STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION

GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

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

Construction Permit ID:	MOGSE0550
Title of Project:	Majestic Lakes Phase 3A
Owner:	Confluence Rivers Utility Operating Co
Address:	1630 Des Peres Rd, Suite 140 St. Louis, MO 63131

The project will also include general site work appropriate to the scope and purpose of the project and will include all the necessary appurtenances to make a complete and usable collection system. The construction of this project will be in the vicinity of the county below and discharge to Receiving Permit ID below:

County: Receiving Permit ID:

for the construction of (described construction project):

Majestic Lakes Phase 3A - Construction of approximately 1830 lf of 8-inch PVC SDR-35 gravity sewer lines with approximately 10 manholes to serve 44 lots with an estimated design average flow of 7,920 gpd.

Project is in the vicinity of Birchwood Drive N. and Lakewood Drive in Majestic Lakes Subdivision, Lincoln County and discharges to an existing collection system to be treated at Majestic Lakes WWTF, MO-0130125. Confluence Rivers Utility Operating Company, Inc is the owner and continuing authority of the treatment plant and applicant for the sewer extension project. Jacob Freeman, Director, Engineering signed the application for construction permit dated 4/13/23.

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.
This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

May 31, 2023
Issue Date

John Hoke, Director
Water Protection Program

January 02, 2025
Expiration Date

APPLICABILITY

1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earthen flow equalization storage basins at lift stations and inline storage, which flows back into the lift station or collection system, are also included.

2. A site specific sewer extension construction permit may be required by the Department due to compliance and enforcement actions.

3. Projects located within an Approved Sewer Program as noted in the operating permit of the receiving wastewater treatment facility are not required to obtain a construction permit from the Department of Natural Resources (Department).

4. This permit does not apply to:
   A. Earthen storage basins;
   B. Exempt projects unless requested by the applicant or required by enforcement.

PREREQUISITES:

1. The General Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).

2. The plans and specifications each signed and sealed by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.

3. The Design Certification form or Engineering Report or Summary of Design signed and sealed by a professional engineer registered in the State of Missouri certifying the design of the system was prepared in accordance with 10 CSR 20-6 and 10 CSR 20-8.

4. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the wastewater for treatment and indicating the permitted treatment facility has the available capacity.

5. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the responsibility for operation and maintenance of these facilities.

PERMIT CONDITIONS:

1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.

2. The construction must be in accordance with the final plans and specifications approved by the Department.

3. 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 regional office per 10 CSR 20-7.015(9)(E)2., or through the Online Bypass/SSO Reporting system found at https://dnr.mo.gov/eservices.htm under Water Protection.

PERMIT CONDITIONS: (continued)

4. Protection of drinking water supplies must meet the requirements of 10 CSR 23-3.010 .
   A. There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto, which would permit the passage of any wastewater or polluted water into the potable supply.
   B. Sewers shall be laid at least fifty feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.

5. Manholes shall be located with the top access at or above grade level.

6. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements 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 www.dnr.mo.gov/env/wpp/epermit/help.htm.

   See www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.

7. 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 www.dnr.mo.gov/env/wpp/401/ for more information.

8. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then a full closure plan shall be submitted with a Facility Closure Request Form, Form – MO 780-2512 to the Department's appropriate regional office for review and approval. 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. Closure shall not commence until the submitted closure plan is approved by the Department.

9. If this project is part of a project to resolve an enforcement action or is receiving funding from the Department, submit a statement of work complete following the completion of construction

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT – SEWER EXTENSION

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

NOTE ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

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 Department of Natural Resources approved the proposed project's engineering report*?
☐ YES Date of Approval: ☐ NO ☑ N/A

1.3 Is a copy of the appropriate plans* and specifications* included with this application? ☑ YES ☐ NO

1.4 Is a summary of design* included with this application? ☑ YES ☐ NO

1.5 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
Majestic Lakes Phase 3A

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
Birchwood Dr N	Moscow Mills	MO	63362	Lincoln

2.2 Legal Description: ¼, ¼, ¼, Sec. 10,15 , T 48 , R 1

2.3 Project Components (check all that apply):
☑ Gravity sewers ☐ Pumping stations ☐ Force mains ☐ Alternative sewer system ☐ Other (Describe below.)

2.4 PROJECT DESCRIPTION
Construction of a sanitary sewer extension consisting of approximately 1,830 linear feet of 8" PVC pipe and 10 manholes to serve 44 homes.

2.5 DESIGN INFORMATION
A. Population or number of lots to be served by this extension: 44

B. Estimated flow to be contributed by this extension: Design Average Flow: 7,920 gpd Design Peak Hourly Flow: 1320 gph

C. Industrial Wastes: Type: 0 Flow: N/A gpd

D. Receiving Sewer: Size: 8 inches Capacity: 626 gpm

3.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Confluence Rivers Utility Operating Company, Inc	314-736-4672	jfreeman@cswrgroup.com

ADDRESS	CITY	STATE	ZIP CODE
1630 Des Peres Road, Suite 140	St. Louis	MO	63131

4.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity or person(s) that will be operating the facility or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0, unless the continuing authority is an individual(s), government, or otherwise not required to register with the SoS.

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Same as above		

ADDRESS	CITY	STATE	ZIP CODE

4.1 A letter from the continuing authority or the Continuing Authority and Receiving Wastewater Treatment Facility Acceptance form, if different than the owner, is included with this application. ☐ YES ☐ NO ☑ N/A

5.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Robert Tiemann, THD Design Group	636-733-6055	Rob@THDDesignGroup.com

ADDRESS	CITY	STATE	ZIP CODE
148 Chesterfield Industrial Blvd, Suite E	Chesterfield	MO	63005

6.0 RECEIVING WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Majestic Lakes Wastewater Treatment Facility	(314)380-8598	jfreeman@cswrgroup.com

MISSOURI STATE OPERATING PERMIT #	REMAINING CAPACITY (GPD)
MO-0130125	8,880

6.1 Has the receiving treatment facility agreed to accept the additional wastewater flow? ☑ YES ☐ NO

6.2 A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application.
☐ YES ☐ NO ☑ N/A

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

PRINTED NAME	DATE
Jacob Freeman	

TITLE OR COPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Director, Engineering	(314)380-8598	jfreeman@cswrgroup.com

Mail completed copy to:

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
P.O. BOX 176
JEFFERSON CITY, MO 65102-0176

SEWER EXTENSION DESIGN CERTIFICATION

Answer all questions yes, no, or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension **OR** if a deviation was previously allowed by the Department in the approval of Standard specifications or Standard Detail Sheets.

9.0 SEWER EXTENSION CHECKLIST					
	REGULATION		YES	NO	N/A
1	8.110(9)(B)	Are detailed plans showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities provided?	☑	☐	☐
2	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	☑	☐	☐
3	8.110(3)(B)	Are average design flows, peak hourly flows, and I&I contributions for new systems calculated.	☑	☐	☐
4	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains, and combined wastewater?	☑	☐	☐
5	8.120(3)(C)	Is ASTM C969-17 leakage test specified to ensure water tight joint seals and appropriate exfiltration and infiltration rates?	☑	☐	☐
6	8.120(4)(A)	Are manholes located at all changes in grade, size or alignment, and all intersections?	☑	☐	☐
7	8.120(3)(A)1	Are all sewer pipes constructed with a slope to obtain mean velocities of not less than 2 feet per second?	☑	☐	☐
8	8.120(3)(A)2	Is the pipe covered with at least 36” of soil or sufficiently insulated to prevent freezing?	☑	☐	☐
9	8.120(3)(A)	Is the pipe installation, embedment, and backfill designed to prevent damage to the pipe and its joints?	☑	☐	☐
10	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	☑	☐	☐
11	8.120(4)(C)	Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8”?	☑	☐	☐
12	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, are they a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8”?	☑	☐	☐
13	8.120(4)(E)	Are the manholes specified to be watertight, constructed, installed in accordance with the manufacturer’s recommendations and procedures?	☑	☐	☐
14	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	☑	☐	☐
15	8.120(5)(B)	Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	☑	☐	☐
16	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system with no water pipes coming in contact with a sewer manhole?	☑	☐	☐

10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST					
	REGULATION		YES	NO	N/A
17	8.125(5)(A)1.	Does the cleaning velocity of ≥ 2 ft/s happen at least once per day?	☐	☐	☑
18	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5”?	☐	☐	☑
19	8.125(5)B	Are appurtenances compatible with the piping system?	☐	☐	☑
20	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25 in.?	☐	☐	☑
21	8.125(5)(D)1. A	Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence – 1 grinder pump station.	☐	☐	☑
22	8.125(5)(D)1. B	Are multiple unit pump stations owned, operated, maintained by an approved continuing authority?	☐	☐	☑
23	8.125(5)(D)3	Is there at least 70 gallons of storage in the grinder pump unit?	☐	☐	☑
24	8.125(5)(D)4	Do grinder pump stations have shutoff valves, check valves, and anti-siphon valves (where siphoning could occur) that are accessible from the ground surface?	☐	☐	☑
25	8.125(5)(D)7 8.130(3)(B)2	Are units serviceable and replaceable under wet conditions without electrical hazard and electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location)?	☐	☐	☑
26	8.125(5)(D)8 8.125(6)(F)6	Are provisions in place to avoid interruption of service due to mechanical or power failure by providing standby power, storage capacity or interconnection with another disposal system?	☐	☐	☑
27	8.125(6)(D) 8.180(2)	Does each EDU have at least one septic tank with a minimum of 1,000 gallon capacity with 20% of tank volume dedicated to freeboard and ventilation?	☐	☐	☑
28	8.125(6)(F)	Are pump vaults designed with duplex pumps for STEP sewer systems with design flow of 1,500 gallons per day or greater?	☐	☐	☑
29	8.125(7)(A) 8.125(7)(C)	Is the minimum STEG sewerservice line at least 4” in diameter?	☐	☐	☑
11.0 PUMP STATION CHECKLIST					
	REGULATION		YES	NO	N/A
30	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?	☐	☐	☑
31	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?	☐	☐	☑
32	8.130(3)(B)	If the design flow is 1,500 gpd or more, are at least 2 pumps or pneumatic ejectors provided?	☐	☐	☑
33	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?	☐	☐	☑
34	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?	☐	☐	☑
35	8.130(3)(G)	Does all potable water brought to the pump station comply with 8.140 (7) D?	☐	☐	☑
36	8.130(6)	Is an alarm system provided with uninterrupted power?	☐	☐	☑
37	8.130(7)(A)	Is there 2 hours retention of the peak hourly flow for a design flow > 100,000 gpd or 4 hrs retention of the peak hourly flow for a design flow < 100,000 gpd?	☐	☐	☑
38	8.130(7)(B)	Is there an independent utility substation provided for emergency power that is capable of starting and operating the pump station at its rated capacity?	☐	☐	☑
39	8.130(8)(A)	Is the force main velocity of ≥ 2 ft/s maintained?	☐	☐	☑
40	8.130	Are there complete operation instructions for the pumping stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?	☐	☐	☑

12.0 SUCTION LIFT PUMP AND SUBMERSIBLE PUMP STATION CHECKLIST					
	REGULATION		YES	NO	N/A
41	8.130(4)	Are the suction lift pumps of the self priming or vacuum priming type?	☐	☐	☑
42	8.130(4)(A)	Is the combined total of dynamic suction lift at the "pump off" elevation and required net positive suction head at design operating conditions less than or equal to twenty-two feet (22')?	☐	☐	☑
43	8.130(4)(B)	Are there dual vacuum pumps capable of removing air from the suction lift pump?	☐	☐	☑
44	8.130(5)(A)	Are submersible pumps readily removable and replaceable without personel entering, or disconnecting any pipe in the wet well?	☐	☐	☑

13.0 CERTIFICATION STATEMENT

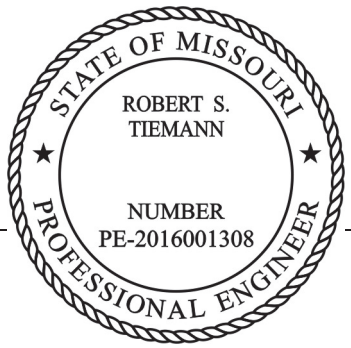
I hereby certify that the design plans and specifications for this project, to the best of my knowledge, conform to the requirements listed above. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

I hereby certify that this plan, specification, and/or report was prepared by me or under my direct supervision and that I am a duly Licensed Professional Engineer under the laws of the state of Missouri.

For any question answered "NO" provide explanation. Provide any useful comments on design for review engineer:

Design flow is based on average flow per existing customer of 180 gpd per data provided by Confluence Rivers Utility Operating Company, Inc, project owner. A peaking factor of 4 was used. Available capacity was provided by Confluence Rivers Utility Operating Company, Inc. The average flow per existing customer was applied to the existing undeveloped lots and deducted from the available capacity provided.

Missouri Professional Engineer's Seal:



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