

ATTACHMENT 1

GROUNDWATER REQUIRED ACTIONS

I. Area Covered by Required Actions

The property that is the subject of the required actions is located at and around 73956 Homestead Lane, Boardman, Oregon, in Morrow County, on property that was historically subject to a Confined Animal Feeding Operation Permit (collectively, the “Property”). The Property contains monitoring wells (MW), identified as MW-1, MW-3, and MW-8 and fields identified as fields 403, 404, 501, 410, 504, 505, 600, 602, 603, and 604. Exhibit A to this Attachment 1 identifies the monitoring wells and the fields.

II. Required Actions

The Required Actions will remain in effect until data collected from MW 1, 3, and 8 show nitrate limits below the following established concentration limits for each well: MW-1: 5.02 mg/L, MW-3: 15.31 mg/L, MW-8: 19.77 mg/L. RAs #1-#4 shall terminate on a well-by-well and field by field basis as follows:

Table 1:

Groundwater wells	MW-1	MW-3	MW-8
Nitrate Concentration Limits	5.02 mg/L	15.31 mg/L	19.77 mg/L
Applicable Fields	403, 404, 410	501, 504, 505 and 600	602, 603, 604

- a. Termination on fields 403, 404, and 410 after well MW-1 reports nitrate levels at or below 5.02 mg/L for six consecutive months.
- b. Termination on fields 501, 504, 505, and 600 after well MW-3 reports nitrate levels at or below 15.31 mg/L for six consecutive months.
- c. Termination on fields 602, 603, and 604 after well MW-8 reports nitrate levels at or below 19.77.

Landowner shall maintain monitoring and reporting for nitrates at MW 1, 3, and 8 until all RAs for the respective well has terminated as described above.

Landowner will comply with the following on an individual monitoring well basis for MW 1, 3, and 8 until the applicable monitoring well reports demonstrate nitrate levels at or below the above-referenced nitrate concentration limits for six consecutive months:

These RAs are applicable and limited to fields 403, 404, 501, 410, 504, 505, 600, 602, 603, and 604. However, all fields and operations are required to comply with applicable laws and regulation for the Agriculture Water Quality Management Program including OAR Chapter 603 Division 95 for Willow Creek Management area.

RA #1. Reporting of Nitrate Levels: Until the applicable monitoring well achieves reported nitrate

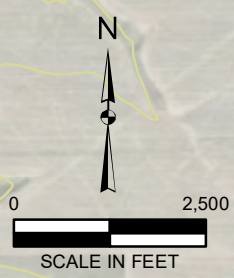
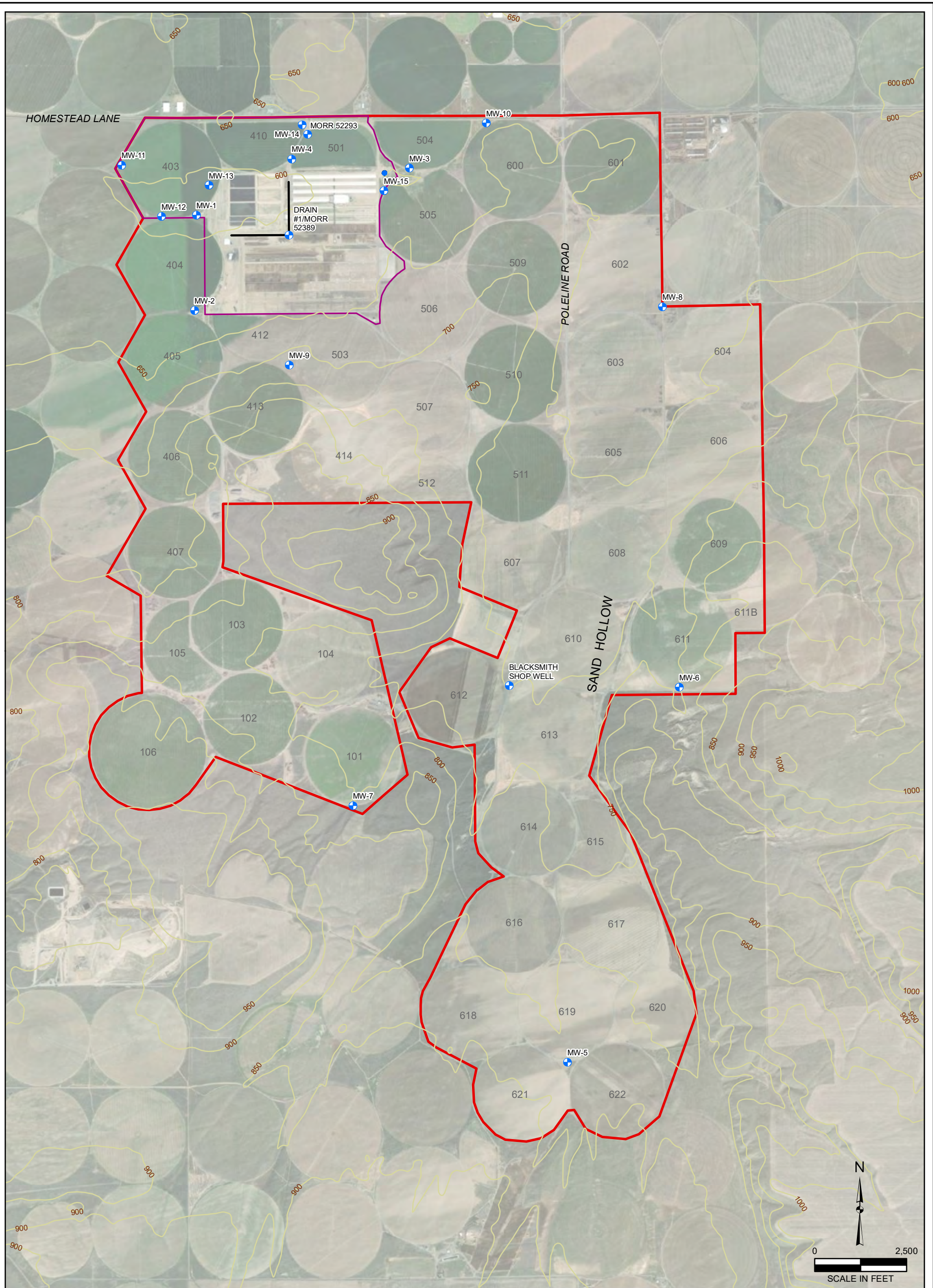
levels below the above-referenced concentration limits for six consecutive months, MW 1, 3, and 8 will continue to be sampled for nitrate monitoring purposes monthly by a third-party consultant at Landowner's cost. Landowner will report the sampling results to ODA on or before the end of the month for the prior month's sampling. For example, data compiled for June 2024 will be reported on or before July 31, 2024.

RA #2. Irrigation Management: At no time during the irrigation season will the rate and frequency of applying irrigation water cause the soil profile to reach saturation levels above (1) 110% at the depth of four inches, and (2) 99.9% at depths beyond 4 inches. Soil moisture above these thresholds resulting from events beyond Landowner's reasonable control, such as precipitation will not constitute non-compliance with this RA #2. If such an event occurs, Landowner will report the event to ODA within 24 hours and provide that record with monthly reporting of monitoring data. Landowner already installed soil moisture probes in the fields, and Landowner will maintain such existing soil moisture probes. Landowner will provide a map of all probe locations, including a narrative description of how the probe was placed based on soil water holding capacity to be representative of leaching through the field soil profile, and report a monthly summary of the daily soil moisture data to a depth of 60 inches to ODA for each location at the same time monitoring well data is reported. Upon ODA's request, Landowner will install and maintain up to one additional 60-inch soil moisture probe per field (for a maximum total of two probes in any given field) for the fields subject to these RAs in mutually acceptable locations.

RA #3. Fields to be Planted with Alfalfa Crop: Landowner will plant and/or maintain an alfalfa crop in fields 403, 501, 410, 504, 505, and 600. No nitrogen from fertilizer (organic or commercial) shall be applied to these fields listed in RA#3. In the event Landowner requests a fertilization event, a crop nitrogen balance shall be calculated for crop nitrogen needs, using agronomic references such as the one shown in Exhibit B. The nitrogen balance must be calculated using all sources of nitrogen, including: all synthetic N applied, N in seed coating, N from irrigation or stormwater applied, residual soil N, crop residue N, estimates of soil organic matter mineralized during the growing season, and any other source of added materials containing nitrogen. Landowner will provide ODA with an annual actual nitrogen balance summary for each of the fields listed in this RA #3 by December 1st of each year.

RA #4. Landowner will calculate an expected crop nitrogen balance for fields 404, 602, 603, and 604 to be completed and submitted to ODA within 30 days of the signing of the Consent Agreement for 2024 crop year and by March 1, or prior to the first nitrogen application for the upcoming crop season, of each following year. The nitrogen balance calculations must include current or last determined residual soil nitrogen levels, expected crop demand using agronomic references such as the one shown in Exhibit B, expected residual nitrogen post-harvest and any proposed winter cover crop to be planted. The nitrogen balance must be calculated using all sources of nitrogen, including: all synthetic N applied, N in seed coating, N from irrigation or stormwater applied, residual soil N, crop residue N, estimates of soil organic matter mineralized during the growing season, and any other source of added materials containing nitrogen. Landowner will provide ODA with an annual actual nitrogen balance summary for each of the fields listed in this RA #4 by December 1st of each year.

Exhibit A



LEGEND

- BORING
- ⊕ GROUNDWATER MONITORING WELL
- STAFF GAUGE
- DRAIN LINE
- 10' CONTOUR ELEVATION
- ▭ PERMITTED CAFO
- ▭ EASTERDAY DAIRY PROPERTY

ALL WELLS LOCATED IN MORROW COUNTY.
 "MORR" PREFIX REMOVED FROM ALL WELL IDENTIFIERS.
 412 = FIELD IDENTIFICATION NUMBER

NOTES:

1. ALL LOCATIONS ARE APPROXIMATE.
2. FIGURES WERE PRODUCED IN COLOR. GRAYSCALE COPIES MAY NOT REPRODUCE ALL ORIGINAL INFORMATION.

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FIGURE 2A

PERMITTED CAFO SITE PLAN
 EASTERDAY DAIRY
 73956 HOMESTEAD LANE
 BOARDMAN, OREGON

FARALLON PN: 2445-001

Drawn By: jjones

Checked By: PC

Date: 12/29/2022

Disc Reference:

Path: Q:\Projects\2445 Easterday Farms Dairy\001\Mapfiles\006\Figure-02A_Permitted-CAFO-SitePlan.mxd

Exhibit B

Crop Removal of Nutrients				% of Dry Yield			Removal per Acre		
Crop	Yield		lbs/Unit	N	P	K	N	P2O5	K2O
	Unit	Condition		%	%	%	lbs/ton	lbs/ton	lbs/ton
AWMFH Chapter 6 & OSU Extension									
Alfalfa	ton	DHM	2000	3.45%	0.35%	2.85%	69.0	16.0	68.7
Wheat/Oat/Trit Haylage	ton	DHM	2000	2.16%	0.38%	2.90%	43.2	17.4	69.9
Corn Silage	ton	DHM	2000	1.10%	0.25%	1.09%	22.0	11.4	26.3
Corn Grain	ton	DHM	2000	1.61%	0.28%	0.45%	32.2	12.8	10.8
Potato	ton	AH	2000	0.33%	0.09%	0.52%	6.6	4.1	12.5
Mint	ton	DHM	2000	2.41%	0.24%	1.85%	48.2	11.0	44.6
Sweet Corn	ton	AH	2000	0.89%	0.24%	0.58%	17.8	11.0	14.0
Wheat Grain & Straw	ton	DHM	2000	2.66%	0.62%	0.80%	53.2	28.4	19.3
Peas and Pea Hay	ton	DHM	2000				65.0	19.1	55.6
Carrots (org. & conv.)	ton	AH	2000				4.3	3.5	9.6
Onions	ton	AH	2000				5.6	2.5	5.0
Sudan Grass Hay	ton	DHM	2000				45.0	21.9	105.6
Beans & Bean Straw	ton	DHM	2000				83.0	19.0	75.0
Barley Grain & Straw	ton	DHM	2000				36.0	12.0	28.0
Soybeans	ton	DHM	2000				132.0	26.7	60.0
Teff Grain & Straw	ton	DHM	2000				40.0	12.0	28.0
Canola	ton	DHM	2000				67.0	31.0	55.0
Safflower	ton	DHM	2000				56.0	30.7	40.0
Grass for Seed	ton	DHM	2000				30.3	10.9	52.6
Fruit Trees	ton	AH	2000	0.13%	0.02%	0.16%	2.6	0.9	3.9
Grapes	ton	AH	2000	0.28%	0.10%	0.50%	5.6	4.6	12.1

*DHM = Dry Harvested Material
AH = As Harvested

Crop Removal of Nutrients Per ORAWM 4.9				Removal per Acre		
Crop	% DM	Yield Units	lb/Unit	N lbs/ton	P2O5 lbs/ton	K2O lbs/ton
Alta Fescue Hay/Pasture	100%	Ton	2000	38.8	18.6	53.3
Grass/Legume Hay/Pasture	100%	Ton	2000	39.9	14.3	10.7
Perennial Hay/Pasture(Med Intensity)	100%	Ton	2000	48.0	16.0	45.8
Meadow Fescue Hay/Pasture	100%	Ton	2000	48.9	23.5	67.2
Oats Hay/Pasture	100%	Ton	2000	30.6	27.5	21.0
Orchard Grass Hay/Pasture	100%	Ton	2000	62.6	23.1	26.4
Ryegrass Hay/Pasture	100%	Ton	2000	39.3	14.7	40.2
Timothy Hay/Pasture	100%	Ton	2000	28.2	11.9	44.8
Wheatgrass Hay/Pasture	100%	Ton	2000	33.4	14.5	76.0
Alfalfa-Orchardgrass Haylage	100%	Ton	2000	52.0	7.8	27.5
Oat Haylage	100%	Ton	2000	32.0	12.8	22.4
Ryegrass Haylage	100%	Ton	2000	50.0	18.3	51.3
Sorghum-Sudan Haylage	100%	Ton	2000	54.4	14.7	69.9
Triticale, Haylage	100%	Ton	2000	49.0	15.6	13.7
Wheat, Haylage	100%	Ton	2000	41.3	11.5	69.0
Corn Silage	100%	Ton	2000	25.0	9.2	24.1
Alfalfa for Seed	100%	cwt	100	6.8	1.8	3.1
Barley, Grain	100%	Bu	48	1.0	0.4	0.3
Barley, Grain Straw Removed	100%	Ton	2000	60.0	23.8	47.2
Buckwheat, Grain	100%	Bu	48	1.1	0.5	0.4
Buckwheat, Grain Staw Removed	100%	Ton	2000	57.2	19.7	76.9
Bluegrass for Seed	100%	cwt	100	3.2	1.1	2.7
Corn, Grain	100%	Ton	2000	32.2	12.8	9.6
Fescue Seed	100%	cwt	100	1.4	0.0	0.0
Peppermint, Oil	100%	Ton	2000	4.2	4.1	3.4
Peppermint, Oil Stems & Leaves Removed	100%	Ton	2000	87.2	84.3	69.6
Rapeseed	100%	Bu	50	1.5	0.8	0.4
Rapeseed, Stray Removed	100%	Ton	2000	161.6	45.8	117.2
Red Clover Seed	100%	cwt	100	5.2	1.2	0.0
Ryegrass Seed	100%	cwt	100	8.1	2.4	2.4
Wheat, Spring Hard Red	100%	Bu	60	1.8	0.9	0.4
Wheat, Spring Hard Red Straw Removed	100%	Ton	2000	83.4	39.2	44.7
Wheat, Winter Hard Red	100%	Bu	60	1.8	0.9	0.4
Wheat, Winter Hard Red Straw Removed	100%	Ton	2000	83.4	39.2	44.7
Beans, Dry	100%	Ton	2000	62.6	20.6	20.7
Blueberries	100%	Ton	2000	14.3	3.0	14.2
Peas, Austrian Winter	100%	Ton	2000	72.0	18.3	28.9
Peas, Green	100%	Ton	2000	73.6	18.3	21.7
Poplars for Pumpwood	100%	Ton	2000	0.3	0.2	0.1