Permit No. CPSE01081

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

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

Kansas City
8300 Oak Street
Kansas City, MO 64114

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 18, 2019
Effective Date

February 22, 2021
Modification Date

Edward B. Galbraith

Edward B. Galbraith, Director, Division of Environmental Quality

August 17, 2021
Expiration Date

Chris Wieberg

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

CONSTRUCTION DESCRIPTION:

This project is to reduce the 9 million gallons of wastewater discharged through Combined Sewer Outfall #058, in a typical year. This project will replace existing 12 inch sewer bottleneck with approx. 1,200 lf of 36 inch and 334 lf of 24 inch C905 PVC (DR-25) cast iron outside diameter gravity sewer with 6 manholes and 2 gate structures. By replacing the bottleneck and utilizing the earthen storage basin, the time to peak storage in the basin is 7.25 hrs after peak rainfall during the 1-year design storm and the time to peak in the 24 inch line is approx. 20 hrs from the time of peak rainfall, thus delaying the load to the interceptor sewer and reducing discharges from CSO #058.

The earthen storage basin will be non-aerated with

- A slope is 3: 1;
- 2 ft of freeboard;
- Slope of the floor is 2% to the outlet structure drain;
- Depth from the top of the basin to the floor is 13 ft; and
- Storage volume of 2.7 million gallons, or 3.1 million gallons including the freeboard.

The geohydrological evaluation was completed in January 2019 receiving a slight overall geologic limitation. As the construction of the earthen basin and sewer line replacement is in the location of a pre-subtitle D landfill, the project received approval from the Department's Waste Management Program in November 2018.

On January 13, 2020, a change order request was submitted to replace the 2 feet of high plasticity clay soils with a 2 equal layers of compacted clay with a geosynthetic clay liner in between the compacted clay layers. The proposed geosynthetic clay liner meets the minimum requirements of 10 CSR 20-8.200(4)(C)1 of 1.0×10^{-7} cm/sec.

The project will also include general site work appropriate to the scope and purpose of the project. These activities will be in the vicinity of East 85th Street and Oak Street in Kansas City, Jackson County and connect with the existing Blue River Interceptor Sewer system and be treated at the Kansas City Blue River Wastewater Treatment Facility, Missouri State Operating Permit No. MO-0024911.

PERMIT CONDITIONS:

1. Contact the department's Kansas City Regional Office and the Department's Waste Management Program 48 hours prior to starting construction. Contact information can be found at http://dnr.mo.gov/regions/regions.htm.

2. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request. This construction permit does not authorize discharge.

PERMIT CONDITIONS: (continued)

3. All construction shall be consistent with the plans and specifications signed and sealed by George Butler Associates, Inc., and as described in this permit.

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 regional office per 10 CSR 20-7.015(9)(E)2.

5. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "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. No water pipe shall pass through or come in contact with any part of a sewer manhole."

   A. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.

   B. Sewer mains shall be laid at least ten feet (10') horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a ten foot (10') separation, the department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 inches above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.

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

   D. Manholes should be located at least ten feet (10') horizontally from any existing or proposed water main.

   E. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:

PERMIT CONDITIONS: (continued)

1) The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
2) Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends ten feet (10') on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the department for use in water main construction.

6. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one 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 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. Upon completion of construction:

   A. Kansas City will become the continuing authority for operation and maintenance of these facilities;
   B. Submit an electronic copy of the as builts; and
   C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N).

Lease Meyers, EI
Engineering Section
lease.meyers@dnr.mo.gov

John Rustige, P.E.
Engineering Section
john.rustige@dnr.mo.gov

MO-0024911 AP32118 MOGC00504

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT – WASTEWATER FACILITY

RECEIVED APR 01 2019 Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED $300.00	CHECK NO. 98288
DATE RECEIVED 4-1-19	

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
Diversion Structure 068 Storage Basin

2.2 PROJECT DESCRIPTION
The project consist of constructing a 3 million gallon open earthen storage basin to relieve the Blue River Interceptor Sewer in Kansas City, Missouri during wet weather events. The storage basin will reduce combined sewer overflows to meet the Federal Consent Decree pertaining to the City of Kansas City's Smart Sewer (KCSS) program. The earthen storage basin is designed to meet requirements of Missouri DNR 10 CSR 20-8.200 Wastewater Treatment Ponds (Lagoons). For the typical design storm the basin will fill and drain within 24-hours.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
N/A to this project.

2.4 DESIGN INFORMATION
A. Current population: n/a ; Design population: n/a
B. Actual Flow: n/a gpd; Design Average Flow: 88,000** gpd;
Actual Peak Daily Flow: 110,000** gpd; Design Maximum Daily Flow: 30 x 10^6 gpd;
Design Wet Weather Event: 1-year storm*

Notes:
- Maximum Storage Volume: 3 MG
- *Maximum Design Flow entering basin: 30 MGD
- *Maximum Design Flow discharging from basin to the Blue River Interceptor Sewer: 8 MGD
- **Based on design model

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
$ 8,600,000.00

3.0 WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Diversion Structure 068 Storage Basin	n/a	n/a

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
8300 Oak Street	Kansas City	MO	64114	Jackson

Wastewater Treatment Facility: Mo- n/a (Outfall 058 Of)

3.1 Legal Description: ¼, NE ¼, NW ¼, Sec. 20 , T 48N , R 33W
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 1022388.92 Northing (Y): 2763902.76
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Tributary of Blue River

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
City of Kansas City	(816) 513-1313	Andy.Shively@kcmo.org

ADDRESS	CITY	STATE	ZIP CODE
414 E 12th Street	Kansas City	MO	64106

5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
City of Kansas City	(816) 513-1313	Andy.Shively@kcmo.org

ADDRESS	CITY	STATE	ZIP CODE
414 E. 12th Street	Kansas City	MO	64106

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	EMAIL ADDRESS
Timothy Schneller / GBA	(913) 492-0400	tschneller@gbateam.com

ADDRESS	CITY	STATE	ZIP CODE
9801 Renner Blvd	Lenexa	KS	66219

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 Andy Shively

PRINTED NAME	DATE
Andy Shively	3/14/19

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Special Assistant City Manager	(816) 513-1313 0304	Andy.Shively@kcmo.org

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.