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JUN 23 2016



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM

Water Protection Program

**FORM W - CONCENTRATED ANIMAL FEEDING OPERATION  
(CAFO) OPERATING PERMIT APPLICATION**

FOR OFFICE USE ONLY	
CHECK NUMBER	14613144
DATE RECEIVED	6/23/16
FEE SUBMITTED	\$100.00

Complete all applicable sections. Instructions for completing the form are located at the end of the form. Sign, date and return the form and all requested documents along with a check for the appropriate permit fee to the Missouri Department of Natural Resources. Make a copy of this completed form and keep it with your nutrient management plan.

**PART 1 - PERMIT OWNERSHIP AND CONTACT INFORMATION**

1.1 OPERATION NAME Purina Animal Nutrition Center	CURRENT PERMIT NUMBER MO-6010169	COUNTY Franklin
PHYSICAL ADDRESS 100 Danforth Drive	LEGAL DESCRIPTION Sec.: 5-7 Twn.: 43N Rng.: 2E	TELEPHONE NUMBER WITH AREA CODE (636) 742-6103
CITY Gray Summit	STATE Missouri	ZIP CODE 63039
1.2 OWNER (PROVIDE LEGAL NAME) Purina Animal Nutrition, LLC	EMAIL ADDRESS ENiemeyer@landolakes.com	
MAILING ADDRESS 1080 Country Road F West	TELEPHONE NUMBER WITH AREA CODE (800) 329-9680	
CITY Shoreview	STATE MN	ZIP CODE 55126
1.3 CONTINUING AUTHORITY (IF DIFFERENT THAN THE OWNER) Purina Animal Nutrition Center		
MAILING ADDRESS 100 Danforth Road	TELEPHONE NUMBER WITH AREA CODE (636) 742-6103	
CITY Gray Summit	STATE MO	ZIP CODE 63039

**PART 2 - PERMIT TYPE AND PERMIT ACTION**

2.1 PERMIT TYPE <input type="checkbox"/> NPDES Site Specific Permit Request review of draft permit prior to public notice. <input type="checkbox"/> Yes <input type="checkbox"/> No  <input checked="" type="checkbox"/> NPDES General Permit (MOG01)  <input type="checkbox"/> State No-Discharge General Permit (MOGS1)	2.2 PERMIT ACTION* <input type="checkbox"/> New Permit <input type="checkbox"/> Renewal <input checked="" type="checkbox"/> Modification <input type="checkbox"/> Ownership Transfer  _____ PREVIOUS OWNERS NAME  _____ ADDRESS  _____ CITY STATE ZIP CODE  _____ SIGNATURE DATE
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\*See instructions for additional requirements and documents for the request permit action.

**PART 3 - DESIGN CAPACITY FOR MANURE STORAGE AND ANIMALS OF EACH CAFO FEATURE**

3.1 STORAGE STRUCTURE TYPES, AMOUNT OF STORAGE, AND AMOUNT OF MANURE GENERATED PER YEAR.							
CAFO Feature	List All Manure Storage Structures at each CAFO Feature Storage Structure Type(s)	Dry Manure Handling System		Wet Manure Handling System			
		Design Dry Process Waste (tons/yr.)	Days of Storage	Total Storage Capacity (gal)	Design Wastewater per Year (gal./yr.)	Days of Storage	Design Flow MGD
001	See attached Table, Part 3, 3.1						
002	No change from 2014 Form W submittal						
003							
004							
005							

3.2 LIST EACH TYPE OF ANIMAL IN CONFINEMENT AND THE NUMBER OF EACH ANIMAL TYPE.						
CAFO Feature	Animal Category #1	Animal Numbers	Animal Category #2	Animal Numbers	Animal Category #3	Animal Numbers
001	See attached Table					
002	Part 3, 3.2					
003						
004						
005						

**PART 4 - OPERATIONAL INFORMATION**

4.1 OPERATIONAL INFORMATION (SEE INSTRUCTIONS) SIC Code(s) 0213 0241 0211 0214 0272 CAFO Class Size 1C
4.2 Is this an export-only operation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No

# LAND APPLICATION INFORMATION (NPDES Permits only)

Operation Name: Purina Animal Nutrition Center		Class Size: 1C		Permit #: MO 010166		County: Franklin								
Field Name	Legal Description	Spreadable Acres	P Loss Risk <sup>1</sup>	N or P Based Application	Crop #1		Crop #2		Crop #3 <sup>1</sup>		Crop #4 <sup>1</sup>		Crop #5 <sup>1</sup>	
					Crop	Yield Goal <sup>2</sup>	Crop	Yield Goal <sup>2</sup>	Crop	Yield Goal <sup>2</sup>	Crop	Yield Goal <sup>2</sup>	Crop	Yield Goal <sup>2</sup>
A	Sec. 6 Twp. 43N Rng. 2E	1.9	High	P	Fescue	2 T								
B	Sec. 7 Twp. 43N Rng. 2E	12.0	Medium	P	Fescue	2 T								
C	Sec. 6 Twp. 43N Rng. 2E	10.7	High	P	Fescue	2 T								
D	Sec. 6 Twp. 43N Rng. 2E	4.2	High	P	Fescue	2 T								
E	Sec. 6 Twp. 43N Rng. 2E	1.2	High	P	Fescue	2 T								
F	Sec. 6 Twp. 43N Rng. 2E	1.2	High	P	Fescue	2 T								
G	Sec. 5 Twp. 43N Rng. 2E	1.1	Medium	P	Fescue	2 T								
H	Sec. 5 Twp. 43N Rng. 2E	9.4	High	P	Fescue	2 T								
I	Sec. 6 Twp. 43N Rng. 2E	4.6	Medium	P	Fescue	2 T								
J	Sec. 6 Twp. 43N Rng. 2E	4.9	Medium	P	Fescue	2 T								
K	Sec. 6 Twp. 43N Rng. 2E	13.0	Medium	P	Fescue	2 T								
L	Sec. 5 Twp. 43N Rng. 2E	5.9	High	P	Fescue	2 T	Soybeans	40 Bu						
M	Sec. 5 Twp. 43N Rng. 2E	19.1	Medium	P	Fescue	2 T	Soybeans	40 Bu	Corn	160 Bu				

<sup>1</sup> If more than five planned or alternative crops per field continue on next line.

<sup>2</sup> Soil Test P Rating or P Index Rating may be used.

<sup>3</sup> Express yield in Bu=Bushels or T=Tons per acre.



**FORM W - CONCENTRATED ANIMAL FEEDING OPERATION (CAFO)  
OPERATING PERMIT APPLICATION  
Attachments**

**PART 2**

**2.1 NARRATIVE DESCRIPTION OF PROJECT**

This Small Ruminant Animal facility for 160 sheep and goats will be a one-off building not to be connected to our current companion animal facility. This site is approximately .5 acres. The 80 animal pens, two animals per pen, will be in a 95' by 32' structure with an additional 39' x 48' used for a feed room, work space and a loadout area.

The manure, urine and bedding will be scraped, collected in a covered loadout area and hauled to the existing compost area. There will be a small amount of wash down water, estimated at 500 gallons per day. The gray water drains will be send the water to a 1000 gallon septic system with drain field. No observation room or employee restrooms will be constructed.

**PART 3****3.2 Type of Animal in Confinement and the Number of Each Animal Type**

<b>CAFO Feature</b>	<b>Storage Structure</b>	<b>Animal Category</b>	<b>Animal Numbers</b>
	<b>WASTEWATER</b>		
001	Swine Lagoon 2	Swine over 55 lbs	900
001	Swine Lagoon 2	Swine under 55 lbs	1040
002	Swine Lagoons 3 & 3A	Swine over 55 lbs	600
003	Dairy Lagoons 4, 5 & 6	Dairy Cattle	738
004	Swine Lagoon 7	Swine under 55 lbs	560
005	Rabbit Lagoon 8	Rabbits	285
006	Beef Feedlot Lagoon 14	Beef Cattle	135
	<b>DRY WASTE</b>		
007 & 008	Compost Sheds 1 & 2	Dairy Cattle	940
007 & 008	Compost Sheds 1 & 2	Horse	76
007 & 008	Compost Sheds 1 & 2	Beef Cattle	260
007 & 008	Compost Sheds 1 & 2	Rabbits	285
007 & 008	Compost Sheds 1 & 2	Goats and Sheep	160

## **Site Information**

### **A. Site Description**

Purina Animal Nutrition, LLC owns and operates the Purina Animal Nutrition Center in Franklin County near Gray Summit, Missouri. The Center's headquarters are located at 100 Danforth Drive, Gray Summit Missouri 63039.

The Purina Animal Nutrition Center is recognized as the premier animal nutrition research facility in North America's feed industry, and one of the leading centers in the world. It is comprised of 1,188 acres with several high-technology facilities for researching dairy cattle, beef cattle, swine, horses, rabbits, laying hens, deer, goats and sheep. The Purina Animal Nutrition Center operates under a Missouri Department of Natural Resources (MoDNR) Concentrated Animal Feeding Operations (CAFO) Class 1C permit.

The Purina Animal Nutrition Center currently consists of a 738 head dairy facility, a 210 unit moderate health calf building (MHCB), a 282 head beef facility, a 1500 swine facility, a 76 head equine facility and a 160 unit small ruminant facility.

The Purina Animal Nutrition Center and its waste handling are divided into two separate and independent facilities, north and south. The north farm consists of dairy and equine and the south farm consists of beef, swine and other miscellaneous waste streams and surface runoff.

As stated above, the north farm consists of the dairy and equine facilities. The dairy consists of several barns and other facilities, including a freestall barn, tie stall barn, surgery/maternity barn, milking parlor, holding pen, heifer barns, feedlots, the MHCB, etc. Liquid waste effluent from the dairy facility, with the exception of the freestall barn, is transferred directly into and through lagoons 4-6. Liquid waste effluent from the freestall barn is directed through a fan separator prior to being transferred to the lagoons 4-6. In addition, a study was conducted in 2010 regarding the addition of a new screw press and chemical treatment system. This system has shown the ability to remove 40% of TKN and 80% of phosphorous from the effluent waste stream. The system was installed in November 2011. The facility has also lessened the land application demand for the north farm by removing the dairy plate cooler water from the effluent waste stream for 2011.

The equine facility consists of barn and paddock/pasture combinations. All manure and bedding from the equine facility is handled as a solid and is transferred to the onsite compost facility.

The south farm consists of the beef and swine facilities. The beef farm consists of three separate operation types, confinement barns/feedlots, tie stall barn and paddock/pastures. The effluent waste streams from the three operation types are separate. Runoff from the feedlot portion of the beef confinement Runoff from the beef paddocks are directed to a small holding pond. A valve and piping can, when needed, transfer the waste water to lagoon 14. Lagoon 14 also services the feedlot runoff waste stream from the beef tie stall barn operation. A designed vegetative

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## ***B. Facility Inventories***

### **1. Animals**

**Table B-1**

Animal Type	Number	Animal Units Under Roof		Animal Type	Number	Animal Units in Open Confinement
Dairy Milk Cows	320	457				
Dairy Heifers	280	400				
Dairy Calves	360	514		Calf Hutches	60	86
Swine < 55 lbs	1500	150				
Swine > 55 lbs	1500	600				
Horses	76	38				
Beef Cattle	260	260		Beef Feedlot	135	135
Rabbits	285	29				
Chicken Laying Hens	240	3				
Goats & Sheep	160	16		Deer	6	1
<b>COLUMN TOTALS</b>		<b>2467</b>				<b>222</b>
<b>CENTER TOTAL</b>		<b>2689</b>				

### **2. Livestock Waste Production**

Wastewater production was averaged from the 2009 and 2010 annual reports. The 2009 and 2010 annual reports use actual pumping records. Actual pumping records will be more accurate than calculating waste production based on animal numbers. A summary of pumping records can be found in the references for waste application planning section (section 27) of this CNMP.





PROPERTY EXHIBIT  
MAP 1



**PRELIMINARY**  
NOT FOR  
CONSTRUCTION

WUNDERLICH SURVEYING & ENGINEERING, INC.  
20 SOUTH CHURCH STREET  
UNION, MO 63084 (636) 583-8400  
WSETEAM.COM

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DATE: \_\_\_\_\_

1 OF 1

PROPERTY EXHIBIT MAP

A TRACT OF LAND BEING PART OF SECTION 5,  
T43N, 2E OF THE 5TH P.M.  
IN FRANKLIN COUNTY, MISSOURI

**WUNDERLICH**  
SURVEYING & ENGINEERING INC.  
20 SOUTH CHURCH STREET  
UNION, MO 63084 (636) 583-8400  
WSETEAM.COM

WUNDERLICH SURVEYING & ENGINEERING, INC.  
MISSOURI STATE CERTIFICATE OF AUTHORITY # CC 0328930





0.020 Miles

0.020 Miles

0.020 Miles

0.04 Miles

2

3

24

12

8

4



Hwy 100

NEW BUILDING

STATION

RAILROAD

PARKWAY

400.00

400.00



PROPERTY EXHIBIT  
MAP 2



1 OF 1

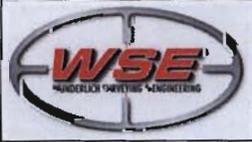
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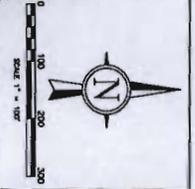
WUNDERLICH SURVEYING & ENGINEERING, INC.  
MISSOURI STATE CERTIFICATE OF AUTHORITY # 00 0328620







PROPERTY EXHIBIT MAP 3

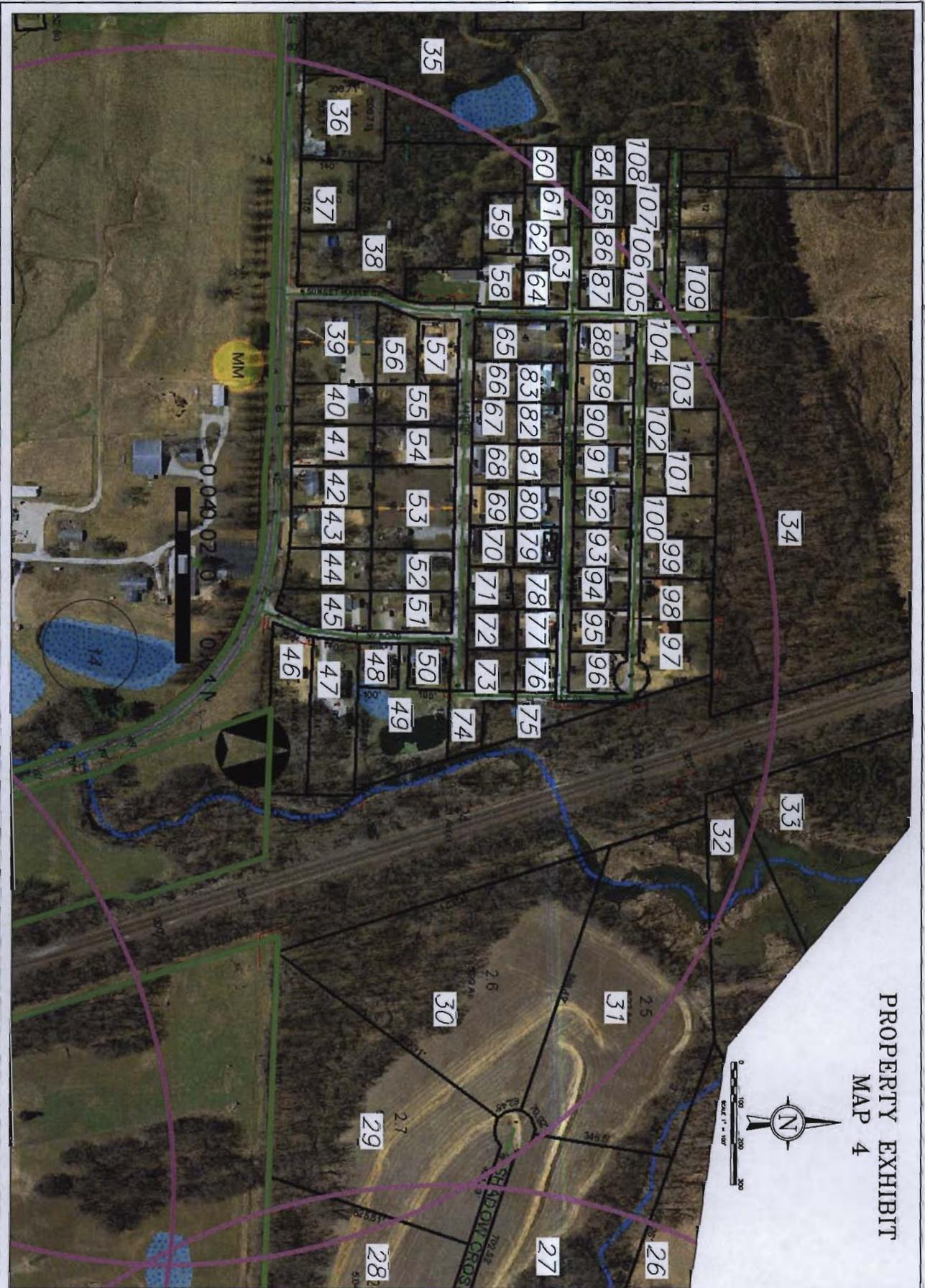


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 CONSTRUCTION  
 1 OF 1

PROPERTY EXHIBIT MAP  
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 IN FRANKLIN COUNTY, MISSOURI

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 20 SOUTH CHURCH STREET  
 UNION, MO 63084 (636) 583-8400  
 WSETEAM.COM  
 MISSOURI STATE CERTIFICATE OF AUTHORITY # CC 0328930





PROPERTY EXHIBIT  
MAP 4



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UNION, MO 63084 (636) 583-8400  
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1 OF 1

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MISSOURI STATE CERTIFICATE OF AUTHORITY # CC 033630



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JUN 23 2016



Water Protection Program

Purina Animal Nutrition Center  
100 Danforth Drive  
Gray Summit, MO 63039

June 10, 2016

Mr. Keith Forck  
Water Pollution Control Program  
Missouri Department of Natural Resources  
P.O. Box 176  
Jefferson City, Missouri 65102-0176

*Re: Purina Animal Nutrition Center  
MO-G010169, Franklin County  
CAFO Operating Permit Modification Application*

Dear Mr. Forck:

At the direction of Mr. Greg Caldwell of your staff, we are submitting a Form W for a CAFO Operating Permit Modification. We will be constructing a new Small Ruminant Animal facility which will have the capacity to house approximately 160 goats and sheep. Mr. Caldwell indicated that a construction permit was not needed for this project, but that our current operating permit would need to be modified.

The manure from this new facility will be scraped, collected in a covered area and hauled to the compost area. There will be a small amount of wash down water, but these "gray water drains" will send the water to a septic system with drain field. This "gray water" will amount to approximately 500 gallons per day. No human waste will enter the septic tank. Mr. Caldwell indicated that this septic system does not need to be included in our CAFO permit, but it does need to be registered with the Missouri Geological Survey. The new building will not be connected to any of our existing lagoons.

Included in this application are the following:

- 1) Form W plus attachments,
- 2) Two modified chapters from our Nutrient Management Plan.
- 3) The title page of engineering documents.
- 4) Maps showing the extent of the production area including all confinement buildings, open lots, manure storage structures surface water and areas subject to a one-hundred year flood event within or adjacent to the production area, and production area setback distances in accordance with 10 CSR 20-8.300(5)(B).
- 5) A check for \$150 for the CAFO Class 1C permit fee.

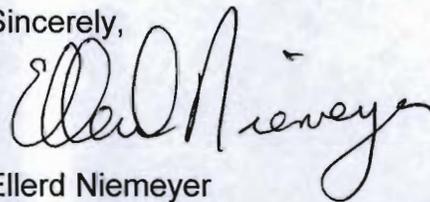
We wanted to provide the above information to you as early as possible now that it is available.

Our next step will be to begin and complete:

- 1) Proof of neighbor notice to all parties listed in 10 CSR 20-6.300(3)(C)2, maps that meets the requirement of 10 CSR 20-6.300(3)(C)4.

Please contact me at 636-742-6103 for any questions.

Sincerely,



Ellerd Niemeyer  
Operations Manager  
[ENiemeyer@landolakes.com](mailto:ENiemeyer@landolakes.com)