

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Douglas S. Bjornstad, P.E.
District Engineer/Manager
JCPSD, Bel Air Estates WWTF
Jefferson County Public Sewer District (JCPSD)
P.O. Box 632, Hillsboro, MO 63050

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.

September 27, 2022
Effective Date

September 26, 2024
Expiration Date

A handwritten signature in black ink that reads 'Chris Wieberg'. Below the signature is a horizontal line.
Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction shall include installation of a chlorination tablet feeder, a precast baffled concrete chlorine contact tank, and a dechlorination tablet feeder.

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 consistent with plans and specifications signed and sealed by Douglas Bjornstad, P.E., with the JCPSD and as described in this permit.

3. The Department must be contacted in writing prior to making any changes to the plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(11).
4. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's St. Louis Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater treatment facility shall be located at least fifty feet (50') from any dwelling or establishment.
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. A United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Department of the Army permit and a Section 401 Water Quality Certification issued by the Department may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied or notification is provided that no Section 404 permit is required by the USACE. You must contact your local USACE district since they determine what waters are jurisdictional and which permitting requirements may apply. You may call the Department's Water Protection Program, Operating Permits Section at 573-522-4502 for more information. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.
8. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - Contact period for Chlorine Disinfection. A minimum contact period of fifteen (15) minutes at design peak hourly flow or maximum rate of pumpage shall be provided after thorough mixing. 10 CSR 20-8.190(3)(A)
 - Solid dechlorination systems shall not be located in the chlorine contact tank. 10 CSR 20-8.190(4)(B)1.
 - Contact time. A minimum of thirty (30) seconds for mixing and contact time of dechlorination systems shall be provided at the design peak hourly flow or maximum rate of pumpage. 10 CSR 20-8.190(4)(B)2.
 - Disinfection and dechlorination, when used, shall be provided during all power outages. 10 CSR 20-8.140(7)(A)2.
 - The identification and hazard warning data included on chemical shipping containers, when received, shall appear on all containers (regardless of size or type) used to store, carry, or use a hazardous substance. 10 CSR 20-8.140(9)(E)

- The materials utilized for storage, piping, valves, pumping, metering, and splash guards, etc., for chemical handling, shall be specially selected considering the physical and chemical characteristics of each hazardous or corrosive chemical. 10 CSR 20-8.140(9)(A)1.
- All pumps or feeders for hazardous or corrosive chemicals shall have guards that will effectively prevent spray of chemicals into space occupied by facility personnel. 10 CSR 20-8.140(9)(A)3.
- Flood protection shall apply to new construction and to existing facilities undergoing major modification. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the one hundred (100)-year flood elevation. 10 CSR 20-8.140(2)(B)
- No treatment unit with a capacity of 22,500 gpd or less shall be located closer than the minimum distance of 50 ft to a neighboring residence for all other discharging facilities. See 10 CSR 20-2.010(68) for the definition of a residence. 10 CSR 20-8.140(2)(C)2.
- Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140(2)(D)
- The outfall shall be so constructed and protected against the effects of flood water, ice, or other hazards as to reasonably ensure its structural stability and freedom from stoppage. 10 CSR 20-8.140(6)(A)
- All outfalls shall be posted with a permanent sign indicating the outfall number (i.e., Outfall #001). 10 CSR 20-8.140(6)(C)
- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20-8.140(7)(D)1.
- A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
- Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards. The following shall be provided to fulfill the particular needs of each wastewater treatment facility:
 - Fencing. Enclose the facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140(8)(A)
 - Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140(8)(B)
 - First aid equipment; 10 CSR 20-8.140(8)(C)
 - Posted “No Smoking” signs in hazardous areas; 10 CSR 20-8.140(8)(D)
 - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140(8)(E) and 10 CSR 20-8.140(9)(D)1.
 - 10 CSR 20-8.140(8)(G) Portable lighting equipment complying with NEC requirements. See subsection (7)(B) of this rule;
 - Appropriately-placed warning signs for slippery areas, non-potable water fixtures (see subparagraph (7)(D)3.B. of this rule), low head clearance areas, open service manholes, hazardous chemical storage areas, flammable fuel storage areas, high noise areas, etc.; 10 CSR 20-8.140(8)(I)
- All sampling points shall be designed so that a representative and discrete twenty-four (24) hour automatic composite sample or grab sample of the effluent discharge can

be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters. 10 CSR 20-8.140(6)(B)

- Effluent twenty-four (24) hour composite automatic sampling equipment shall be provided at all mechanical wastewater treatment facilities and at other facilities where necessary under provisions of the operating permit. 10 CSR 20-8.190(3)(D)
9. Upon completion of construction:
- A. The Jefferson County Public Sewer District (JCPSD) will become the continuing authority for operation and maintenance of these facilities;
 - B. Submit an electronic copy of the as-built plans 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).

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Disinfection is proposed to meet final effluent limits for *E. coli* bacteria.

2. FACILITY DESCRIPTION

The existing WWTF includes a septic tank, extended aeration treatment tank, final clarifier, and aerated sludge holding tank. Sludge is hauled to a nearby JCPSD WWTF for further holding then land application.

The JCPSD assumed responsibility of the Bel Air Estates WWTP from the Public Service Commission (PSC) in March 2018. The JCPSD is operating the WWTF under an Abatement Order on Consent (AOC, 2019-WPCB-1588).

The WWTF does not currently have a disinfection system. The JCPSD is proposing to add chlorination and dechlorination to meet final effluent limits.

The JCPSD, Bel Air Estates WWTF is located at 6537 Jenny Court, in Cedar Hill, Jefferson County, Missouri. The facility has a design average flow of 12,300 gpd and serves a hydraulic population equivalent of approximately 164 people.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits for *E. coli* of 126 mg/l as established in operating permit MO0086576.

Following the completion of construction, the following limits (related to the disinfection project) will be applicable to the facility's discharge:

Parameter	Units	Monthly average limit
<i>E. coli</i>	#/100mL	126
Total Residual Chlorine	µg/L	8 (130 ML)
Dissolved Oxygen	mg/L	monitoring only

ML – minimum quantification level (ML)

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- Septic tank
- Activated sludge aeration basin
- Secondary clarifier with sludge return and wasting
- Sludge digester

Construction will cover the following items:

- Components are designed for a minimum peak hourly flow of 2,141 gallons per hour.
- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
 - Tablet Chlorinator – Installation of a tablet [Norweco Bio-Dynamic® Model XT 4000] chlorination chamber receiving clarified effluent and prior to the chlorine contact tank. The tablet chlorinator shall have a minimum design average flow of 20,000 gpd and a peak flow of 50,000 gpd. The system will dispense hypochlorite as the wastewater comes into contact with the tablets.
 - Chlorine Contact Tank – Installation of a pre-cast concrete tank approximately 6.5 ft x 6.5 ft x 2.84 ft (minimum water level) with at least 4 end-around baffles allowing for at least a 30:1 length to width ratio. This tank will allow for greater than 15-minute contact time during a peak flow of 2,141 gph.
 - Tablet Dechlorinator – Installation of a tablet [Norweco Bio-Dynamic® Model ITR 4000-S] dechlorination chamber receiving the chlorinated effluent and prior to Outfall No. 001. The tablet dechlorinator shall have a minimum design average flow of 20,000 gpd and a peak flow of 50,000 gpd. The system will dispense sodium sulfite as the wastewater comes into contact with the tablets.

5. OPERATING PERMIT

Operating permit MO0086576 will require a modification to reflect construction activities. The modified operating permit for the JCPSD, Bel Air Estates WWTF, MO0086576, will be public noticed to add total residual chlorine effluent limits and dissolved oxygen effluent monitoring.

Upon completion of construction, 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. (<https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>)

This facility does not meet the requirements of the MOGD general permit issued on July 1, 2019, as the facility is publicly owned.

V. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

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

Scott Adams, P.E.
Engineering Section
scott.adams@dnr.mo.gov

APPENDICES

- **CAFCOM**
- **Process Flow Diagram**

APPENDIX – COST ANALYSIS FOR COMPLIANCE:

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

**JCPSD Bel Air Estates WWTF, Permit Modification
 Jefferson County Public Sewer District
 Missouri State Operating Permit #MO-0086576**

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 quarterly monitoring requirements for Total Residual Chlorine and Dissolved Oxygen.

Connections

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

Connection Type	Number
Residential	43
Commercial	0
Industrial	0
Facility Total	43
Sewer District Total	4,597

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 District’s financial and socioeconomic situation. The financial questionnaire available to permittees on the Department’s website (<https://dnr.mo.gov/document-search/financial-questionnaire-mo-780-2511>) 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;

Criterion 1 Table. Current Financial Information for Jefferson County	
Current Monthly User Rates per 5,000 gallons*	\$46.97
Median Household Income (MHI) ¹	\$70,782
Current Annual Operating Costs (excludes depreciation) for JCPSD, Bel Aire	\$21,000

*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:

Criterion 2A Table. Estimated Cost Breakdown of New Permit Requirements			
New Requirement	Frequency	Estimated Cost	Estimated Annual Cost
Total Residual Chlorine	Quarterly	\$33	\$132
Dissolved Oxygen	Quarterly	\$12	\$48
Total Estimated Annual Cost of New Permit Requirements			\$180

(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 Sewer District has reported that they have no outstanding debt for the current wastewater collection and treatment systems.

(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 ¹⁻⁶ for Jefferson County

No.	Administrative Unit	Jefferson County	Missouri State	United States
1	Population (2020)	224,777	6,124,160	326,569,308
2	Percent Change in Population (2000-2020)	13.5%	9.5%	16.0%
3	2020 Median Household Income (in 2021 Dollars)	\$70,782	\$59,981	\$68,047
4	Percent Change in Median Household Income (2000-2020)	-6.1%	-2.8%	-0.4%
5	Median Age (2020)	39.6	38.7	38.2
6	Change in Median Age in Years (2000-2020)	4.7	2.6	2.9
7	Unemployment Rate (2020)	4.8%	4.5%	5.4%
8	Percent of Population Below Poverty Level (2020)	9.1%	13.0%	12.8%
9	Percent of Household Received Food Stamps (2020)	9.2%	10.5%	11.4%

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

The sewer district reported disinfection is to be added during Fiscal Year 2022 as well as beginning work on the collection system improvements to address infiltration and inflow issues. In Fiscal Year 2023, the sewer district plans to add to the comprehensive regionalization plan.

(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 Jefferson County Sewer District to seek funding from an outside source.

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

The sewer district indicated the Bel Aire Estates Mobile Home Park is surrounded by large-sized lot subdivisions or small acreage homes that are averse to utility infrastructure consolidation. As the county continues to develop, JCPSD will continue to search for opportunities to consolidate wastewater treatment facilities.

CONCLUSION AND FINDING

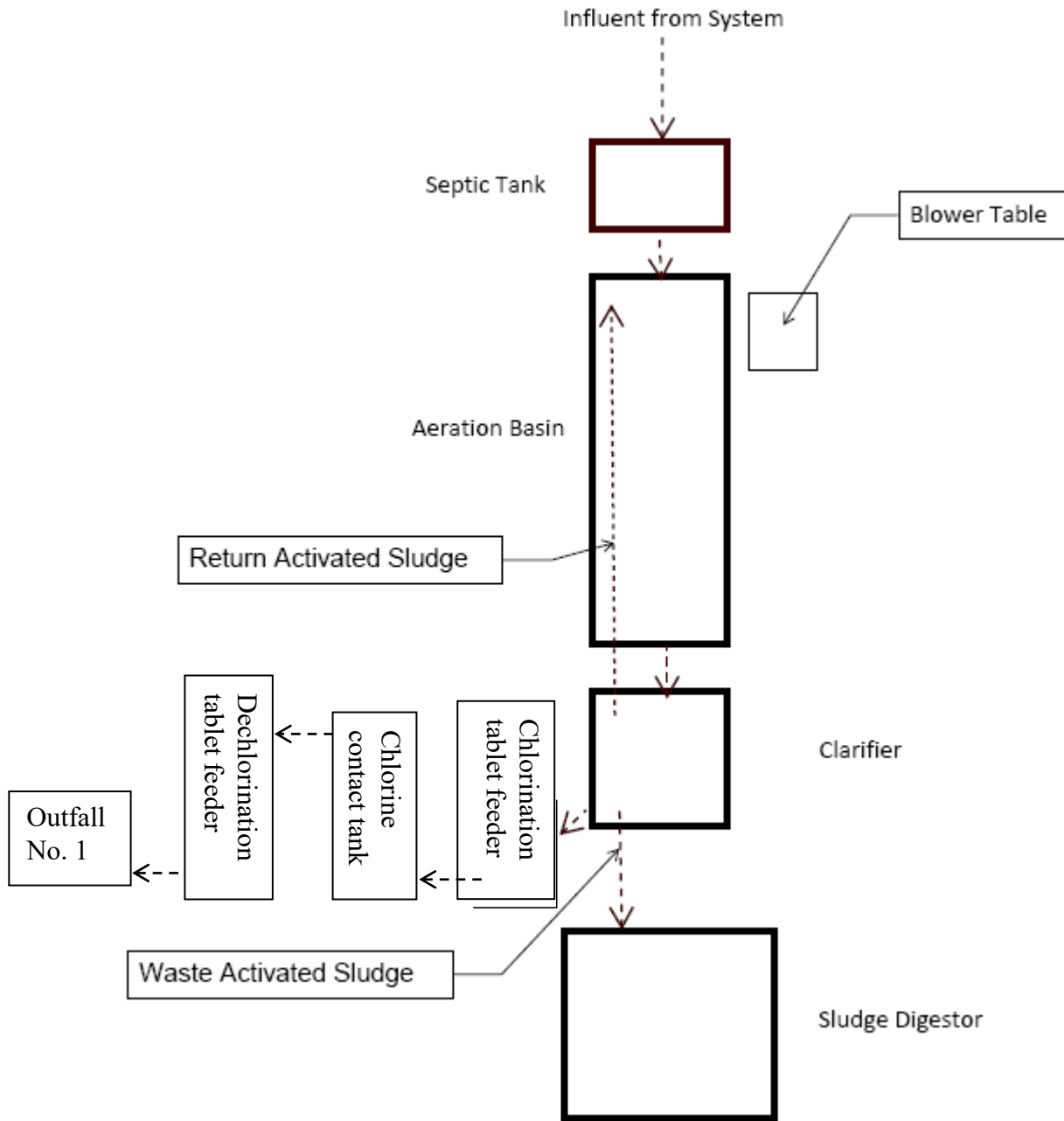
As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to increase monitoring. The Department has considered the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with the new permit 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. 2020 MHI in 2020 Dollar: United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2020 Inflation-Adjusted Dollars). <https://data.census.gov/cedsci/table?q=B19013&tid=ACSDT5Y2020.B19013>.
(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/content/dam/Census/library/publications/2003/dec/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/content/dam/Census/library/publications/2003/dec/phc-2-1-pt1.pdf>.
(C) (C) 2021 CPI, 2020 CPI and 1999 CPI: U.S. Department of Labor Bureau of Labor Statistics (2021) Consumer Price Index - All Urban Consumers, U.S. City Average. All Items. 1982-84=100 (unadjusted) - CUUR0000SAO. <https://data.bls.gov/cgi-bin/surveymost?bls>.
(D) 2020 MHI in 2021 Dollar = 2020 MHI in 2020 Dollar x 2021 CPI / 2020 CPI; 2000 MHI in 2020 Dollar = 2000 MHI in 1999 Dollar x 2021 CPI / 1999 CPI.
(E) Percent Change in Median Household Income (2000-2020) = (2020 MHI in 2021 Dollar - 2000 MHI in 2021 Dollar) / (2000 MHI in 2021 Dollar).
2. Total Population in 2020: United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, Table B01003: Total Population - Universe: Total Population. <https://data.census.gov/cedsci/table?q=B01003&tid=ACSDT5Y2020.B01003>.
(B) 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/content/dam/Census/library/publications/2003/dec/phc-2-1-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. Age and Sex: 2000, Washington, DC. <https://www2.census.gov/library/publications/2003/dec/phc-2-1-pt2.pdf>.
(C) Percent Change in Population (2000-2020) = (Total Population in 2020 - Total Population in 2000) / (Total Population in 2000).
3. Median Age in 2020: United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, Table B01002: Median Age by Sex - Universe: Total population. <https://data.census.gov/cedsci/table?q=B01002&tid=ACSDT5Y2020.B01002>.
(B) 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/content/dam/Census/library/publications/2003/dec/phc-2-1-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. Age and Sex: 2000, Washington, DC., Pages 64-92. <https://www2.census.gov/library/publications/2003/dec/phc-2-1-pt2.pdf>.
(C) Change in Median Age in Years (2000-2020) = (Median Age in 2020 - Median Age in 2000).
4. United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, S2301: Employment Status for the Population 16 Years and Over - Universe: Population 16 years and Over. <https://data.census.gov/cedsci/table?q=unemployment&tid=ACSST5Y2020.S2301>.
5. United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. <https://data.census.gov/cedsci/table?q=S1701&tid=ACSST5Y2020.S1701>.
6. United States Census Bureau. 2016-2020 American Community Survey 5-Year Estimates, Table S2201: Food Stamps/Supplemental Nutrition Assistance Program (SNAP) - Universe: Households. <https://data.census.gov/cedsci/table?q=S2201&tid=ACSST5Y2020.S2201>.

APPENDIX – FLOW DIAGRAM:





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: _____ gpd; Design Average Flow: _____ gpd;
 Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: _____ gpd; Design Wet Weather Event: _____

2.6 ADDITIONAL INFORMATION

A. Is a topographic map attached? YES NO

B. Is a process flow diagram attached? YES NO

3.0 WASTEWATER TREATMENT FACILITY

NAME Douglas S. Bjornstad	TELEPHONE NUMBER WITH AREA CODE 636-797-9900	E-MAIL ADDRESS dbjornstad@jeffcopsd.org
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ADDRESS (PHYSICAL) PO Box 632	CITY Hillsboro	STATE MO	ZIP CODE 63050	COUNTY Jefferson
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Wastewater Treatment Facility: Mo- 0086576 (Outfall 01 Of 01)

3.1 Legal Description: _____ ¼, NE ¼, SE ¼, Sec. 30, T 42N, R 4E
(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: Tributary to Isum Creek

4.0 PROJECT OWNER

NAME Douglas S. Bjornstad	TELEPHONE NUMBER WITH AREA CODE 636.797.9900	E-MAIL ADDRESS dbjornstad@jeffcopsd.org
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ADDRESS PO Box 632	CITY Hillsboro	STATE MO	ZIP CODE 63050
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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 Douglas S. Bjornstad	TELEPHONE NUMBER WITH AREA CODE 636-797-9900	E-MAIL ADDRESS dbjornstad@jeffcopsd.org
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ADDRESS PO Box 632	CITY Hillsboro	STATE MO	ZIP CODE 63050
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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 Douglas S. Bjornstad, P.E.	TELEPHONE NUMBER WITH AREA CODE 636-797-9900	E-MAIL ADDRESS dbjornstad@jeffcopsd.org
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ADDRESS PO Box 632	CITY Hillsboro	STATE MO	ZIP CODE 63050
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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 Douglas S Bjornstad, P.E.	DATE 06/30/2022
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TITLE OR CORPORATE POSITION District Manager/Engineer	TELEPHONE NUMBER WITH AREA CODE 636-797-9900	E-MAIL ADDRESS dbjornstad@jeffcopsd.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.