

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



**CONSTRUCTION PERMIT**

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

Gloria Phipps  
Phipps Rentals, LLC  
13000 CR7130  
Rolla, MO 65401

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.

July 16, 2018  
Effective Date

July 15, 2020  
Modification Date

July 15, 2021  
Expiration Date

  
Edward B. Galbraith, Director, Division of Environmental Quality

  
Chris Wieberg, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

Conversion of an existing recirculating sand filter to a no-discharge wastewater treatment system. Maintain use of two existing septic tanks. Installation of three tanks in series, each with a nominal capacity of 6500 gallons; final tank to act as pump tank with an effluent filter located in tank. Two submersible effluent pumps (Liberty FL 150, 1.5 H.P) for dosing absorption field, each with a capacity of 90 GPM at a TDH of 44 feet, approximately 730 lineal feet of 2-inch and 3-inch PVC force main, LPP (low-pressure pipe) soil absorption system with an absorption area of 21,000 square feet, separated into four zones; and all the necessary appurtenances to make the facilities complete and usable to treat the waste from a population equivalent of 42, with an average daily dry weather flow of 4,200 gallons. This is a non-discharging facility to be located in the SW1/4, of the NE 1/4, of Section 27, T37N, R8W, Phelps County, Missouri.

Approximate Drainfield location: UTM (zone 15)      X=606050, Y=4196130

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.

A closure plan will need to be submitted to the Southeast Regional Office for review and approval prior to any closure activities.

### **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 Shoreline Surveying & Engineering on June 28, 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 Southeast 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. 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.
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 [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.
8. 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.

9. A full closure plan shall be submitted to the Department's Southeast Regional Office for review and approval of any permitted wastewater treatment system being replaced. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit No. MO-0132471. Closure shall not commence until the submitted closure plan is approved by the Department.
10. Upon completion of construction:
  - A. Submit an electronic copy of the as builts 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)(D). Request that the operating permit modification be issued. Operating Permit MO-0132471 will be transferred to a general Permit, MOG823xxx.

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

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

The owner has decided to install a non discharging treatment system. Final limits for the existing discharging recirculating sand filter became effective March 1, 2018 and include ammonia limitations. Discharge limits will not apply to a no-discharge system.

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

The existing treatment facility is a recirculating sand filter that discharges to a tributary to Wolf Creek. The new system will reuse the septic tanks from the existing system and include a new pump tank and a LPP (low pressure pipe) soil absorption system. The design flow will be reduced slightly from 4403 gpd to 4200 gpd.

The Phipps MHP treatment facility is located at 13000 CR 7130, Rolla, in Phelps County. The proposed facility has a design average flow of 4200 gpd and design population equivalent of 42.

### **3. COMPLIANCE PARAMETERS**

The proposed project is required to meet the requirements of MOG823xxx, and all applicable conditions, with an expiration date of August 24, 2022. There are no reporting requirements for the type of system proposed.

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

The design flow is based on serving 14 mobile homes considering 3.0 persons per unit at 100 gallons per person. The existing recirculating sand filter is to be closed. Existing septic tanks will remain in use, two tanks each with a volume of 3500 gallons. Three new tanks in series to be installed, each with a volume of approximately 6500 gallons, last tank to act as pumping tank. A Zaebl model A600 - 12 series filter will be placed on the incoming pipe inside the pumping tank. Two Liberty model FL 150 dosing pumps will be installed, each with a capacity of 90 gpm at a TDH of 44. Approximately 140 feet of 3 inch Sch 40 PVC force main connected to an Orenco model V6404A, 4-way automatic flow distribution valve. Manifold pipe from the distribution valve to the distribution laterals will be 2-inch Sch 40 PVC. Each zone to have 14 laterals, 75 feet in length, spaced 5 feet on center. Distribution laterals will be 1.0 inch PVC with 5/32-inch holes every 5 feet. Timer will control dosing of water to the field. Each zone to be dosed approximately 5.8 minutes, 2 times per day.

LPP absorption field to be 21,000 sq. ft., divided into 4 equal zones; each zone to have 14 laterals, each 75 feet long placed 5 feet apart; the irrigation pipe will be 1.0 inch pvc with a 5/32-inch hole every five feet. Set-back distance from the absorption field to the property boundary is detailed on the plans as approximately 50 feet to the south at the nearest point. Set back distance from the absorption field to the existing well located on the property is shown as approximately 300 feet. Absorption field size is based on a soil loading rate of 0.20 gallons per square foot per day. The soil is a silt loam at the distribution depth of 6 inches, and a silt loam or clay loam at the 12 inch depth and 24 inch depths (based on pits #4 and #5). A curtain drain will be installed along the upslope portion of the absorption field; set back will be at least 10 feet away from the absorption field. Detailed soil analysis was performed by Mr. Dennis Meinert, Soil Scientist. The loading rate and curtain drain are in accordance with the recommendations in the soil report.

## **5. OPERATING PERMIT**

After completion of construction project submit: statement of work completed, and as-builts. Missouri State Operating Permit MO-0132471 will be terminated and replaced with MSOP General Permit MO-G823xxx, after receipt of the statement of work completed.

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



RECEIVED

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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM

Water Protection Program

**APPLICATION FOR CONSTRUCTION PERMIT –  
WASTEWATER FACILITY**

## FOR DEPARTMENT USE ONLY

APP NO.

CP NO.

FEE RECEIVED

CHECK NO.

DATE RECEIVED

11/6/17  
1000<sup>00</sup>2981  
J.S.**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**

Phipps WWTF Replacement

**2.2 PROJECT DESCRIPTION**

Convert current RSF (MO-0132471) into a no discharge land application system.

**2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION**

N/A

**2.4 DESIGN INFORMATION**

- A. Current population: 20; Design population: 42
- B. Actual Flow: 2000 gpd; Design Average Flow: 2100 gpd;  
Actual Peak Daily Flow: 2400 gpd; Design Maximum Daily Flow: 4200 gpd;  
Design Wet Weather Event: \_\_\_\_\_

**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 <b>Phipps Mobile Home Park</b>		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS
ADDRESS (PHYSICAL) <b>13000 CR 7130</b>	CITY <b>Rolla</b>	STATE <b>MO</b>	ZIP CODE <b>65401</b>	COUNTY <b>Phelps</b>
Wastewater Treatment Facility: Mo-0132471 (Outfall#001 Of 4952 )				
3.1 Legal Description: $\frac{1}{4}$ , NW $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 27 , T 37 , R 8W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 606093 Northing (Y): 4196185 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: Unnamed Tributary to Wolf Creek				
<b>4.0 PROJECT OWNER</b>				
NAME <b>Phipps Rentals LLC</b>		TELEPHONE NUMBER WITH AREA CODE		EMAIL ADDRESS
ADDRESS <b>P.O. Box 456</b>	CITY <b>Rolla</b>	STATE <b>MO</b>	ZIP CODE <b>65402</b>	
<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 <b>*SAME AS ABOVE*</b>		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				
<b>6.0 ENGINEER</b>				
ENGINEER NAME / COMPANY NAME <b>Jared W. Wheaton/Shoreline Surveying &amp; Engineering</b>		TELEPHONE NUMBER WITH AREA CODE <b>(573) 392-3312</b>		EMAIL ADDRESS <b>jared@shorelinese.com</b>
ADDRESS <b>3048 Hwy 52</b>	CITY <b>Eldon</b>	STATE <b>MO</b>	ZIP CODE <b>65026</b>	
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				
PRINTED NAME <b>Gloria Phipps</b>			DATE <b>11/2/17</b>	
TITLE OR CORPORATE POSITION <b>Owner</b>			TELEPHONE NUMBER WITH AREA CODE	
			EMAIL ADDRESS <b>bebasPhipps@embarg, m</b>	
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176				
END OF PART A. REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.				