**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**WATER PROTECTION PROGRAM**  
**FORM W - CONCENTRATED ANIMAL FEEDING OPERATION (CAFO) OPERATING PERMIT APPLICATION**

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

<table>
<thead>
<tr>
<th>1.1 OPERATION NAME</th>
<th>CURRENT PERMIT NUMBER</th>
<th>COUNTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harder Hog Farm</td>
<td>MO 63536</td>
<td>Shelby</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>PHYSICAL ADDRESS</th>
<th>LEGAL DESCRIPTION</th>
<th>TELEPHONE NUMBER WITH AREA CODE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Edina</td>
<td>Sec.: 5 Twn.: 59N Rng.: 11W</td>
<td>(660) 342-6197</td>
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</table>

<table>
<thead>
<tr>
<th>CITY</th>
<th>STATE</th>
<th>ZIP CODE</th>
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<tbody>
<tr>
<td>Edina</td>
<td>MO</td>
<td>63537</td>
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</tbody>
</table>

### PART 2 – PERMIT TYPE AND PERMIT ACTION

2.1 PERMIT TYPE

- [ ] NPDES Site Specific Permit  
  Request review of draft permit prior to public notice.  
  [ ] Yes  
  [ ] No

- [ ] NPDES General Permit (MOG01)

- [x] State No-Discharge General Permit (MOGS1)

2.2 PERMIT ACTION*

- [x] New Permit  
- [ ] Renewal  
- [ ] Modification  
- [ ] Ownership Transfer

### 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.**

<table>
<thead>
<tr>
<th>CAFO Feature</th>
<th>Storage Structure Type(s)</th>
<th>Design Dry Process Waste (tons/yr.)</th>
<th>Days of Storage</th>
<th>Total Storage Capacity (gal)</th>
<th>Design Wastewater per Year (gal/yr.)</th>
<th>Days of Storage</th>
<th>Design Flow (MGD)</th>
</tr>
</thead>
<tbody>
<tr>
<td>001</td>
<td>C</td>
<td></td>
<td></td>
<td>2,046,382</td>
<td>1,495,162</td>
<td>500</td>
<td>.004</td>
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<tr>
<td>002</td>
<td>G</td>
<td>28</td>
<td>365</td>
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</tbody>
</table>

### PART 4 – OPERATIONAL INFORMATION

4.1 OPERATIONAL INFORMATION (SEE INSTRUCTIONS)

<table>
<thead>
<tr>
<th>SIC Code(s)</th>
<th>CAFO Class Size</th>
</tr>
</thead>
<tbody>
<tr>
<td>0213</td>
<td>IC</td>
</tr>
</tbody>
</table>

4.2 Is this an export-only operation?  

- [x] Yes  
- [ ] No

**MO 760-2112 (07-14)**
Completing PARTS 5 - 11 will meet the requirements of a Nutrient Management Plan (NMP) for an export only operation.

PART 5 – MANURE STORAGE
5.1 Do all manure storage structures have adequate storage, and operated and maintained as no discharge? ☑ Yes ☐ No

PART 6 – ANIMAL MORTALITY
6.1 PERMANENT METHOD OF DISPOSING OF ROUTINE ANIMAL MORTALITIES.
☑ Composting ☐ Rendering ☐ Send to a Landfill ☐ Incineration ☐ Other (Describe)
6.2 DESCRIPTIVE METHOD OF MORTALITY HANDLING AND STORAGE THROUGH ALL PHASES TO FINAL DISPOSAL. (EXAMPLE: MORTALITIES ARE COMPOSTED WITHIN 24 HOURS OF DEATH AND FINISHED COMPOST PRODUCT IS STORED UNDER ROOF UNTIL LAND APPLIED). ALSO DESCRIBE THE TYPE OF COMPOST STRUCTURE USED, IF APPLICABLE.
Mortalities will be removed regularly to a static pile compost facility to be constructed on-site and composted within 24 hours of death.

PART 7 – DIVERSION OF CLEAN WATER
7.1 Is clean stormwater diverted from the production area? ☑ Yes ☐ No
7.2 IF YES, DESCRIBE CONTROLS AND MEASURES USED TO DIVERT STORMWATER.
Buildings prevent stormwater from entering animal production area. Site is graded to divert storm water away from buildings.
7.3 IF NO, DESCRIBE HOW CONTAMINATED STORMWATER IS CONTAINED AND INCLUDE THE STORAGE CAPACITY OF THE CONTAINMENT IF NOT PREVIOUSLY PROVIDED.

PART 8 – PREVENT DIRECT CONTACT OF ANIMALS WITH SURFACE WATERS
8.1 Do the animals have access to waters of the state within the production area? ☐ Yes ☑ No
8.2 LIST MEASURES USED TO PREVENT CONFFINED ANIMAL FORM HAVING DIRECT CONTACT WITH WATERS OF THE STATE.
Animals are confined in buildings.

PART 9 – CHEMICAL HANDLING
9.1 Check the appropriate box below to indicate method for handling and disposal of chemicals used by the operation:
☑ Chemicals are stored, handled, and disposed of according to manufacturer labels.
☑ Chemical storage and handling areas are protected from precipitation and runoff, and any spillage is contained within these areas.
☒ Emergency procedures and equipment are in place to contain and clean up chemical spills.
☑ Equipment wash areas are designed and constructed to prevent contamination of surface waters.
☒ No chemicals are stored or handled in the production area.

PART 10 – MANURE ANALYSIS TESTING
10.1 LIST EACH TYPE OF MANURE SOURCE. (i.e., MANURE, LITTER, COMPOST, WASTE WATER.)
Manure pit wastewater and mortality compost.
10.2 DESCRIBE PROCEDURES FOR ENSURING EACH MANURE SOURCE IS TESTED ANNUALLY.
Manure/compost is collected in bottles from several locations at each storage location and are then taken to a laboratory for testing.

PART 11 – RECORD KEEPING
11.1 Are records of all inspections, manure transfers, discharges and land application maintained? ☑ Yes ☐ No

PART 12 – SIGNATURE
NAME
Nathaniel Harder

SIGNATURE

TITLE
Owner

DATE
3-27-19

House Bill 28, which became effective Aug 28, 2013, contained provisions that changed construction permitting requirements. Construction permits are required for the construction of an earthen storage structure to hold, convey, contain, store, or treat domestic, agricultural, or industrial process wastewater. Construction of all other point source systems designed to hold, convey, contain, store, or treat domestic, agricultural, or industrial process waste must be designed by a professional engineer registered in Missouri in accordance with design regulations.

Operation Name Nathaniel Harder
Address See Part 1
City

Engineer Firm Allied Engineering Services
P.O. Box 29
Bowling Green, MO 63334

City State Zip Code

Engineer Seal

Jeff Eric Browning Number E-28664

MO 780-2112 (07-14)

I, Project Engineer, certify that above described systems have been designed in accordance with Missouri CAFO design regulations in 10 CSR 20-8.300

PROJECT ENGINEER SIGNATURE

REGISTRATION PROFESSIONAL ENGINEER

STATE OF MISSOURI

RENEWED BUILDING SERVICES
PIT BARN CALCULATION SHEET

Nat Harder

Calculation of Available Volume in 8' Deep Pit Barn:

- Inside width of pit = 69'10"
- Inside length of pit = 559'8"
- Depth = 8'
- Safety Volume Depth = 1'
- Volume at 7' deep = 69'10" X 559'8" X 7' = 273,580 cu ft = 2,046,382 gallons

Calculation of waste volume produced in 8' Deep Pit Barns:

- # head/barn = 4,960
- Avg. wt. / head = 150 lbs.
- Total wt. = 4,960 hd X 150 lbs/ hd = 744,000 lbs
- From MWPS-18, Section 1 Manure Characteristics, table 7:
  - Manure production (lbs/yr) = 2,500 lbs/yr/ hd = 40.3 cu ft/yr/ hd
  - Total Manure production = 40.3 cu ft * 4,960 hd = 199,888 cu ft/yr

Average & Maximum Annual Pumpdown = 199,888 cu ft = 1,495,162 gallons

Days Storage = 500
HARDER HOG FARM
NARRATIVE SUMMARY OF DESIGN

This facility is located in Section 5, Township 59N, Range 11W in Shelby County.

The proposed farm operation will include a new 71'2" wide x 561'0" long 4,960 head (1,984 animal units) wean-to-finish deep-pit hog barn. This will be a class IC cafo operation as defined by the Missouri Department of Natural Resources.

The average weight of hogs will be 150 lbs. There will be a concrete pit under each barn that is 8' deep from the bottom of the slatted floor. Hog manure falls through the slatted floor and is collected and stored in the pits until it can be land applied on nearby farm fields. This pit has an approximate storage period of 500 days.

Land Application

The land application system will employ a custom applicator, temporary surface hose, a tankwagon, an aerway system or knife injection system and an irrigation pump to apply wastewater to nearby farm fields. The non-owned land application areas will be maintained in row crop and grass. The annual application rate will vary from year-to-year, determined by lab analysis and will be calculated using projected yields for the crop to be grown.

Dead Animals

Dead animals will be disposed of in accordance with the Missouri Department of Agriculture regulations. Dead animals from this operation will be composted on-farm. It is planned to construct a mortality compost shed with a concrete floor and a roof. The finished compost that is expected to be generated annually is 28 tons. Finished compost will be land applied at agronomic rates.

Clean Water Diversion

This farm will be graded to divert storm water away from buildings, animal confinement areas and manure storage areas.

A potential source of unplanned waste from animal confinement facilities is from storm water coming into contact with pollutants. The pollutants that could potentially contaminate the water are the hogs, manure, mortality compost, feed, diesel fuel, and oils and lubricants for farm equipment. All of these potential pollutants are kept under roof at this farm. They do not come into contact with clean rain water or add to the contaminated waste on the farm.

A common way for clean water to become contaminated is by contacting ventilated dust on the ground around the barn. To treat rainwater that becomes contaminated by this dust, the barn will be surrounded by grass. The grass acts as a filter and helps prevent erosion around the barns reducing suspended solids in the runoff.

Other operations at this farm that could potentially contribute to exposed pollutants are the loading and unloading of pigs, feed, manure, and mortality compost. When these sources are handled messes can occur. Care should be taken to not create a mess around the door of the barns, the manure pumping ports, the skirt to the compostor or at the base of the feed bins. When messes occur during these operations they will be cleaned up immediately.

Prevention of Direct Contact of Confined Animals to Waters of the State

All confined animals are housed under roof in buildings with no outside access. They have no direct access to waters of the state.
GENERAL LOCATION MAP
Nat Harder
Township 59N, Range 11W, Section 5
Shelby County Missouri
March 28, 2018

Gorden Wray
Water Pollution Control Program
P.O. Box 176
Jefferson City, MO 65102-0176

Dear Gorden,

Enclosed please find the general operating permit application for Harder Hog Farm in Shelby County. This farm will have one new 4,960 head wean-to-finish hog barn. I have enclosed a cd with a copy of the permit documents.

If you have any questions or need any additional information, please feel free to contact me.

Sincerely,

Jeff E. Browning, P.E.

Enclosures