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Central Regional Office

Concentrated Animal Feeding Operation
NPDES PERMIT – Annual Report
Western Valley Farms
December 2023

Index
&
Department of Ecology Contact Information

This packet includes:

Index and Contact Information

Concentrated Animal Feeding Operation NPDES Annual Report

2023 Field Nutrient Budgets (Spring, Summer, Fall)

Department of Ecology Contact Information:

Washington Department of Ecology
Water Quality Program
Attn: Cafo Permit Administrator – (360)407-6600
cafopermit@ecy.wa.gov
PO Box 47600
Olympia, WA 98504-7600

DEPARTMENT OF ECOLOGY
State of Washington

APPENDIX B: ANNUAL REPORT FORM
Concentrated Animal Feeding Operation (CAFO) General Permit

Reporting Year: 2023	**Reporting Period:** January 1 to December 31

I. Permit Information

Permit Number: WAG 0-15020B	Facility Name: Western Valley Farms, LLC
Permittee Name:	

II. Contact Information (fill out if different from I. Permittee Information above)

Name: Steve Boon	Email: wvfsteve@gmail.com
Phone: (360)661-1316	Cell Phone (*optional*): (360)661-1316

III. Operation Information

Provide the maximum number of each type of animals at your facility for the year.

- ☑ Dairy Cows: 3250
- ☐ Dairy Heifers: _____
- ☐ Veal Calves: _____
- ☐ Beef: _____
- ☐ Swine
  - ≥55 pounds: _____
  - < 55pounds: _____
- ☐ Other: _____
- ☐ Sheep or Lambs: _____
- ☐ Turkeys: _____
- ☐ Ducks: _____
- ☐ Horses: _____
- ☐ Chickens
  - ☑ Broilers: _____
  - Layers: _____

Generated by CAFO (Specify units: tons, gallons, or ft^3)	☑ Manure: Liquid: 34,000,000gallons Solid: 12,400 tons ☐ Poultry Litter: _____ ☐ Other Organic By-Products: _____ ☐ Process Wastewater: _____ ☐ Digestate: _____
Exported by CAFO (Specify units: tons, gallons, or ft^3)	☑ Manure: Liquid: 22,692,800 gallons Solid: 15,428.33 tons ☐ Poultry Litter: _____ ☐ Other Organic By-Products: _____ ☐ Process Wastewater: _____ ☐ Digestate: _____

Total number of acres **available** for land application **included in** your MPPP: 545

Total acres **you control** used for land application in the past year: 385

Discharges

During the year, has manure, litter, process waste, or process wastewater discharged from your production area or land application fields? ☐ Yes / ☒ No

(NOTE: if you are covered by the Combined Permit, do not include discharges of agricultural stormwater here.)

If YES, provide a summary of the approximate date, time, volume and duration of the discharge(s). Summarize your response to the discharge(s). If necessary, attach a separate sheet of paper for additional space.

Adaptive Management Risk Level High or Very High

Document the reason(s) a land application field fall soil nitrate tests for a single year result in the field being at a risk level or high or very high. Identify which field the documentation applies to. If necessary, attach a separate sheet of paper for additional space.

IV. Nutrient Source Content Analysis (Print additional copies of this page if you have more nutrient sources than space provided)

Nutrient Source Name		Nutrient Content				
		(NH_3/NH_4)	(NO_3/NO_2)	Phosphorus	Units	% OM
Spring Lagoon	1st Analysis	513	567	110	☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	
Summer Lagoon	1st Analysis	165	565	130	☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	
	1st Analysis				☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	
	1st Analysis				☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	
	1st Analysis				☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	
	1st Analysis				☑ PPM ☐ (fill in)	
	2nd Analysis				☑ PPM ☐ (fill in)	
	3rd Analysis				☑ PPM ☐ (fill in)	

V. Field Land Application Information (Print one copy of this page for each of your fields)

Field ID: Pivct #1, 2 & 3	**Action Level:**		**Crop Grown:** Corn Silage		**Crop Yield (provide units):** 32 tons		
Field Soil Sample Nutrient Analysis							
	NH_3/NH_4 as N		NO_3/NO_2 as N		Phosphorus as P	Units	% OM
Soil Profile Depth	**Spring**	**Fall**	**Spring**	**Fall**	**Fall**		**Fall**
1st Foot	4.6	3.2	24	28		☑ PPM ☐ Lbs/Acre	1.84
2nd Foot (if required)		2.8		20		☑ PPM ☐ Lbs/Acre	1.54
3rd Foot (if required)		2.6		14		☑ PPM ☐ Lbs/Acre	1.49
Date of last Organic Matter (OM) Analysis: 10/22/23			Date of last Phosphorus Analysis: 11/7/22				

Nutrient Sources Applied to Field		
Nutrient Source Applied (List all sources of nutrients including commercial fertilizer that were applies to this field. Source name must match Nutrient Source Name from section IV)	**Total Amount Applied**	
Spring Lagoon	1,086,000	☑ Gallons ☐ Tons ☐ Ft^3
Summer Lagoon	1,086,000	☑ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	3/10/23		
Field Name:	#Pivot #1,2 & 3	Acres:	100
Current Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Previous Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		190	650.98
A. Soil Test (NH_4) Ammonium N	14		
B. Soil Test (NO_3) Nitrate Nitrogen	79.2		
C. Organic Matter (**20 lbs per1%**)	45		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**138**	**190**	**651**
Net Nutrient Required (lb/ac) **	**128**	**-78**	**-385**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	9.01	0.92	7.76
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**14.2**	**-84.8**	**-49.6**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

Make sure the Phosphorus and Potassium is the "fertilizer equivalent"

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	6/9/23		
Field Name:	#1,2 & 3	Acres:	100
Current Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Previous Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		132.82	453.75
A. Soil Test (NH_4) Ammonium N	9		
B. Soil Test (NO_3) Nitrate Nitrogen	89.1		
C. Organic Matter (**20 lbs per1%**)	32.8		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**131**	**133**	**454**
Net Nutrient Required (lb/ac) **	**135**	**-21**	**-188**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	6.09	1.08	8.34
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**22.2**	**-19.3**	**-22.5**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

V. Field Land Application Information (Print one copy of this page for each of your fields)

Field ID: Pivct #4	**Action Level:**		**Crop Grown:** Corn Silage		**Crop Yield (provide units):** 32 tons		
Field Soil Sample Nutrient Analysis							
	NH_3/NH_4 as N		NO_3/NO_2 as N		Phosphorus as P	Units	% OM
Soil Profile Depth	**Spring**	**Fall**	**Spring**	**Fall**	**Fall**		**Fall**
1st Foot	4.0	4.1	30	23		☑ PPM ☐ Lbs/Acre	1.73
2nd Foot (if required)		2.0		25		☑ PPM ☐ Lbs/Acre	1.40
3rd Foot (if required)		2.1		19		☑ PPM ☐ Lbs/Acre	1.34
Date of last Organic Matter (OM) Analysis: 10/22/23			Date of last Phosphorus Analysis: 11/7/22				

Nutrient Sources Applied to Field

Nutrient Source Applied (List all sources of nutrients including commercial fertilizer that were applies to this field. Source name must match Nutrient Source Name from section IV)	**Total Amount Applied**	
Spring Lagoon	1,794,000	☑ Gallons ☐ Tons ☐ Ft^3
Summer Lagoon	1,794,000	☑ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	3/10/23		
Field Name:	Pivot #4	Acres:	165
Current Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Previous Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		87.02	355.7
A. Soil Test (NH_4) Ammonium N	12		
B. Soil Test (NO_3) Nitrate Nitrogen	99		
C. Organic Matter (**20 lbs per1%**)	38.8		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**150**	**87**	**356**
Net Nutrient Required (lb/ac) **	**116**	**25**	**-90**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	9.01	0.92	7.76
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**12.9**	**27.2**	**-11.6**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

Make sure the Phosphorus and Potassium is the "fertilizer equivalent"

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	6/9/23		
Field Name:	#4	Acres:	165
Current Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Previous Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		112.21	446.49
A. Soil Test (NH_4) Ammonium N	7		
B. Soil Test (NO_3) Nitrate Nitrogen	95.7		
C. Organic Matter (**20 lbs per1%**)	34.6		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**137**	**112**	**446**
Net Nutrient Required (lb/ac) **	**129**	**0**	**-180**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	6.09	1.08	8.34
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**21.1**	**-0.2**	**-21.6**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

Make sure the Phosphorus and Potassium is the "fertilizer equivalent"

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

V. Field Land Application Information (Print one copy of this page for each of your fields)

Field ID: Pivct #5	**Action Level:**		**Crop Grown:** Corn Silage		**Crop Yield (provide units):** 32 tons		
Field Soil Sample Nutrient Analysis							
	NH_3/NH_4 as N		NO_3/NO_2 as N		Phosphorus as P	Units	% OM
Soil Profile Depth	**Spring**	**Fall**	**Spring**	**Fall**	**Fall**		**Fall**
1st Foot	4.1	3.4	26	20		☑ PPM ☐ Lbs/Acre	1.63
2nd Foot (if required)		2.8		16		☑ PPM ☐ Lbs/Acre	1.44
3rd Foot (if required)		2.3		17		☑ PPM ☐ Lbs/Acre	1.52
Date of last Organic Matter (OM) Analysis: 10/22/23			Date of last Phosphorus Analysis: 11/7/22				

Nutrient Sources Applied to Field

Nutrient Source Applied (List all sources of nutrients including commercial fertilizer that were applies to this field. Source name must match Nutrient Source Name from section IV)	**Total Amount Applied**	
Spring Lagoon	1,304,000	☑ Gallons ☐ Tons ☐ Ft^3
Summer Lagoon	1,304,000	☑ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3
		☐ Gallons ☐ Tons ☐ Ft^3

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	3/10/23		
Field Name:	Pivot #5	Acres:	120
Current Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Previous Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		105	478
A. Soil Test (NH_4) Ammonium N	12		
B. Soil Test (NO_3) Nitrate Nitrogen	85.8		
C. Organic Matter (**20 lbs per1%**)	43.6		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**141**	**105**	**478**
Net Nutrient Required (lb/ac) **	**125**	**7**	**-212**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	9.01	0.92	7.76
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**13.8**	**7.6**	**-27.3**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

Make sure the Phosphorus and Potassium is the "fertilizer equivalent"

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

FIELD/CROP NUTRIENT MANAGEMENT PLAN

Date:	6/9/23		
Field Name:	#Pivot 5	Acres:	120
Current Crop:	Corn Silage	Average Yield: (3 to 5 years)	30 Ton
Previous Crop:	Triticale	Average Yield: (3 to 5 years)	9 Ton
Irrigation Type:	Pivot	Dominant Soil:	Silt Loam 2% slope

NUTRIENT BUDGET	CURRENT SOIL TEST LEVELS		
	N	P_2O_5	K_2O
Recommended Nutrient Needs (lb/ac)	**266**	**112**	**266**
Nutrient Credits (Soil Analysis)		80.15	395.67
A. Soil Test (NH_4) Ammonium N	7		
B. Soil Test (NO_3) Nitrate Nitrogen	92.4		
C. Organic Matter (**20 lbs per1%**)	32.6		
D. Crop Residue	0		
E. Commerical Fertilizer	0		
F. Manure	0		
G. Other	0		
Total Credits (lb/ac) *	**132**	**80**	**396**
Net Nutrient Required (lb/ac) **	**134**	**32**	**-130**
Estimated Manure Nutrients	N	P_2O_5	K_2O
Liquid Manure Value (lbs/1000 gal) ***	6.09	1.08	8.34
Solid Manure Value (Lbs/ton)	0.00	0.00	0.00
1,000 Gallons Liquids Needed/AC	**22.0**	**29.5**	**-15.5**
Tons Solids Needed/AC	#DIV/0!	#DIV/0!	#DIV/0!

Make sure the Phosphorus and Potassium is the "fertilizer equivalent"

P PPM *2.29 = P_2O_5

K PPM* 1.21 = K_2O

A. NH_4 PPM X 3.11 = #/AC

B. NO_3 PPM X Soil Type Factor = #/AC **Soil Type Factor: (Sandy = 4.0 Silt Loam = 3.3 Clay = 3.5)**

*** Equals A through G**

**** Equals Nutrient needs minus total credits**

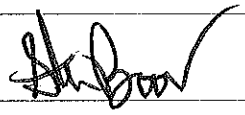
***** Manure Values for manure analysis**

If "Total Credits" are larger than the recommend nutrient needs-DO NOT APPLY

Do not fill in the yellow highlighted cells.

VI. Certification

"I certify under penalty of law, that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Printed Name: Steve Boon	Date: December 28, 2023
Signature: 	

NOTE: Be sure to include your yearly nutrient budget for each of your fields including the budget for a double crop or winter cover crop (if applicable) **with your completed Annual Report Form.**

Instructions for Annual Report Form

Concentrated Animal Feeding Operation General Permit

Year

Start by filling out the year for this annual report (e.g. 2016). The reporting period of January 1 to December 31 always remains the same.

I. Permittee Information

Fill in the permit number assigned by Ecology. This number is found on the coverage letter Ecology sends to the Permittee when issuing permit coverage. Also fill out your facility name (e.g. ABC Facility) and the Permittee's name.

II. Contact Information

Provide the contact information for your facility if the contact person is not the same as the Permittee. The contact must be familiar with the information on the Annual Report.

III. Operation Information

Provide the following data for your operation:

- Animal numbers – max for year
- Amount of manure, litter, process waste, process wastewater, and other organic by-products generated for the past year in gallons, tons, or cubic feet.
- Amount of manure, litter, process waste, process wastewater, and other organic by-products exported to other parties in the past year in gallons, tons, or cubic feet.
- The number of acres in your MPPP
- The number of acres you control
- Summary of the discharges from your production area or land application fields in the past year. Note that if you are covered by the Combined Permit, do not include agricultural stormwater as part of the discharges from your land application fields.
- Document the reasons, for each field, that the field has an adaptive management risk level or high or very high.

IV. Nutrient Source Content Analysis

This section of the annual report is to provide the 3 nutrient analysis required for each source of nutrients that the Permittee land applies. Chemical/Commercial fertilizer and the label content must be included. Provide the following for each nutrient source:

- Name of the nutrient source (e.g. lagoon 1, manure pile A)
- The ammonia/ammonium as N concentration
- The nitrate/nitrite as N concentration
- The phosphorus as P concentration
- The units of measure. Check the PPM box or provide an alternate unit of measure.
- The percent organic matter.

V. Field Information

Provide the following data for each of your fields:

- Field ID. Ensure that the field IDs you use in this section are the same fields IDs you used for your fields on your yearly nutrient budgets.
- Crop grown
- Crop yield (you provide units).
- Total amount of each nutrient source from section IV. Nutrient Source Content Analysis applied to the field in tons, gallons, or cubic feet. The names must match between the two sections.