

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



**CONSTRUCTION PERMIT**

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

Richard Umlauf  
Deer Meadows Farms  
29421 Woodhaven Road  
Edwards, MO 65326

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.

August 7, 2018  
Effective Date

  
Edward B. Galbraith, Director, Division of Environmental Quality

August 6, 2020  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

The facility proposed to construct a 100,000 gallon storage lagoon to store domestic septage when land application is not permitted due to ground conditions.

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**

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

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 BC Engineering, LLC on July 5, 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 Kansas City Regional Office per 10 CSR 20-7.015(9)(E)2.
5. The wastewater treatment facility shall be located at least fifty feet (50') from any dwelling or establishment.
6. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
7. Wastewater treatment facility shall not be located within one hundred feet (100'), and preferably three hundred feet (300') of any water well or water supply structure.
8. 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.
9. 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.
10. Upon completion of construction:
  - A. The Deer Meadows Farms will become 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 operating permit MOG821142 to be modified.

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

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

The storage volume of the facility is increased 100,000 gallons by constructing a septage storage lagoon.

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

Land Application and storage of domestic septage removed from septic tanks. This project is adding a 100,000 gallon storage lagoon to store domestic septage when land application is not permitted due to ground and weather conditions.

The Deer Meadows Farms WWTF is located at 29421 Woodhaven Road, Edwards City, in Benton County, Missouri.

##### **3. COMPLIANCE PARAMETERS**

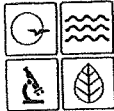
The proposed project is required to monitor storage basin freeboard, daily precipitation, daily volume land applied, application area and application rate.

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

Storage Lagoon – Lagoon will be constructed and sealed with 6 inches bentonite due to the site condition of a severe overall geologic-limitations rating. Bentonite will be applied at the rate of two (2) pound per square foot, one (1) pound in one direction then one (1) pound per square foot in a perpendicular direction. The basin will have 3:1 sloping walls, the depth from the top of the berms to the lagoon floor will be 7 ft, 1 ft will serve as sludge depth, and 1 ft of freeboard provides an operating depth of 5 ft. The basin is non-aerated and has a surface area of 5950 ft<sup>2</sup> and a wastewater volume of 100,000 gallons. This provides approximately 365 days of retention at the 1 in 10-year rainfall minus evaporation for the proposed storage period. The berm width will be 4 ft.

##### **5. OPERATING PERMIT**

Operating permit MOG821142 will require a modification to reflect the construction activities. 60 days prior to the lagoon operation, submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D), Form E - Application for General Permit under Missouri Clean Water Law, Form--MO 780-0795, [dnr.mo.gov/forms/780-0795-f.pdf](http://dnr.mo.gov/forms/780-0795-f.pdf), along with \$100 permit modification fee and request the operating permit modification be issued.



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM  
**APPLICATION FOR CONSTRUCTION PERMIT**  
**WASTEWATER FACILITY**

RECEIVED  
114-05 2018  
Water Protection Program

|                            |                   |
|----------------------------|-------------------|
| AP30199 CP0002009          |                   |
| FOR DEPARTMENT USE ONLY    |                   |
| APP NO.                    | CP NO.            |
| FEES RECEIVED<br>\$1000.00 | CHECK NO.<br>5169 |
| DATE RECEIVED<br>7-5-18    |                   |

**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. 1.4.)
- 1.5 [Complete only if answered Not Applicable on No. 1.3.] 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

Deer Meadows Farms

2.2 PROJECT DESCRIPTION

Add storage lagoon when ground is not suitable for land application of septage.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

2.4 DESIGN INFORMATION

A. Current population: \_\_\_\_\_; Design population: \_\_\_\_\_

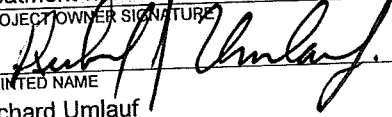
B. Actual Flow: \_\_\_\_\_ gpd; Design Average Flow: 274 gpd;  
Actual Peak Daily Flow: 274 gpd; Design Maximum Daily Flow: 274 gpd; Design Wet Weather Event: 274

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

\$

|  |  |   |                     |   |
|--|--|---|---------------------|---|
| <b>3.0 WASTEWATER TREATMENT FACILITY</b>   |  |   |                     |   |
| NAME<br>Deer Meadows farms   |  | TELEPHONE NUMBER WITH AREA CODE                   |                     | EMAIL ADDRESS                             |
| ADDRESS (PHYSICAL)<br>29421 Westhaven Road   |  | CITY<br>Edwards                                   | STATE<br>MO         | ZIP CODE<br>65326                         |
| COUNTY<br>Benton   |  |   |                     |   |
| Wastewater Treatment Facility: Mo- G821142 (Outfall      Of      )   |  |   |                     |   |
| 3.1 Legal Description:      ¼, SE      ¼, NE      ¼, Sec. 25      , T 39N      , R 21W<br>(Use additional pages if construction of more than one outfall is proposed.)   |  |   |                     |   |
| 3.2 UTM Coordinates Easting (X):      Northing (Y):<br>For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)  |  |   |                     |   |
| 3.3 Name of receiving streams:   |  |   |                     |   |
| <b>4.0 PROJECT OWNER</b>   |  |   |                     |   |
| NAME<br>Richard Umlauf   |  | TELEPHONE NUMBER WITH AREA CODE                   |                     | EMAIL ADDRESS                             |
| ADDRESS<br>29421 Westhaven Road  |  | CITY<br>Edwards                                   | STATE<br>MO         | ZIP CODE<br>65326                         |
| 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>Richard Umlauf   |  | TELEPHONE NUMBER WITH AREA CODE                   |                     | EMAIL ADDRESS                             |
| ADDRESS<br>29421 Westhaven Road  |  | CITY<br>Edwards                                   | STATE<br>MO         | ZIP CODE<br>65326                         |
| 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   |  |   |                     |   |
| <b>6.0 ENGINEER</b>  |  |   |                     |   |
| ENGINEER NAME / COMPANY NAME<br>Bowden Campbell / BC Engineering, LLC  |  | TELEPHONE NUMBER WITH AREA CODE<br>(660) 438-6835 |                     | EMAIL ADDRESS<br>bowdencampbell@gmail.com |
| ADDRESS<br>23332 Highway 7   |  | CITY<br>Warsaw                                    | STATE<br>MO         | ZIP CODE<br>65355                         |
| 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>Richard Umlauf   |  |   | DATE<br>July 2 2018 |   |
| TITLE OR CORPORATE POSITION<br>Owner   |  | TELEPHONE NUMBER WITH AREA CODE<br>417-998-6520   |                     | 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.   |  |   |                     |   |
| REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.  |  |   |                     |   |