

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Dale Klussman
City Administrator
City of Concordia
P.O. Box 847
Concordia, MO 64020

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.

March 15, 2019
Effective Date


Edward B. Galbraith, Director, Division of Environmental Quality

March 14, 2021
Expiration Date


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Proposed construction involves adding more aeration and mixing to the existing aerated lagoon system. The project includes rearranging existing aeration units and installing more units in the lagoon. Four Reliant Water Technologies Model WQA aeration/mixing units will be repositioned in the first cell to provide an enhanced mixing pattern. Two new WQA aeration/mixing units will be added to the second cell. A third new WQA aeration/mixing unit will be placed in the entrance area of the third cell. A floating curtain will also be installed in the third cell prior to the discharge structure.

This project will also include general site work appropriate to the scope and purpose of the project. Design flow of facility will remain at 374,000 GPD and the outfall will remain at existing location. Discharge is to Tributary to Panther Creek (C) in the SW 1/4, of the NE 1/4, of the NW 1/4, Section 14, T48N, R24W, Lafayette County.

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 required to determine “findings of affordability” because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **APPENDIX – COST ANALYSIS FOR COMPLIANCE**.

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 Douglas Schulte, P.E., Schulte Engineering & Consulting, 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 Kansas City 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. Upon completion of construction:
 - A. Submit an electronic copy of the as built 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)(N).

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Existing aerated lagoon has not consistently met effluent limitations for BOD and TSS in Missouri State Operating Permit MO-0025194. Facility is under enforcement action from EPA for not meeting effluent limitations.

2. FACILITY DESCRIPTION

The existing treatment system is a 3 cell aerated lagoon consisting of three separate earthen basins. Aeration is provided by 4 aerators in the first cell. The total volume of all three cells is approximately 41.4 million gallons.

The improvements to the facility will include adding aeration/mixers to the second and third cells. The third cell will also receive a floating curtain.

The Concordia Southeast Wastewater Treatment Facility is located one mile north of Panther Creek Road and Hwy PP, City of Concordia, in Lafayette County, Missouri. The facility has a design average flow of 374,000 gpd and serves an organic population equivalent of approximately 3740 people.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits of 30 mg/l for BOD and TSS as established in the proposed modified Operating Permit MO-0025194. Ammonia limitations are 1.4 mg/l (April – September), and 2.9 mg/l (October – March).

Seasonal e-Coli limits of 206 mg/l become effective on November 1, 2021. These limitations are met at times despite no active disinfection system at the facility. Applicant theorizes that the facility enhancements will facilitate greater reduction in e-Coli such that a supplemental method of disinfection might not be necessary for compliance with e-Coli limits.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- The existing lagoon consists of three separate adjacent earthen basins.
- Lagoon Cell No. 1 has a surface area of approximately 18.6 acres and a working depth of 5 feet with an approximate volume of 30.3 MG. This provides approximately 81 days of retention at the design flow of 374,000 GPD. Cell No. 1 is aerated with four Reliant Water Technologies Model WQA aeration/mixing units.
- Cell No. 2 has a surface area of approximately 18.6 acres and a working depth of 5 feet with an approximate volume of 30.3 MG. This provides approximately 23 days of retention at the design flow of 374,000 GPD. Cell 2 is not aerated.
- Cell No. 3 has a surface area of approximately 1.5 acres and a working depth of 5 feet with an approximate volume of 2.4 MG. This provides approximately 6.4 days of retention at the design flow. Cell 3 is not aerated.

Construction will cover the following items:

- Design flow will remain at 374,000 GPD with a Population Equivalent of 3740 based on organic loading to the system.
- Rearrangement of the four existing WQA aeration/mixing units in the first cell. Aeration is estimated as 97 scfm/unit. Total aeration to the first cell will remain at 388 scfm.
- Addition of two Reliant Water Technologies Model WQA aeration/mixing units to the second cell.
- Addition of one Reliant Water Technologies Model WQA aeration/mixing unit to the third cell.
- Each Reliant Water Technologies Model WQA aeration/mixing units (Model KO4-MS) is 2HP, has an aeration capacity of 97 scfm and can supply approximately 320 lbs. of O₂/day.
- Baffle system – A floating curtain baffle to partition the third cell and create a quiescent zone for final settling of the effluent. Minimum thickness of 30 mil, constructed of industrial grade XR-5 geomembrane (6730 XR-5, Seaman Corporation, or equal). Baffle to have water tight seal against the lagoon berms and lagoon bottom. Flow through window will be 24 inches by 30 inches.

- Total added oxygen to be provided by 6 of the 7 aeration units is approximately 1920 lbs. O₂/day. Each aerator can supply 97 scfm of air which can add up to 320 lbs. of O₂/day. The design load to the treatment facility is an organic load of 636 lbs. BOD/day, and 93 lbs. of ammonia/day. For BOD, aeration must supply 1.4 lbs. of O₂/lb. of BOD removed; or 890 lbs. O₂. For ammonia, aeration must supply a minimum of 4.6 lbs. of O₂/ lb. ammonia removed; or 428 lbs. of O₂. Minimum required O₂ is 1319 lbs./day.
- The intention of rearranging and adding aerators is for enhanced mixing with oxygen addition in order to reduce sludge accumulations and to reduce the excess production of algae.

5. OPERATING PERMIT

Operating permit MO-0025194 will require a modification to reflect the construction activities. The modified Concordia Southeast Wastewater Treatment Facility, MO-0025194, was successfully public noticed from February 8, 2018 to March 11, 2019, with no comments received. 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.

Andrew Appelbaum, P.E.
Engineering Section
andy.appelbaum@dnr.mo.gov

APPENDIX – COST ANALYSIS FOR COMPLIANCE:

**Missouri Department of Natural Resources
Water Protection Program
Cost Analysis for Compliance
(In accordance with RSMo 644.145)**

**CONCORDIA SOUTHEAST WWTF
Permit Modification
City of Concordia
Missouri State Operating Permit #MO-0025194**

Section 644.145 RSMo requires the Department of Natural Resources (Department) to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system for publicly-owned treatment works.” This cost analysis does not dictate how the permittee will comply with new permit requirements.

New Permit Requirements

The permit also requires compliance with new influent monitoring requirements for total nitrogen and total phosphorus.

Connections

The number of connections was reported by the permittee on the Financial Questionnaire from the permit renewal, reported by the permittee on the permit renewal application. 9-6-16.

Connection Type	Number
Residential	900
Commercial	155
Industrial	6
Total City Connections:	1,061
Total Connections for this facility:	690 Ω

Ω - City reported that 65% of connections go to the Concordia SE WWTF

Data Collection for this Analysis

This cost analysis is based on data available to the Department as provided by the permittee and data obtained from readily available sources. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the City of Concordia’s financial and socioeconomic situation. The financial questionnaire available to permittees on the Department’s website (<http://dnr.mo.gov/forms/780-2511-f.pdf>) is a required attachment to the permit renewal application. If the financial questionnaire is not submitted with the renewal application, the Department sends a request to complete the form with the welcome correspondence. If certain data was not provided by the permittee to the Department and the data is not obtainable through readily available sources, this analysis will state that the information is “unknown”. Data submitted with the 2016 permit renewal application including the financial questionnaire dated 8/1/16 was used.

Eight Criteria of 644.145 RSMo

The Department must consider the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with new permit requirements.

(1) A community's financial capability and ability to raise or secure necessary funding;

Criterion 1 Table. Current Financial Information for the City of Concordia	
Current Monthly User Rates per 5,000 gallons*	\$10.53
Median Household Income (MHI) ¹	\$51,465
Current Annual Operating Costs (excludes depreciation)	\$183,333

*User Rates were reported by the permittee on the Financial Questionnaire at renewal 2016.

(2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;

The following tables outline the estimated costs of the new permit requirements:

Criterion 2A Table. Estimated Cost Breakdown of New Permit Requirements			
New Requirement	Frequency	Estimated Cost	Estimated Annual Cost
Total Phosphorus sampling	Quarterly	\$24	\$96
Total Nitrogen sampling	Quarterly	\$73	\$292
Total Estimated Annual Cost of New Permit Requirements			\$388

Criterion 2B Table. Estimated Costs for New Permit Requirements		
(1)	Estimated Annual Cost	\$388
(2)	Estimated Monthly User Cost for New Requirements	\$0.05
	Estimated Monthly User Cost for New Requirements as a Percent of MHI	0.0176%
(3)	Total Monthly User Cost* User cost based on results of CAFCOM performed at renewal (attached) which is \$31.90 plus \$0.05	\$31.95
	Total Annual User Cost as a Percent of MHI ³	0.745%

* Current Estimated User Rate + Estimated Monthly Costs of New Sampling Requirements

Due to the minimal cost associated with new permit requirements, the Department anticipates an extremely low to no rate increase will be necessary, which could impact individuals or households of this community.

(3) An evaluation of the overall costs and environmental benefits of the control technologies;

This analysis is being conducted based on new requirements in the permit, which will not require the addition of new control technologies at the facility. However, the new sampling requirements are being established in order to provide data regarding the health of the receiving stream's aquatic life and to ensure that the existing permit limits are providing adequate protection of aquatic life. Improved wastewater provides benefits such as avoided health costs due to water-related illness, enhanced environmental ecosystem quality, and improved natural resources. The preservation of natural resources has been proven to increase the economic value and sustainability of the surrounding communities. Maintaining Missouri's water quality standards fulfills the goal of restoring and maintaining the chemical, physical, and biological integrity of the receiving stream; and, where attainable, it achieves a level of water quality that provides for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water.

(4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates:

The community reported with their 2016 renewal application their outstanding debt for their current wastewater collection and treatment systems to be \$183,333. The community reported that each user pays \$10.53 each month, of which, \$6.53 is used toward payments on the current outstanding debt.

As shown in Criteria #2, Tables B-1 and B-1; The CAFCOM performed at renewal calculated a future user rate of \$31.90. The projected user rate plus the new sampling costs would be \$31.95.

(5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:

- (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations.
- (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained.

The following table characterizes the current overall socioeconomic condition of the community as compared to the overall socioeconomic condition of Missouri. The following information was compiled using the latest U.S. Census data.

Criterion 5 Table. Socioeconomic Data^{1,2, 4-12} for the City of Concordia, taken from CAFCOM at renewal.

Indicator No.	Select a Community from the Dropdown List →	Concordia City	Missouri State
1	Population (2015)	2,373	6,045,448
2	Percent Change in Population (2000-2015)	0.6%	8.0%
3	2015 Median Household Income (in 2016 Dollar)	\$51,465	\$48,582
4	Percent Change in Median Household Income (2000-2015)	9.2%	-7.8%
5	Median Age (2015)	39.6	38.2
6	Change in Median Age in Years (2000-2015)	-0.3	2.1
7	Unemployment Rate (2015)	6.5%	7.5%
8	Percent of Population Below Poverty Level (2015)	13.1%	15.6%
9	Percent of Household Received Food Stamps (2015)	9.8%	13.5%
10	(Primary) County Where the Community Is Located	Lafayette County	

(6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;

The community did not report any other investments relating to environmental improvements in the 2016 financial questionnaire.

(7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;

The new requirements associated with this permit will not impose a financial burden on the community, nor will they require the City of Concordia to seek funding from an outside source.

(8) An assessment of any other relevant local community economic conditions.

The community did not report any other relevant local economic conditions.

The Department contracted with Wichita State University to complete an assessment tool that would allow for predictions on rural Missouri community populations and future sustainability. The purpose of the study is to use a statistical modeling analysis in order to determine factors associated with each rural Missouri community that would predict the future population changes that could occur in each community. A stepwise regression model was applied to 19 factors which were determined as predictors of rural population change in Missouri. The model established a hierarchy of the predicting factors which allowed the model to place a weighted value on each of the factors. A total of 745 rural towns and villages in Missouri received a weighted value for each of the predicting factors. The weighted values for each town / village were then added together to determine an overall decision score. The overall decision scores were then divided into five categories and each town was assigned to a different categorical group based on the overall decision score.

The categorical groups were developed from the range of overall scores across all rural towns and villages within Missouri. The range covers 1,191 score points (-245 to 946).

Based on the assessment tool, the City of Concordia has been determined as a category (5) community. This means that the City of Concordia is predicted to be stable over time.

Conclusion and Finding

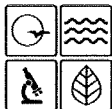
As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to increase monitoring. The Department has considered the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with the new permit requirements.

This analysis examined whether the new sampling requirements affect the ability of an individual customer or household to pay a utility bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household. After reviewing the above criteria, the Department finds that the new sampling requirements may result in a low burden with regard to the community's overall financial capability and a low financial impact for most individual customers/households; therefore, the new permit requirements are affordable.

References:

1. <http://www.hydromantis.com/>
2. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2015 Inflation-Adjusted Dollars).
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B19013&prodType=table. U.S. Department of Labor Bureau of Labor Statistics (2016) Consumer Price Index - All Urban Consumers, All items, 1982-84=100, Midwest Urban Areas.
http://data.bls.gov/timeseries/CUUR0300SA0?data_tool=Xgtable.
3. $(\$31.90 + 0.05)12 / \$51,465 \times 100\% = 0.745\%$ (estimated annual costs from renewal plus new sampling)
4. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, Table B01003: Total Population - Universe: Total Population.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B01003&prodType=table.
5. U.S. Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>. U.S. Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Age and Sex: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
6. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2015 Inflation-Adjusted Dollars).
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B19013&prodType=table.
7. U.S. Census Bureau (2003) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-1 Part 1. United States Summary, Table 5. Work Status and Income in 1999: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-2-1-pt1.pdf>. U.S. Census Bureau (2003) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-27, Missouri, Table 10. Work Status and Income in 1999: 2000, Washington, DC.
<https://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
8. U.S. Department of Labor Bureau of Labor Statistics (2016) Consumer Price Index - All Urban Consumers, U.S. City Average, All items, 1982-84=100.
http://data.bls.gov/timeseries/CUUR0000SA0?data_tool=Xgtable. U.S. Department of Labor Bureau of Labor Statistics (2016) Consumer Price Index - All Urban Consumers, All items, 1982-84=100, Midwest Urban Areas. http://data.bls.gov/timeseries/CUUR0300SA0?data_tool=Xgtable.
9. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, Table B01002: Median Age by Sex - Universe: Total population.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B01002&prodType=table.
10. U.S. Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>. U.S. Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Age and Sex: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.

11. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, B23025: Employment Status for the Population 16 Years and Over - Universe: Population 16 years and Over.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B23025&prodType=table.
12. U.S. Census Bureau. 2011-2015 American Community Survey 5-Year Estimates, Table B22003: Receipt of Food Stamps/SNAP in the Past 12 Months by Poverty Status in the Past 12 Months for Households - Universe: Households.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_15_5YR_B22003&prodType=table.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
**APPLICATION FOR CONSTRUCTION PERMIT
WASTEWATER FACILITY**

RECEIVED

OCT 09 2018

Water Protection Program

AP 30914
CPC0002034

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1050.00	CHECK NO. 44380
DATE RECEIVED 10-9-18	

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: 6/29/2018 ☐ 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

Installation of Additional Aeration/Mixing Equipment Pn Southeast Wastewater Treatment Facility

2.2 PROJECT DESCRIPTION

Installation of WQA aeration/mixing units in Cell Nos. 2 and 3 of the existing Southeast Wastewater Treatment Facility. Two (2) WQA units to be installed in Cell No.2 and one (1) WQA unit in Cell No.3. Included installations shall be installation of floating baffle curtain in Cell No.3 prior to discharge structure and the installation of site electrical services and controls to the new WQA units.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Sludge is retained in lagoon cells.

2.4 DESIGN INFORMATION

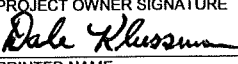
- A. Current population: 2,385 (Est.); Design population: 3,740
- B. Actual Flow: 233,866 gpd; Design Average Flow: 374,000 gpd;
Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: _____ gpd;
Design Wet Weather Event: _____

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

\$ 200,139.00

3.0 WASTEWATER TREATMENT FACILITY				
NAME		TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
ADDRESS (PHYSICAL)		CITY	STATE	ZIP CODE
				COUNTY
Wastewater Treatment Facility: Mo- (Outfall Of)				
3.1 Legal Description: ¼, ¼, ¼, 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	EMAIL ADDRESS	
City of Concordia		(660) 463-2228		
ADDRESS	CITY	STATE	ZIP CODE	
618 S. Main, P.O. Box 847	Concordia	MO	64020	
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	
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		TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
Schulte Engineering & Consulting, LLC		(816) 665-7900	ron@schulteengineering.com	
ADDRESS	CITY	STATE	ZIP CODE	
21 Gates Drive	Platte City	MO	64079	
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				
			DATE	
PRINTED NAME			DATE	
Dale Klussman			9-25-18	
TITLE OR CORPORATE POSITION		TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
City Administrator		(660) 463-2228	concordiaadmin@ctcis.net	
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.				

PART B – LAND APPLICATION ONLY**(Submit only if the proposed construction project includes land application of wastewater.)****8.0 FACILITY INFORMATION**

8.1 Type of wastewater to be irrigated: ☐ Domestic ☐ State/National Park ☐ Seasonal business
☐ Municipal ☐ Municipal with a pretreatment program or significant industrial users
☐ Other (explain) _____

8.2 Months when the business or enterprise will operate or generate wastewater:
☐ 12 months per year ☐ Part of the year (list months): _____

8.3 This system is designed for:
☐ No-discharge ☐ Subsurface
☐ Partial irrigation when feasible and discharge rest of time
☐ Irrigation during recreational season, April – October, and discharge during November – March
☐ Other (explain) _____

9.0 STORAGE BASINS

9.1 Number of storage basins: _____ (Use additional pages if greater than two basins.)

9.2 Type of basins: ☐ Steel ☐ Concrete ☐ Fiberglass ☐ Earthen ☐ Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.
Basin #1: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____
Basin #2: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).
Basin #1: Maximum operating water level _____ ft Minimum operating water level _____ ft
Basin #2: Maximum operating water level _____ ft Minimum operating water level _____ ft

9.5 Design depth of sludge in storage basins.
Basin #1: _____ ft Basin #2: _____ ft

9.6 Existing sludge depth, if the basins are currently in operation.
Basin #1: _____ ft Basin #2: _____ ft

9.7 Total design sludge storage: _____ dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Type of land application: ☐ Fixed Head Sprinklers ☐ Center Pivot ☐ Traveling Gun ☐ Drip Dispersal
☐ Subsurface Low Pressure Pipe ☐ Other (describe) _____

10.2 Number of irrigation sites _____ Total Acres _____ Maximum % field slopes _____
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.3 Type of vegetation: ☐ Grass hay ☐ Pasture ☐ Timber ☐ Row crops
☐ Other (describe) _____

10.4 Wastewater flow (dry weather) gallons per day: Average annual _____
Seasonal _____ Off-season _____

10.5 Land application rate (design flow including 1-in-10 year storm water flows):
Design: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week
Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

10.6 Total irrigation per year (gallons): Design: _____ gal Actual: _____ gal

10.7 Actual months used for irrigation (check all that apply):
☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

10.8 Land application rate is based on:
☐ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N and P) If N and P is selected, is the plan included? ☐ YES ☐ NO