INNOVATIVE
AG SERVICES

Four J Jerseys #2

2023 Annual Report

X	Report Form	N/A	Attachment H
X	Attachment A	N/A	Attachment I
X	Attachment B	N/A	Attachment J
X	Attachment C	N/A	Manure Tracking Manifests
X	Attachment D	N/A	New or Revised Waste Water Agreements
X	Attachment E	X	Groundwater Monitoring Samples
X	Attachment F	N/A	Monitoring Well Report
X	Attachment G	N/A	Owner/Operator Change Form

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

Four J Jerseys #2 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	Four J Jerseys #2
Facility Address	7480 Avenue 160, Tipton CA 93272

Owner/Operator as of 12/31/2023

Operator Name	Ryan Junio
Operator Phone	(559) 757-2619
Owner Name	John Toste
Owner Phone	(559) 936-5724

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:

X No discharges occurred during the reporting period.

__ Yes. ____ Number of discharges occurred (see Attachment H).

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Four J Jerseys #2 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:

_X_ 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:

_X_ 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.

_X_ 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?

_X_ 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.

_X_ 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).

_X_ 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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Four J Jerseys #2 2023

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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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Four J Jerseys #2 2023

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."

DocuSigned by: R Junio B06B57E58D384B5...	See next page
Signature of Operator of Facility	Signature of Owner of Facility
Ryan Junio	John Toste
Print Name	Print Name
6/28/2024	
Title and Date	Title and Date

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Four J Jerseys #2 2023

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."

Signature of Operator of Facility	Signature of Owner of Facility
Ryan Junio	John Toste
Print Name	Print Name
	Owner 7/1/24
Title and Date	Title and Date

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Four J Jerseys #2 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 Net (LB) Available for Land Application	PHOSPHORUS Net (LB) Available for Land Application	POTASSIUM Net (LB) Available for Land Application	SALTS Net (LB) Available for Land Application
Jer Milk Cows	1,080	1,053	Milk Flushed Lane	1,000	24,485.93	272,884.95	46,121.40	61,495.20	495,805.05
Jer Dry Cows	103	100	Flushed	1,100	1,318.69	13,140.00	1,825.00	8,760.00	18,250.00
Jer Heifers (15-24)	741	722	Flushed	700	6,825.08	100,141.40	15,811.80	47,435.40	187,106.30
Jer Heifers (7-14)	225	219	Flushed	600	1,998.27	20,783.10	3,197.40	11,990.25	26,378.55
Jer Calves (4-6)	250	243	Flushed	300	842.60	12,417.30	3,547.80	7,095.60	6,208.65
	2,399	**2,337**			**35,470.57**	**419,366.75**	**70,503.40**	**136,776.45**	**733,748.55**

* 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)**
23,215,026	205.25	16.82	147.52	978.50	39,691.48	3,252.19	28,528.56	189,223.47

* 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).

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-1

Wheat, 73 Acres Planted on 12/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/18/2022	Corral Solids: Manure	6.00	Tons	50.20	2.18	0.64	2.28	%	438		9,510	2,779	9,946	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,022				
01/13/2023	Surface Water: Lower Tule	4.48	Acre Inches		0.00			mg/L			0	0	0	2,959	
01/13/2023	Waste Water: Main Lagoon	0.39	Acre Inches		357.00	56.00	313.00	mg/L		773,083	2,299	361	2,016	15,134	
03/13/2023	Surface Water: Lower Tule	4.85	Acre Inches		0.00			mg/L			0	0	0	3,203	
03/13/2023	Waste Water: Main Lagoon	0.42	Acre Inches		357.00	56.00	313.00	mg/L		832,551	2,476	388	2,171	16,297	
05/09/2023	Surface Water: Lower Tule	4.79	Acre Inches		0.00			mg/L			0	0	0	3,164	
05/09/2023	Waste Water: Main Lagoon	0.41	Acre Inches		197.00	9.19	117.00	mg/L		812,728	1,334	62	792	1,842	
05/24/2023	Harvest	18.69	Tons	51.70	1.07	0.27	1.22	%							14,102
	Acre Inches Applied:	**15.34**						**Totals:**	**438**	**2,418,362**	**16,641**	**3,590**	**14,925**	**42,598**	**14,102**
Season Nitrogen Ratio:	1.18							**Lbs Per Acre:**			**228**	**49**	**204**	**584**	**193**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-1

Corn, 73 Acres Planted on 07/05/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/15/2023	Corral Solids: Manure	6.00	Tons	33.40	0.88	0.27	0.39	%	438		5,152	1,564	2,299	0	
07/17/2023	Surface Water: Lower Tule	5.45	Acre Inches		0.00			mg/L			0	0	0	3,600	
07/17/2023	Waste Water: Main Lagoon	0.71	Acre Inches		149.00	2.08	46.10	mg/L		1,407,407	1,747	24	540	2,486	
08/01/2023	Surface Water: Lower Tule	6.41	Acre Inches		0.00			mg/L			0	0	0	4,234	
08/16/2023	Surface Water: Lower Tule	5.52	Acre Inches		0.00			mg/L			0	0	0	3,646	
08/16/2023	Waste Water: Main Lagoon	0.72	Acre Inches		149.00	2.08	46.10	mg/L		1,427,230	1,772	25	548	2,521	
08/30/2023	Surface Water: Lower Tule	6.49	Acre Inches		0.00			mg/L			0	0	0	4,287	
09/13/2023	Surface Water: Lower Tule	5.45	Acre Inches		0.00			mg/L			0	0	0	3,600	
09/13/2023	Waste Water: Main Lagoon	0.71	Acre Inches		118.00	0.00	114.00	mg/L		1,407,407	1,383	0	1,337	12,662	
09/23/2023	Surface Water: Lower Tule	6.00	Acre Inches		0.00			mg/L			0	0	0	3,963	
10/04/2023	Harvest	29.00	Tons	68.10	0.65	0.23	1.28	%							8,820
	Acre Inches Applied:	**37.46**						**Totals:**	**438**	**4,242,045**	**10,054**	**1,613**	**4,724**	**40,997**	**8,820**
Season Nitrogen Ratio:	1.14							**Lbs Per Acre:**			**138**	**22**	**65**	**562**	**121**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-2

Wheat, 73 Acres Planted on 12/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/18/2022	Corral Solids: Manure	6.50	Tons	50.20	2.18	0.64	2.28	%	474		10,302	3,011	10,776	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,022				
01/11/2023	Surface Water: Lower Tule	4.48	Acre Inches		0.00			mg/L			0	0	0	2,959	
01/11/2023	Waste Water: Main Lagoon	0.39	Acre Inches		219.00	48.50	257.00	mg/L		773,083	1,410	312	1,655	23,891	
03/10/2023	Surface Water: Lower Tule	4.86	Acre Inches		0.00			mg/L			0	0	0	3,210	
03/10/2023	Waste Water: Main Lagoon	0.42	Acre Inches		357.00	56.00	313.00	mg/L		832,551	2,476	388	2,171	16,297	
05/07/2023	Surface Water: Lower Tule	4.79	Acre Inches		0.00			mg/L			0	0	0	3,164	
05/07/2023	Waste Water: Main Lagoon	0.41	Acre Inches		197.00	9.19	117.00	mg/L		812,728	1,334	62	792	1,842	
05/24/2023	Harvest	20.90	Tons	46.40	0.99	0.28	1.12	%							16,257
	Acre Inches Applied:	**15.35**						**Totals:**	**474**	**2,418,362**	**16,545**	**3,773**	**15,394**	**51,363**	**16,257**
Season Nitrogen Ratio:	1.02							**Lbs Per Acre:**			**227**	**52**	**211**	**704**	**223**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-2

Corn, 73 Acres Planted on 07/05/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/12/2023	Corral Solids: Manure	10.00	Tons	33.40	0.88	0.27	0.39	%	730		8,586	2,606	3,831	0	
07/15/2023	Surface Water: Lower Tule	5.45	Acre Inches		0.00			mg/L			0	0	0	3,600	
07/15/2023	Waste Water: Main Lagoon	0.70	Acre Inches		149.00	2.08	46.10	mg/L		1,387,585	1,722	24	533	2,451	
07/30/2023	Surface Water: Lower Tule	6.41	Acre Inches		0.00			mg/L			0	0	0	4,234	
08/14/2023	Surface Water: Lower Tule	5.53	Acre Inches		0.00			mg/L			0	0	0	3,652	
08/14/2023	Waste Water: Main Lagoon	0.70	Acre Inches		149.00	2.08	46.10	mg/L		1,387,585	1,722	24	533	2,451	
08/28/2023	Surface Water: Lower Tule	6.49	Acre Inches		0.00			mg/L			0	0	0	4,287	
09/11/2023	Surface Water: Lower Tule	5.45	Acre Inches		0.00			mg/L			0	0	0	3,600	
09/11/2023	Waste Water: Main Lagoon	0.71	Acre Inches		118.00	0.00	114.00	mg/L		1,407,407	1,383	0	1,337	12,662	
09/21/2023	Surface Water: Lower Tule	6.00	Acre Inches		0.00			mg/L			0	0	0	3,963	
10/04/2023	Harvest	28.90	Tons	67.40	1.22	0.28	1.09	%							16,781
	Acre Inches Applied:	**37.44**						**Totals:**	**730**	**4,182,577**	**13,414**	**2,654**	**6,233**	**40,898**	**16,781**
Season Nitrogen Ratio:	0.80							**Lbs Per Acre:**			**184**	**36**	**85**	**560**	**230**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-3

Wheat, 66 Acres Planted on 12/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/20/2022	Corral Solids: Manure	6.00	Tons	50.20	2.18	0.64	2.28	%	396		8,598	2,513	8,992	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			924				
01/15/2023	Surface Water: Lower Tule	4.49	Acre Inches		0.00			mg/L			0	0	0	2,681	
01/15/2023	Waste Water: Main Lagoon	0.39	Acre Inches		357.00	56.00	313.00	mg/L		698,952	2,078	326	1,822	13,682	
03/14/2023	Surface Water: Lower Tule	4.83	Acre Inches		0.00			mg/L			0	0	0	2,884	
03/14/2023	Waste Water: Main Lagoon	0.42	Acre Inches		357.00	56.00	313.00	mg/L		752,717	2,239	351	1,963	14,734	
05/11/2023	Surface Water: Lower Tule	4.77	Acre Inches		0.00			mg/L			0	0	0	2,849	
05/11/2023	Waste Water: Main Lagoon	0.41	Acre Inches		197.00	9.19	117.00	mg/L		734,795	1,206	56	716	1,665	
05/24/2023	Harvest	19.00	Tons	34.40	1.01	0.27	1.18	%							16,617
	Acre Inches Applied:	**15.31**						**Totals:**	**396**	**2,186,464**	**15,045**	**3,246**	**13,494**	**38,496**	**16,617**
Season Nitrogen Ratio:	0.91							**Lbs Per Acre:**			**228**	**49**	**204**	**583**	**252**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-3

Corn, 66 Acres Planted on 07/05/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/12/2023	Corral Solids: Manure	9.00	Tons	33.40	0.88	0.27	0.39	%	594		6,986	2,121	3,117	0	
07/19/2023	Surface Water: Lower Tule	5.44	Acre Inches		0.00			mg/L			0	0	0	3,249	
07/19/2023	Waste Water: Main Lagoon	0.71	Acre Inches		149.00	2.08	46.10	mg/L		1,272,450	1,579	22	488	2,247	
08/03/2023	Surface Water: Lower Tule	6.37	Acre Inches		0.00			mg/L			0	0	0	3,804	
08/18/2023	Surface Water: Lower Tule	5.50	Acre Inches		0.00			mg/L			0	0	0	3,284	
08/18/2023	Waste Water: Main Lagoon	0.72	Acre Inches		149.00	2.08	46.10	mg/L		1,290,372	1,602	22	496	2,279	
09/01/2023	Surface Water: Lower Tule	6.44	Acre Inches		0.00			mg/L			0	0	0	3,846	
09/15/2023	Surface Water: Lower Tule	5.44	Acre Inches		0.00			mg/L			0	0	0	3,249	
09/15/2023	Waste Water: Main Lagoon	0.71	Acre Inches		118.00	0.00	114.00	mg/L		1,272,450	1,251	0	1,208	11,448	
09/25/2023	Surface Water: Lower Tule	6.00	Acre Inches		0.00			mg/L			0	0	0	3,583	
10/24/2023	Harvest	29.10	Tons	67.20	1.11	0.23	1.03	%							13,985
	Acre Inches Applied:	**37.33**						**Totals:**	**594**	**3,835,273**	**11,418**	**2,165**	**5,310**	**36,988**	**13,985**
Season Nitrogen Ratio:	0.82							**Lbs Per Acre:**			**173**	**33**	**80**	**560**	**212**

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Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-4

Wheat, 40 Acres Planted on 12/20/2022

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
10/18/2022	Corral Solids: Manure	6.00	Tons	50.20	2.18	0.64	2.28	%	240		5,211	1,523	5,450	0	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			560				
01/17/2023	Surface Water: Lower Tule	4.25	Acre Inches		0.00			mg/L			0	0	0	1,538	
01/17/2023	Waste Water: Main Lagoon	0.37	Acre Inches		357.00	56.00	313.00	mg/L		401,884	1,195	188	1,048	7,867	
03/16/2023	Surface Water: Lower Tule	5.31	Acre Inches		0.00			mg/L			0	0	0	1,922	
03/16/2023	Waste Water: Main Lagoon	0.46	Acre Inches		357.00	56.00	313.00	mg/L		499,639	1,486	233	1,303	9,781	
05/13/2023	Surface Water: Lower Tule	5.13	Acre Inches		0.00			mg/L			0	0	0	1,857	
05/13/2023	Waste Water: Main Lagoon	0.44	Acre Inches		197.00	9.19	117.00	mg/L		477,916	784	36	466	1,083	
05/24/2023	Harvest	19.20	Tons	51.50	1.08	0.29	1.18	%							8,046
	Acre Inches Applied:	**15.96**						**Totals:**	**240**	**1,379,438**	**9,237**	**1,980**	**8,266**	**24,047**	**8,046**
Season Nitrogen Ratio:	1.15							**Lbs Per Acre:**			**231**	**50**	**207**	**601**	**201**

INNOVATIVE AG SERVICES

Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Field Name: P-4

Corn, 40 Acres Planted on 07/05/2023

Date	Event/Source	Amount Applied/Yield (per Acre)	Units	Lab Sample Data % Moist.	Nitrogen	Phos.	Potass.	Units	Manure Applied (Tons)	Wastewater Applied (Gallons)	Nitrogen Applied (Lbs)	Phosphorus Applied (Lbs)	Potassium Applied (Lbs)	Salt Applied (Lbs)	Nitrogen Extracted (Lbs)
06/18/2023	Corral Solids: Manure	10.00	Tons	33.40	0.88	0.27	0.39	%	400		4,705	1,428	2,099	0	
07/21/2023	Surface Water: Lower Tule	5.72	Acre Inches		0.00			mg/L			0	0	0	2,070	
07/21/2023	Waste Water: Main Lagoon	0.75	Acre Inches		149.00	2.08	46.10	mg/L		814,629	1,011	14	313	1,439	
08/05/2023	Surface Water: Lower Tule	7.15	Acre Inches		0.00			mg/L			0	0	0	2,588	
08/20/2023	Surface Water: Lower Tule	5.92	Acre Inches		0.00			mg/L			0	0	0	2,142	
08/20/2023	Waste Water: Main Lagoon	0.80	Acre Inches		149.00	2.08	46.10	mg/L		868,938	1,078	15	334	1,534	
09/03/2023	Surface Water: Lower Tule	7.38	Acre Inches		0.00			mg/L			0	0	0	2,671	
09/17/2023	Surface Water: Lower Tule	5.72	Acre Inches		0.00			mg/L			0	0	0	2,070	
09/17/2023	Waste Water: Main Lagoon	0.80	Acre Inches		118.00	0.00	114.00	mg/L		868,938	854	0	825	7,817	
09/27/2023	Surface Water: Lower Tule	6.00	Acre Inches		0.00			mg/L			0	0	0	2,172	
10/04/2023	Harvest	32.50	Tons	66.90	1.10	0.25	1.00	%							9,467
	Acre Inches Applied:	**40.24**						**Totals:**	**400**	**2,552,504**	**7,648**	**1,457**	**3,571**	**24,503**	**9,467**
Season Nitrogen Ratio:	0.81							**Lbs Per Acre:**			**191**	**36**	**89**	**613**	**237**

INNOVATIVE AG SERVICES

Four J Jerseys #2 2023

Nutrient Applications (Attachment B)

Summary of Nutrient Applications, Removal, and Balance

	Total N (Lbs)	Total P (Lbs)	Total K (Lbs)	Total Salts (Lbs)	Total Manure Applied	
Solid Manure	59,051.38	17,543.39	46,510.47	0.00	3,710.50	tons
Process Wastewater	37,422.29	2,934.85	25,405.79	186,111.73	23,215,025.70	gallons
Irrigation Water	0.00					
Fertilizer / Total Imports	0.00					
Atmospheric Deposition	3,528.00					
Total Nitrogen Applied	**100,001.67**					
Crop Nitrogen Removal	104,074.30					
Nitrogen Balance	**(4,072.63)**					
Nitrogen Ratio	**0.96**					

- **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.**

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Four J Jerseys #2 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

INNOVATIVE AG SERVICES

Four J Jerseys #2 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 (N03-N or TKN, P, K, TDS) x 10-6 using the samples closest in date to the export event.

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Four J Jerseys #2 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
P-1	x228 x020 x013 xxxx	73	Both
P-2	x228 x020 x013 xxxx	74	Both
P-3	x228 x020 x012 xxxx	66	Both
P-4	x228 x020 x012 xxxx	40	Both
		253	

Production Area APN(s): x228 x020 x012 xxxx

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Four J Jerseys #2 2023

Lab Results Summary (Attachment E)

Process Wastewater

(mgl/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	CL
03/08/2023	357.00	56.00	313.00	3,540	123.00		2,350.00								
04/19/2023	197.00	9.19	117.00	410	24.20	0.37	272.00	7.32							
07/18/2023	149.00	2.08	46.10	320	0.55		212.00								
11/02/2023	118.00	0.00	114.00	1,620	68.20		1,080.00								
Averages:	205.25	16.82	147.52	1,472	53.99	0.37	978.50	7.32							

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	TN	TP	TK	Moisture	Ash	CA	MG	NA	S	CL
06/14/2023	0.88	0.27	0.39	33.40						%
11/02/2023	1.33	0.53	2.99	36.50						%
Averages:	1.11	0.40	1.69	34.95						

Plant Tissue

(Dry Weight Basis)

Field:	Crop #:	Crop	Sample Date:	TN (lbs/ton)	TP (lbs/ton)	TK (lbs/ton)	Moisture (%)	Ash (%)
P-1	1	Wheat	05/24/2023	21.40	5.34	24.40	51.70	9.74
P-1	2	Corn	10/04/2023	13.06	4.52	25.60	68.10	5.29

INNOVATIVE AG SERVICES

Four J Jerseys #2 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 (%)
P-2	1	Wheat	05/24/2023	19.88	5.66	22.40	46.40	11.40
P-2	2	Corn	10/04/2023	24.40	5.60	21.80	67.40	5.28
P-3	1	Wheat	05/24/2023	20.20	5.34	23.60	34.40	14.20
P-3	2	Corn	10/24/2023	22.20	4.52	20.60	67.20	5.92
P-4	1	Wheat	05/24/2023	21.60	5.84	23.60	51.50	11.20
P-4	2	Corn	10/04/2023	22.00	5.06	20.00	66.90	4.95

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

								General Minerals						
	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL
Domestic														
Barn Well	01/19/2023	20.90		1,090										
Toste #2	12/20/2023	23.90		922										
	Averages:	22.40		1,006										

INNOVATIVE AG SERVICES

Four J Jerseys #2 2023

Lab Results Summary (Attachment E)

Well / Irrigation Water

(mgl/ppm unless noted otherwise)

								General Minerals						
	Sample Date:	NO3N	TP	EC (umhos/cm)	NH4N *	TDS	TN	CA	MG	NA	HCO3	CO3	SO4	CL
Irrigation														
2							Out of service							
3							Did not run							
4							Did not run							
5							Did not run							
	Averages:													
Surface Water														
Lower Tule (General)	06/28/2023	0.00		52		40.00	0.00							
	Averages:	0.00		52		40.00	0.00							

* NH4N was non-detectable unless a value is shown

INNOVATIVE AG SERVICES

Four J Jerseys #2 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: P-1								
	1	Wheat	73	12/20/2022	05/24/2023	18.5	1364.4	18.7
	2	Corn	73	07/05/2023	10/04/2023	28.6	2117.0	29.0
Field: P-2								
	1	Wheat	73	12/20/2022	05/24/2023	20.8	1525.7	20.9
	2	Corn	73	07/05/2023	10/04/2023	28.4	2109.7	28.9
Field: P-3								
	1	Wheat	66	12/20/2022	05/24/2023	19.4	1254.0	19.0
	2	Corn	66	07/05/2023	10/24/2023	29.0	1920.6	29.1
Field: P-4								
	1	Wheat	40	12/20/2022	05/24/2023	19.7	768.0	19.2
	2	Corn	40	07/05/2023	10/04/2023	30.2	1300.0	32.5

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Four J Jerseys #2 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

*Note: SWP = Standing Water Present

INNOVATIVE AG SERVICES

ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

January 26, 2023

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

Lab No. : **VI 2340371**
Customer No. : **4018573**
Reference : **40123**

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Barn Well	01/19/2023	01/19/2023	VI 2340371-001	DW

Sampling and Receipt Information:

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

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

Test Summary	
	Preparation and analysis performed by FGL-Santa Paula (FGL-SP ELAP# 1573)
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: 2023-01-28

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January 26, 2023

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

Description : Barn Well
Project : 0129 Four J Jerseys #2

Lab No. : VI 2340371-001
Customer No. : 4018573
Reference : 40123
Sampled On : January 19, 2023 at 14:00
Sampled By : Sean
Received On : January 19, 2023 at 16:00
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	20.9	0.4	mg/L	10	1		01/20/2023	14:30	lfs	SM 4500-NO3 F	01/20/2023	16:06	lfs
Conductivity	1090	1	umhos/cm	1600[2]	1		01/25/2023	13:13	sta		01/25/2023	13:13	sta

DQF Flags Definition:

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

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January 26, 2023
Innovative Ag Services, LLC

Lab No. : VI 2340371
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2510B	01/25/2023:200820STA	Blank	umhos/cm		ND	<1	
		(STK2330818-001)	Dup	umhos/cm		0.4%	5	
Nitrate Nitrogen	4500NO3F	01/20/2023:200670LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	91.9%	80-120	
			MS	mg/L	5.609	87.9%	66-125	
		(CC 2380254-001)	MSD	mg/L	5.609	88.4%	66-125	
			MSRPD	mg/L	5.609	0.5%	≤30.4	

Definition

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

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Page 3 of 3

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Laboratory Analysis Work Order

N° 40123

ID: # 0129

SITE NAME: Four J Jerseys #2

Billing: IAS

LABORATORY: FGL

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)
W2 EC, NO_3N, TDS, TN (Irr)
W3 NH_4-N (Ammonium)
W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)
W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)
W6 NO_3N, NO_2 (Dom ILRP, Annually)
W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)
W8 Other: _____

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)
L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)
L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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: _____

16.1 RM

2340371

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S
S2 S1 + CEC, CaCO3, OM, C:N, TN
S3 NO_3N, NH_4N
S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	BARN WELL	Dom	W1	1/19/23 2:00	SEAN	Ø		
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 sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st	[signature]	IAS		1/19/23 4:00
2nd	[signature]	FGL	1-19-23 1600	
3rd	[signature]			1-19-23 1730
4th	[signature]		1-19-23 1735	

LABORATORY USE ONLY

Logged In By: _____ **Total Samples:** _____ **Laboratory #:** [signature] 1/20/23 1110

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ENVIRONMENTAL FGL AGRICULTURAL
Analytical Chemists

January 2, 2024

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

Lab No. : **VI 2348757**
Customer No. : **4018573**
Reference : **42230**

Laboratory Report

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

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

Case Narrative

This Case Narrative pertains to the following samples:

Sample Description	Date Sampled	Date Received	FGL Lab No.	Matrix
Toste #2	12/20/2023	12/20/2023	VI 2348757-001	DW

Sampling and Receipt Information:

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

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

Test Summary	
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: 2024-01-03

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853 Corporation Street
Santa Paula, CA 93060
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Stockton, CA 95215
TEL: (209)942-0182
FAX: (209)942-0423
CA ELAP Certification No. 1563

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Chico, CA 95926
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FAX: (530)343-3807
CA ELAP Certification No. 2670

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FAX: (805)783-2912
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9415 W. Goshen Avenue
Visalia, CA 93291
TEL: (559)734-9473
FAX: (559)734-8435
CA ELAP Certification No. 2810

January 2, 2024

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

Description : Toste #2
Project : 0129 Four J Jerseys #2

Lab No. : VI 2348757-001
Customer No. : 4018573
Reference : 42230
Sampled On : December 20, 2023 at 14:10
Sampled By : Frank
Received On : December 20, 2023 at 16:04
Matrix : Drinking Water

Sample Results - Inorganic

Constituent	Result	RL	Units	MCL/AL	Dil.	DQF	Sample Preparation			Sample Analysis			
Dairy Analysis							Date	Time	Who	Method	Date	Time	Who
Nitrate Nitrogen	23.9	0.4	mg/L	10	1		12/21/2023	13:00	lfs	SM 4500-NO3 F	12/21/2023	15:44	lfs
Conductivity	922	1	umhos/cm	1600[2]	1		12/28/2023	09:35	krh	SM 4500-H+B	12/28/2023	10:58	krh

DQF Flags Definition:

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

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January 2, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348757
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2348743-001)	Dup	umhos/cm		0.6%	5	
Nitrate Nitrogen	4500NO3F	12/21/2023:214418LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	101%	80-120	
			MS	mg/L	5.609	98.0%	66-125	
		(CH 2390646-001)	MSD	mg/L	5.609	98.0%	66-125	
			MSRPD	mg/L		0.0%	≤30.4	

Definition

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

DQO : Data Quality Objective - This is the criteria against which the quality control data is compared.

Dup : Duplicate Sample - A random sample with each batch is prepared and analyzed in duplicate. The relative percent difference is an indication of precision for the preparation and analysis.

LCS : Laboratory Control Standard/Sample - Prepared to verify that the preparation process is not affecting analyte recovery.

MS : Matrix Spikes - A random sample is spiked with a known amount of analyte. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSD : Matrix Spike Duplicate of MS/MSD pair - A random sample duplicate is spiked with a known amount of analyted. The recoveries are an indication of how that sample matrix affects analyte recovery.

MSRPD : MS/MSD Relative Percent Difference (RPD) - The MS relative percent difference is an indication of precision for the preparation and analysis.

ND : Non-detect - Result was below the DQO listed for the analyte.

Page 3 of 3

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Laboratory Analysis Work Order

Nº 42230

2348757

ID: # 0129

LABORATORY: FGL

SITE NAME: Four J Jerseys #2

Billing: IAS

Authorized Copy Release to:

Innnovative Ag Services LLC

(559) 587-2800

ANALYSIS TO BE COMPLETED:

Irrigation/Ground Water (ELAP Standards)

W1 EC, NO_3N (Dom)

W2 EC, NO_3N, TDS, TN (Irr)

W3 NH_4-N (Ammonium)

W4 EC, NO_3N, Ca, Mg, Na, K, HCO_3, CO_3, SO_4S, Cl, TDS (Dom, GM)

W5 EC, NO_3N, TDS, TN, Ca, Mg, Na, HCO_3, CO_3, SO_4S, Cl (Irr, GM)

W6 NO_3N, NO_2 (Dom ILRP, Annually)

W7 Ca, Mg, Na, K, HCO_3, CO_3, SO_4, Cl + Lab Filtering (GWM)

W8 Other: _____

Rd 17.5°C Int# 1#407

Process Waste Water (lagoon)

L1 EC, NH_4N, TKN, TP, TK, TDS (Quarterly)

L2 EC, NO_3N, NH_4N, TKN, TP, TK, TDS, pH (Annually)

L3 L1 + Ca, Mg, Na, HCO_3,CO_3, SO_4S, 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: _____

Plant Tissue

P1 TN, NO_3N, PO_4P, 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: _____

Soil

S1 SP%, pH, EC, Ca, Mg, Na, K, ESP, LP, B, NO_3N, PO_4P, K-AA, Zn, Mn, Fe, Cu, SO_4S

S2 S1 + CEC, CaCO3, OM, C:N, TN

S3 NO_3N, NH_4N

S4 Other: _____

	Sample ID	Description	Analysis	Date/Time	Sampled by	IAS USE ONLY: FIELD TESTS NH_3N *	pH	Temp
1	Toste #2	Dom	W1	12/20 2:10	Frank	—		
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 sampes, please note below.

NOTES:

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		12/20/23 3:30
2nd	AJB	FGL	12/20/23 1532	
3rd	AJB	FGL		12/20/23 1604
4th			12/20/23 1604	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: 12/20/23 1746 Laboratory #: _____ 12/20/23 PLO

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