

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**



**CONSTRUCTION PERMIT**

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

St. James WWTP  
16000 Highway B  
St. James, MO 65559

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.

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 2, 2022  
Effective Date

March 1, 2024  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

## CONSTRUCTION PERMIT

### I. CONSTRUCTION DESCRIPTION

This project consists of construction of a new secondary clarifier flow splitting structure, a new RAS/WAS pumping system, expansion of the existing UV disinfection process, installation of a new wet weather screening process, and construction of a new chemical feed facility for disinfection and dechlorination of wet weather flows.

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 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 in accordance with the plans and specifications dated by Archer-Elgin Engineering, Surveying & Architecture, LLC on October 11, 2021, and signed and sealed by Kenneth A. Campbell, P.E. on May 3, 2021, and approved by the Department on March 3, 2022.
3. Regulation 10 CSR 20-4.040(18)(B)1 requires that projects be publicly advertised, allowing sufficient time for bids to be prepared and submitted. Projects should be advertised at least 30 days prior to bid opening.
4. The Department must be contacted in writing prior to making any changes to the approved 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).
5. As per 10 CSR 20-4.040, all changes in contract price or time within the approved scope of work must be by change order in accordance with Section 19 of this rule.
6. 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 electronic Sanitary Sewer Overflow/Bypass Reporting system at <https://dnr.mo.gov/mogem/> or the Central Field Office per 10 CSR 20-7.015(9)(G).
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 <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
8. A United States Army Corps of Engineers (USACE) Section 404 Department of Army permit (§404) along with the Department's Section 401 Water Quality Certification or waiver (§401) 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 likely be required. Since the USACE makes determinations on what is jurisdictional, you must contact the USACE to determine permitting requirements. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information or you may contact the Department's Water Protection Program at 573-522-4502 or [wpsc401cert@dnr.mo.gov](mailto:wpsc401cert@dnr.mo.gov).

9. Upon completion of construction:
  - a. The City of St. James will become the continuing authority for operation and maintenance of these facilities;
  - b. Submit an electronic copy of the as-builts 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) and request the operating permit modification be issued.

#### **IV. REVIEW SUMMARY**

##### **1. CONSTRUCTION PURPOSE**

This construction intends to eliminate wet weather discharges from Outfall #002 by blending treated wet weather flows with the secondary treatment process effluent.

##### **2. FACILITY DESCRIPTION**

The St. James WWTP is an existing plant with two oxidation ditches, three final clarifiers, and UV disinfection. After construction, blending starts when flows are diverted from the wet weather flow splitter; pass through the wet weather mechanical and manual screen, chlorination, peak flow clarifier, and dechlorination; and are combined with fully treated flows from the outlet flume.

The St. James WWTP is located at 16000 Highway B, St. James, Missouri, in Phelps County. The facility has a design average flow of 1.0 million gpd and serves a hydraulic population equivalent of approximately 7,757 people.

##### **3. COMPLIANCE PARAMETERS**

The proposed project is required to meet final effluent limits for Total Residual Chlorine of 18.1 µg/L (Daily Maximum) and 9 µg/L (Monthly Average Limit), as established in MO-0093564.

The limits applicable to the facility following the completion of construction will be:

Parameter	Units	Monthly Average Limit	Daily Maximum
Total Residual Chlorine	µg/L	9 (130 ML)	18.1

#### **4. REVIEW OF MAJOR TREATMENT DESIGN CRITERIA**

Construction activities for the St. James WWTF Peak Flow Disinfection Improvements project will include:

- Construction of new wet weather screening and flow measurement process. The wet weather screen will be a mechanical traveling rake-style installed within the flow channel. An emergency bypass channel will be installed with a manual bar screen. Flow measurement will be by Parshall flume with ultrasonic level transducer. New flow control slide gates will be installed to allow isolation and dewatering of this process.
- Construction of a new chemical feed process. A pre-engineered, prefabricated fiberglass chemical feed building package will be installed on a shallow reinforced concrete foundation. Sodium hypochlorite and sodium bisulfite will be drawn from insulated chemical storage tanks and delivered to the process piping upstream and downstream of the Peak Flow Clarifier, respectively.
- Construction of a new secondary clarifier flow splitting structure. New process piping will collect flow from the oxidation ditches and convey them to a central location between secondary clarifiers No. 1, No. 2 and No. 3. The collected flows will be split to each clarifier with three new flow control gates.
- Construction of a new RAS/WAS pump station process. Two new RAS and one WAS pumps will be installed in the northern existing wetwell.
- Install two new UV modules within each existing bank.

#### **5. OPERATING PERMIT**

The modified St. James WWTP Missouri State Operating Permit No. MO-0093564 was public noticed to reflect the construction activities from January 8, 2022, to February 7, 2022, 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.

Patrick Anderson, P.E.  
Financial Assistance Center  
[patrick.anderson@dnr.mo.gov](mailto:patrick.anderson@dnr.mo.gov)

**APPENDIX – COST ANALYSIS FOR COMPLIANCE:**

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

**St. James WWTP, Permit Renewal  
 City of St. James  
 Missouri State Operating Permit #MO-0093564**

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 requires compliance with new monitoring requirements for Total Kjeldahl Nitrogen, and Nitrate + Nitrite sampling for Outfall #001 and Total Phosphorus, Ammonia, Total Kjeldahl Nitrogen, and Nitrate + Nitrite sampling for Permitted Feature INF

**Connections**

The number of connections was reported by the permittee on the Financial Questionnaire.

Connection Type	Number
Residential	1,240
Commercial	196
Industrial	0
<b>Total</b>	<b>1,436</b>

**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’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.”

**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;**

<b>Criterion 1 Table. Current Financial Information for the City of St. James</b>	
Current Monthly User Rates per 5,000 gallons*	\$26.89
Median Household Income (MHI) <sup>1</sup>	\$45,222
Current Annual Operating Costs (excludes depreciation)	\$569,695

\*User Rates were reported by the permittee on the Financial Questionnaire.

**(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:

<b>Criterion 2A Table. Estimated Cost Breakdown of New Permit Requirements</b>			
New Requirement	Frequency	Estimated Cost	Estimated Annual Cost
Total Phosphorus – Influent	Monthly	\$24	\$288
Total Kjeldahl Nitrogen - Influent	Monthly	\$33	\$396
Nitrate + Nitrite - Influent	Monthly	\$40	\$480
Ammonia - Influent	Monthly	\$20	\$240
Total Kjeldahl Nitrogen - Effluent	Monthly	\$33	\$396
Nitrate + Nitrite - Effluent	Monthly	\$40	\$480
Total Estimated Annual Cost of New Permit Requirements			\$2,280

<b>Criterion 2B Table. Estimated Costs for New Permit Requirements</b>		
(1)	Estimated Annual Cost	\$2,280
(2)	Estimated Monthly User Cost for New Requirements <sup>2</sup>	\$0.13
	Estimated Monthly User Cost for New Requirements as a Percent of MHI <sup>3</sup>	0.004%
(3)	Total Monthly User Cost*	\$27.02
	Total Monthly User Cost as a Percent of MHI <sup>4</sup>	0.7%

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

**(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.

**Nutrient Monitoring**

Nutrients are mineral compounds that are required for organisms to grow and thrive. Of the six (6) elemental macronutrients, nitrogen and phosphorus are generally not readily available and limit growth of organisms. Excess nitrogen and phosphorus will cause a shift in the ecosystem’s food web. Once excess nitrogen and phosphorus are introduced into a waterbody, some species’ populations will dramatically increase, while other populations will not be able to sustain life. Competition and productivity are two factors in which nutrients can alter aquatic ecosystems and the designated uses of a waterbody. For example, designated uses, such as drinking water sources and recreational uses, become impaired when algal blooms take over a waterbody. These blooms can cause foul tastes and odors in the drinking water, unsightly appearance, and fish mortality in the waterbody. Some algae also produce

toxins that may cause serious adverse health conditions such as liver damage, tumor promotion, paralysis, and kidney damage. The monitoring requirements for nitrogen and phosphorus have been added to the permit to provide data regarding the health of the receiving stream's aquatic life. A healthy ecosystem is beneficial as it provides reduced impacts on human and aquatic health as well as recreational opportunities.

**(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 that their outstanding debt for their current wastewater collection and treatment systems is \$2,395,000.

**(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 <sup>1, 5-9</sup> for the City of St. James**

No.	Administrative Unit	St. James City	Missouri State
1	Population (2018)	4,112	6,090,062
2	Percent Change in Population (2000-2018)	11.0%	8.8%
3	2018 Median Household Income (in 2019 Dollars)	\$45,222	\$54,530
4	Percent Change in Median Household Income (2000-2018)	19.7%	-6.3%
5	Median Age (2018)	37.9	38.5
6	Change in Median Age in Years (2000-2018)	-2.2	2.4
7	Unemployment Rate (2018)	6.7%	5.1%
8	Percent of Population Below Poverty Level (2018)	18.3%	14.2%
9	Percent of Household Received Food Stamps (2018)	14.7%	11.6%
10	(Primary) County Where the Community Is Located	Phelps County	

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

The City reported that they are looking at making system improvements to address bypasses, which is estimated to cost the City between \$2,360,000 and \$3,470,000, depending on which options are chosen.

**(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 St. James 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.

Based on the assessment tool, the City of St. James has been determined to be a category 5 community. This means that the City of St. James 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**

- (A) 2018 MHI in 2018 Dollar: United States Census Bureau. United States Census Bureau. 2014-2018 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2018 Inflation-Adjusted Dollars). <https://data.census.gov/cedsci/table?q=B19013&tid=ACSDT5Y2018.B19013&vintage=2018>.

(B) 2000 MHI in 1999 Dollar: (1) For United States, United States 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>. (2) For Missouri State, United States 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>.

(C) 2019 CPI, 2018 CPI and 1999 CPI: U.S. Department of Labor Bureau of Labor Statistics (2019) Consumer Price Index - All Urban Consumers, U.S. City Average. All Items. 1982-84=100. [http://data.bls.gov/timeseries/CUUR0000SA0?data\\_tool=Xgtable](http://data.bls.gov/timeseries/CUUR0000SA0?data_tool=Xgtable).

(D) 2018 MHI in 2019 Dollar = 2018 MHI in 2018 Dollar x 2019 CPI / 2018 CPI; 2000 MHI in 2019 Dollar = 2000 MHI in 1999 Dollar x 2019 CPI / 1999 CPI.

(E) Percent Change in Median Household Income (2000-2018) = (2018 MHI in 2019 Dollar - 2000 MHI in 2019 Dollar) / (2000 MHI in 2019 Dollar).
- (\$2,280/1,436)/12 = \$0.13 (Estimated Monthly User Cost for New Requirements)
- (\$0.13/(\$45,222/12))100% = 0.004% (New Sampling Only)
- (\$27.02/(\$45,222/12))100% = 0.7% (Total User Cost)
- (A) Total Population in 2018: United States Census Bureau. 2014-2018 American Community Survey 5-Year Estimates, Table B01003: Total Population - Universe: Total Population. <https://data.census.gov/cedsci/table?q=B010003%20population&tid=ACSDT5Y2018.B01003&vintage=2018>.

- (B) Total Population in 2000: (1) For United States, United States 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>.
- (2) For Missouri State, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Place of Birth, Residence in 1995, and Language: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
- (C) Percent Change in Population (2000-2018) = (Total Population in 2018 - Total Population in 2000) / (Total Population in 2000).
6. (A) Median Age in 2018: United States Census Bureau. 2014-2018 American Community Survey 5-Year Estimates, Table B01002: Median Age by Sex - Universe: Total population. <https://data.census.gov/cedsci/table?q=B01002&tid=ACSDT5Y2018.B01002&vintage=2018>.
- (B) Median Age in 2000: (1) For United States, United States 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., Page 2. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>.
- (2) For Missouri State, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Place of Birth, Residence in 1995, and Language: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
- (C) Change in Median Age in Years (2000-2018) = (Median Age in 2018 - Median Age in 2000).
7. United States Census Bureau. 2014-2018 American Community Survey 5-Year Estimates, B23025: Employment Status for the Population 16 Years and Over - Universe: Population 16 years and Over. <https://data.census.gov/cedsci/table?q=B23025&tid=ACSDT5Y2018.B23025>.
8. United States Census Bureau. 2014-2018 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. <https://data.census.gov/cedsci/table?q=S1701&tid=ACSST5Y2018.S1701>.
9. United States Census Bureau. 2014-2018 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. <https://data.census.gov/cedsci/table?q=B22003&tid=ACSDT5Y2018.B22003>.



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

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

**APPLICATION OVERVIEW**

The Application for Construction Permit – Wastewater Treatment Facility form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.**

**PART A – BASIC INFORMATION**

**1.0 APPLICATION INFORMATION** (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project?  YES  N/A Funding Agency: \_\_\_\_\_ Project #: \_\_\_\_\_
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
 YES Date of Approval: \_\_\_\_\_  N/A
- 1.3 Has the department approved the proposed project's facility plan\*?  
 YES Date of Approval: \_\_\_\_\_  NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan\* for wastewater treatment facilities included with this application?  
 YES  NO  Exempt because \_\_\_\_\_
- 1.5 Is a copy of the appropriate plans\* and specifications\* included with this application?  
 YES Denote which form is submitted:  Hard copy  Electronic copy (See instructions.)  NO
- 1.6 Is a summary of design\* included with this application?  YES  NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?  
 YES Date of submittal: \_\_\_\_\_  
 Enclosed is the appropriate operating permit application and fee submittal. Denote which form:  A  B  B2  
 N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice?  YES  NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency?  YES  NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application?  YES  NO  
 See Section 7.0

\* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

**2.0 PROJECT INFORMATION**

2.1 NAME OF PROJECT	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$
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2.3 PROJECT DESCRIPTION

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

2.5 DESIGN INFORMATION

A. Current population: \_\_\_\_\_; Design population: \_\_\_\_\_

B. Actual Flow: \_\_\_\_\_ MGD Design Average Flow: \_\_\_\_\_ MGD  
 Actual Peak Daily Flow: \_\_\_\_\_ MGD Design Maximum Daily Flow: \_\_\_\_\_ MGD Design Wet Weather Event: \_\_\_\_\_ MGD

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 Billy Bowers		TELEPHONE NUMBER WITH AREA CODE 573-263-8810	E-MAIL ADDRESS bbowers@alliancewater.com	
ADDRESS (PHYSICAL) 16000 State Route B	CITY St. James	STATE MO	ZIP CODE 65559	COUNTY USA

Wastewater Treatment Facility: Mo- 0093564 (Outfall 001 Of 001 )

3.1 Legal Description: NE ¼, NE ¼, NW ¼, Sec. 9, T 38N, R 6W  
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 623761 Northing (Y): 4210458  
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Robinson Creek

**4.0 PROJECT OWNER**

NAME City of St. James		TELEPHONE NUMBER WITH AREA CODE 573-265-7013	E-MAIL ADDRESS jfleming@stjamesmo.org	
ADDRESS 100 S. Jefferson	CITY St. James	STATE MO	ZIP CODE 65559	

**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 City of St. James		TELEPHONE NUMBER WITH AREA CODE 573-265-7013	E-MAIL ADDRESS jfleming@stjamesmo.org	
ADDRESS 100 S. Jefferson	CITY St. James	STATE MO	ZIP CODE 65559	

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 Ken Campbell / Archer-Elgin Engineering & Surveying		TELEPHONE NUMBER WITH AREA CODE (573)- 364- 6362	E-MAIL ADDRESS kcampbell@cmarcher.com	
ADDRESS 310 E. 6th Street	CITY Rolla	STATE MO	ZIP CODE 65401	

**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  
James Fleming

DATE  
5-10-2021

TITLE OR CORPORATE POSITION City Administrator	TELEPHONE NUMBER WITH AREA CODE 573-265-7013	E-MAIL ADDRESS jfleming@stjamesmo.org
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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.  
 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 three 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 \_\_\_\_\_  
 Basin #3: 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  
 Basin #3: 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 Basin #3: \_\_\_\_\_ ft

9.6 Existing sludge depth, if the basins are currently in operation.  
 Basin #1: \_\_\_\_\_ ft Basin #2: \_\_\_\_\_ ft Basin #3: \_\_\_\_\_ ft

9.7 Total design sludge storage: \_\_\_\_\_ dry tons and \_\_\_\_\_ cubic feet

**10.0 LAND APPLICATION SYSTEM**

10.1 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.)

10.2 Type of vegetation:  Grass hay  Pasture  Timber  Row crops  
 Other (describe) \_\_\_\_\_

10.3 Wastewater flow (dry weather) gallons per day: Average annual \_\_\_\_\_ Seasonal \_\_\_\_\_ Off-season \_\_\_\_\_

10.4 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

10.5 Total irrigation per year (gallons): Design: \_\_\_\_\_ gal Actual: \_\_\_\_\_ gal

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

10.7 Land application rate is based on:  
 Hydraulic Loading  Other (describe) \_\_\_\_\_  
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included?  YES  NO