Inches		0.90			mg/L			11	0	0	1,054	
07/31/2023	Surface Water: Lakeside	5.60 Acre Inches		0.90			mg/L			10	0	0	1,026	
08/14/2023	Surface Water: Lakeside	5.30 Acre Inches		0.90			mg/L			10	0	0	971	
08/28/2023	Surface Water: Lakeside	5.20 Acre Inches		0.90			mg/L			10	0	0	953	
10/04/2023	Harvest	31.00 Tons	72.10	0.63	0.21	1.07	%							987
<b>Acre Inches Applied:</b>		<b>33.15</b>	<b>Totals:</b>					<b>27</b>		<b>1,133</b>	<b>305</b>	<b>1,039</b>	<b>6,074</b>	<b>987</b>
<b>Season Nitrogen Ratio:</b>		<b>1.15</b>	<b>Lbs Per Acre:</b>							<b>126</b>	<b>34</b>	<b>115</b>	<b>675</b>	<b>110</b>



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C11

Wheat, 20 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
			% Moist.	Nitrogen	Phos.	Potass.	Units						
01/01/2023	Atmospheric Deposit	14.00 Pounds		100.00			%		280				
04/15/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L		22	0	0	2,239	
04/15/2023	Waste Water: Main Lagoon	1.10 Acre Inches		527.00	66.50	852.00	mg/L		597,395	2,623	331	4,240	31,898
05/12/2023	Harvest	18.40 Tons	63.40	1.26	0.19	0.95	%						3,394
Acre Inches Applied:		6.60	Totals:					597,395	2,925	331	4,240	34,137	3,394
Season Nitrogen Ratio:		0.86	Lbs Per Acre:						146	17	212	1,707	170

Field Name: C11

Corn, 20 Acres Planted on 06/14/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
			% Moist.	Nitrogen	Phos.	Potass.	Units						
05/16/2023	Corral Solids: Main Corral	3.00 Tons	32.70	2.95	0.84	2.86	%	60	2,382	678	2,310	0	
05/23/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L		22	0	0	2,239	
07/04/2023	Surface Water: Lakeside	5.70 Acre Inches		0.90			mg/L		23	0	0	2,321	
07/21/2023	Surface Water: Lakeside	5.60 Acre Inches		0.90			mg/L		23	0	0	2,280	
07/31/2023	Surface Water: Lakeside	5.75 Acre Inches		0.90			mg/L		23	0	0	2,341	
08/14/2023	Surface Water: Lakeside	5.40 Acre Inches		0.90			mg/L		22	0	0	2,199	
08/28/2023	Surface Water: Lakeside	5.20 Acre Inches		0.90			mg/L		21	0	0	2,117	
10/04/2023	Harvest	30.20 Tons	72.30	0.65	0.22	1.17	%						2,188
Acre Inches Applied:		33.15	Totals:					60	2,517	678	2,310	13,497	2,188
Season Nitrogen Ratio:		1.15	Lbs Per Acre:						126	34	115	675	109



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C12

Wheat, 4 Acres Planted on 11/01/2022

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/30/2022	Ground Water: Well Avg	4.00 Acre Inches	16.05			mg/L			58	0	0	1,181	
09/30/2022	Waste Water: Main Lagoon	0.50 Acre Inches	630.00	54.10	586.00	mg/L		54,309	285	24	265	3,004	
01/01/2023	Atmospheric Deposit	14.00 Pounds	100.00			%			56				
04/16/2023	Surface Water: Lakeside	5.50 Acre Inches	0.90			mg/L			4	0	0	448	
04/16/2023	Waste Water: Main Lagoon	0.50 Acre Inches	527.00	66.50	852.00	mg/L		54,309	238	30	385	2,900	
05/10/2023	Harvest	17.80 Tons	60.50	1.22	0.18	0.68 %							686
<b>Acre Inches Applied:</b>		<b>10.50</b>	<b>Totals:</b>					<b>108,617</b>	<b>642</b>	<b>55</b>	<b>651</b>	<b>7,532</b>	<b>686</b>
<b>Season Nitrogen Ratio:</b>		<b>0.94</b>	<b>Lbs Per Acre:</b>						<b>160</b>	<b>14</b>	<b>163</b>	<b>1,883</b>	<b>172</b>

Field Name: C12

Corn, 4 Acres Planted on 06/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre) Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/21/2023	Corral Solids: Main Corral	3.50 Tons	32.70	2.95	0.84	2.86 %		14		556	158	539	0
05/26/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90		mg/L			4	0	0	448	
06/21/2023	Surface Water: Lakeside	5.60 Acre Inches		0.90		mg/L			5	0	0	456	
07/03/2023	Surface Water: Lakeside	5.80 Acre Inches		0.90		mg/L			5	0	0	472	
07/19/2023	Surface Water: Lakeside	5.70 Acre Inches		0.90		mg/L			5	0	0	464	
07/26/2023	Surface Water: Lakeside	5.30 Acre Inches		0.90		mg/L			4	0	0	432	
08/09/2023	Surface Water: Lakeside	5.20 Acre Inches		0.90		mg/L			4	0	0	423	
10/04/2023	Harvest	29.80 Tons	71.50	0.67	0.25	1.18 %							455
<b>Acre Inches Applied:</b>		<b>33.10</b>	<b>Totals:</b>					<b>14</b>	<b>583</b>	<b>158</b>	<b>539</b>	<b>2,695</b>	<b>455</b>
<b>Season Nitrogen Ratio:</b>		<b>1.28</b>	<b>Lbs Per Acre:</b>						<b>146</b>	<b>40</b>	<b>135</b>	<b>674</b>	<b>114</b>



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C13

Wheat, 20 Acres Planted on 11/25/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
09/30/2022	Ground Water: Well Avg	4.00	Acre Inches	16.05			mg/L		290	0	0	5,904		
11/03/2022	Corral Solids: Main Corral	5.00	Tons	22.10	2.84	0.77	2.71	%	100	4,425	1,198	4,222	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00				%		280				
04/16/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90				mg/L		22	0	0	2,239	
05/10/2023	Harvest	19.70	Tons	58.00	1.12	0.18	0.74	%						3,707
<b>Acre Inches Applied:</b>		<b>9.50</b>		<b>Totals:</b>				<b>100</b>		<b>5,018</b>	<b>1,198</b>	<b>4,222</b>	<b>8,143</b>	<b>3,707</b>
<b>Season Nitrogen Ratio:</b>		<b>1.35</b>		<b>Lbs Per Acre:</b>						<b>251</b>	<b>60</b>	<b>211</b>	<b>407</b>	<b>185</b>

Field Name: C13

Corn, 20 Acres Planted on 06/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
05/20/2023	Corral Solids: Main Corral	3.00	Tons	32.70	2.95	0.84	2.86	%	60	2,382	678	2,310	0	
05/26/2023	Surface Water: Lakeside	5.50	Acre Inches	0.90				mg/L		22	0	0	2,239	
06/21/2023	Surface Water: Lakeside	5.70	Acre Inches	0.90				mg/L		23	0	0	2,321	
07/03/2023	Surface Water: Lakeside	5.80	Acre Inches	0.90				mg/L		24	0	0	2,361	
07/19/2023	Surface Water: Lakeside	5.75	Acre Inches	0.90				mg/L		23	0	0	2,341	
07/26/2023	Surface Water: Lakeside	5.40	Acre Inches	0.90				mg/L		22	0	0	2,199	
08/09/2023	Surface Water: Lakeside	5.25	Acre Inches	0.90				mg/L		21	0	0	2,138	
10/04/2023	Harvest	30.20	Tons	71.10	0.54	0.23	1.11	%						1,882
<b>Acre Inches Applied:</b>		<b>33.40</b>		<b>Totals:</b>				<b>60</b>		<b>2,518</b>	<b>678</b>	<b>2,310</b>	<b>13,599</b>	<b>1,882</b>
<b>Season Nitrogen Ratio:</b>		<b>1.34</b>		<b>Lbs Per Acre:</b>						<b>126</b>	<b>34</b>	<b>115</b>	<b>680</b>	<b>94</b>



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

**Field Name:** C14

Wheat, 17 Acres Planted on 11/15/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
			% Moist.	Nitrogen	Phos.	Potass.								
10/12/2022	Corral Solids: Main Corral	3.00 Tons	22.10	2.84	0.77	2.71	%	51		2,257	611	2,153	0	
10/22/2022	Ground Water: Well Avg	4.00 Acre Inches		16.05			mg/L			247	0	0	5,018	
01/01/2023	Atmospheric Deposit	14.00 Pounds		100.00			%			238				
04/16/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L			19	0	0	1,903	
05/10/2023	Harvest	18.40 Tons	55.30	0.98	0.13	0.56	%						2,726	
<b>Acre Inches Applied:</b>		<b>9.50</b>					<b>Totals:</b>	<b>51</b>		<b>2,760</b>	<b>611</b>	<b>2,153</b>	<b>6,922</b>	<b>2,726</b>
<b>Season Nitrogen Ratio:</b>		<b>1.01</b>					<b>Lbs Per Acre:</b>			<b>162</b>	<b>36</b>	<b>127</b>	<b>407</b>	<b>160</b>

**Field Name:** C14

Corn, 17 Acres Planted on 06/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)	
			% Moist.	Nitrogen	Phos.	Potass.								
05/21/2023	Corral Solids: Main Corral	3.00 Tons	32.70	2.95	0.84	2.86	%	51		2,025	576	1,963	0	
05/26/2023	Surface Water: Lakeside	5.50 Acre Inches		0.90			mg/L			19	0	0	1,903	
06/21/2023	Surface Water: Lakeside	5.80 Acre Inches		0.90			mg/L			20	0	0	2,007	
07/03/2023	Surface Water: Lakeside	5.70 Acre Inches		0.90			mg/L			20	0	0	1,973	
07/19/2023	Surface Water: Lakeside	5.75 Acre Inches		0.90			mg/L			20	0	0	1,990	
07/26/2023	Surface Water: Lakeside	5.25 Acre Inches		0.90			mg/L			18	0	0	1,817	
08/09/2023	Surface Water: Lakeside	5.40 Acre Inches		0.90			mg/L			19	0	0	1,869	
10/04/2023	Harvest	30.10 Tons	71.90	0.60	0.23	1.17	%						1,723	
<b>Acre Inches Applied:</b>		<b>33.40</b>					<b>Totals:</b>	<b>51</b>		<b>2,141</b>	<b>576</b>	<b>1,963</b>	<b>11,559</b>	<b>1,723</b>
<b>Season Nitrogen Ratio:</b>		<b>1.24</b>					<b>Lbs Per Acre:</b>			<b>126</b>	<b>34</b>	<b>115</b>	<b>680</b>	<b>101</b>



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C15

Corn, 22 Acres Planted on 04/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00		%			308					
03/13/2023	Corral Solids: Main Corral	6.00	Tons	32.70	2.95	0.84	2.86	%	132		5,241	1,491	5,081	0
03/25/2023	Surface Water: Lakeside	5.50	Acre Inches		0.90			mg/L		25	0	0	2,463	
05/11/2023	Surface Water: Lakeside	5.80	Acre Inches		0.90			mg/L		26	0	0	2,598	
05/27/2023	Surface Water: Lakeside	5.75	Acre Inches		0.90			mg/L		26	0	0	2,575	
06/11/2023	Surface Water: Lakeside	5.40	Acre Inches		0.90			mg/L		24	0	0	2,418	
06/20/2023	Surface Water: Lakeside	5.20	Acre Inches		0.90			mg/L		23	0	0	2,329	
06/29/2023	Surface Water: Lakeside	4.90	Acre Inches		0.90			mg/L		22	0	0	2,194	
07/07/2023	Surface Water: Lakeside	4.75	Acre Inches		0.90			mg/L		21	0	0	2,127	
07/17/2023	Surface Water: Lakeside	5.00	Acre Inches		0.90			mg/L		22	0	0	2,239	
07/30/2023	Harvest	28.90	Tons	68.20	1.70	0.36	1.93	%						6,874
<b>Acre Inches Applied:</b>		<b>42.30</b>		<b>Totals:</b>				<b>132</b>	<b>5,739</b>	<b>1,491</b>	<b>5,081</b>	<b>18,945</b>	<b>6,874</b>	
<b>Season Nitrogen Ratio:</b>		<b>0.83</b>		<b>Lbs Per Acre:</b>					<b>261</b>	<b>68</b>	<b>231</b>	<b>861</b>	<b>312</b>	



**Poplar Lane Dairy 2023  
Nutrient Applications (Attachment B)**

**Field Name:** C16

Corn, 27 Acres Planted on 04/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00	%					378				
03/13/2023	Corral Solids: Main Corral	6.00	Tons	32.70	2.95	0.84	2.86	%	162		6,432	1,830	6,236	0
03/25/2023	Surface Water: Lakeside	5.25	Acre Inches		0.90			mg/L		29	0	0	2,886	
05/11/2023	Surface Water: Lakeside	5.60	Acre Inches		0.90			mg/L		31	0	0	3,078	
05/27/2023	Surface Water: Lakeside	5.50	Acre Inches		0.90			mg/L		30	0	0	3,023	
06/11/2023	Surface Water: Lakeside	5.30	Acre Inches		0.90			mg/L		29	0	0	2,913	
06/20/2023	Surface Water: Lakeside	5.10	Acre Inches		0.90			mg/L		28	0	0	2,803	
06/29/2023	Surface Water: Lakeside	4.75	Acre Inches		0.90			mg/L		26	0	0	2,611	
07/07/2023	Surface Water: Lakeside	4.80	Acre Inches		0.90			mg/L		26	0	0	2,638	
07/17/2023	Surface Water: Lakeside	4.50	Acre Inches		0.90			mg/L		25	0	0	2,473	
07/30/2023	Harvest	30.30	Tons	71.40	1.65	0.37	1.77	%						7,721
<b>Acre Inches Applied:</b>		<b>40.80</b>		<b>Totals:</b>				<b>162</b>		<b>7,035</b>	<b>1,830</b>	<b>6,236</b>	<b>22,426</b>	<b>7,721</b>
<b>Season Nitrogen Ratio:</b>		<b>0.91</b>		<b>Lbs Per Acre:</b>						<b>261</b>	<b>68</b>	<b>231</b>	<b>831</b>	<b>286</b>

# Poplar Lane Dairy 2023

## Nutrient Applications (Attachment B)

Field Name: C17

Corn, 37 Acres Planted on 04/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			518				
03/14/2023	Corral Solids: Main Corral	6.00	Tons	32.70	2.95	0.84	2.86	%	222		8,815	2,507	8,546	0
03/25/2023	Surface Water: Lakeside	5.20	Acre Inches		0.90			mg/L		39	0	0	0	3,917
05/11/2023	Surface Water: Lakeside	5.40	Acre Inches		0.90			mg/L		41	0	0	0	4,067
05/27/2023	Surface Water: Lakeside	5.50	Acre Inches		0.90			mg/L		41	0	0	0	4,143
06/11/2023	Surface Water: Lakeside	5.25	Acre Inches		0.90			mg/L		40	0	0	0	3,955
06/20/2023	Surface Water: Lakeside	5.10	Acre Inches		0.90			mg/L		38	0	0	0	3,841
06/29/2023	Surface Water: Lakeside	4.90	Acre Inches		0.90			mg/L		37	0	0	0	3,691
07/07/2023	Surface Water: Lakeside	4.75	Acre Inches		0.90			mg/L		36	0	0	0	3,578
07/17/2023	Surface Water: Lakeside	4.80	Acre Inches		0.90			mg/L		36	0	0	0	3,616
07/30/2023	Harvest	30.60	Tons	71.20	1.65	0.33	1.64	%						10,760
<b>Acre Inches Applied:</b>		<b>40.90</b>		<b>Totals:</b>				<b>222</b>		<b>9,641</b>	<b>2,507</b>	<b>8,546</b>	<b>30,807</b>	<b>10,760</b>
<b>Season Nitrogen Ratio:</b>		<b>0.90</b>		<b>Lbs Per Acre:</b>						<b>261</b>	<b>68</b>	<b>231</b>	<b>833</b>	<b>291</b>

## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

Field Name: C18

Corn, 42 Acres Planted on 04/12/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data				Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
01/01/2023	Atmospheric Deposit	14.00	Pounds	100.00			%			588				
03/14/2023	Corral Solids: Main Corral	5.00	Tons	32.70	2.95	0.84	2.86	%	210		8,339	2,371	8,084	0
03/25/2023	Surface Water: Lakeside	5.20	Acre Inches		0.90			mg/L			45	0	0	4,446
05/11/2023	Surface Water: Lakeside	5.40	Acre Inches		0.90			mg/L			46	0	0	4,617
05/27/2023	Surface Water: Lakeside	5.50	Acre Inches		0.90			mg/L			47	0	0	4,703
06/11/2023	Surface Water: Lakeside	5.25	Acre Inches		0.90			mg/L			45	0	0	4,489
06/20/2023	Surface Water: Lakeside	5.10	Acre Inches		0.90			mg/L			44	0	0	4,360
06/29/2023	Surface Water: Lakeside	5.00	Acre Inches		0.90			mg/L			43	0	0	4,275
07/07/2023	Surface Water: Lakeside	4.75	Acre Inches		0.90			mg/L			41	0	0	4,061
07/17/2023	Surface Water: Lakeside	4.90	Acre Inches		0.90			mg/L			42	0	0	4,190
07/30/2023	Harvest	29.80	Tons	73.70	1.11	0.27	1.49	%						7,308
<b>Acre Inches Applied:</b>		<b>41.10</b>		<b>Totals:</b>				<b>210</b>		<b>9,279</b>	<b>2,371</b>	<b>8,084</b>	<b>35,141</b>	<b>7,308</b>
<b>Season Nitrogen Ratio:</b>		<b>1.27</b>		<b>Lbs Per Acre:</b>						<b>221</b>	<b>56</b>	<b>192</b>	<b>837</b>	<b>174</b>



**Poplar Lane Dairy 2023  
Nutrient Applications (Attachment B)**

***Summary of Nutrient Applications, Removal, and Balance***

	<u>Total N (Lbs)</u>	<u>Total P (Lbs)</u>	<u>Total K (Lbs)</u>	<u>Total Salts (Lbs)</u>	<u>Total Manure Applied</u>
Solid Manure	64,817.26	18,195.06	62,572.53	0.00	1,587.00 tons
Process Wastewater	189,432.02	21,706.94	282,868.23	2,265,870.94	44,709,554.95 gallons
Irrigation Water	52,380.24				
Fertilizer / Total Imports	0.00				
Atmospheric Deposition	10,276.00				
<b>Total Nitrogen Applied</b>	<b>316,905.52</b>				
Crop Nitrogen Removal	261,758.28				
<b>Nitrogen Balance</b>	<b>55,147.24</b>				
<b>Nitrogen Ratio</b>	<b>1.21</b>				

- Nutrient applications shown in Attachment B are on a crop year basis.
- Lab sample data results for applications are based on the sample taken closest to the application date. Lab sample data results are shown on 100% dry basis for manure applications and harvest events.
- Well Avg: Irrigation source representing the average nutrient values of all irrigation wells sampled for the facility during the reporting year.

\*\* Book Value: No sample data results were available. For manure applications and plant tissue harvests, the calculations were based off book values.



## Poplar Lane Dairy 2023 Nutrient Applications (Attachment B)

### FIELD NITROGEN RATIO Calculation:

"Field Nitrogen Ratio" = "Total Nitrogen Applied to Field" / "Total Nitrogen Extracted from Field at Harvest"

### ATMOSHERIC DEPOSITION Applied (lbs) Calculation:

"Nitrogen Applied (Lbs)" = "14 Lbs (per year) \* "Acres Planted"

### HARVEST Nitrogen Extraction (Lbs) Calculation:

"Nitrogen Extracted (Lbs)" = ("Yield" (tons per acre) \* 2000) \* ((100 - "% Moisture") / 100 \* "Lab Sample Data Nitrogen Value" / 100) \* "Acres Planted"

### IRRIGATION Nitrogen and Salts Applied (Lbs) Calculations:

"Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data Nitrogen Value" \* 0.000001) \* "Acres Planted"

"Salts Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data TDS Value" \* 0.000001) \* "Acres Planted"

### PROCESS WASTEWATER Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data Nitrogen Value" \* 0.000001) \* "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data Phosphorus Value" \* 0.000001) \* "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data Potassium Value" \* 0.000001) \* "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ("Lab Sample Data TDS Value" \* 0.000001) \* "Acres Planted"

### SOLID MANURE (Corral, Separator, or Compost) Nitrogen, Phosphorus, Potassium and Salts Applied (Lbs) Calculations:

Nitrogen Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ((100 - "% Moisture")/100 \* "Lab Sample Data Nitrogen Value"/100) \* "Acres Planted"

Phosphorus Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ((100 - "% Moisture")/100 \* "Lab Sample Data Phosphorus Value"/100) \* "Acres Planted"

Potassium Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ((100 - "% Moisture")/100 \* "Lab Sample Data Potassium Value"/100) \* "Acres Planted"

Salt Applied (Lbs)" = "Lbs Applied per Acre" (see below) \* ((100 - "% Moisture")/100 \* "Lab Sample Data Ash Value"/100) \* "Acres Planted"

### "Lbs Applied per Acre" Calculations:

If "Application Units" = Tons, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) \* 2000

If "Application Units" = Acres Inches, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) \* 8.33 \*27,154.3

If "Application Units" = Acre Feet, Then Lbs Applied per Acre" = "Application Amount" (per Acre) \* 8.33 \* 325,851

If "Application Units" = Gallons, Then "Lbs Applied per Acre" = "Application Amount" (per Acre) \* 8.33

**Poplar Lane Dairy 2023**  
**Estimated Manure and Process Wastewater/Nutrients Transferred Off-Site (Attachment C)**

**A. ESTIMATED TOTAL MANURE TRANSFERRED OFFSITE**

Total Manure Exported (tons)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total Salts Exported (lbs)**

\* The Total Manure (tons) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.

\*\* Total (N, P, K, Salts) (lbs) = Sum of (N, P, K, Salts) for each manure export event based on (Manure(tons) x 2000lb/ton) x ((100-moisture%)/100) x (N, P, K, and Ash) Concentration (%, dry weight) / 100 using the samples closest in date to the export event.

**B. ESTIMATED TOTAL PROCESS WASTEWATER TRANSFERRED OFFSITE**

Total Process Wastewater Exported (gal)*	Total Nitrogen Exported (lbs)**	Total Phosphorus Exported (lbs)**	Total Potassium Exported (lbs)**	Total TDS Exported (lbs)**

\* The Total Manure (gals) should be calculated as the sum of all manure transferred offsite as reported in all the Manure/Process Wastewater Tracking Manifests for the reporting period.

\*\* Total (Nitrogen, Phosphorus, Potassium, TDS) (lbs) = Sum of (Nitrogen, Phosphorus, Potassium, TDS) for each wastewater export event based on (Process Wastewater(gals) x 8.33lb/gal) x (NO3-N or TKN, P, K, TDS) x 10-6 using the samples closest in date to the export event.



**Poplar Lane Dairy 2023  
Land Application Area Description Technical Report (Attachment D)**

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
C1	x028 x190 x073 x000	66	Process Wastewater
C2	x028 x190 x073 x000	88	Process Wastewater
C3	x028 x190 x073 x000	78	Process Wastewater
C4	x028 x190 x019 x000, x028 x190 x020 x000	84	Both
C5	x028 x190 x016 x000	73	Both
C6	x028 x190 x021 x000, x028 x190 x022 x000	49	Process Wastewater
C7	x028 x190 x021 x000	35	Process Wastewater
C8	x028 x190 x021 x000	25	Process Wastewater
C9	x028 x190 x005 x000	38	Process Wastewater
C10	x028 x190 x005 x000	9	Manure
C11	x028 x190 x005 x000	20	Both
C12	x028 x190 x003 x000, x028 x190 x005 x000	4	Both
C13	x028 x190 x005 x000	20	Manure
C14	x028 x190 x005 x000	17	Manure
C15	x028 x190 x003 x000	22	Manure
C16	x028 x190 x010 x000, x028 x190 x012 x000	27	Manure
C17	x028 x190 x010 x000	37	Manure
C18	x028 x190 x062 x000	42	Manure
			734

Production Area APN(s): x028 x190 x072 x000, x028 x190 x073 x000



**Poplar Lane Dairy 2023  
Lab Results Summary (Attachment E)**

**Process Wastewater**

(mg/l/ppm unless noted otherwise)

Sample Date:	TKN	TP	TK	EC (umhos/cm)	NH4N	NO3N	TDS	pH (units)	General Minerals					
									CA	MG	NA	HCO3	CO3	SO4
02/13/2023	438.00	52.90	931.00	8,480	389.00		5,630.00							
06/09/2023	527.00	66.50	852.00	9,650	520.00	0.00	6,410.00	7.57						
07/12/2023	569.00	51.80	496.00	9,470	500.00		6,290.00							
11/06/2023	550.00	80.00	606.00	7,890	544.00		5,240.00							
<b>Averages:</b>	<b>521.00</b>	<b>62.80</b>	<b>721.25</b>	<b>8,872</b>	<b>488.25</b>	<b>0.00</b>	<b>5,892.50</b>	<b>7.57</b>						

**Manure - Compost Solids**

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL	
06/08/2023	1.82	0.26	0.44	66.90							%
<b>Averages:</b>	<b>1.82</b>	<b>0.26</b>	<b>0.44</b>	<b>66.90</b>							

**Manure - Corral Solids**

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL	
06/08/2023	2.95	0.84	2.86	32.70							%
11/06/2023	2.46	0.87	2.70	40.50							%
<b>Averages:</b>	<b>2.70</b>	<b>0.85</b>	<b>2.78</b>	<b>36.60</b>							



**Poplar Lane Dairy 2023  
Lab Results Summary (Attachment E)**

**Plant Tissue**

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
C1	1	Wheat	05/12/2023	27.20	4.08	18.48	64.20	9.68
C1	2	Corn	09/26/2023	31.80	5.58	27.00	66.80	6.76
C2	1	Corn	07/30/2023	35.00	6.60	35.00	70.80	7.63
C3	1	Wheat	05/11/2023	29.40	8.62	41.00	66.80	10.80
C3	2	Corn	10/06/2023	21.80	4.96	26.60	71.60	7.67
C4	1	Wheat	05/10/2023	22.60	3.58	14.32	61.00	7.27
C4	2	Corn	10/06/2023	14.48	5.00	25.60	71.00	8.23
C5	1	Wheat	05/11/2023	28.20	8.88	44.40	67.20	11.50
C5	2	Corn	10/06/2023	14.34	4.60	24.20	71.30	7.13
C6	1	Wheat	05/10/2023	20.20	3.20	12.84	59.50	7.76
C6	2	Corn	09/26/2023	30.20	5.42	24.00	63.50	5.82
C7	1	Wheat	05/10/2023	23.00	3.78	14.00	58.90	7.11
C7	2	Corn	09/26/2023	29.20	6.20	22.20	64.90	5.93
C8	1	Wheat	05/10/2023	22.00	3.34	13.30	56.90	8.01
C8	2	Corn	09/26/2023	33.60	5.56	25.00	65.80	5.73
C9	1	Wheat	05/10/2023	18.62	2.92	11.76	56.80	7.63
C9	2	Corn	10/04/2023	12.46	4.72	24.40	71.20	7.63
C10	1	Wheat	05/10/2023	19.94	2.74	13.00	62.00	7.72

**Poplar Lane Dairy 2023  
Lab Results Summary (Attachment E)**

**Plant Tissue**

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
C10	2	Corn	10/04/2023	12.68	4.24	21.40	72.10	7.51
C11	1	Wheat	05/12/2023	25.20	3.82	19.08	63.40	9.52
C11	2	Corn	10/04/2023	13.08	4.36	23.40	72.30	7.65
C12	1	Wheat	05/10/2023	24.40	3.54	13.70	60.50	7.32
C12	2	Corn	10/04/2023	13.40	4.92	23.60	71.50	7.88
C13	1	Wheat	05/10/2023	22.40	3.56	14.80	58.00	7.17
C13	2	Corn	10/04/2023	10.78	4.64	22.20	71.10	7.66
C14	1	Wheat	05/10/2023	19.50	2.64	11.10	55.30	7.42
C14	2	Corn	10/04/2023	11.98	4.62	23.40	71.90	7.76
C15	1	Corn	07/30/2023	34.00	7.28	38.60	68.20	8.25
C16	1	Corn	07/30/2023	33.00	7.32	35.40	71.40	7.70
C17	1	Corn	07/30/2023	33.00	6.62	32.80	71.20	6.48
C18	1	Corn	07/30/2023	22.20	5.32	29.80	73.70	7.58

**Well / Irrigation Water**

(mg/l/ppm unless noted otherwise)

Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals					
							CA	MG	NA	HCO3	CO3	SO4



**Poplar Lane Dairy 2023  
Lab Results Summary (Attachment E)**

**Well / Irrigation Water**

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL	General Minerals
<b>Dairy</b>															
Well 1															Out of service
Well 2															Out of service
<b>Averages:</b>															
<b>Domestic</b>															
Well 3	03/02/2023	36.10		787		480.00		54.00	0.00	111.00	70.00	0.00	33.90	59.00	
<b>Averages:</b>															
<b>Irrigation</b>															
IRW1	06/28/2023	25.00		829		540.00	25.00	63.00	1.00	86.00	160.00	0.00	35.90	45.00	
IRW2	06/26/2023	14.20		405		260.00	14.20	16.00	0.00	60.00	70.00	0.00	13.70	25.00	
IRW3	07/12/2023	37.50		971		650.00	37.50	84.00	2.00	115.00	140.00	0.00	39.20	72.00	
IRW4	12/04/2023	17.00		516		440.00	17.00	23.00	2.00	79.00	50.00	0.00	21.40	44.00	
IRW5															Out of service
IRW11	12/04/2023	9.70		342		240.00	9.70								
IRW17															Did not run
IRW18															Did not run
IRWC3N	07/12/2023	0.00		317		190.00	0.00								
<b>Averages:</b>															
		17.23		563		386.67	17.23	46.50	1.25	85.00	105.00	0.00	27.55	46.50	



**Poplar Lane Dairy 2023  
Lab Results Summary (Attachment E)**

**Well / Irrigation Water**

(mg/l/ppm unless noted otherwise)

	Sample Date:	NO3N	TP (umhos/cm)	EC (umhos/cm)	NH4N *	TDS	TN	General Minerals						
								CA	MG	NA	HCO3	CO3	SO4	CL
<b>Surface Water</b>														
Kaweah Delta (General)	06/28/2023	0.00		43		40.00	0.00							
Lakeside (General)	06/28/2023	0.90		158		90.00	0.90							
	<b>Averages:</b>	0.45		100		65.00	0.45							

\* NH4N was non-detectable unless a value is shown

**Poplar Lane Dairy 2023**  
**Planting and Harvest Information (Attachment F)**

Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: C1							
	1 Wheat	66	11/22/2022	05/12/2023	23.4	1458.6	22.1
	2 Corn	66	06/15/2023	09/26/2023	31.7	2151.6	32.6
Field: C2							
	1 Corn	88	04/14/2023	07/30/2023	29.7	2745.6	31.2
Field: C3							
	1 Wheat	78	11/01/2022	05/11/2023	20.1	1614.6	20.7
	2 Corn	78	06/19/2023	10/06/2023	30.8	2441.4	31.3
Field: C4							
	1 Wheat	84	11/01/2022	05/10/2023	21.6	1713.6	20.4
	2 Corn	84	06/18/2023	10/06/2023	30.9	2755.2	32.8
Field: C5							
	1 Wheat	73	11/22/2022	05/11/2023	24.2	1700.9	23.3
	2 Corn	73	06/18/2023	10/06/2023	30.2	2277.6	31.2
Field: C6							
	1 Wheat	49	11/01/2022	05/10/2023	18.4	886.9	18.1
	2 Corn	49	06/14/2023	09/26/2023	30.3	1470.0	30.0
Field: C7							
	1 Wheat	35	11/01/2022	05/10/2023	19.1	654.5	18.7
	2 Corn	35	06/14/2023	09/26/2023	28.8	966.0	27.6
Field: C8							
	1 Wheat	25	11/01/2022	05/10/2023	18.0	472.5	18.9
	2 Corn	25	06/14/2023	09/26/2023	29.2	725.0	29.0
Field: C9							
	1 Wheat	38	11/01/2022	05/10/2023	19.2	741.0	19.5
	2 Corn	38	06/14/2023	10/04/2023	29.2	1143.8	30.1



**Poplar Lane Dairy 2023  
Planting and Harvest Information (Attachment F)**

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: C10								
	1	Wheat	9	11/01/2022	05/10/2023	19.2	170.1	18.9
	2	Corn	9	06/14/2023	10/04/2023	29.2	279.0	31.0
Field: C11								
	1	Wheat	20	11/01/2022	05/12/2023	18.9	368.0	18.4
	2	Corn	20	06/14/2023	10/04/2023	29.2	604.0	30.2
Field: C12								
	1	Wheat	4	11/01/2022	05/10/2023	18.7	71.2	17.8
	2	Corn	4	06/12/2023	10/04/2023	29.2	119.2	29.8
Field: C13								
	1	Wheat	20	11/25/2022	05/10/2023	19.3	394.0	19.7
	2	Corn	20	06/12/2023	10/04/2023	29.2	604.0	30.2
Field: C14								
	1	Wheat	17	11/15/2022	05/10/2023	19.0	312.8	18.4
	2	Corn	17	06/12/2023	10/04/2023	29.2	511.7	30.1
Field: C15								
	1	Corn	22	04/12/2023	07/30/2023	29.2	635.8	28.9
Field: C16								
	1	Corn	27	04/12/2023	07/30/2023	29.2	818.1	30.3
Field: C17								
	1	Corn	37	04/12/2023	07/30/2023	29.2	1132.2	30.6
Field: C18								
	1	Corn	42	04/12/2023	07/30/2023	30.1	1251.6	29.8



## Poplar Lane Dairy 2023 Weather Data (Attachment G)

Day	January	February	March	April	May	June	July	August	September	October	November	December
1	Light	None	Light	None	None	None	None	None	None	None	None	None
2	Light	None	None	None	None	None	None	None	None	None	None	None
3	None	None	None	None	None	None	None	None	None	None	None	None
4	Light	None	None	None	Light	None	None	None	None	None	None	None
5	Heavy	Light	Light	None	None	None	None	None	None	None	None	None
6	None	None	None	None	None	None	None	None	None	None	None	None
7	None	None	None	None	None	SWP	None	None	None	None	None	None
8	None	None	None	None	None	None	None	None	None	None	None	None
9	SWP	None	Light	None	None	None	None	None	None	None	None	None
10	Light	None	SWP	None	None	None	None	None	None	None	None	None
11	None	None	None	None	None	None	None	None	None	None	None	None
12	None	None	None	None	None	None	None	None	None	None	None	None
13	None	None	None	None	None	None	None	None	None	None	None	None
14	Heavy	None	SWP	None	None	None	None	None	None	None	None	None
15	Light	None	Heavy	None	None	None	None	None	None	None	None	None
16	Heavy	None	None	None	None	None	None	None	None	None	None	None
17	None	None	None	None	None	None	None	None	None	None	None	None
18	None	None	None	None	None	None	None	None	None	None	None	None
19	None	None	Light	None	None	None	None	Light	None	None	None	None
20	None	None	None	None	None	None	None	SWP	None	None	None	None
21	None	None	SWP	None	None	None	None	None	None	None	None	None
22	None	Light	Light	None	None	None	None	None	None	None	None	None
23	None	None	None	None	None	None	None	None	None	Heavy	None	None
24	None	SWP	None	None	None	None	None	None	None	None	None	None
25	None	SWP	None	None	None	None	None	None	None	None	None	None
26	None	None	None	None	None	None	None	None	None	None	None	None
27	None	Light	None	None	None	None	None	None	None	None	None	None
28	None	Heavy	Light	None	None	None	None	None	None	None	None	None
29	Light		Heavy	None	None	None	None	None	None	None	None	None
30	None		Light	None	None	None	None	None	None	None	None	Light
31	None		None		None		None	None	None	None		None

\*Note: SWP = Standing Water Present



December 18, 2023

**Lab No.** : VI 2348143**Customer No.** : 4018573**Reference** : 42126

**Innovative Ag Services, LLC**  
 1201 Delta View Road  
 Suite 5  
 Hanford, CA 93230

### Laboratory Report

**Introduction:** This report package contains a total of 6 pages divided into 3 sections:

- |                 |           |   |
|-----------------|-----------|---|
| Case Narrative  | (1 page)  | : An overview of the work performed at FGL. |
| Sample Results  | (2 pages) | : Results for each sample submitted.        |
| Quality Control | (3 pages) | : 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
IRW11	12/04/2023	12/04/2023	VI 2348143-001	AGW
IRW4	12/04/2023	12/04/2023	VI 2348143-002	AGW

### Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were 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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	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-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: JRD

Approved By **Kelly A. Dunnahoo, B.S.**

Digitally signed by Kelly A. Dunnahoo, B.S.  
 Title: Laboratory Director  
 Date: 2023-12-18

Section: Case Narrative

Page 1 of 6

Page 1 of 6

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December 18, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road  
 Suite 5  
 Hanford, CA 93230

Description : IRW11  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2348143-001  
 Customer No.: 4018573  
 Reference : 42126  
 Sampled On : December 4, 2023 at 08:20  
 Sampled By : Zeke  
 Received On : December 4, 2023 at 16:10  
 Matrix : Ag Water

### Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	12/12/2023	08:00	sta	EPA 351.2	12/13/2023	16:36	lcr
Nitrate Nitrogen	9.7	0.4	mg/L		1		12/05/2023	13:30	lfs	SM 4500-NO3 F	12/05/2023	15:29	lfs
Nitrogen, Total as Nitrogen	9.7	0.5	mg/L		1		12/12/2023	08:00	sta	Calc.	12/13/2023	16:36	lcr
Nitrate + Nitrite as N	9.7	0.4	mg/L		1		12/05/2023	13:30	lfs	SM 4500-NO3 F	12/05/2023	15:29	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	12/12/2023	08:00	sta	EPA 351.2	12/13/2023	16:36	lcr
Conductivity	342	1	umhos/cm		1		12/07/2023	07:47	krh	SM 4500-H+B	12/07/2023	10:43	krh
Solids, Total Dissolved (TDS)	240	20	mg/L		1		12/06/2023	11:00	ctl	SM 2540 C	12/07/2023	11:00	ctl

DQF Flags Definition:

U Constituent results were non-detect.

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



December 18, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road  
 Suite 5  
 Hanford, CA 93230

Description : IRW4  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2348143-002  
 Customer No.: 4018573  
 Reference : 42126  
 Sampled On : December 4, 2023 at 08:05  
 Sampled By : Zeke  
 Received On : December 4, 2023 at 16:10  
 Matrix : Ag Water

### Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Alkalinity (as CaCO <sub>3</sub> )	40	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	05:10	amm
Bicarbonate	50	10	mg/L		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	05:10	amm
Carbonate	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	05:10	amm
Hydroxide	ND	10	mg/L		1	U	12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	05:10	amm
Chloride	44	1	mg/L		1		12/05/2023	12:25	ldm	EPA 300.0	12/05/2023	21:58	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	12/12/2023	08:00	sta	EPA 351.2	12/13/2023	16:31	lcr
Nitrate Nitrogen	17	0.1	mg/L		1		12/05/2023	12:25	ldm	EPA 300.0	12/05/2023	21:58	ldm
Nitrogen, Total as Nitrogen	17.0	0.5	mg/L		1		12/12/2023	08:00	sta	Calc.	12/13/2023	16:31	lcr
Nitrate + Nitrite as N	17	0.1	mg/L		1		12/05/2023	12:25	ldm	EPA 300.0	12/05/2023	21:58	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	12/12/2023	08:00	sta	EPA 351.2	12/13/2023	16:31	lcr
Conductivity	516	1	umhos/cm		1		12/10/2023	16:08	amm	SM 4500-H+B	12/11/2023	05:10	amm
Sulfate Sulfur	21.4	0.17	mg/L		1		12/05/2023	12:25	ldm	EPA 300.0	12/05/2023	21:58	ldm
Solids, Total Dissolved (TDS)	440	20	mg/L		1		12/06/2023	09:45	ctl	SM 2540 C	12/07/2023	11:00	ctl
Calcium	23	1	mg/L		1		12/05/2023	16:00	ejc	EPA 200.7	12/07/2023	23:27	ac
Magnesium	2	1	mg/L		1		12/05/2023	16:00	ejc	EPA 200.7	12/07/2023	23:27	ac
Sodium	79	1	mg/L		1		12/05/2023	16:00	ejc	EPA 200.7	12/07/2023	23:27	ac

DQF Flags Definition:

U Constituent results were non-detect.

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



December 18, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2348143

Customer No. : 4018573

**Quality Control - Metals**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Calcium	200.7	12/05/2023:213716EJC (CC 2384219-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	12.00	ND 99.3% 107% 65.6% 6.1%	<1 85-115 75-125 <1/4 ≤20.0	
Magnesium	200.7	12/05/2023:213716EJC (CC 2384219-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	12.00	ND 107% 111% 90.0% 5.4%	<1 85-115 75-125 75-125 ≤20	
Sodium	200.7	12/05/2023:213716EJC (CC 2384219-001)	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	12.00	ND 102% 105% 32.7% 5.2%	<1 85-115 75-125 <1/4 ≤20.0	

**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.
- 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 analyte. 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.

December 18, 2023  
**Innovative Ag Services, LLC**

Lab No. : VI 2348143  
Customer No. : 4018573

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO3)	2320B	12/10/2023:213906AMM	ND	mg/L		0.2%	10	
Bicarbonate	2320B	(SP 2319949-001)	Dup	mg/L		0.2%	10	
E. C.	2320B	(VI 2348142-001)	Dup	umhos/cm		0.2%	5	
	2320B	(SP 2319949-001)	Dup	umhos/cm		0.1%	5	
Solids, Total Dissolved	2540CE	12/06/2023:213726CTL	Blank	mg/L		ND	<20	
		(SP 2320049-001)	LCS	mg/L	991.5	103%	90-110	
		(SP 2320049-001)	Dup	mg/L		1.91%	5	
			Dup	mg/L		0.3%	5	
			Blank	mg/L	991.5	ND	<20	
		(CC 2384245-003)	LCS	mg/L		101%	90-110	
		(CC 2384245-003)	Dup	mg/L		2.09%	5	
		(CC 2384245-003)	Dup	mg/L		0.3%	5	
Chloride	300.0	12/05/2023:213763LDM	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	98.1%	90-110	
		(SP 2319967-001)	MS	mg/L	50.00	93.5%	67-117	
			MSD	mg/L	50.00	93.3%	67-117	
			MSRPD	mg/L		0.1%	≤7	
		(SP 2319925-001)	MS	mg/L	50.00	89.2%	67-117	
		(SP 2319925-001)	MSD	mg/L	50.00	88.7%	67-117	
		(SP 2319925-001)	MSRPD	mg/L		0.3%	≤7	
Nitrate + Nitrite as N	300.0	12/05/2023:213763LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	98.0%	90-110	
		(SP 2319967-001)	MS	mg/L	40.00	101%	86-112	
			MSD	mg/L	40.00	100%	86-112	
			MSRPD	mg/L		0.2%	≤7	
		(SP 2319925-001)	MS	mg/L	40.00	102%	86-112	
		(SP 2319925-001)	MSD	mg/L	40.00	101%	86-112	
		(SP 2319925-001)	MSRPD	mg/L		0.3%	≤7	
Nitrate Nitrogen	300.0	12/05/2023:213763LDM	Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	98.0%	90-110	
		(SP 2319967-001)	MS	mg/L	40.00	101%	86-112	
			MSD	mg/L	40.00	100%	86-112	
			MSRPD	mg/L		0.2%	≤7	
		(SP 2319925-001)	MS	mg/L	40.00	102%	86-112	
		(SP 2319925-001)	MSD	mg/L	40.00	101%	86-112	
		(SP 2319925-001)	MSRPD	mg/L		0.3%	≤7	
Sulfate Sulfur	300.0	12/05/2023:213763LDM	Blank	mg/L		ND	<0.5	
			LCS	mg/L	50.00	99.7%	90-110	
		(SP 2319967-001)	MS	mg/L	100.0	93.3%	18-165	
			MSD	mg/L	100.0	93.1%	18-165	
			MSRPD	mg/L		0.1%	≤7	
		(SP 2319925-001)	MS	mg/L	100.0	88.5%	18-165	
		(SP 2319925-001)	MSD	mg/L	100.0	88.0%	18-165	
		(SP 2319925-001)	MSRPD	mg/L		0.3%	≤7	
Nitrogen, Total Kjeldahl	351.2	12/12/2023:213992STA	Blank	mg/L		ND	<0.5	
			LCS	mg/L	12.00	95.8%	73-124	
		(SP 2319783-001)	MS	mg/L	12.00	91.8%	90-110	
			MSD	mg/L	12.00	90.7%	90-110	
			MSRPD	mg/L		1.2%	≤20	
			MS	mg/L	12.00	84.4%	<1/4	406

December 18, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2348143  
 Customer No. : 4018573

**Quality Control - Wet Chem**

<b>Constituent</b>	<b>Method</b>	<b>Date/ID</b>	<b>Type</b>	<b>Units</b>	<b>Conc.</b>	<b>QC Data</b>	<b>DQO</b>	<b>Note</b>
		(VI 2348053-002)	MSD MSRPD	mg/L mg/L	12.00	84.3% 0.1%	<1/4 ≤20	
Nitrate + Nitrite as N	4500NO3F	12/05/2023:213707LFS	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609 2.5%	ND 96.6% 93.5% 95.9% ≤30.4	<0.4 80-120 66-125 66-125 ≤30.4	
Nitrate Nitrogen	4500NO3F	12/05/2023:213707LFS	Blank LCS MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L	11.22 5.609 5.609 5.609 2.5%	ND 96.6% 93.5% 95.9% ≤30.4	<0.4 80-120 66-125 66-125 ≤30.4	
<b>Definition</b>								

- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- 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 analyte. 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**

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.



# Laboratory Analysis Work Order

ID: # 01892348143

Nº 42126

SITE NAME: POPULAR LANE DAIRYBilling: JAS

## ANALYSIS TO BE COMPLETED:

### Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO<sub>3</sub>N (Dom) *20 ac 10/15*  
W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)  
W3 NH<sub>4</sub>-N (Ammonium)  
W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)  
W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)  
W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)  
W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)  
W8 Other: \_\_\_\_\_

### Plant Tissue

- P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)  
P2 TN, P, K (Mid-season - Corn)  
P3 TN, TP, TK, Ash, %M (At Harvest)  
P4 TN, %M  
P5 % Moisture  
P6 NIR  
P7 Other: \_\_\_\_\_

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH <sub>3</sub> N *	pH	Temp
1	IRw11	JAS	W2	12-4 / 8:20	Zeka		
2	IRw4	JAS	W5	12-4 / 8:05	Zeka		
3							
4							
5							
6							
7							
8							

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES: \_\_\_\_\_

### CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>	<u>E</u>	JAS		12-4-23 / 3:00
2 <sup>nd</sup>	<u>B</u>	FGL	12-4-23 15:50	
3 <sup>rd</sup>	<u>S</u>	FGL		12-4-23 16:10
4 <sup>th</sup>	<u>V</u>		12/4/23 16:10	

LABORATORY USE ONLY

Logged In By: GJTotal Samples: 4/21Laboratory #: TP

GLS inc 12/5/23 11:55



August 3, 2023

**Lab No.** : VI 2344560  
**Customer No.** : 4018573  
**Reference** : 41041

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

### Laboratory Report

**Introduction:** This report package contains a total of 6 pages divided into 3 sections:

- |                 |           |   |
|-----------------|-----------|---|
| Case Narrative  | (1 page)  | : An overview of the work performed at FGL. |
| Sample Results  | (2 pages) | : Results for each sample submitted.        |
| Quality Control | (3 pages) | : 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
IRW3	07/12/2023	07/12/2023	VI 2344560-001	AGW
IRWC3N	07/12/2023	07/12/2023	VI 2344560-002	AGW

### Sampling and Receipt Information:

All samples were received in acceptable condition and within temperature requirements, unless noted on the Condition Upon Receipt (CUR) form. All samples were 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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	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-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

Section: Case Narrative

Page 1 of 6

Page 1 of 6

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 563 E. Lindo Avenue  
 Chico, CA 95926  
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 9415 W. Goshen Avenue  
 Visalia, CA 93291  
 TEL: (559)734-9473  
 FAX: (559)734-8435  
 CA ELAP Certification No. 2810



August 3, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

Description : IRW3  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2344560-001  
 Customer No.: 4018573  
 Reference : 41041  
 Sampled On : July 12, 2023 at 12:40  
 Sampled By : Henry  
 Received On : July 12, 2023 at 16:22  
 Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Alkalinity (as CaCO <sub>3</sub> )	120	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:25	amm
Bicarbonate	140	10	mg/L		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:25	amm
Carbonate	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:25	amm
Hydroxide	ND	10	mg/L		1	U	07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:25	amm
Chloride	72	1	mg/L		1	I	07/13/2023	14:05	ldm	EPA 300.0	07/13/2023	19:38	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/28/2023	17:18	lcr
Nitrate Nitrogen	37.5	0.5*	mg/L		5		07/13/2023	14:05	ldm	EPA 300.0	07/14/2023	01:36	ldm
Nitrogen, Total as Nitrogen	37.5	0.5	mg/L		1		07/28/2023	08:46	sta	Calc.	07/28/2023	17:18	lcr
Nitrate + Nitrite as N	37.5	0.5*	mg/L		5		07/13/2023	14:05	ldm	EPA 300.0	07/14/2023	01:36	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/28/2023	17:18	lcr
Conductivity	971	1	umhos/cm		1		07/17/2023	15:13	amm	SM 4500-H+B	07/17/2023	17:25	amm
Sulfate Sulfur	39.2	0.17	mg/L		1		07/13/2023	14:05	ldm	EPA 300.0	07/13/2023	19:38	ldm
Solids, Total Dissolved (TDS)	650	20	mg/L		1		07/14/2023	16:00	ctl	SM 2540 C	07/17/2023	11:10	ctl
Calcium	84	1	mg/L		1		07/17/2023	06:45	ejc	EPA 200.7	07/18/2023	16:47	ac
Magnesium	2	1	mg/L		1		07/17/2023	06:45	ejc	EPA 200.7	07/18/2023	16:47	ac
Sodium	115	1	mg/L		1	h	07/17/2023	06:45	ejc	EPA 200.7	07/18/2023	16:47	ac

## DQF Flags Definition:

- U Constituent results were non-detect.
- I The MS/MSD did not meet QC criteria.
- h The MS/MSD did not meet QC criteria.

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution



August 3, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

Description : IRWC3N  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2344560-002  
 Customer No.: 4018573  
 Reference : 41041  
 Sampled On : July 12, 2023 at 13:05  
 Sampled By : Henry  
 Received On : July 12, 2023 at 16:22  
 Matrix : Ag Water

### Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	18:26	lcr
Nitrate Nitrogen	ND	0.4	mg/L		1	U	07/13/2023	13:00	lfs	SM 4500-NO3 F	07/13/2023	15:00	lfs
Nitrogen, Total as Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	Calc.	07/31/2023	18:26	lcr
Nitrate + Nitrite as N	ND	0.4	mg/L		1	U	07/13/2023	13:00	lfs	SM 4500-NO3 F	07/13/2023	15:00	lfs
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/28/2023	08:46	sta	EPA 351.2	07/31/2023	18:26	lcr
Conductivity	317	1	umhos/cm		1		07/18/2023	14:57	amm	SM 4500-H+B	07/18/2023	22:17	amm
Solids, Total Dissolved (TDS)	190	20	mg/L		1		07/14/2023	16:00	ctl	SM 2540 C	07/17/2023	11:10	ctl

DQF Flags Definition:

U Constituent results were non-detect.

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution



August 3, 2023  
**Innovative Ag Services, LLC**

Lab No. : VI 2344560  
 Customer No. : 4018573

### Quality Control - Metals

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Calcium	200.7	07/17/2023:207762EJC (CC 2382158-004)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 2.7% 12.00 12.00 7.7%	ND 105% 111% 117% ≤20.0 -6.42% 132% ≤20.0	<1 85-115 75-125 75-125 <¼ <1/4 406	
Magnesium	200.7	07/17/2023:207762EJC (CC 2382158-004)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 1.9% 12.00 12.00 5.9%	ND 104% 107% 110% ≤20 54.0% 96.7% ≤20	<1 85-115 75-125 75-125 <¼ 75-125 406	
Sodium	200.7	07/17/2023:207762EJC (CC 2382158-004)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 2.8% 12.00 12.00 6.3%	ND 105% 114% 129% ≤20.0 44.1% 108% ≤20.0	<1 85-115 75-125 75-125 435 <¼ 75-125 406	

#### 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.
- 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 analyte. 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

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

August 3, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2344560  
 Customer No. : 4018573

**Quality Control - Wet Chem**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO3)	2320B	07/17/2023:207798AMM	ND	mg/L		1.39%	10	435
Bicarbonate	2320B	(VI 2344701-012)	Dup	mg/L		1.33%	10	
Carbonate	2320B	(VI 2344701-012)	Dup	mg/L			10	
E. C.	2320B	(VI 2344701-012)	Dup	umhos/cm		0%	5	
	2320B	(VI 2344169-001)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	07/14/2023:207703CTL	Blank	mg/L	993.7	ND	<20	
		(SP 2311948-004)	LCS	mg/L		101%	90-110	
		(SP 2311948-004)	Dup	mg/L		1.47%	5	
			Dup	mg/L		0.3%	5	
Chloride	300.0	07/13/2023:207792LDM	Blank	mg/L		ND	<1	
		(VI 2344562-001)	LCS	mg/L	25.00	103 %	90-110	
			MS	mg/L	50.00	73.9 %	85-121	435
			MSDP	mg/L	50.00	48.2 %	85-121	435
		(CH 2375292-001)	MS	mg/L	10.00	13.7%	≤19	
			MSDP	mg/L	50.00	104 %	85-121	
			MSDP	mg/L	50.00	100 %	85-121	
			MSDP	mg/L	10.00	3.2%	≤19	
Nitrate + Nitrite as N	300.0	07/13/2023:207792LDM	Blank	mg/L		ND	<0.4	
		(VI 2344562-001)	LCS	mg/L	20.00	102 %	90-110	
			MS	mg/L	40.00	102 %	85-119	
			MSDP	mg/L	40.00	101 %	85-119	
		(CH 2375292-001)	MSRPD	mg/L	10.00	1.5%	≤19	
			MS	mg/L	40.00	103 %	85-119	
			MSDP	mg/L	40.00	99.7 %	85-119	
			MSDP	mg/L	10.00	3.1%	≤19	
Nitrate Nitrogen	300.0	07/13/2023:207792LDM	Blank	mg/L		ND	<0.4	
		(VI 2344562-001)	LCS	mg/L	20.00	102 %	90-110	
			MS	mg/L	40.00	102 %	85-119	
			MSDP	mg/L	40.00	101 %	85-119	
		(CH 2375292-001)	MS	mg/L	10.00	1.5%	≤19	
			MSDP	mg/L	40.00	103 %	85-119	
			MSDP	mg/L	40.00	99.7 %	85-119	
			MSDP	mg/L	10.00	3.1%	≤19	
Sulfate Sulfur	300.0	07/13/2023:207792LDM	Blank	mg/L		ND	<0.5	
		(VI 2344562-001)	LCS	mg/L	50.00	106 %	90-110	
			MS	mg/L	100.0	99.9 %	82-124	
			MSDP	mg/L	100.0	99.1 %	82-124	
		(CH 2375292-001)	MS	mg/L	10.00	0.6%	≤23	
			MSDP	mg/L	100.0	106 %	82-124	
			MSDP	mg/L	100.0	103 %	82-124	
			MSDP	mg/L	10.00	3.1%	≤23	
Nitrogen, Total Kjeldahl	351.2	07/28/2023:208341STA	Blank	mg/L		ND	<0.5	
		(SP 2311944-001)	LCS	mg/L	12.00	94.1%	73-124	
			MS	mg/L	12.00	92.8%	54-136	
			MSDP	mg/L	12.00	91.6%	54-136	
			MS	mg/L	12.00	1.3%	≤27	
		(SP 2311944-002)	MSDP	mg/L	12.00	92.0%	54-136	
			MSDP	mg/L	12.00	90.6%	54-136	
			MSDP	mg/L		1.4%	≤27	
			Blank	mg/L		ND	<0.5	

August 3, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2344560  
 Customer No. : 4018573

**Quality Control - Wet Chem**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
		(STK2339188-001)	LCS	mg/L	12.00	98.2%	73-124	
			MS	mg/L	12.00	99.6%	54-136	
			MSD	mg/L	12.00	93.1%	54-136	
			MSRPD	mg/L		6.7%	≤27	
		(VI 2344560-001)	MS	mg/L	12.00	38.3%	<1/4	406
			MSD	mg/L	12.00	28.6%	<1/4	
			MSRPD	mg/L		29.6%	≤27	435
			Blank	mg/L		ND	<0.4	
Nitrate + Nitrite as N	4500NO3F	07/13/2023:207687LFS	LCS	mg/L	11.22	100%	80-120	
			MS	mg/L	5.609	89.3%	66-125	
			MSD	mg/L	5.609	88.7%	66-125	
			MSRPD	mg/L		0.2%	≤30.4	
			Blank	mg/L		ND	<0.4	
Nitrate Nitrogen	4500NO3F	07/13/2023:207687LFS	LCS	mg/L	11.22	100%	80-120	
			MS	mg/L	5.609	89.3%	66-125	
			MSD	mg/L	5.609	88.7%	66-125	
			MSRPD	mg/L		0.2%	≤30.4	

**Definition**

- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- 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 analyte. 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**

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.



2344560  
**Laboratory Analysis Work Order**

ID: #0089

SITE NAME: Polar Lane DairyBilling: IAS

Nº 41041

LABORATORY: FGL

Authorized Copy Release to:

Innovative Ag Services LLC  
(559) 587-2800**ANALYSIS TO BE COMPLETED:****Irrigation/Ground Water (ELAP Standards)**ROI  
7.3°CW1 EC, NO<sub>3</sub>N (Dom)W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)W3 NH<sub>4</sub>N (Ammonium)W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)

W8 Other: \_\_\_\_\_

**Plant Tissue**P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)

P2 TN, P, K (Mid-season - Corn)

P3 TN, TP, TK, Ash, %M (At Harvest)

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other: \_\_\_\_\_

**Process Waste Water (lagoon)**L1 EC, NH<sub>4</sub>N, TKN, TP, TK, TDS (Quarterly)L2 EC, NO<sub>3</sub>N, NH<sub>4</sub>N, TKN, TP, TK, TDS, pH (Annually)L3 L1 + Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Biennially)

L4 Other: \_\_\_\_\_

**Manure**

M1 TN, TP, TK, %M (2/year)

M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)

M3 Other: \_\_\_\_\_

**Soil**S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO<sub>3</sub>N, PO<sub>4</sub>P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>SS2 S1 + CEC, CaCO<sub>3</sub>, OM, C:N, TNS3 NO<sub>3</sub>N, NH<sub>4</sub>N

S4 Other: \_\_\_\_\_

IAS USE ONLY: FIELD TESTS					
Sample ID	Description	Analysis	Date/Time	Sampled by	
1 TRW13	TR	W5	12:40 7/12	Heavy	—
2 TRWC3N	1	W7	1:05 7/12	1	—
3					
4					
5					
6					
7					
8					

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling &amp; Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES:

**CHAIN OF CUSTODY RECORDING**

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		2023-07-12 13:00 7/12/23
2nd		FGL	7/12/23 16:10	7/12/23 16:22
3rd		FGL		
4th		FGL	7/12/23 16:22	7/12/23 17:30
		GLS	7/12/23 17:30	7/12/23 17:30

LABORATORY USE ONLY

Logged In By: \_\_\_\_\_

Total Samples: \_\_\_\_\_

Laboratory #: \_\_\_\_\_



July 17, 2023

**Lab No.** : VI 2344384  
**Customer No.** : 4018573  
**Reference** : 40983

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

### Laboratory Report

**Introduction:** This report package contains a total of 5 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 | (3 pages) | : 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
IRW1	06/28/2023	06/28/2023	VI 2344384-001	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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	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-H+B	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: KEH

Approved By **Kelly A. Dunnahoo, B.S.**  Digitally signed by Kelly A. Dunnahoo, B.S.  
 Title: Laboratory Director  
 Date: 2023-07-18

Section: Case Narrative

Page 1 of 5

Page 1 of 5

Corporate Offices & Laboratory 853 Corporation Street Santa Paula, CA 93060 TEL: (805)392-2000 Env FAX: (805)525-4172 / Ag FAX: (805)392-2063 CA ELAP Certification No. 1573	Office & Laboratory 2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423 CA ELAP Certification No. 1563	Office & Laboratory 563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807 CA ELAP Certification No. 2670	Office & Laboratory 3442 Empress Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912 CA ELAP Certification No. 2775	Office & Laboratory 9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 FAX: (559)734-8435 CA ELAP Certification No. 2810
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July 17, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

Description : IRW1  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2344384-001  
 Customer No.: 4018573  
 Reference : 40983  
 Sampled On : June 28, 2023 at 13:00  
 Sampled By : Henry  
 Received On : June 28, 2023 at 16:20  
 Matrix : Ag Water

### Sample Results - Inorganic

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Alkalinity (as CaCO <sub>3</sub> )	130	10	mg/L		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:25	amm
Bicarbonate	160	10	mg/L		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:25	amm
Carbonate	ND	10	mg/L		1	U	07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:25	amm
Hydroxide	ND	10	mg/L		1	U	07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:25	amm
Chloride	45	1	mg/L		1		06/29/2023	11:54	ldm	EPA 300.0	06/29/2023	17:30	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/11/2023	15:00	sta	EPA 351.2	07/14/2023	17:37	lcr
Nitrate Nitrogen	25.0	0.3*	mg/L		3		06/29/2023	11:54	ldm	EPA 300.0	06/29/2023	23:46	ldm
Nitrogen, Total as Nitrogen	25.0	0.5	mg/L		1		07/11/2023	15:00	sta	Calc.	07/14/2023	17:37	lcr
Nitrate + Nitrite as N	25.0	0.3*	mg/L		3		06/29/2023	11:54	ldm	EPA 300.0	06/29/2023	23:46	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/11/2023	15:00	sta	EPA 351.2	07/14/2023	17:37	lcr
Conductivity	829	1	umhos/cm		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:25	amm
Sulfate Sulfur	35.9	0.17	mg/L		1		06/29/2023	11:54	ldm	EPA 300.0	06/29/2023	17:30	ldm
Solids, Total Dissolved (TDS)	540	20	mg/L		1		06/29/2023	16:30	ctl	SM 2540 C	06/30/2023	11:50	ctl
Calcium	63	1	mg/L		1		07/04/2023	22:26	ejc	EPA 200.7	07/05/2023	12:57	ac
Magnesium	1	1	mg/L		1		07/04/2023	22:26	ejc	EPA 200.7	07/05/2023	12:57	ac
Sodium	86	1	mg/L		1		07/04/2023	22:26	ejc	EPA 200.7	07/05/2023	12:57	ac

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

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution



July 17, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2344384  
 Customer No. : 4018573

**Quality Control - Metals**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Calcium	200.7	07/04/2023:207286EJC	Blank	mg/L		ND	<1	
		(SP 2311301-001)	LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	68.7%	<1/4	406
			MSD	mg/L	12.00	59.5%	<1/4	
			MSRPD	mg/L		1.2%	≤20.0	
		(SP 2311300-002)	MS	mg/L	12.00	55.3%	<1/4	406
			MSD	mg/L	12.00	118%	75-125	
			MSRPD	mg/L		8.4%	≤20.0	
Magnesium	200.7	07/04/2023:207286EJC	Blank	mg/L		ND	<1	
		(SP 2311301-001)	LCS	mg/L	12.00	106%	85-115	
			MS	mg/L	12.00	82.6%	75-125	
			MSD	mg/L	12.00	77.3%	75-125	
			MSRPD	mg/L		1.4%	≤20	
		(SP 2311300-002)	MS	mg/L	12.00	79.0%	75-125	
			MSD	mg/L	12.00	105%	75-125	
			MSRPD	mg/L		6.9%	≤20	
Sodium	200.7	07/04/2023:207286EJC	Blank	mg/L		ND	<1	
		(SP 2311301-001)	LCS	mg/L	12.00	107%	85-115	
			MS	mg/L	12.00	55.3%	<1/4	406
			MSD	mg/L	12.00	1.58%	<1/4	
			MSRPD	mg/L		3.5%	≤20.0	
		(SP 2311300-002)	MS	mg/L	12.00	-11.7%	<1/4	406
			MSD	mg/L	12.00	118%	75-125	
			MSRPD	mg/L		8.7%	≤20.0	

**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.
- 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 analyte. 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**

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.

July 17, 2023  
**Innovative Ag Services, LLC**

Lab No. : VI 2344384  
Customer No. : 4018573

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO <sub>3</sub> )	2320B	07/03/2023:207246AMM	ND	mg/L		0.1%	10	406
Bicarbonate	2320B	(SP 2311036-008)	Dup	mg/L		0%	10	
Carbonate	2320B	(SP 2311036-008)	Dup	mg/L			10	
E. C.	2320B	(SP 2311036-008)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	06/29/2023:207182CTL	Blank	mg/L	993.7	ND	<20	
		(SP 2311097-001)	LCS	mg/L		102%	90-110	
		(SP 2311097-001)	Dup	mg/L		4.35%	5	
			Dup	mg/L		0.9%	5	
Chloride	300.0	06/29/2023:207217LDM	Blank	mg/L	(CH 2374537-001)	ND	<1	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		90.0 %	85-121	
			MSD	mg/L		88.2 %	85-121	
			MSRPD	mg/L		1.0%	≤19	
			MS	mg/L		92.4 %	85-121	
			MSD	mg/L		89.8 %	85-121	
			MSRPD	mg/L		1.4%	≤19	
Nitrate + Nitrite as N	300.0	06/29/2023:207217LDM	Blank	mg/L	(CH 2374537-001)	ND	<0.4	
			LCS	mg/L		101 %	90-110	
			MS	mg/L		102 %	85-119	
			MSD	mg/L		100 %	85-119	
			MSRPD	mg/L		2.1%	≤19	
			MS	mg/L		105 %	85-119	
			MSD	mg/L		102 %	85-119	
			MSRPD	mg/L		2.9%	≤19	
Nitrate Nitrogen	300.0	06/29/2023:207217LDM	Blank	mg/L	(CH 2374537-001)	ND	<0.4	
			LCS	mg/L		101 %	90-110	
			MS	mg/L		102 %	85-119	
			MSD	mg/L		100 %	85-119	
			MSRPD	mg/L		2.1%	≤19	
			MS	mg/L		105 %	85-119	
			MSD	mg/L		102 %	85-119	
			MSRPD	mg/L		2.9%	≤19	
Sulfate Sulfur	300.0	06/29/2023:207217LDM	Blank	mg/L	(CH 2374537-001)	ND	<0.5	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		102 %	82-124	
			MSD	mg/L		99.7 %	82-124	
			MSRPD	mg/L		2.0%	≤23	
			MS	mg/L		104 %	82-124	
			MSD	mg/L		101 %	82-124	
			MSRPD	mg/L		2.8%	≤23	
Nitrogen, Total Kjeldahl	351.2	07/11/2023:207567STA	Blank	mg/L	(STK2338587-006)	ND	<0.5	
			LCS	mg/L		97.7%	73-124	
			MS	mg/L		92.5%	54-136	
			MSD	mg/L		91.2%	54-136	
			MSRPD	mg/L		1.4%	≤27	
			MS	mg/L		97.1%	54-136	
			MSD	mg/L		96.0%	54-136	
			MSRPD	mg/L		1.1%	≤27	

**Definition**

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

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 analyte. 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**

406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.



2344384  
Laboratory Analysis Work Order

No 40983

ID: # 0089

SITE NAME: Polar Lane Dairy  
Billing: IAS

ROI  
21.4

## ANALYSIS TO BE COMPLETED:

## Irrigation/Ground Water (ELAP Standards)

- W1 EC, NO<sub>3</sub>N (Dom)
- W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)
- W3 NH<sub>4</sub>-N (Ammonium)
- W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)
- W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)
- W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)
- W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)
- W8 Other: \_\_\_\_\_

## Plant Tissue

- P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)
- P2 TN, P, K (Mid-season - Corn)
- P3 TN, TP, TK, Ash, %M (At Harvest)
- P4 TN, %M
- P5 % Moisture
- P6 NIR
- P7 Other: \_\_\_\_\_

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH <sub>3</sub> N *	pH	Temp
1 IRWI	Irr	W5	1:00 6/28	Henry	—		
2							
3							
4							
5							
6							
7							
8							

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling & Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES:

GLS 6/29/23

CDA 1028

## CHAIN OF CUSTODY RECORDING

Signature	Company	Received Date & Time	Relinquished Date & Time
1st	IAS		2:00 6/28/23
2nd	FGL	6-28-23 16:00	
3rd	FGL		6-28-23 16:20
4th	FGL	6-28-23 16:20	
LABORATORY USE ONLY	GLS	6-28-23 1730	
Logged In By: _____	Total Samples: _____	Laboratory #: _____	



July 12, 2023

**Innovative Ag Services, LLC**  
1201 Delta View Road Suite 5  
Hanford, CA 93230

**Lab No.** : VI 2344246  
**Customer No.** : 4018573  
**Reference** : 40863

### Laboratory Report

**Introduction:** This report package contains a total of 5 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 | (3 pages) | : 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
IRW2	06/26/2023	06/26/2023	VI 2344246-001	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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	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-H+B	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: 2023-07-12



July 12, 2023

**Innovative Ag Services, LLC**  
 1201 Delta View Road Suite 5  
 Hanford, CA 93230

Description : IRW2  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2344246-001  
 Customer No.: 4018573  
 Reference : 40863  
 Sampled On : June 26, 2023 at 12:20  
 Sampled By : Henry  
 Received On : June 26, 2023 at 15:40  
 Matrix : Ag Water

**Sample Results - Inorganic**

Constituent	Result	RL	Units	Note	Dil.	DQF	Sample Preparation			Sample Analysis			
							Date	Time	Who	Method	Date	Time	Who
<b>Dairy Analysis</b>													
Alkalinity (as CaCO <sub>3</sub> )	60	10	mg/L		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:35	amm
Bicarbonate	70	10	mg/L		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:35	amm
Carbonate	ND	10	mg/L		1	U	07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:35	amm
Hydroxide	ND	10	mg/L		1	U	07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:35	amm
Chloride	25	1	mg/L		1		06/27/2023	11:23	ldm	EPA 300.0	06/27/2023	17:12	ldm
Nitrogen, Total Kjeldahl	ND	0.5	mg/L		1	U	07/06/2023	12:12	sta	EPA 351.2	07/11/2023	21:44	lcr
Nitrate Nitrogen	14.2	0.1	mg/L		1	I	06/27/2023	11:23	ldm	EPA 300.0	06/27/2023	17:12	ldm
Nitrogen, Total as Nitrogen	14.2	0.5	mg/L		1	I	07/06/2023	12:12	sta	Calc.	07/11/2023	21:44	lcr
Nitrate + Nitrite as N	14.2	0.1	mg/L		1	I	06/27/2023	11:23	ldm	EPA 300.0	06/27/2023	17:12	ldm
Kjeldahl Nitrogen	ND	0.5	mg/L		1	U	07/06/2023	12:12	sta	EPA 351.2	07/11/2023	21:44	lcr
Conductivity	405	1	umhos/cm		1		07/03/2023	12:08	amm	SM 4500-H+B	07/04/2023	01:35	amm
Sulfate Sulfur	13.7	0.17	mg/L		1		06/27/2023	11:23	ldm	EPA 300.0	06/27/2023	17:12	ldm
Solids, Total Dissolved (TDS)	260	20	mg/L		1		06/28/2023	12:45	ctl	SM 2540 C	06/29/2023	11:30	ctl
Calcium	16	1	mg/L		1	h	06/28/2023	01:00	ejc	EPA 200.7	06/28/2023	11:11	ac
Magnesium	ND	1	mg/L		1	J	06/28/2023	01:00	ejc	EPA 200.7	06/28/2023	11:11	ac
Sodium	60	1	mg/L		1		06/28/2023	01:00	ejc	EPA 200.7	06/28/2023	11:11	ac

## DQF Flags Definition:

- U Constituent results were non-detect.
- I The MS/MSD did not meet QC criteria.
- h The MS/MSD did not meet QC criteria.
- J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

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



July 12, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2344246  
 Customer No. : 4018573

**Quality Control - Metals**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Metals</b>								
Calcium	200.7	06/28/2023:207109EJC	Blank	mg/L		ND	<1	
		(SP 2310971-002)	LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	114%	75-125	
			MSD	mg/L	12.00	92.7%	75-125	
			MSRPD	mg/L		4.4%	≤20.0	
		(SP 2310985-001)	MS	mg/L	12.00	138%	75-125	435
			MSD	mg/L	12.00	103%	75-125	
			MSRPD	mg/L		8.9%	≤20.0	
Magnesium	200.7	06/28/2023:207109EJC	Blank	mg/L		ND	<1	
		(SP 2310971-002)	LCS	mg/L	12.00	107%	85-115	
			MS	mg/L	12.00	109%	75-125	
			MSD	mg/L	12.00	66.0%	<1/4	
			MSRPD	mg/L		4.6%	≤20	
		(SP 2310985-001)	MS	mg/L	12.00	120%	75-125	
			MSD	mg/L	12.00	101%	75-125	
			MSRPD	mg/L		7.4%	≤20	
Sodium	200.7	06/28/2023:207109EJC	Blank	mg/L		ND	<1	
		(SP 2310971-002)	LCS	mg/L	12.00	103%	85-115	
			MS	mg/L	12.00	141%	<¼	406
			MSD	mg/L	12.00	98.0%	75-125	
			MSRPD	mg/L		6.9%	≤20.0	
		(SP 2310985-001)	MS	mg/L	12.00	188%	<¼	406
			MSD	mg/L	12.00	87.8%	75-125	
			MSRPD	mg/L		9.9%	≤20.0	

**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.
- 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 analyte. 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**

- 406 : Matrix Spike (MS) not within the Acceptance Range (AR) because of high analyte concentration in the sample. Data was accepted based on the LCS or CCV recovery.
- 435 : Sample matrix may be affecting this analyte. Data was accepted based on the LCS or CCV recovery.

July 12, 2023

**Innovative Ag Services, LLC**

Lab No. : VI 2344246  
 Customer No. : 4018573

**Quality Control - Wet Chem**

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO3)	2320B	07/03/2023:207246AMM	ND	mg/L		0.1%	10	435
Bicarbonate	2320B	(SP 2311036-008)	Dup	mg/L		0%	10	
Carbonate	2320B	(SP 2311036-008)	Dup	mg/L			10	
E. C.	2320B	(SP 2311036-008)	Dup	umhos/cm		0.2%	5	
Solids, Total Dissolved	2540CE	06/28/2023:207137CTL  (SP 2311026-004) (SP 2311026-004)	Blank	mg/L	993.7	ND	<20	
			LCS	mg/L		100%	90-110	
			Dup	mg/L		0.3%	5	
			Dup	mg/L		3.53%	5	
Chloride	300.0	06/27/2023:207124LDM  (CH 2374410-001)  (VI 2344216-001)	Blank	mg/L	25.00	ND	<1	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		99.9 %	85-121	
			MSD	mg/L		98.0 %	85-121	
			MSRPD	mg/L	10.00	1.7%	≤19	
			MS	mg/L	50.00	97.0 %	85-121	
			MSD	mg/L	50.00	95.5 %	85-121	
			MSRPD	mg/L	10.00	1.0%	≤19	
Nitrate + Nitrite as N	300.0	06/27/2023:207124LDM  (CH 2374410-001)  (VI 2344216-001)	Blank	mg/L	20.00	ND	<0.4	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		103 %	85-119	
			MSD	mg/L		101 %	85-119	
			MSRPD	mg/L	10.00	1.9%	≤19	
			MS	mg/L	40.00	69.3 %	85-119	435
			MSD	mg/L	40.00	68.8 %	85-119	435
			MSRPD	mg/L	10.00	0.2%	≤19	
Nitrate Nitrogen	300.0	06/27/2023:207124LDM  (CH 2374410-001)  (VI 2344216-001)	Blank	mg/L	20.00	ND	<0.4	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		103 %	85-119	
			MSD	mg/L		101 %	85-119	
			MSRPD	mg/L	10.00	1.9%	≤19	
			MS	mg/L	40.00	69.3 %	85-119	435
			MSD	mg/L	40.00	68.8 %	85-119	435
			MSRPD	mg/L	10.00	0.2%	≤19	
Sulfate Sulfur	300.0	06/27/2023:207124LDM  (CH 2374410-001)  (VI 2344216-001)	Blank	mg/L	50.00	ND	<0.5	
			LCS	mg/L		102 %	90-110	
			MS	mg/L		95.7 %	82-124	
			MSD	mg/L		93.8 %	82-124	
			MSRPD	mg/L	10.00	1.2%	≤23	
			MS	mg/L	100.0	95.6 %	82-124	
			MSD	mg/L	100.0	94.3 %	82-124	
			MSRPD	mg/L	10.00	0.8%	≤23	
Nitrogen, Total Kjeldahl	351.2	07/06/2023:207387STA  (STK2338278-002)  (VI 2344324-002)	Blank	mg/L	12.00	ND	<0.5	
			LCS	mg/L		93.4%	73-124	
			MS	mg/L		88.8%	54-136	
			MSD	mg/L		92.3%	54-136	
			MSRPD	mg/L		3.2%	≤27	
			MS	mg/L	12.00	72.8%	54-136	
			MSD	mg/L	12.00	59.5%	54-136	
			MSRPD	mg/L		20.3%	≤27	

**Definition**

Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.

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 analyte. 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.

2344246



# Laboratory Analysis Work Order

Nº 40863

ID: #0089

ROI

9.1°

SITE NAME: Poplar Lane Dairy

Billing: IAS

LABORATORY: FGL

Authorized Copy Release to:

Innovative Ag Services LLC

(559) 587-2800

**ANALYSIS TO BE COMPLETED:****Irrigation/Ground Water (ELAP Standards)**W1 EC, NO<sub>3</sub>N (Dom)W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)W3 NH<sub>4</sub>-N (Ammonium)W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)

W8 Other: \_\_\_\_\_

**Process Waste Water (lagoon)**L1 EC, NH<sub>4</sub>N, TKN, TP, TK, TDS (Quarterly)L2 EC, NO<sub>3</sub>N, NH<sub>4</sub>N, TKN, TP, TK, TDS, pH (Annually)L3 L1 + Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Biennially)

L4 Other: \_\_\_\_\_

**Manure**

M1 TN, TP, TK, %M (2/year)

M2 TN, TP, K, %M, Ca, Mg, Na, S, Cl, ash (Biennially)

M3 Other: \_\_\_\_\_

**Soil**S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO<sub>3</sub>N, PO<sub>4</sub>P, K-AA, Zn, Mn, Fe, Cu, SO<sub>4</sub>SS2 S1 + CEC, CaCO<sub>3</sub>, OM, C:N, TNS3 NO<sub>3</sub>N, NH<sub>4</sub>N

S4 Other: \_\_\_\_\_

**Plant Tissue**P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)

P2 TN, P, K (Mid-season - Corn)

P3 TN, TP, TK, Ash, %M (At Harvest)

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other: \_\_\_\_\_

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH <sub>3</sub> N*	pH	Temp
1 IRW2	Trc	W5	12:20 6/26	Henry	—		
2							
3							
4							
5							
6							
7							
8							

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling &amp; Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

NOTES: \_\_\_\_\_

**CHAIN OF CUSTODY RECORDING**

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>		IAS		2:00 6/26/23
2 <sup>nd</sup>	ASB	FGL	6/26/23 1540	
3 <sup>rd</sup>	ASB	FGL		6/26/23 1558
4 <sup>th</sup>	SRO	FGL	6/26/23 1558	
Laboratory Use Only	SRC	FGL	6/26/23 1730	
Logged In By:			6/26/23 1730	

Total Samples: \_\_\_\_\_

Laboratory #: \_\_\_\_\_

GLS MC 6/27/23 12:14



March 26, 2024

**Innovative Ag Services, LLC**  
 1201 Delta View Road  
 Suite 5  
 Hanford, CA 93230

**Lab No.** : VI 2341303  
**Customer No.** : 4018573  
**Reference** : 40258

### Laboratory Report

**Introduction:** This report package contains a total of 5 pages divided into 3 sections:

- |                 |           |   |
|-----------------|-----------|---|
| Case Narrative  | (2 pages) | : An overview of the work performed at FGL. |
| Sample Results  | (1 page)  | : Results for each sample submitted.        |
| Quality Control | (2 pages) | : 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
Well 3	03/02/2023	03/02/2023	VI 2341303-001	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 except those as listed in the table below. 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.

### Samples Over Hold Time

Lab No	Analyte Method	Maximum Hold Time	Actual Hold Time
VI 2341303-001	Chloride	28 days	42.0 days
VI 2341303-001	Nitrate Nitrogen	48 hours	1,007.2 hours
VI 2341303-001	Sulfate Sulfur	28 days	42.0 days

**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 200.7	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
EPA 300.0	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)

### Discussion of Analytical Results:

Amended to reflect sample type as drinking water.

Section: Case Narrative

Page 1 of 5

Amended

Page 1 of 5

Corporate Offices & Laboratory	Office & Laboratory	Office & Laboratory	Office & Laboratory	
853 Corporation Street Santa Paula, CA 93060 TEL: (805)392-2000 Env FAX: (805)525-4172 / Ag FAX: (805)392-2063 CA ELAP Certification No. 1573	2500 Stagecoach Road Stockton, CA 95215 TEL: (209)942-0182 FAX: (209)942-0423 CA ELAP Certification No. 1563	563 E. Lindo Avenue Chico, CA 95926 TEL: (530)343-5818 FAX: (530)343-3807 CA ELAP Certification No. 2670	3442 Empresa Drive, Suite D San Luis Obispo, CA 93401 TEL: (805)783-2940 FAX: (805)783-2912 CA ELAP Certification No. 2775	9415 W. Goshen Avenue Visalia, CA 93291 TEL: (559)734-9473 FAX: (559)734-8435 CA ELAP Certification No. 2810

**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 **David Terz, B.A., M.B.A.** 

Digitally signed by David Terz, B.A., M.B.A.  
Title: QA Director  
Date: 2024-03-26



March 26, 2024

**Innovative Ag Services, LLC**  
 1201 Delta View Road  
 Suite 5  
 Hanford, CA 93230

Description : Well 3  
 Project : 0089 Poplar Lane Dairy

Lab No. : VI 2341303-001  
 Customer No.: 4018573  
 Reference : 40258  
 Sampled On : March 2, 2023 at 13:40  
 Sampled By : Alex  
 Received On : March 2, 2023 at 16:00  
 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
<b>Dairy Analysis</b>													
Alkalinity (as CaCO <sub>3</sub> )	50	10	mg/L		1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	03:51	amm
Bicarbonate	70	10	mg/L		1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	03:51	amm
Carbonate	ND	10	mg/L		1	U	03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	03:51	amm
Hydroxide	ND	10	mg/L		1	U	03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	03:51	amm
Chloride	59	1	mg/L	500 <sup>2</sup>	1	T	04/13/2023	12:52	ldm	EPA 300.0	04/13/2023	20:23	ldm
Nitrate Nitrogen	36.1	0.4*	mg/L	10	4	T	04/13/2023	12:52	ldm	EPA 300.0	04/14/2023	12:05	ldm
Conductivity	787	1	umhos/cm	1600 <sup>2</sup>	1		03/06/2023	13:57	amm	SM 4500-H+B	03/07/2023	03:51	amm
Sulfate Sulfur	33.9	0.17	mg/L		1	T	04/13/2023	12:52	ldm	EPA 300.0	04/13/2023	20:23	ldm
Solids, Total Dissolved (TDS)	480	20	mg/L	1000 <sup>2</sup>	1		03/06/2023	10:15	ctl	SM 2540 C	03/07/2023	11:30	ctl
Calcium	54	1	mg/L		1	h	03/06/2023	02:50	ejc	EPA 200.7	03/06/2023	16:18	ac
Magnesium	ND	1	mg/L		1	Jh	03/06/2023	02:50	ejc	EPA 200.7	03/06/2023	16:18	ac
Potassium	ND	1	mg/L		1	Jh	03/06/2023	02:50	ejc	EPA 200.7	03/06/2023	16:18	ac
Sodium	111	1	mg/L		1	h	03/06/2023	02:50	ejc	EPA 200.7	03/06/2023	16:18	ac

## DQF Flags Definition:

U Constituent results were non-detect.

T Exceeded method/regulatory-specific holding time.

h The MS/MSD did not meet QC criteria.

J Reported value is estimated; detected at a concentration below the RL and above the laboratory MDL.

ND=Non-Detected, RL=Reporting Level \* RL adjusted for dilution, Dil.=Dilution

MCL = Maximum Contamination Level. 2 - Secondary Standard. 3 - CDPH Notification Level. AL = Regulatory Action Level.

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March 26, 2024

**Innovative Ag Services, LLC**

Lab No. : VI 2341303  
 Customer No. : 4018573

**Quality Control - Metals**

<b>Constituent</b>	<b>Method</b>	<b>Date/ID</b>	<b>Type</b>	<b>Units</b>	<b>Conc.</b>	<b>QC Data</b>	<b>DQO</b>	<b>Note</b>
<b>Metals</b>								
Calcium	200.7	03/06/2023:202374EJC (SP 2303142-001) (VI 2341168-005)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 0.8000 12.00 12.00 0.8000	ND 103 % 84.6 % 105 % 2.7% 134 % 161 % 8.6%	<1 85-115 75-125 75-125 ≤20.0 75-125 75-125 ≤20.0	435 435
Magnesium	200.7	03/06/2023:202374EJC (SP 2303142-001) (VI 2341168-005)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 0.8000 12.00 12.00 0.8000	ND 99.2 % 101 % 104 % 0.9% 126 % 147 % 10.0%	<1 85-115 75-125 75-125 ≤20 75-125 75-125 ≤20	435 435
Potassium	200.7	03/06/2023:202374EJC (SP 2303142-001) (VI 2341168-005)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 0.8000 12.00 12.00 0.8000	ND 94.9 % 109 % 112 % 2.3% 129 % 180 % 9.9%	<1 85-115 75-125 75-125 ≤20.0 75-125 75-125 ≤20.0	435 435
Sodium	200.7	03/06/2023:202374EJC (SP 2303142-001) (VI 2341168-005)	Blank LCS MS MSD MSRPD MS MSD MSRPD	mg/L mg/L mg/L mg/L mg/L mg/L mg/L mg/L	12.00 12.00 12.00 12.00 0.8000 12.00 12.00 0.8000	ND 103 % 94.8 % 107 % 2.1% 125 % 146 % 8.9%	<1 85-115 75-125 75-125 ≤20.0 75-125 75-125 ≤20.0	435

**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.
- 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 analyte. 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.

March 26, 2024  
**Innovative Ag Services, LLC**

Lab No. : VI 2341303  
 Customer No. : 4018573

### Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
<b>Wet Chem</b>								
Alkalinity (as CaCO <sub>3</sub> )	2320B	(CC 2380676-001)	Dup	mg/L		1.43%	10	
Bicarbonate	2320B	(CC 2380676-001)	Dup	mg/L		1.59%	10	
E. C.	2320B	(CC 2380676-001)	Dup	umhos/cm		0%	5	
Solids, Total Dissolved	2540CE	03/06/2023:20401CTL  (STK2332812-001) (STK2332812-001)	Blank	mg/L		ND	<20	
			LCS	mg/L	992.0	97.5%	90-110	
			Dup	mg/L		1.53%	5	
			Dup	mg/L		1.22%	5	
Chloride	300.0	04/13/2023:204065LDM  (CH 2372297-007)	Blank	mg/L		ND	<1	
			LCS	mg/L	25.00	101 %	90-110	
			MS	mg/L	50.00	97.7 %	85-121	
			MSD	mg/L	50.00	103 %	85-121	
			MSRPD	mg/L	10.00	5.5%	≤19	
		(CH 2372297-009)	MS	mg/L	50.00	95.7 %	85-121	
			MSD	mg/L	50.00	100 %	85-121	
			MSRPD	mg/L	10.00	4.0%	≤19	
			MS	mg/L	40.00	98.1 %	85-119	
			MSD	mg/L	40.00	103 %	85-119	
Nitrate Nitrogen	300.0	04/13/2023:204065LDM  (CH 2372297-007)	MSRPD	mg/L	10.00	4.6%	≤19	
			Blank	mg/L		ND	<0.4	
			LCS	mg/L	20.00	102 %	90-110	
			MS	mg/L	40.00	99.2 %	85-119	
			MSD	mg/L	40.00	105 %	85-119	
		(CH 2372297-009)	MSRPD	mg/L	10.00	5.7%	≤19	
			MS	mg/L	40.00	98.1 %	85-119	
			MSD	mg/L	40.00	103 %	85-119	
			MSRPD	mg/L	10.00	4.6%	≤19	
			MS	mg/L	10.00	4.9%	≤23	
Sulfate Sulfur	300.0	04/13/2023:204065LDM  (CH 2372297-007)	MSD	mg/L	100.0	102 %	82-124	
			MSRPD	mg/L	10.00	4.9%	≤23	
			MS	mg/L	100.0	97.6 %	82-124	
			MSD	mg/L	100.0	102 %	82-124	
			MSRPD	mg/L	10.00	4.7%	≤23	

#### Definition

- Blank : Method Blank - Prepared to verify that the preparation process is not contributing contamination to the samples.
- 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 analyte. 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.

**Laboratory Analysis Work Order**ID: # 00892341303

Nº 40258

SITE NAME: Poplar Lane, DairyBilling: IAS**ANALYSIS TO BE COMPLETED:****Irrigation/Ground Water (ELAP Standards)**W1 EC, NO<sub>3</sub>N (Dom)W2 EC, NO<sub>3</sub>N, TDS, TN (Irr)W3 NH<sub>4</sub>-N (Ammonium)W4 EC, NO<sub>3</sub>N, Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl, TDS (Dom, GM)W5 EC, NO<sub>3</sub>N, TDS, TN, Ca, Mg, Na, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>S, Cl (Irr, GM)W6 NO<sub>3</sub>N, NO<sub>2</sub> (Dom ILRP, Annually)W7 Ca, Mg, Na, K, HCO<sub>3</sub>, CO<sub>3</sub>, SO<sub>4</sub>, Cl + Lab Filtering (GWM)

W8 Other: \_\_\_\_\_

201 7.4

**Plant Tissue**P1 TN, NO<sub>3</sub>N, PO<sub>4</sub>P, K (Mid Season - Wheat)

P2 TN, P, K (Mid-season - Corn)

P3 TN, TP, TK, Ash, %M (At Harvest)

P4 TN, %M

P5 % Moisture

P6 NIR

P7 Other: \_\_\_\_\_

Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS		
					NH <sub>3</sub> N *	pH	Temp
1	Well 3	Dom	W4	3/2 1:40	Alex	—	
2							
3							
4							
5							
6							
7							
8							

\* Field Test of ammonium nitrogen may only be made by a trained technician. Positive test to be analyzed for ammonium nitrogen by the laboratory.

All samples are to follow the procedures noted in the Sampling &amp; Analysis Plan of the NMP and the RWQCB specifications. Any samples taken outside of these procedures shall provide the procedures on the notes below. Additionally, if any preservatives are used in the collections or processing of samples, please note below.

## NOTES:

**CHAIN OF CUSTODY RECORDING**

	Signature	Company	Received Date & Time	Relinquished Date & Time
1 <sup>st</sup>	<u>Andy R.</u>	IAS		3/2/23 2:10
2 <sup>nd</sup>	<u>SP</u>	FGI	3-2-23 15:45	
3 <sup>rd</sup>	<u>Brian</u>	FGI		3-2-23 16:00
4 <sup>th</sup>	<u>GLS</u>		3/2/23 16:00	

## LABORATORY USE ONLY

Logged In By: GLSTotal Samples: 22Laboratory #: 742

GLS MLC 3/3/23 1222

CALIFORNIA ENVIRONMENTAL  
PROTECTION AGENCYFORM FOR TRANSFER OF OWNER/OPERATOR COVERAGE  
UNDERREISSUED WASTE DISCHARGE REQUIREMENTS GENERAL ORDER FOR EXISTING  
MILK COW DAIRIES, ORDER R5-2013-0122 (REISSUED GENERAL ORDER)

Page 1



This form consists of three parts and is for use by current and new owners and/or operators when there is a transfer of ownership and/or operator at an existing milk cow dairy covered under Reissued Waste Discharge Requirements General Order for Existing Milk Cow Dairies, Order R5-2013-0122 (Reissued General Order). New owners and/or operators are required to complete and submit Parts I and III and are not authorized to discharge under the Reissued General Order (and are subject to enforcement) until receiving written approval of the coverage transfer from the Executive Officer.

Current owners and/or operators should complete and submit Parts I, II, III.A, and III.B no less than 60 days before any planned change in ownership or control of the dairy in order to provide the required notification of a change in ownership and/or operator and notification of informing the new owner and/or operator of the existence of the General Order.\*

The current and new owners/operators are encouraged, but not required, to complete the form jointly and submit it 60 days prior to any planned change in ownership or control of the dairy.

**PART I: DAIRY FACILITY INFORMATION****A. Current Facility Information:**

Current Facility Name (required):	Poplar Lane
Current Facility Address (required):	5387 Kent Avenue
City: Hanford	

**B. New Facility Information:**

New Facility Name (if different than current name):	
New Facility Address (if different than current name):	
County: Kings	Zip Code: 93230

**PART II: CURRENT OWNER/OPERATOR INFORMATION****A. Current Owner/Operator Name:**

Current Owner Name:	Bernard te Velde, Sr.
Current Operator Name:	Case Anker

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\* Current owners/operators are not required to use this form, but written notification containing information required by the General Order must be provided no less than 60 days prior to the change in ownership or control.

CALIFORNIA ENVIRONMENTAL  
PROTECTION AGENCYFORM FOR TRANSFER OF OWNER/OPERATOR COVERAGE  
UNDERREISSUED WASTE DISCHARGE REQUIREMENTS GENERAL ORDER FOR EXISTING  
MILK COW DAIRIES, ORDER R5-2013-0122 (REISSUED GENERAL ORDER)

Page 2

**B. Current Owner/Operator Certification:**

I certify under penalty of law that I have informed the new owner and/or operator of the existence of the Reissued General Order and that I have personally examined and am familiar with the information submitted in Parts I, II, III.A, and III.B 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.

DocuSigned by:

*Judith Vannette*

SIGNATURE OF CURRENT OWNER

DocuSigned by:

*C. Anker*

SIGNATURE OF CURRENT OPERATOR

Bernard te Velde, Sr.

Case Anker

PRINT OR TYPE NAME

PRINT OR TYPE NAME

6/23/2023

6/23/2023

DATE

DATE

**PART III: NEW OWNER/OPERATOR INFORMATION****A. New Owner Information** – Check here if not applicable \_\_\_\_\_ :

Name: <b>Case Anker</b>	Owner Type (Check one): <input checked="" type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Governmental Agency Other: _____
Mailing Address: 5387 Kent Avenue	
City: Hanford, CA 93230	
Contact Person: Case Anker	Telephone Number: (559) 901-8636

**B. New Operator Information** – Check here if not applicable \_\_\_\_\_ :

Name: <b>same as owner</b>	Operator Type (Check one): <input type="checkbox"/> Individual <input type="checkbox"/> Corporation <input type="checkbox"/> Partnership <input type="checkbox"/> Governmental Agency Other: _____
Mailing Address:	
City:	
Contact Person:	Telephone Number:

**C. Person To Receive Central Valley Water Board Correspondence:**

Send correspondence to:

- Owner
- Operator
- Both

CALIFORNIA ENVIRONMENTAL  
PROTECTION AGENCYFORM FOR TRANSFER OF OWNER/OPERATOR COVERAGE  
UNDERREISSUED WASTE DISCHARGE REQUIREMENTS GENERAL ORDER FOR EXISTING  
MILK COW DAIRIES, ORDER R5-2013-0122 (REISSUED GENERAL ORDER)

Page 3

**D. Billing:**

Send bills to (Check One):

- Owner  
 Operator  
 Other (identify below):

Case Anker	5387 Kent Avenue	Hanford	CA 93230
Name (Print)	Address	City	State Zip

**E. Agreement To Assume Responsibility Under Reissued Waste Discharge Requirements  
General Order For Existing Milk Cow Dairies Order R5-2013-0122:**

I assume full responsibility for compliance with Reissued Waste Discharge Requirements General Order For Existing Milk Cow Dairies Order R5-2013-0122, including development of the required Waste Management Plan and Nutrient Management Plan and/or implementation of any such plans prepared by the preceding owner or operator.

DocuSigned by:

SIGNATURE OF NEW OWNER

Case Anker

PRINT OR TYPE NAME

6/23/2023

DATE

SIGNATURE OF NEW OPERATOR

same as owner

PRINT OR TYPE NAME

DATE

**F. New Owner/Operator Certification:**

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

DocuSigned by:

SIGNATURE OF NEW OWNER

Case Anker

PRINT OR TYPE NAME

6/23/2023

DATE

SIGNATURE OF NEW OPERATOR

same as owner

PRINT OR TYPE NAME

DATE