

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**



**CONSTRUCTION PERMIT**

The Missouri Department of Natural Resources hereby issues a permit to:

Calvin Hoover  
RR 1, Box 209A  
Rutledge, MO 63563

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

March 15, 2018  
Effective Date

  
Edward B. Galbraith, Director, Division of Environmental Quality

March 14, 2020  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

Construction of a wastewater storage basin, associated piping, and septic system/grease trap for a seasonal meat processing facility.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

### **II. COST ANALYSIS FOR COMPLIANCE**

The Department is not required to complete a cost analysis for compliance because the facility is not a combined or separate sanitary sewer system for a publically-owned treatment works.

### **III. CONSTRUCTION PERMIT CONDITIONS**

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.
2. All construction shall be in accordance with the plans and specifications submitted by Allied Engineering Services, LLC on January 8, 2018.
3. The Department must be contacted in writing prior to making any changes to the approved plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(8).
4. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's Northeast Regional Office per 10 CSR 20-7.015(9)(E)2.
5. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the Department's ePermitting system available online at [dnr.mo.gov/env/wpp/epermit/help.htm](http://dnr.mo.gov/env/wpp/epermit/help.htm). See [dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm](http://dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm) for more information.

6. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of jurisdictional waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See [dnr.mo.gov/env/wpp/401/](http://dnr.mo.gov/env/wpp/401/) for more information.
7. Upon completion of construction:
  - A. Calvin Hoover will be the continuing authority for operation, maintenance, and modernization of these facilities;
  - B. Submit an electronic copy of the as built's if the project was not constructed in accordance with previously submitted plans and specifications; and
  - C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the general operating permit MOG822241 be issued.

#### **IV. REVIEW SUMMARY**

##### **1. CONSTRUCTION PURPOSE**

This facility will provide storage and treatment for the wastewater generated this meat processing facility.

##### **2. FACILITY DESCRIPTION**

This is a new system consisting of a 750 gallon septic tank and grease trap and 102 foot by 102 foot earthen basin to store the wastewater prior to land application. Wastewater will be applied to eight acres of cool season grass hay with a travelling gun irrigation system.

This facility is located at near Rutledge, in Scotland County, Missouri. The facility has a design average flow of 663 gpd.

**3. COMPLIANCE PARAMETERS**

The proposed project is required to meet the requirements of MOG822241 Tables A, B, and C.

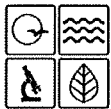
**4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA**

Proposed improvements include a 30' by 40' meat processing building along with the wastewater treatment system. This facility will process approximately 2 cows and 3 hogs per week along with approximately 50 deer per week during the 2 week deer season. The 102 foot by 102 foot, 10 foot deep storage basin will provide more than adequate storage volume for the anticipated maximum flow of 199,980 gallons per year. Storage volume is 302,243 gallons. The land application system uses a pump, temporary surface irrigation distribution pipe, a traveling gun to apply wastewater at a hydraulic rate to the near 7 acres of grass hay. Application rate will not exceed 1.3 inches per acre per year.

**5. OPERATING PERMIT**

An application for a General Operating Permit for Land Application of Food Processing Waste Water was received and MOG822241 will be issued when a statement of work completed is received by the department.

Diane Reinhardt  
Engineering Section  
[Diane.reinhardt@dnr.mo.gov](mailto:Diane.reinhardt@dnr.mo.gov)



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT –  
WASTEWATER FACILITY

RECEIVED

JAN 8 2013

Water Protection Program

AP 29061

CP0001958

| FOR DEPARTMENT USE ONLY   |                   |
|---------------------------|-------------------|
| APP NO.                   | CP NO.            |
| FEE RECEIVED<br>\$1006.00 | CHECK NO.<br>None |
| DATE RECEIVED<br>1-8-18   |                   |

JB

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Facility form is for construction pertaining to domestic wastewater treatment facilities, agrichemical facilities, and components thereof. This form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form.** **Submittal of an incomplete application may result in the application being returned.**

PART A – BASIC INFORMATION

**1.0 APPLICATION INFORMATION** (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: \_\_\_\_\_ Project #: \_\_\_\_\_
- 1.2 Is this an application for an agrichemical? ☐ YES (See instructions.) ☒ N/A
- 1.3 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
☐ YES Date of Approval: \_\_\_\_\_
- 1.4 Has the department approved the proposed project's facility plan\*?  
☐ YES Date of Approval: \_\_\_\_\_ ☐ NO ☒ N/A (If Not Applicable, complete No. 1.5.)
- 1.5 [Complete only if answered Not Applicable on No. 1.4] Is a copy of the engineering report\* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?  
☒ YES ☐ NO
- 1.6 Is a copy of the appropriate plans\* and specifications\* included with this application?  
☒ YES Denote which form is submitted: ☒ Hard copy ☐ Electronic copy (See instructions.) ☐ NO
- 1.7 Is a summary of design\* included with this application? ☒ YES ☐ NO
- 1.8 Is a general operating permit applicable?  
☒ YES Submit the appropriate operating permit application to the Regional Office at least 60 days prior to operation.  
☐ NO Enclose the appropriate operating permit application and fee submittal. Denote which form: ☐ B ☐ B2
- 1.9 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☐ YES ☒ NO
- 1.10 Is the appropriate fee included with this application? ☒ YES ☐ NO (See instructions for appropriate fee.)

\* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT

Calvin Hoover

2.2 PROJECT DESCRIPTION

Small meat processing facility with wastewater storage lagoon.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

All wastewater is collected in the storage lagoon and land applied via a traveling gun. All sludge from the septic tank and grease trap is removed off-site by a certified disposal service,

2.4 DESIGN INFORMATION

- A. Current population: \_\_\_\_\_; Design population: \_\_\_\_\_
- B. Actual Flow: 327 gpd; Design Average Flow: 663 gpd;  
Actual Peak Daily Flow: 930 gpd; Design Maximum Daily Flow: 763 gpd;  
Design Wet Weather Event: 25 yr, 24 hr

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached? ☒ YES ☐ NO
- B. Is a process flow diagram attached? ☒ YES ☐ NO

2.6 ESTIMATED PROJECT CONSTRUCTION COST

\$

**PART B – LAND APPLICATION ONLY**

(Submit only if the proposed construction project includes land application of wastewater.)

**8.0 FACILITY INFORMATION**

- 8.1 Type of wastewater to be irrigated: ☐ Domestic ☐ State/National Park ☐ Seasonal business  
☐ Municipal ☐ Municipal with a pretreatment program or significant industrial users  
☒ Other (explain) Meat Processing Facility

- 8.2 Months when the business or enterprise will operate or generate wastewater:  
☒ 12 months per year ☐ Part of the year (list months):

- 8.3 This system is designed for:  
☒ No-discharge ☐ Subsurface  
☐ Partial irrigation when feasible and discharge rest of time  
☐ Irrigation during recreational season, April – October, and discharge during November – March  
☐ Other (explain)

**9.0 STORAGE BASINS**

- 9.1 Number of storage basins: <sup>1</sup>\_\_\_\_\_ (Use additional pages if greater than two basins.)

- 9.2 Type of basins: ☐ Steel ☐ Concrete ☐ Fiberglass ☒ Earthen ☐ Earthen with membrane liner

- 9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

Basin #1: Length 102 Width 102 Depth 10 Freeboard 1 Depth Safety 1.3 % Slope 3:1  
Basin #2: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Freeboard \_\_\_\_\_ Depth \_\_\_\_\_ Safety \_\_\_\_\_ % Slope \_\_\_\_\_

- 9.4 Storage Basin operating levels (report as feet below emergency overflow level).

Basin #1: Maximum operating water level 1.31 ft Minimum operating water level 7 ft  
Basin #2: Maximum operating water level \_\_\_\_\_ ft Minimum operating water level \_\_\_\_\_ ft

- 9.5 Design depth of sludge in storage basins.

Basin #1: 2 ft Basin #2: \_\_\_\_\_ ft

- 9.6 Existing sludge depth, if the basins are currently in operation.

Basin #1: \_\_\_\_\_ ft Basin #2: \_\_\_\_\_ ft

- 9.7 Total design sludge storage: \_\_\_\_\_ dry tons and 3600 cubic feet

**10.0 LAND APPLICATION SYSTEM**

- 10.1 Type of land application: ☐ Fixed Head Sprinklers ☐ Center Pivot ☒ Traveling Gun ☐ Drip Dispersal  
☐ Subsurface Low Pressure Pipe ☐ Other (describe) \_\_\_\_\_

- 10.2 Number of irrigation sites \_\_\_\_\_ Total Acres \_\_\_\_\_ Maximum % field slopes \_\_\_\_\_

Location: \_\_\_\_\_ ¼, SE \_\_\_\_\_ ¼, SW \_\_\_\_\_ ¼, 13 Sec. 64N T 11W R Scotland County 8 Acres  
Location: \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres  
Location: \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres  
(Use additional pages if greater than three irrigation sites.)

- 10.3 Type of vegetation: ☒ Grass hay ☐ Pasture ☐ Timber ☐ Row crops  
☐ Other (describe)

- 10.4 Wastewater flow (dry weather) gallons per day: Average annual 327

Seasonal 930 Off-season 430

- 10.5 Land application rate (design flow including 1-in-10 year storm water flows):

Design: 1.28 inches/year .5 inches/hour 1.28 inches/day 1.28 inches/week  
Actual: 1.1 inches/year .5 inches/hour 1.1 inches/day 1.1 inches/week


- 10.6 Total irrigation per year (gallons): Design: 278,565 gal Actual: 241,820 gal

- 10.7 Actual months used for irrigation (check all that apply):

☐ Jan ☐ Feb ☐ Mar ☒ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

- 10.8 Land application rate is based on:

☒ Hydraulic Loading ☐ Other (describe) \_\_\_\_\_  
☐ Nutrient Management Plan (N and P) If N and P is selected, is the plan included? ☐ YES ☐ NO

| 3.0 WASTEWATER TREATMENT FACILITY  |  |   |             |  |                    |
|--|--|---|-------------|--|--------------------|
| NAME<br>Calvin Hoover  |  | TELEPHONE NUMBER WITH AREA CODE<br>(660) 342-7303 |             | EMAIL ADDRESS                              |                    |
| ADDRESS (PHYSICAL)<br>RR1, Box 209A  |  | CITY<br>Rutledge                                  | STATE<br>MO | ZIP CODE<br>63563                          | COUNTY<br>Scotland |
| Wastewater Treatment Facility: Mo- (Outfall 1 Of 1 )   |  |   |             |  |                    |
| 3.1 Legal Description: ¼, SE ¼, SW ¼, Sec. 13 , T64N , R11W<br>(Use additional pages if construction of more than one outfall is proposed.)  |  |   |             |  |                    |
| 3.2 UTM Coordinates Easting (X): 1759622.178 Northing (Y): 1644671.951<br>For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)   |  |   |             |  |                    |
| 3.3 Name of receiving streams: Long Branch-North Fabius River  |  |   |             |  |                    |
| 4.0 PROJECT OWNER  |  |   |             |  |                    |
| NAME<br>Calvin Hoover  |  | TELEPHONE NUMBER WITH AREA CODE<br>(660) 342-7303 |             | EMAIL ADDRESS                              |                    |
| ADDRESS<br>RR1, Box 209A   |  | CITY<br>Rutledge                                  | STATE<br>MO | ZIP CODE<br>63563                          |                    |
| 5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.   |  |   |             |  |                    |
| NAME<br>Same   |  | TELEPHONE NUMBER WITH AREA CODE                   |             | EMAIL ADDRESS                              |                    |
| ADDRESS  |  | CITY  | STATE       | ZIP CODE                                   |                    |
| 5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A   |  |   |             |  |                    |
| 5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.   |  |   |             |  |                    |
| A. Is a copy of the certificate of convenience and necessity included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO  |  |   |             |  |                    |
| 5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.   |  |   |             |  |                    |
| A. Is a copy of the as-filed restrictions and covenants included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO   |  |   |             |  |                    |
| B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO   |  |   |             |  |                    |
| C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO  |  |   |             |  |                    |
| D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO   |  |   |             |  |                    |
| 6.0 ENGINEER   |  |   |             |  |                    |
| ENGINEER NAME / COMPANY NAME<br>Jeff E. Browning / Allied Engineering Services, LLC  |  | TELEPHONE NUMBER WITH AREA CODE<br>(573) 324-6860 |             | EMAIL ADDRESS<br>jeff@alliedengineering.us |                    |
| ADDRESS<br>P.O. Box 29   |  | CITY<br>Bowling Green                             | STATE<br>MO | ZIP CODE<br>63334                          |                    |
| 7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility. |  |   |             |  |                    |
| PROJECT OWNER SIGNATURE<br>   |  |   |             |  |                    |
| PRINTED NAME<br>Calvin Hoover  |  |   |             | DATE<br>12/28/17                           |                    |
| TITLE OR CORPORATE POSITION<br>Owner   |  | TELEPHONE NUMBER WITH AREA CODE<br>(660) 342-7303 |             | EMAIL ADDRESS                              |                    |
| Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES<br>WATER PROTECTION PROGRAM<br>P.O. BOX 176<br>JEFFERSON CITY, MO 65102-0176  |  |   |             |  |                    |
| END OF PART A.<br>REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.  |  |   |             |  |                    |