

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Franklin County Industrial Park
Meyer Drive
Washington, MO 63090

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.

April 23, 2020
Effective Date

April 22, 2022
Expiration Date


Edward B. Galbraith, Director, Division of Environmental Quality


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Franklin County Industrial Park is constructing a chlorine/dechlorination disinfection system to meet final *E. Coli* effluent limits. The facility will be installing two Norweco Bio-Dynamic® Model IT 2000 S feeders to supply chlorine and dechlorination tablets. The feeders will have a design flow of 6,500 gpd. The chlorine contact tank will be a pre-cast concrete tank providing 48.5:1 length to width ratio allowing 15 minutes of contact time at 6,500 gpd. The facility's design average flow will remain at 5,200 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 Scheer Design Group, LLC. 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 St. Louis 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 dnr.mo.gov/env/wpp/epermit/help.htm. See 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/ for more information.
9. 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)
 - Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D)

- All sampling points shall be designed so that a representative and discrete twenty-four (24) hour automatic composite sample or grab sample of the effluent discharge can be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters. 10 CSR 20-8.140 (6) (B)
- All wastewater treatment facilities shall be provided with an alternate source of electric power or pumping capability to allow continuity of operation during power failures. 10 CSR 20-8.140 (7) (A) 1.
- Disinfection and dechlorination, when used, shall be provided during all power outages. 10 CSR 20-8.140 (7) (A) 2. and 10 CSR 20-8.190 (2) (A)
- 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.
- 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)
- The materials utilized for storage, piping, valves, pumping, metering, and splash guards, etc., for chemical handling, shall be specially selected considering the physical and chemical characteristics of each hazardous or corrosive chemical. 10 CSR 20-8.140 (9) (A) 1.
- Secondary containment storage areas contain the stored volume of chemical until it can be safely transferred to alternate storage or released to the wastewater treatment plant at controlled rates that will not damage the facilities, inhibit the treatment processes, or contribute to stream pollution. Secondary containment shall be designed as follows:
 - A minimum volume of one hundred twenty-five percent (125%) of the volume of the largest storage container located within the containment area plus the space occupied by any other tanks located within the containment area when not protected from precipitation; 10 CSR 20-8.140 (9) (A) 2. A.
 - A minimum volume of one hundred ten percent (110%) of the volume of the largest storage container located within the containment area plus the space occupied by any other tanks located within the containment area when protected from precipitation; 10 CSR 20-8.140 (9) (A) 2. B.
 - Walls and floors of the secondary containment structure constructed of suitable material that is compatible with the specifications of the product being stored. 10 CSR 20-8.140 (9) (A) 2. C.
- All connections (flanged or other type), except those adjacent to storage or feeder areas, shall have guards that will direct any leakage away from space occupied by facility personnel. 10 CSR 20-8.140 (9) (A) 4. B.

- Dust collection equipment shall be provided to protect facility personnel from dusts injurious to the lungs or skin and to prevent polymer dust from settling on walkways that become slick when wet. 10 CSR 20-8.140 (9) (A) 6.
- The identification and hazard warning data included on chemical shipping containers, when received, shall appear on all containers (regardless of size or type) used to store, carry, or use a hazardous substance. 10 CSR 20-8.140 (9) (E)
- 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)
- Alarm System for chlorination and dechlorination systems. The applicant shall conform to 10 CSR 20-8.140(7)(C) and be responsible for specifying what the alarm requirements are necessary to assure consistent disinfection in compliance with the applicable bacteria limits and the disinfection residual limit in the effluent. 10 CSR 20-8.190 (3) (C)
- Dilution tanks and mixing tanks are required when using dry compounds and may be necessary when using liquid compounds to deliver the proper dosage. 10 CSR 20-8.190 (4) (A)
- Solid dechlorination systems shall not be located in the chlorine contact tank. 10 CSR 20-8.190 (4) (B) 1.
- Contact time. A minimum of thirty (30) seconds for mixing and contact time of dechlorination systems shall be provided at the design peak hourly flow or maximum rate of pumpage. 10 CSR 20-8.190 (4) (B) 2.

10. Upon completion of construction:

- A. The Franklin County Industrial Park Sewer Association will become the continuing authority for operation and maintenance of these facilities;
- B. Submit an electronic copy of the as built if the project was not constructed in accordance with previously submitted plans and specifications; and
- C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) with a request for the operating permit modification be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The facility is installing a tablet chlorinator and dechlorinator to meet final *E. Coli* effluent limits.

2. FACILITY DESCRIPTION

The Franklin County Industrial Park WWTF is located on Meyer Drive, Washington, in Franklin County, Missouri. The facility has a design average flow of 5200 gpd and serves a hydraulic population equivalent of approximately 52 people. The existing facility is a recirculating media filter with septic tank, recirculation tank, and sludge disposed of by contract hauler. In review of the previous five years of discharge monitoring data, the facility has an average flow of 4,224 gpd.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits for *E. Coli* as established in Operating Permit MO-0110787. The schedule of compliance expired on December 1, 2019. The limits following the completion of construction will be applicable to the facility:

Parameter	Units	Monthly average limit
Total Residual Chlorine	µg/L	8 (130 ML)
Dissolved Oxygen	mg/L	*
<i>E. Coli</i>	#/100mL	206

* Monitoring only

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- Septic tanks
- Recirculation Tank
- Filter Media Bed

Construction will cover the following items:

- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
 - Tablet Chlorinator – Installation of a tablet, Norweco Bio-Dynamic® Model IT 2000 S, chlorination chamber receiving clarified effluent and prior to the chlorine contact tank. The tablet chlorinator shall have a design flow of 6,500 gpd and a maximum flow of 20,000 gpd. The system will dispense hypochlorite as the wastewater comes into contact with the tablets.
 - Chlorine Contact Tank – Installation of a pre-cast concrete tank approximately 3 ft x 5 ft x 3.33 ft with 4 end-around baffles allowing for a 48.5:1 length to width ratio. This tank will allow for a 15 minute contact time during a peak flow of 6,500 gpd.
 - Tablet Dechlorinator – Installation of a tablet, Norweco Bio-Dynamic® Model IT 2000 S, dechlorination chamber receiving the chlorinated effluent and prior to Outfall No. 001. The tablet dechlorinator shall have a design flow of 6,500

gpd and a maximum flow of 20,000 gpd. The system will dispense sodium sulfite as the wastewater comes into contact with the tablets.

5. OPERATING PERMIT

Operating permit MO-0110787 will require a modification to reflect the construction activities. The modified operating permit, MO-0110787 will be public noticed to add TRC limits. 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

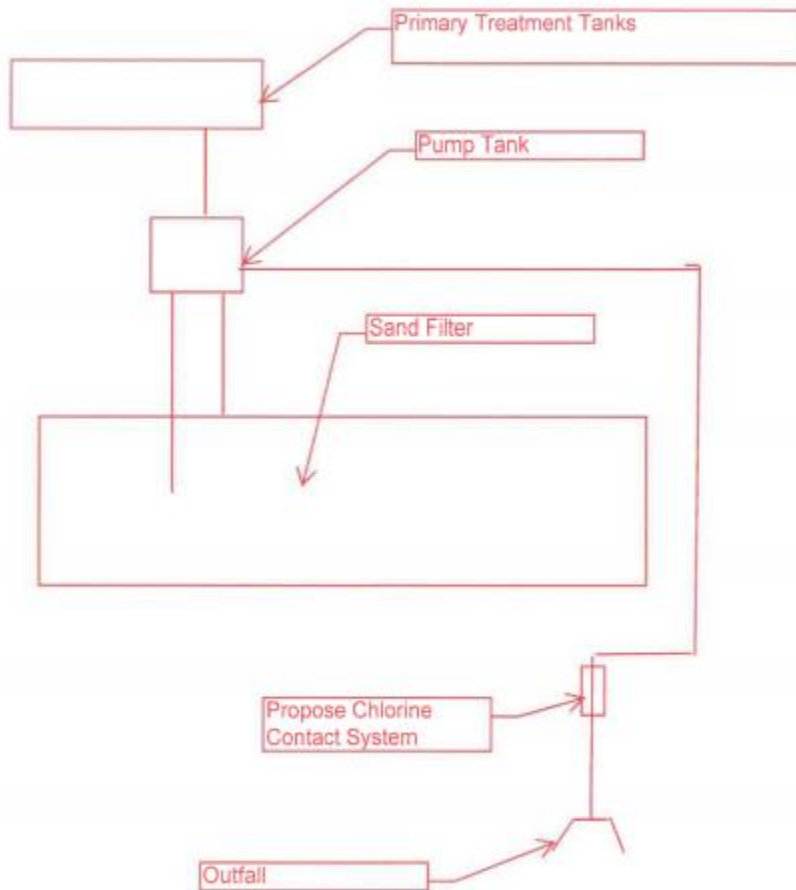
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered,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

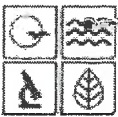
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

Leasue Meyers, EI
Engineering Section
leasue.meyers@dnr.mo.gov

Cindy LePage, P.E.
Engineering Section
cindy.lepage@dnr.mo.gov

APPENDIX A: PROCESS FLOW DIAGRAM





MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT
WASTEWATER TREATMENT FACILITY

RECEIVED

MAR 26 2020

Water Protection Program

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 Addition of disinfection to existing system
- 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 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

Franklin County Industrial Park

2.2 ESTIMATED PROJECT CONSTRUCTION COST

\$ 12,000

2.3 PROJECT DESCRIPTION

Addition of two tablet feeders and a chlorine contact chamber to provide disinfection to the WWTF effluent prior to discharge.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

contract hauler

2.5 DESIGN INFORMATION

A. Current population: _____; Design population: 52

B. Actual Flow: 4200 gpd; Design Average Flow: 5200 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 Franklin County Industrial Park		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS (PHYSICAL) Meyer Drive		CITY Washington	STATE MO	ZIP CODE 63090
COUNTY Franklin				
Wastewater Treatment Facility: Mo- 0110787 (Outfall 1 Of 1)				
3.1 Legal Description: <u>SE 1/4, NW 1/4, SE 1/4, Sec. 16, T 43N, R 1W</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>671799</u> Northing (Y): <u>4260227</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>Trib. to Flat Creek (C)</u>				
4.0 PROJECT OWNER				
NAME Franklin County Industrial Park Sewer Association		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS 6555 Meyer Dr		CITY Washington	STATE MO	ZIP CODE 63090
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 See Above		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				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Kirby Scheer / Scheer Design Group, LLC		TELEPHONE NUMBER WITH AREA CODE 573 459-2611		E-MAIL ADDRESS kirbs@fidnet.com
ADDRESS 8584 HWY YY		CITY New Haven	STATE MO	ZIP CODE 63068
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input type="checkbox"/> 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 <i>Jerry DeWitt</i>		DATE <i>3-19-20</i>		
TITLE OR CORPORATE POSITION <i>Maintenance Supervisor</i>		TELEPHONE NUMBER WITH AREA CODE <i>636-583-1600</i>		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.				