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INNOVATIVE
AG SERVICES

DDW Farms LLC

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)

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Annual Report

DDW Farms LLC 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

Facility Information:

Name of Dairy	DDW Farms LLC
Facility Address	24643 Road 36, Tulare CA 93274

Owner/Operator as of 12/31/2023

Operator Name	Peter de Jong
Operator Phone	(559) 582-7689
Owner Name	Outback Ranch
Owner Phone	(559) 686-7391

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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DDW Farms LLC 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.

__ Not applicable; no written agreements.

X 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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DDW Farms LLC 2023

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

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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DDW Farms LLC 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:
E5D936B263844AA...
Signature of Operator of Facility

Peter de Jong
Print Name

6/25/2024
Title and Date

DocuSigned by:
F7277BB019B74D7...
Signature of Owner of Facility

Outback Ranch
Print Name

6/27/2024
Title and Date

INNOVATIVE AG SERVICES

DDW Farms LLC 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
Hol Milk Cows	1,645	1,603	Milk Freestall -	1,400	40,682.36	579,244.05	99,466.15	134,571.85	1,056,681.57
Hol Milk Cows	265	258	Milk Dry Scrape -	1,400	6,547.75	93,228.30	16,008.90	21,659.10	170,071.02
Hol Dry Cows	200	195	Dry Scrape	1,450	2,845.46	35,587.50	4,982.25	23,487.75	50,221.08
Hol Heifers(15-24)	1,000	975	Dry Scrape	1,000	10,177.56	135,232.50	21,352.50	64,057.50	251,105.40
	3,110	**3,031**			**60,253.14**	**843,292.35**	**141,809.80**	**243,776.20**	**1,528,079.07**

* 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)**
27,458,971	637.25	111.12	738.25	5,902.50	145,760.25	25,417.98	168,862.31	1,350,097.8

* 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).

INNOVATIVE AG SERVICES

DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L1

Corn, 17 Acres Planted on 05/02/2023

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			238				
05/14/2023	Surface Water: Tulare	6.02	Acre Inches		0.00			mg/L			0	0	0	694	
05/14/2023	Waste Water: Main Lagoon	0.97	Acre Inches		580.00	107.00	690.00	mg/L		447,774	2,163	399	2,574	22,305	
05/29/2023	Surface Water: Tulare	8.09	Acre Inches		0.00			mg/L			0	0	0	933	
06/13/2023	Surface Water: Tulare	6.33	Acre Inches		0.00			mg/L			0	0	0	730	
06/13/2023	Waste Water: Main Lagoon	1.02	Acre Inches		580.00	107.00	690.00	mg/L		470,856	2,275	420	2,706	23,455	
06/27/2023	Surface Water: Tulare	8.46	Acre Inches		0.00			mg/L			0	0	0	976	
07/11/2023	Surface Water: Tulare	6.02	Acre Inches		0.00			mg/L			0	0	0	694	
07/11/2023	Waste Water: Main Lagoon	0.97	Acre Inches		586.00	92.30	588.00	mg/L		447,774	2,186	344	2,193	22,268	
07/21/2023	Surface Water: Tulare	6.62	Acre Inches		0.00			mg/L			0	0	0	764	
08/01/2023	Harvest	31.50	Tons	62.50	1.35	0.28	1.70	%							5,422
	Acre Inches Applied:	**44.50**						**Totals:**		**1,366,404**	**6,862**	**1,163**	**7,473**	**72,820**	**5,422**
Season Nitrogen Ratio:	1.27							**Lbs Per Acre:**			**404**	**68**	**440**	**4,284**	**319**

INNOVATIVE AG SERVICES

DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L2

Corn, 10 Acres Planted on 05/02/2023

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			140				
05/11/2023	Surface Water: Tulare	6.20	Acre Inches		0.00			mg/L			0	0	0	421	
05/11/2023	Waste Water: Main Lagoon	1.00	Acre Inches		580.00	107.00	690.00	mg/L		271,543	1,312	242	1,561	13,526	
05/26/2023	Surface Water: Tulare	9.00	Acre Inches		0.00			mg/L			0	0	0	611	
06/10/2023	Surface Water: Tulare	6.72	Acre Inches		0.00			mg/L			0	0	0	456	
06/10/2023	Waste Water: Main Lagoon	1.08	Acre Inches		580.00	107.00	690.00	mg/L		293,266	1,417	261	1,686	14,609	
06/24/2023	Surface Water: Tulare	9.60	Acre Inches		0.00			mg/L			0	0	0	651	
07/08/2023	Surface Water: Tulare	6.20	Acre Inches		0.00			mg/L			0	0	0	421	
07/08/2023	Waste Water: Main Lagoon	1.00	Acre Inches		586.00	92.30	588.00	mg/L		271,543	1,326	209	1,330	13,504	
07/18/2023	Surface Water: Tulare	6.60	Acre Inches		0.00			mg/L			0	0	0	448	
08/01/2023	Harvest	32.40	Tons	61.90	1.50	0.32	1.55	%							3,703
	Acre Inches Applied:	**47.40**						**Totals:**		**836,352**	**4,194**	**712**	**4,576**	**44,646**	**3,703**
Season Nitrogen Ratio:	1.13							**Lbs Per Acre:**			**419**	**71**	**458**	**4,465**	**370**

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DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L3

Wheat, 76 Acres Planted on 12/06/2022

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)
12/30/2022	Surface Water: Tulare	4.91	Acre Inches		0.00			mg/L			0	0	0	2,532	
12/30/2022	Waste Water: Main Lagoon	0.93	Acre Inches		580.00	98.00	784.00	mg/L		1,919,266	9,273	1,567	12,534	127,900	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,064				
02/26/2023	Surface Water: Tulare	5.31	Acre Inches		0.00			mg/L			0	0	0	2,738	
02/26/2023	Waste Water: Main Lagoon	1.00	Acre Inches		666.00	153.00	887.00	mg/L		2,063,727	11,449	2,630	15,249	97,644	
04/25/2023	Surface Water: Tulare	5.25	Acre Inches		0.00			mg/L			0	0	0	2,708	
04/25/2023	Waste Water: Main Lagoon	0.99	Acre Inches		580.00	107.00	690.00	mg/L		2,043,090	9,871	1,821	11,743	101,773	
05/10/2023	Harvest	21.00	Tons	52.70	1.94	0.54	3.12	%							29,290
	Acre Inches Applied:	**18.39**						**Totals:**		**6,026,082**	**31,657**	**6,018**	**39,525**	**335,295**	**29,290**
Season Nitrogen Ratio:	1.08							**Lbs Per Acre:**			**417**	**79**	**520**	**4,412**	**385**

INNOVATIVE AG SERVICES

DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L3

Corn, 76 Acres Planted on 06/28/2023

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)
07/10/2023	Surface Water: Tulare	5.75	Acre Inches		0.00			mg/L			0	0	0	2,966	
07/23/2023	Surface Water: Tulare	6.93	Acre Inches		0.00			mg/L			0	0	0	3,574	
07/23/2023	Waste Water: Main Lagoon	0.72	Acre Inches		586.00	92.30	588.00	mg/L		1,485,883	7,253	1,142	7,278	73,893	
08/09/2023	Surface Water: Tulare	5.82	Acre Inches		0.00			mg/L			0	0	0	3,001	
08/09/2023	Waste Water: Main Lagoon	0.74	Acre Inches		586.00	92.30	588.00	mg/L		1,527,158	7,455	1,174	7,480	75,946	
08/23/2023	Surface Water: Tulare	7.01	Acre Inches		0.00			mg/L			0	0	0	3,615	
09/06/2023	Ground Water: Well Avg	5.75	Acre Inches		23.07			mg/L			2,280	0	0	42,505	
09/06/2023	Waste Water: Main Lagoon	0.72	Acre Inches		586.00	92.30	588.00	mg/L		1,485,883	7,253	1,142	7,278	73,893	
09/16/2023	Surface Water: Tulare	6.59	Acre Inches		0.00			mg/L			0	0	0	3,399	
09/27/2023	Harvest	31.70	Tons	71.80	1.42	0.27	1.51	%							19,295
	Acre Inches Applied:	**40.03**						**Totals:**		**4,498,924**	**24,242**	**3,459**	**22,035**	**282,792**	**19,295**
Season Nitrogen Ratio:	1.26							**Lbs Per Acre:**			**319**	**46**	**290**	**3,721**	**254**

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DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L4

Wheat, 72 Acres Planted on 12/07/2022

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)
12/31/2022	Surface Water: Tulare	4.91	Acre Inches		0.00			mg/L			0	0	0	2,399	
12/31/2022	Waste Water: Main Lagoon	0.73	Acre Inches		666.00	153.00	887.00	mg/L		1,427,230	7,918	1,819	10,545	67,529	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			1,008				
02/27/2023	Surface Water: Tulare	5.33	Acre Inches		0.00			mg/L			0	0	0	2,604	
02/27/2023	Waste Water: Main Lagoon	0.81	Acre Inches		666.00	153.00	887.00	mg/L		1,583,639	8,785	2,018	11,701	74,929	
04/26/2023	Surface Water: Tulare	5.26	Acre Inches		0.00			mg/L			0	0	0	2,570	
04/26/2023	Waste Water: Main Lagoon	0.79	Acre Inches		580.00	107.00	690.00	mg/L		1,544,537	7,462	1,377	8,878	76,938	
05/11/2023	Harvest	22.00	Tons	68.10	1.84	0.49	2.42	%							18,595
	Acre Inches Applied:	**17.83**						**Totals:**		**4,555,405**	**25,173**	**5,214**	**31,123**	**226,969**	**18,595**
Season Nitrogen Ratio:	1.35							**Lbs Per Acre:**			**350**	**72**	**432**	**3,152**	**258**

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DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L4

Corn, 72 Acres Planted on 07/11/2023

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)
07/23/2023	Surface Water: Tulare	5.76	Acre Inches		0.00			mg/L			0	0	0	2,814	
07/23/2023	Waste Water: Main Lagoon	0.73	Acre Inches		586.00	92.30	588.00	mg/L		1,427,230	6,967	1,097	6,990	70,976	
08/07/2023	Surface Water: Tulare	6.95	Acre Inches		0.00			mg/L			0	0	0	3,396	
08/22/2023	Surface Water: Tulare	5.83	Acre Inches		0.00			mg/L			0	0	0	2,848	
08/22/2023	Waste Water: Main Lagoon	0.74	Acre Inches		586.00	92.30	588.00	mg/L		1,446,781	7,062	1,112	7,086	71,949	
09/05/2023	Surface Water: Tulare	7.04	Acre Inches		0.00			mg/L			0	0	0	3,439	
09/19/2023	Surface Water: Tulare	5.76	Acre Inches		0.00			mg/L			0	0	0	2,814	
09/19/2023	Waste Water: Main Lagoon	0.73	Acre Inches		717.00	92.20	788.00	mg/L		1,427,230	8,524	1,096	9,369	71,095	
09/29/2023	Surface Water: Tulare	6.59	Acre Inches		0.00			mg/L			0	0	0	3,220	
10/10/2023	Harvest	31.80	Tons	73.30	1.39	0.29	1.60	%							16,995
	Acre Inches Applied:	**40.13**						**Totals:**		**4,301,241**	**22,553**	**3,306**	**23,445**	**232,552**	**16,995**
Season Nitrogen Ratio:	1.33							**Lbs Per Acre:**			**313**	**46**	**326**	**3,230**	**236**

INNOVATIVE AG SERVICES

DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: L5

Almonds, 67 Acres Planted on 04/10/2020

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)
11/12/2022	Surface Water: Tulare	3.35	Acre Inches		0.00			mg/L			0	0	0	1,523	
12/17/2022	Fertilize (10-34-0)	15.00	Pounds		10.00	34.00	0.00	%			100	342	0	0	
12/17/2022	Surface Water: Tulare	3.30	Acre Inches		0.00			mg/L			0	0	0	1,500	
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			938				
01/21/2023	Surface Water: Tulare	3.15	Acre Inches		0.00			mg/L			0	0	0	1,432	
02/18/2023	Surface Water: Tulare	3.35	Acre Inches		0.00			mg/L			0	0	0	1,523	
03/17/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			2,679	0	0	0	
03/17/2023	Surface Water: Tulare	3.30	Acre Inches		0.00			mg/L			0	0	0	1,500	
04/14/2023	Surface Water: Tulare	3.25	Acre Inches		0.00			mg/L			0	0	0	1,477	
05/09/2023	Fertilize - UN32	15.00	Gallons		32.00	0.00	0.00	%			2,679	0	0	0	
05/09/2023	Surface Water: Tulare	3.44	Acre Inches		0.00			mg/L			0	0	0	1,564	
06/03/2023	Surface Water: Tulare	3.49	Acre Inches		0.00			mg/L			0	0	0	1,587	
06/28/2023	Surface Water: Tulare	3.35	Acre Inches		0.00			mg/L			0	0	0	1,523	
07/23/2023	Surface Water: Tulare	3.01	Acre Inches		0.00			mg/L			0	0	0	1,369	
08/17/2023	Surface Water: Tulare	3.30	Acre Inches		0.00			mg/L			0	0	0	1,500	
09/13/2023	Harvest	1.30	Tons	28.00	2.43	0.33	1.59	%							3,048
	Acre Inches Applied:	**36.29**						**Totals:**			**6,396**	**342**	**0**	**16,498**	**3,048**
Season Nitrogen Ratio:	2.10							**Lbs Per Acre:**			**95**	**5**	**0**	**246**	**45**

Season Notes: Immature trees in growth stage. N application with FREP guidelines.

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DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: WH5

Wheat, 58 Acres Planted on 12/11/2022

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)
01/01/2023	Atmospheric Deposit	14.00	Pounds		100.00			%			812				
01/04/2023	Surface Water: Tulare	4.87	Acre Inches		0.00			mg/L			0	0	0	1,917	
01/04/2023	Waste Water: Main Lagoon	0.72	Acre Inches		666.00	153.00	887.00	mg/L		1,133,964	6,291	1,445	8,379	53,653	
03/03/2023	Surface Water: Tulare	5.40	Acre Inches		0.00			mg/L			0	0	0	2,125	
04/30/2023	Surface Water: Tulare	5.31	Acre Inches		0.00			mg/L			0	0	0	2,090	
04/30/2023	Waste Water: Main Lagoon	0.80	Acre Inches		580.00	107.00	690.00	mg/L		1,259,960	6,087	1,123	7,242	62,763	
05/15/2023	Harvest	21.20	Tons	70.30	1.31	0.40	2.09	%							9,568
	Acre Inches Applied:	**17.10**						**Totals:**		**2,393,923**	**13,190**	**2,568**	**15,621**	**122,548**	**9,568**
Season Nitrogen Ratio:	1.38							**Lbs Per Acre:**			**227**	**44**	**269**	**2,113**	**165**

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DDW Farms LLC 2023

Nutrient Applications (Attachment B)

Field Name: WH5

Corn, 58 Acres Planted on 06/28/2023

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)
07/10/2023	Surface Water: Tulare	5.79	Acre Inches		0.00			mg/L			0	0	0	2,279	
07/10/2023	Waste Water: Main Lagoon	0.73	Acre Inches		586.00	92.30	588.00	mg/L		1,149,713	5,612	884	5,631	57,175	
07/25/2023	Surface Water: Tulare	7.06	Acre Inches		0.00			mg/L			0	0	0	2,779	
08/09/2023	Surface Water: Tulare	5.89	Acre Inches		0.00			mg/L			0	0	0	2,318	
08/09/2023	Waste Water: Main Lagoon	0.75	Acre Inches		586.00	92.30	588.00	mg/L		1,181,212	5,766	908	5,786	58,742	
08/23/2023	Surface Water: Tulare	7.17	Acre Inches		0.00			mg/L			0	0	0	2,822	
09/06/2023	Ground Water: Well Avg	5.79	Acre Inches		23.07			mg/L			1,752	0	0	32,663	
09/06/2023	Waste Water: Main Lagoon	0.73	Acre Inches		586.00	92.30	588.00	mg/L		1,149,713	5,612	884	5,631	57,175	
09/16/2023	Surface Water: Tulare	6.61	Acre Inches		0.00			mg/L			0	0	0	2,601	
09/27/2023	Harvest	32.00	Tons	71.30	1.41	0.28	1.52	%							15,021
	Acre Inches Applied:	**40.52**						**Totals:**		**3,480,638**	**18,742**	**2,676**	**17,048**	**218,554**	**15,021**
Season Nitrogen Ratio:	1.25							**Lbs Per Acre:**			**323**	**46**	**294**	**3,768**	**259**

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DDW Farms LLC 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	0.00	0.00	0.00	0.00		tons
Process Wastewater	139,320.05	25,115.94	160,847.56	1,383,640.68	27,458,971.25	gallons
Irrigation Water	4,032.18					
Fertilizer / Total Imports	5,457.82					
Atmospheric Deposition	4,200.00					
Total Nitrogen Applied	**153,010.05**					
Crop Nitrogen Removal	120,937.67					
Nitrogen Balance	**32,072.38**					
Nitrogen Ratio	**1.27**					

- **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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DDW Farms LLC 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

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DDW Farms LLC 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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DDW Farms LLC 2023

Land Application Area Description Technical Report (Attachment D)

Field Name	Assessor Parcel Number(s)	Acres	Type of Waste Applied
L1	x147 x060 x024 xxxx	17	Process Wastewater
L2	x147 x060 x024 xxxx	10	Process Wastewater
L3	x147 x060 x024 xxxx	76	Process Wastewater
L4	x147 x060 x022 xxxx, x147 x060 x024 xxxx	72	Process Wastewater
L5	x147 x060 x025 xxxx	67	None
WH5	x147 x040 x022 xxxx	58	Process Wastewater
		300	

Production Area APN(s): x147 x060 x014 xxxx, x147 x060 x024 xxxx

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DDW Farms LLC 2023

Lab Results Summary (Attachment E)

Process Wastewater

(mgl/ppm unless noted otherwise)

									General Minerals						
Sample Date:	**TKN**	**TP**	**TK**	**EC (umhos/cm)**	**NH4N**	**NO3N**	**TDS**	**pH (units)**	**CA**	**MG**	**NA**	**HCO3**	**CO3**	**SO4**	**CL**
02/14/2023	666.00	153.00	887.00	8,550	490.00		5,680.00								
06/09/2023	580.00	107.00	690.00	9,000	575.00	0.00	5,980.00	7.39							
07/12/2023	586.00	92.30	588.00	8,990	489.00		5,970.00								
11/06/2023	717.00	92.20	788.00	9,010	638.00		5,980.00								
Averages:	637.25	111.12	738.25	8,888	548.00	0.00	5,902.50	7.39							

Manure - Compost Solids

(Dry Weight Basis)

Sample Date:	**TN**	**TP**	**TK**	**Moisture**	**Ash**	**CA**	**MG**	**NA**	**S**	**CL**
06/12/2023	1.70	0.28	0.26	16.80						%
Averages:	1.70	0.28	0.26	16.80						

Manure - Corral Solids

(Dry Weight Basis)

Sample Date:	**TN**	**TP**	**TK**	**Moisture**	**Ash**	**CA**	**MG**	**NA**	**S**	**CL**
06/12/2023	1.37	0.53	0.89	33.50						%
11/06/2023	1.94	0.55	2.28	46.30						%
Averages:	1.66	0.54	1.58	39.90						

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DDW Farms LLC 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 (%)
L1	1	Corn	08/01/2023	27.00	5.54	34.00	62.50	6.02
L2	1	Corn	08/01/2023	30.00	6.40	31.00	61.90	6.46
L3	1	Wheat	05/10/2023	38.80	10.90	62.40	52.70	9.94
L3	2	Corn	09/27/2023	28.40	5.38	30.20	71.80	6.01
L4	1	Wheat	05/11/2023	36.80	9.84	48.40	68.10	7.94
L4	2	Corn	10/10/2023	27.80	5.76	32.00	73.30	6.59
L5	1	Almonds	09/13/2023	48.60	6.60	31.80	28.00	8.74
WH5	1	Wheat	05/15/2023	26.20	8.06	41.80	70.30	10.10
WH5	2	Corn	09/27/2023	28.20	5.58	30.40	71.30	6.50

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														
#2 Dom	12/15/2023	14.70		387										
3							Out of service.							
L4D							Out of service							

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DDW Farms LLC 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**
Domestic														
L6D	12/20/2023	13.90		438										
	Averages:	14.30		412										
Irrigation														
L1							Did not run							
L3							Out of service							
L4							Did not run							
L6							Did not run							
	Averages:													
Surface Water														
Tulare (General)	06/28/2023	0.00		42		30.00	0.00							
	Averages:	0.00		42		30.00	0.00							

* NH4N was non-detectable unless a value is shown

Soils

Field	**Sample Date:**	**PO4P (ppm)**
L3	04/12/2023	143.00
L3	06/08/2023	99.90

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DDW Farms LLC 2023

Lab Results Summary (Attachment E)

Soils

Field	Sample Date:	PO4P (ppm)
L4	06/08/2023	106.00
L5	06/08/2023	62.80
WH5	06/08/2023	92.90

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DDW Farms LLC 2023

Planting and Harvest Information (Attachment F)

	Crop #	Crop	Acres Planted	Plant Date	Harvest Date	Estimated Yield (tons)	Tons Harvested	Actual Yield
Field: L1								
	1	Corn	17	05/02/2023	08/01/2023	32.1	535.5	31.5
Field: L2								
	1	Corn	10	05/02/2023	08/01/2023	32.9	324.0	32.4
Field: L3								
	1	Wheat	76	12/06/2022	05/10/2023	21.4	1596.0	21.0
	2	Corn	76	06/28/2023	09/27/2023	32.2	2409.2	31.7
Field: L4								
	1	Wheat	72	12/07/2022	05/11/2023	21.4	1584.0	22.0
	2	Corn	72	07/11/2023	10/10/2023	32.0	2289.6	31.8
Field: L5								
	1	Almonds	67	04/10/2020	09/13/2023	1.2	87.1	1.3
Field: WH5								
	1	Wheat	58	12/11/2022	05/15/2023	22.0	1229.6	21.2
	2	Corn	58	06/28/2023	09/27/2023	33.6	1856.0	32.0

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DDW Farms LLC 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

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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

January 2, 2024

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

Lab No. : **VI 2348586**
Customer No. : **4018573**
Reference : **42188**

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
#2 Dom	12/15/2023	12/15/2023	VI 2348586-001	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

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 Empresa 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. 281

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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

Description : #2 Dom
Project : 0037 DDW Farms LLC

Lab No. : VI 2348586-001
Customer No. : 4018573
Reference : 42188
Sampled On : December 15, 2023 at 09:00
Sampled By : Zeke
Received On : December 15, 2023 at 16:01
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	14.7	0.4	mg/L	10	1		12/22/2023	08:00	lfs	SM 4500-NO3 F	12/22/2023	10:33	lfs
Conductivity	387	1	umhos/cm	1600[2]	1		12/21/2023	09:19	krh	SM 4500-H+B	12/21/2023	11:07	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.

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 Empresa 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. 281

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January 2, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348586
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(SP 2320616-001)	Dup	umhos/cm		0.1%	5	
Nitrate Nitrogen	4500NO3F	12/22/2023:214459LFS	Blank	mg/L		ND	<0.4	
			LCS	mg/L	11.22	97.8%	80-120	
			MS	mg/L	5.609	83.6%	66-125	
		(VI 2348586-001)	MSD	mg/L	5.609	86.7%	66-125	
			MSRPD	mg/L		0.9%	≤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

Corporate Offices & Laboratory
853 Corporation Street
Santa Paula, CA 93060
TEL: (805)392-2000
Env FAX: (805)525-4172 / Ag FAX: (805)392-2063
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Laboratory Analysis Work Order

Nº 42188

ID: # 0037 2348586 **LABORATORY:** FGL

SITE NAME: DDW FARMS

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: _____

20l 8.1C Test # TH407

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	#2 DOM	DOM	W1	12-15/9:00	Zeke			
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: 12/16/23 1359

CHAIN OF CUSTODY RECORDING

	Signature	Company	Received Date & Time	Relinquished Date & Time
1st		IAS		12-15-23 / 2:15
2nd	AJB	FGL	12/15/23 1535	
3rd	AJB	FGL		12/15/23 1601
4th			12/15/23 1601	

LABORATORY USE ONLY

Logged In By: CJ Total Samples: 12/15/23 1732 Laboratory #: _____

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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 2348750**
Customer No. : **4018573**
Reference : **42215**

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
L6D	12/20/2023	12/20/2023	VI 2348750-001	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

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
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Visalia, CA 93291
TEL: (559)734-9473
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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

January 2, 2024

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

Description : L6D
Project : 0037 DDW Farms LLC- Nathan's House Well

Lab No. : VI 2348750-001
Customer No. : 4018573
Reference : 42215
Sampled On : December 20, 2023 at 10:30
Sampled By : Alex
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	13.9	0.4	mg/L	10	1		12/21/2023	13:00	lfs	SM 4500-NO3 F	12/21/2023	15:29	lfs
Conductivity	438	1	umhos/cm	1600[2]	1		12/22/2023	09:20	krh	SM 4500-H+B	12/22/2023	12:16	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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ENVIRONMENTAL AGRICULTURAL
Analytical Chemists

January 2, 2024
Innovative Ag Services, LLC

Lab No. : VI 2348750
Customer No. : 4018573

Quality Control - Wet Chem

Constituent	Method	Date/ID	Type	Units	Conc.	QC Data	DQO	Note
Wet Chem								
E. C.	2320B	(VI 2348803-002)	Dup	umhos/cm		0.1%	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.

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Laboratory Analysis Work Order

Nº 42215

2348750

ID: # 0037

LABORATORY: FGL

SITE NAME: DDW Farms LLC - Nathan's House Well

Billing: IAS - Nathan

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: _____

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	LGD	Dom	W1	12/20 10:30	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 & 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	Alex	IAS		12/20/23 3:15
2nd	ADB	FGL	12/20/23 1532	
3rd	ADB	FGL		12/20/23 1604
4th			12/20/23 1604	

LABORATORY USE ONLY

Logged In By: _____ Total Samples: _____ Laboratory #: _____