

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Liberty Utilities (Missouri Water) LLC
Bruce Robinson, Operations Manager
Valley Woods Subdivision WWTF Improvements
241 Valley Woods Road
Spokane, MO 65754

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.

June 8, 2026
Effective Date

June 7, 2028
Expiration Date

Heather Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

This project is to replace one of the two existing recirculating media filters of the Valley Woods Water Company Wastewater Treatment Facility (WWTF). The existing filter to be replaced is the East Filter of the WWTF. The new media filter is the same size and location as the existing filter. The design flow of this WWTF is also reduced to 7,424 gallons per day (gpd) from 10,160 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 publicly 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 Morgan Neal, P.E., with OWN Inc. 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 Southwest 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. 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.
7. 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 one hundred- (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 three hundred feet (300'). 10 CSR 20-8.140(2)(C)1.
 - Open recirculating media filters following primary treatment with a capacity of twenty-two thousand five hundred gallons per day (22,500 gpd) or less shall be located at the minimum distance of 200' to a neighboring residence. 10 CSR 20-8.140(2)(C)2; 10 CSR 20-8.180(3)(A)
 - A minimum of two (2) recirculating media filter beds and a diversion box are required for all design flows. 10 CSR 20-8.180(3)(B)

- Dosing. Both timer and float switch controls are required; timers are the primary method of operation, and the float switch control is a back-up. 10 CSR 20-8.180(3)(C)
 - Loading. Hydraulic loading rate shall 1. Follow the manufacturer's recommendation for synthetic media filters; and 2. Not exceed three and one-half gallons per day per square foot (3.5 gpd/sqft) for sand or rock filters. 10 CSR 20-8.180(3)(D)
 - Media Characteristics. The media is any of a number of physical structures whose sole purpose is to provide a surface to support biological growth. Commonly used media includes rock, gravel, and sand of various sizes, textile media, and peat. Finely crushed limestone, dolomite, slag, any clay, limestone, or appreciable amounts of organic material is not acceptable. 1. Rock, sand, and gravel media, when used shall A. Be a total of at least thirty-three inches (33") deep; and B. Have at least twenty-four inches (24") of fine filtering media. 10 CSR 20-8.180(3)(E)
8. Upon completion of construction:
- A. Submit an electronic copy of the as built's if the project was not constructed in accordance with previously submitted plans and specifications; and
 - B. Submit the Statement of Work Completed form to the department in accordance with 10 CSR 20-6.010(5)(N) (<https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>) and request the operating permit modification public noticed on April 24, 2026 be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Liberty Utilities (Missouri Water) LLC (Liberty Utilities) owns and operates Valley Woods Water Company WWTF. Liberty Utilities evaluated the WWTF and found one of the recirculating sand filters was deteriorated and needed to be replaced. Liberty Utilities also determined the actual flows of the WWTF were much less than 10,160 gallons per day (gpd). Therefore, Liberty Utilities proposes to replace the existing filter with the same size and reduce the design flow from 10,160 gpd to 7,424 gpd.

2. FACILITY DESCRIPTION

The Valley Woods Water Company WWTF is located at 241 Valley Woods Road, Spokane, in Christian County, Missouri. The WWTF consists of two parallel treatment trains that combine immediately before discharging into a tributary of East Prong Goff Creek. Each treatment train includes a septic and dosing tank, one recirculating sand filter, tablet chlorination, baffled chlorine contact basin, and tablet dechlorination. The facility has a design average flow of 7,424 gpd and serves approximately 109 people.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits as established in Operating Permit MO-0116971.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Existing major components that will remain in use include the following:

All existing major components will remain in use except the East Filter will be replaced with the new one.

Construction will cover the following items:

Recirculating Media Filter – A new concrete recirculating media filter will be installed. The filter bed is approximately 27.8 ft x 48 ft x 6 ft deep for a surface area of 1,334 ft². Together with the West Filter's surface area of 787 ft², the two filters will have a total surface area of 2,121 ft². This provides the hydraulic loading of 3.5 gpd/ft² at design average flow of 7,424 gpd. The PVC laterals spaced 2-ft apart with 14 1/8-inch shielded orifices per lateral. The laterals are located in the center of the top 6-inch layer of 1/2-inch gravel. The filter media layer is 3 ft deep containing media with an effective size of 3 mm to 5 mm and a uniformity coefficient less than 2.5. The underdrain layers include a 6-inch layer of 1/4 to 1/2-inch gravel on top, a 4-inch layer of 1/2-inch to 1-inch gravel in the middle, and 1-inch gravel at the bottom. The filter bed contains 4 underdrains comprised of 4-inch slotted PVC piping with approximate 7-ft spacing. The underdrains flow by gravity to the existing recirculation tank where the wastewater then gets recirculated and distributed to the downstream disinfection system at a typical 4:1 recirculation ratio.

5. OPERATING PERMIT

Operating permit renewal MO-0116971 was successfully public noticed with the construction activities included from April 24, 2026, to May 26, 2026, with no comments received. The reduced design flow will become effective once the Submit the Statement of Work Completed is received in accordance with 10 CSR 20-6.010(5)(N).

V. NOTICE OF RIGHT TO APPEAL

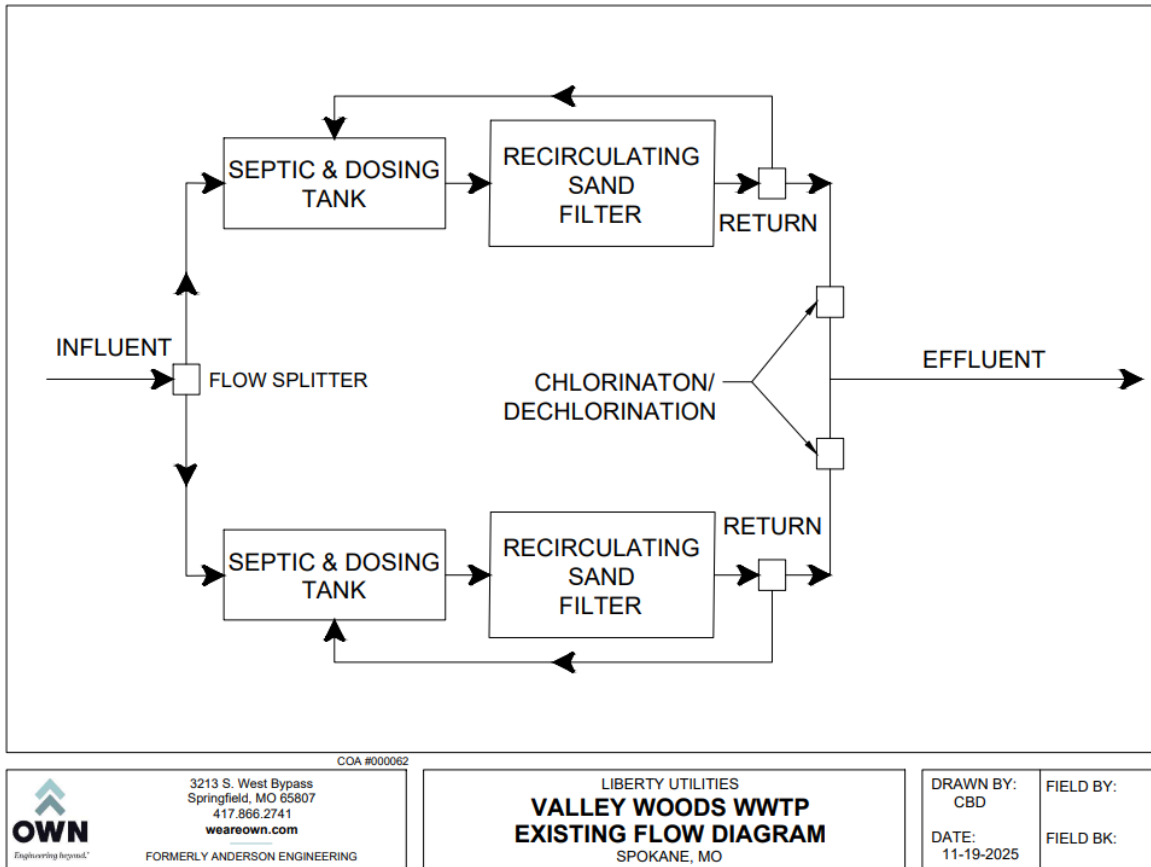
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, 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>

Sieu T. Dang, P.E.
Engineering Section
sieu.dang@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	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$
2.3 PROJECT DESCRIPTION	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION	
2.5 DESIGN INFORMATION A. Current population: _____; Design population: _____ B. Actual Flow: _____ gpd; Design Average Flow: _____ 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? ☐ YES ☐ NO B. Is a process flow diagram attached? ☐ YES ☐ NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS (PHYSICAL)		CITY	STATE	ZIP CODE COUNTY
Wastewater Treatment Facility: Mo- (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): _____ Northing (Y): _____ For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: _____				
4.0 PROJECT OWNER				
NAME		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS		CITY	STATE	ZIP CODE
5.0 CONTINUING AUTHORITY: 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		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. ☐ YES ☐ NO ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS		CITY	STATE	ZIP CODE
7.0 APPLICATION FEE				
☐ CHECK NUMBER ☐ JETPAY CONFIRMATION NUMBER				
8.0 PROJECT OWNER: 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 <i>Bruce Robinson</i>				
PRINTED NAME			DATE	
TITLE OR CORPORATE POSITION		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
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.				