

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



**CONSTRUCTION PERMIT**

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

Ray Evans  
Oak Forest Homeowners' Association  
PO Box 2340  
Rolla, MO 65402

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.

February 24, 2022  
Effective Date

February 23, 2024  
Expiration Date

Chris Wieberg, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

Modification to an existing sewage treatment facility by the addition of a tablet chlorinator, a chlorine contact chamber with an effective volume of approximately 593 gallons, a tablet dechlorinator, and all the necessary appurtenances to make the facilities complete and usable to treat the waste from a population equivalent of 181 with an average daily discharge of 13,000 gallons. This facility discharges to a Tributary to Burgher Branch, Phelps County.

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 Joseph Heberlie, P.E. with Missouri Engineering Company 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 Southeast Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
6. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the one hundred- (100-) year flood elevation per 10 CSR 20-8.140(2)(B). The minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300') per 10 CSR 20-8.140(2)(C)1.
7. 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.
8. A United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Department of the Army permit and a Section 401 Water Quality Certification issued by the Department may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied or notification is provided that no Section 404 permit is required by the USACE. You must contact your local USACE district since they determine what waters are jurisdictional and which permitting requirements may apply. You may call the Department's Water Protection Program, Operating Permits Section at 573-522-4502 for more information. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.
9. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.

10 CSR 20-8.190 Disinfection.

- Contact period for Chlorine Disinfection. A minimum contact period of fifteen (15) minutes at design peak hourly flow or maximum rate of pumpage shall be provided after thorough mixing. 10 CSR 20-8.190 (3) (A)
- Solid dechlorination systems shall not be located in the chlorine contact tank. 10 CSR 20-8.190 (4) (B) 1.

10. Upon completion of construction:

- A. Submit an electronic copy of the as built if the project was not constructed in accordance with previously submitted plans and specifications; and
- B. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification be issued.

**IV. REVIEW SUMMARY**

**1. CONSTRUCTION PURPOSE**

Seasonal *E. coli* limits become effective no later than November 1, 2022. This construction permit allows construction of the necessary disinfection equipment to meet bacteria limitations.

**2. FACILITY DESCRIPTION**

The existing treatment facility is an extended aeration mechanical plant, the design population equivalent is 181 and the design flow is 13,000 GPD. The facility will be modified with the addition of a tablet chlorinator, a chlorine contact tank, and a tablet dechlorinator. The new construction will be located such that it intercepts the facility outfall pipe. The existing design flow and outfall location will remain unchanged. Outfall location: UTM zone 15; X = 610393, Y = 4203189

The Oak Forest Subdivision WWTP is located at 1504 Red Oak Drive, north of Old St. James Road, near the City of Rolla, Phelps County, Missouri.

**3. COMPLIANCE PARAMETERS**

The proposed project is expected to enable the facility meet the final effluent limits of 206 #/100mL monthly average and 1030 #/100mL daily maximum *E. coli* and less than 130 µg/L monthly average and daily maximum total residual chlorine.

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

Tablet Chlorinator – Installation of a tablet chlorination dispenser [Norweco Bio-Dynamic®, Model ITR 2000S or equal] receiving treatment plant effluent and prior to the chlorine contact tank. The tablet chlorinator has a design flow capacity of 20,000 gpd and a maximum peak flow capacity of 100,000 gpd. The system will dispense calcium hypochlorite as the wastewater comes into contact with the tablets.

Chlorine Contact Tank – Installation of a pre-cast concrete tank with inside dimensions of 7.5 ft. x 5 ft., effective water depth of 32 inches, with five end-around baffles allowing for at least 40:1 length to width ratio. Total effective contact volume of approximately 593 gallons. This volume allows for a 15 minute contact time during a peak flow of 56,000 gpd.

Tablet Dechlorinator – Installation of a tablet dechlorination dispenser [Norweco Bio-Dynamic®, Model ITR 2000S or equal] receiving the chlorinated effluent and prior to the outfall. The tablet dechlorinator has a design flow capacity of 20,000 gpd and a maximum peak flow capacity of 100,000 gpd. The system will dispense sodium sulfite as the effluent comes into contact with the tablets.

## **5. OPERATING PERMIT**

Operating permit MO-0113263 will require a modification to reflect the construction activities. Form B - Application for an Operating Permit for Domestic or Municipal Wastewater ( $\leq 100,000$  gallons per day) along with the modification fee of \$150.00 was received by the Department on October 4, 2021. The modified operating permit for Oak Forest Subdivision WWTP, MO-0113263, was placed on public notice on January 14, 2022.

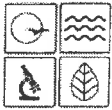
Upon completion of project submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification be issued.

## **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>

Andrew Appelbaum P.E.  
Engineering Section  
[andy.appelbaum@dnr.mo.gov](mailto:andy.appelbaum@dnr.mo.gov)



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

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1000.00	CHECK NO. 1102
DATE RECEIVED 10-4-21	[Signature]

**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: 5/27/2021  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  
 Oak Forest Subdivision Wastewater Treatment Plant

2.2 PROJECT DESCRIPTION  
 Add disinfection with tablet chlorination, contact basin and tablet de-chlorination prior to discharge.


2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION  
 Sludge is stored on site then transferred to another facility for further processing.

2.4 DESIGN INFORMATION  
 A. Current population: 178; Design population: 181  
 B. Actual Flow: 1,500 gpd; Design Average Flow: 13,000 gpd;  
 Actual Peak Daily Flow: 54,080 gpd; Design Maximum Daily Flow: 54,080 gpd;  
 Design Wet Weather Event: 54,080

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  
 \$ 15,000.00

RECEIVED  
 OCT 4 2021  
 Water Protection Program

<b>3.0 WASTEWATER TREATMENT FACILITY</b>				
NAME Oak Forest Subdivision Wastewater Treatment Plant		TELEPHONE NUMBER WITH AREA CODE (573) 466-1784		EMAIL ADDRESS evanslvre1984@gmail.com
ADDRESS (PHYSICAL) 1504 Red Oak Drive		CITY Rolla	STATE MO	ZIP CODE 65401
COUNTY Phelps				
Wastewater Treatment Facility: Mo-0113263 (Outfall 1 Of 1 )				
3.1 Legal Description: SW ¼, NE ¼, SW ¼, Sec. 31 , T 38N , R 7W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 610393 Northing (Y): 4203189 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: Tributary to Burgher Branch				
<b>4.0 PROJECT OWNER</b>				
NAME Oak Forest Homeowners' Association		TELEPHONE NUMBER WITH AREA CODE (573) 466-1784		EMAIL ADDRESS evanslvre1984@gmail.com
ADDRESS PO Box 2340		CITY Rolla	STATE MO	ZIP CODE 65402
<b>5.0 CONTINUING AUTHORITY:</b> Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.				
NAME Same as above		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 checked="" type="checkbox"/> NO <input 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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
<b>6.0 ENGINEER</b>				
ENGINEER NAME / COMPANY NAME Joseph G Heberlie, Missouri Engineering Company		TELEPHONE NUMBER WITH AREA CODE (573) 364-4003		EMAIL ADDRESS jheberlie@moengco.com
ADDRESS PO Box 13		CITY Rolla	STATE MO	ZIP CODE 65402
<b>7.0 PROJECT OWNER:</b> 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 				
PRINTED NAME Ray Evans				DATE 9/30/21
TITLE OR CORPORATE POSITION Oak Forest HOA, President		TELEPHONE NUMBER WITH AREA CODE (573) 466-1784		EMAIL ADDRESS evanslvre1984@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>				