

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



**CONSTRUCTION PERMIT**

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

Scotty Dudenhoeffer  
CRMSS Properties, LLC  
Lodges on CC WWTF  
951 Highway CC  
Linn, MO 65051

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.

November 27, 2023  
Effective Date

November 26, 2025  
Expiration Date

  
\_\_\_\_\_  
John Hoke, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

This project will consist of two septic tanks being placed underground as well as a sampling manhole and the construction of a non-discharging lagoon. The lagoon is constructed to design standards and is 8 feet high, with a storage volume of 437,490 gallons. Design flow is 2,400 gallons per day (gpd), and peak flow is 10,750 gpd.

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 consistent with plans and specifications signed and sealed by Dennis Sievers, P.E., and as described in this permit.
3. The Department must be contacted in writing prior to making any changes to the 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(11).

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)(G).
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 <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
6. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
  - Flood protection shall apply to new construction and to existing facilities undergoing major modification. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the 100 year flood elevation. 10 CSR 20-8.140 (2) (B)
  - Unless another distance is determined by the Missouri Geological Survey or by the department's Public Drinking Water Branch, the minimum distance between wastewater treatment facilities and all potable water sources shall be at least 300 feet. 10 CSR 20-8.140 (2) (C) 1.
  - No treatment unit with a capacity of 22,500 gpd or less shall be located closer than the minimum distance of 200 feet to a neighboring residence and 50 feet to property line for lagoons; 200 feet to a neighboring residence for open recirculating media filters following primary treatment; and 50 feet to a neighboring residence for all other discharging facilities. See 10 CSR 20-2.010(68) for the definition of a residence. 10 CSR 20-8.140 (2) (C) 2
  - Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D)
  - Enclose the pump and haul facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140 (4) (A) 2
  - Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards. The following shall be provided to fulfill the particular needs of each wastewater treatment facility:
    - Fencing. Enclose the facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140 (8) (A)
    - Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140 (8) (B)

- First aid equipment; 10 CSR 20-8.140 (8) (C)
  - Posted “No Smoking” signs in hazardous areas; 10 CSR 20-8.140 (8) (D)
  - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140 (8) (E)
- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20-8.140 (7) (D) 1.
- A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140 (7) (E)
- A septic tank must have a minimum capacity of at least 1,000 gallons. 10 CSR 20-8.180 (2) (A)
- Lagoon berms shall be constructed of relatively impervious material and compacted to at least 95 percent maximum dry density test method to form a stable structure. 10 CSR 20-8.200(4)(A)1.
- The minimum berm width shall be eight feet to permit access of maintenance vehicles. 10 CSR 20-8.200(4)(A)2.
- Minimum freeboard shall be two feet. 10 CSR 20-8.200(4)(A)3.
- An emergency spillway shall be provided that—
  - Prevents the overtopping and cutting of berms; 10 CSR 20-8.200(4)(A)4.A.
  - Is compacted and vegetated or otherwise constructed to prevent erosion; 10 CSR 20-8.200(4)(A)4.B. and
  - Has the ability for a representative sample to be collected, if discharging. 10 CSR 20-8.200(4)(A)4.C.
- The soil of the lagoon bottom shall be compacted with the moisture content between 2 percent below and 4 percent above the optimum water content and compacted to at least 95 percent maximum dry density test method. 10 CSR 20-8.200(4)(B)
- The lagoon shall be sealed to ensure that seepage loss is as low as possible and has a design permeability not exceeding  $1.0 \times 10^{-7}$  cm/sec. 10 CSR 20-8.200(4)(C)1.
- The minimum thickness of the compacted clay liner must be 12 inches. For permeability coefficients greater than  $1.0 \times 10^{-7}$  cm/sec or for heads over 5 feet such as an aerated lagoon system, the following formula shall be used to determine minimum seal thickness, Equation 200-1 per 10 CSR 20-8.200(4)(C)2.:

Equation 200-1

$$t = \frac{H \times K}{5.4 \times 10^{-7} \text{ cm/sec}}$$

where:

K = the permeability coefficient of the soil in question;

H = the head of water in the lagoon; and

t = the thickness of the soil seal.

- Seep collars shall be provided on drainpipes where they pass through the lagoon seal. 10 CSR 20-8.200(4)(C)4.
  - Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200 (4) (D) 1.
  - A manhole shall be installed with its invert at least 6 inches above the maximum operating level of the lagoon, prior to the entrance into the primary cell, and provide sufficient hydraulic head without surcharging the manhole. 10 CSR 20-8.200 (4) (D) 2.
  - The influent line(s) shall be located along the bottom of the lagoon so that the top of the pipe is just below the average elevation of the lagoon seal; however, there shall be an adequate seal below the pipe. 10 CSR 20-8.200 (4) (D) 3.
7. Upon completion of construction:
- A. Scotty Dudenhoeffer will become the continuing authority for operation and maintenance 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;
  - C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N)

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

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

The State Technical College of Missouri needs additional student housing close to town, so two 12 person apartment buildings have been constructed on Highway CC outside Linn, MO and are in need of more permanent waste water storage capabilities.

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

This is a new storage lagoon being constructed to provide preliminary treatment and storage of domestic wastewater created from the Lodges on CC apartment buildings. The sludge and wastewater from the lagoon will be pumped and hauled to another treatment facility contractually with a waste hauler. The sludge and wastewater will be taken to one of two locations around the area: Alliance Water Resources, Inc Lake of the Ozarks plant, or the Columbia landfill.

The Lodges on CC WWTF is located at 1206 Highway CC, City of Linn, in Osage County, Missouri. The facility has a design average flow of 2,400 gpd and serves a hydraulic population equivalent of approximately 24 people.

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

- Single-Cell Lagoon – Influent is gravity fed into the lagoon cell by six-inch PVC. The lagoon surface is rectangular with a width of 166 ft and length of 71 ft at the surface (29'x120' at the bottom). The total depth is 8 feet, with a 3:1 inner-berm side slope. The seal will be bentonite clay compacted to meet chapter 8 requirements. The lagoon is non-discharging and will be pump and hauled regularly according to the contract with Advanced Septic and Plumbing.
- Septic Tank – Two septic tanks in parallel provide passive primary treatment as the settle able solids in raw wastewater settle onto the bottom of the tank. Raw wastewater will flow by gravity to the 1500 gallon compartment septic tank. When the water level reaches a certain height, the wastewater flows into the manhole by two tee-drop pipes. The septic tanks provide approximately 1.25 days of detention at design average flow. The wastewater shall discharge into the lagoon. Settled solids in the septic tank shall be removed by a contract hauler.

### **V. NOTICE OF RIGHT TO APPEAL**

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

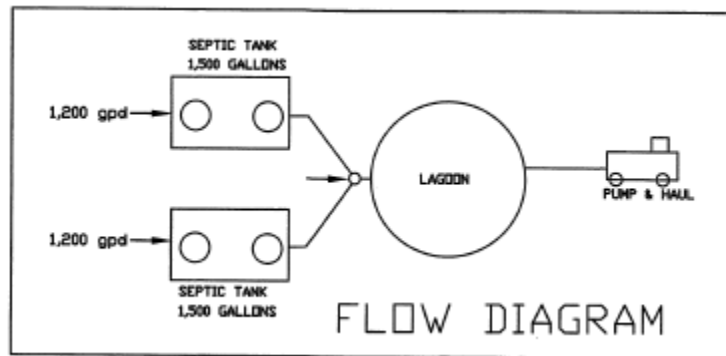
Administrative Hearing Commission  
U.S. Post Office Building, Third Floor  
131 West High Street, P.O. Box 1557  
Jefferson City, MO 65102-1557  
Phone: 573-751-2422  
Fax: 573-751-5018  
Website: <https://ahc.mo.gov>

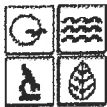
Alex Bielefeldt, EI  
Engineering Section  
[alex.bielefeldt@dnr.mo.gov](mailto:alex.bielefeldt@dnr.mo.gov)

Chai-Wei Young, P.E.  
Engineering Section  
[Chai-wei.young@dnr.mo.gov](mailto:Chai-wei.young@dnr.mo.gov)

## **APPENDIX**

- **Process Flow Diagram**





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

FOR DEPARTMENT USE ONLY	
APP NO	CP NO
FEE RECEIVED	CHECK NO
DATE RECEIVED	

### APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Treatment Facility 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 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
☐ YES Date of Approval: \_\_\_\_\_ ☒ N/A
- 1.3 Has the department approved the proposed project's facility plan\*?  
☐ YES Date of Approval: \_\_\_\_\_ ☒ NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan\* for wastewater treatment facilities included with this application?  
☒ YES ☐ NO ☐ Exempt because \_\_\_\_\_
- 1.5 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
- 1.6 Is a summary of design\* included with this application? ☒ YES ☐ NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?  
☐ YES Date of submittal: \_\_\_\_\_  
☐ Enclosed is the appropriate operating permit application and fee submittal. Denote which form: ☐ A ☐ B ☐ B2  
☐ N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? ☐ YES ☒ NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☐ YES ☒ NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application? ☒ YES ☐ NO  
See Section 7.0

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

#### 2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT Lodges on CC WWTF	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 30,000.00
2.3 PROJECT DESCRIPTION Domestic wastewater from two apartment buildings will flow to septic tanks and into a lagoon. Effluent from the lagoon will be pumped and hauled to an appropriate wastewater treatment plant.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION Periodic removal of sludge from tanks will be pumped and hauled to an appropriate disposal site.	
2.5 DESIGN INFORMATION A. Current population: <u>18</u> ; Design population: <u>24</u> B. Actual Flow: _____ gpd; Design Average Flow: <u>2,400</u> gpd; Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: _____ gpd; Design Wet Weather Event: _____	
2.6 ADDITIONAL INFORMATION A. Is a topographic map attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO B. Is a process flow diagram attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	



<b>3.0 WASTEWATER TREATMENT FACILITY</b>				
NAME Lodges on CC WWTF		TELEPHONE NUMBER WITH AREA CODE 573-694-1989		E-MAIL ADDRESS
ADDRESS (PHYSICAL) Hwy CC	CITY Linn	STATE MO	ZIP CODE 65051	COUNTY Osage
Wastewater Treatment Facility: Mo- N/A (Outfall Of )				
3.1 Legal Description: _____ 1/4, _____ 1/4, _____ 1/4, Sec. _____, T _____, R _____ (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 3826 N Northing (Y): 9148 W For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: N/A				
<b>4.0 PROJECT OWNER</b>				
NAME Scotty Dudenhofer		TELEPHONE NUMBER WITH AREA CODE 573-694-1989		E-MAIL ADDRESS ScottyDudenhofer@gmail.com
ADDRESS 951 Hwy CC	CITY Linn	STATE MO	ZIP CODE 65051	
<b>5.0 CONTINUING AUTHORITY:</b> A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements.				
NAME Same as Owner		TELEPHONE NUMBER WITH AREA CODE		E-MAIL 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 checked="" 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 Dennis Sievers, The Sewage Doctor, LLC		TELEPHONE NUMBER WITH AREA CODE 573-808-1875		E-MAIL ADDRESS thesewagedoctor@gmail.com
ADDRESS 1209 Straton Dr.	CITY Columbia	STATE MO	ZIP CODE 65203	
<b>7.0 APPLICATION FEE</b>				
<input checked="" type="checkbox"/> CHECK NUMBER <input type="checkbox"/> JETPAY CONFIRMATION NUMBER				
<b>8.0 PROJECT OWNER:</b> I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
PROJECT OWNER SIGNATURE 				
PRINTED NAME Scotty Dudenhofer		DATE 10-2-23		
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE 573-694-1989		E-MAIL ADDRESS ScottyDudenhofer@gmail.com
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176				
<b>END OF PART A.</b>				
<b>REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.</b>				