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

City of Bourbon
Bourbon WWTF
440 Highway J
Bourbon, MO  65441

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.

December 20, 2021
Effective Date

December 19, 2023
Expiration Date

Chris Wieberg, Director, Water Protection Program
CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction will include a new effluent pump station, an ultraviolet disinfection system, an effluent flow meter, and upsized gravity effluent pipe.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

II. COST ANALYSIS FOR COMPLIANCE

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a “finding of affordability” on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

The Department is not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

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 Gary William Davis, P.E., with Bartlett & West, Inc., 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 Southeast 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 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 dnr.mo.gov/env/wpp/401/ for more information.

9. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.

- Vacuum testing, if specified for concrete sewer manholes, shall conform to the test procedures in ASTM C1244 – 11(2017) Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill, as approved and published April 1, 2017, or the manufacturer’s recommendation. 10 CSR 20-8.120(4)(F)1.

- Exfiltration testing, if specified for concrete sewer manholes, shall conform to the test procedures in ASTM C969 – 17 Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines, as approved and published April 1, 2017. 10 CSR 20-8.120(4)(F)2.

- 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). 10 CSR 20-8.130(2)(A)
• Facilities shall be readily accessible by authorized personnel from a public right–of-way at all times. 10 CSR 20-8.140(2)(D). 10 CSR 20-8.130(2)(B)

• 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:
  o 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)
  o Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140(8)(B)
  o First aid equipment; 10 CSR 20-8.140(8)(C)
  o Posted “No Smoking” signs in hazardous areas; 10 CSR 20-8.140(8)(D)
  o Appropriate personal protective equipment (PPE); 10 CSR 20-8.140(8)(E)
  o Portable blower and hose sufficient to ventilate accessed confined spaces; 10 CSR 20-8.140(8)(F)
  o 10 CSR 20-8.140(8)(G) Portable lighting equipment complying with NEC requirements. See subsection (7)(B) of this rule;
  o 10 CSR 20-8.140(8)(H) Gas detectors listed and labeled for use in NEC Class I, Division 1, Group D locations. See subsection (7)(B) of this rule;
  o 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)
  o Explosion-proof electrical equipment, non-sparking tools, gas detectors, and similar devices, in work areas where hazardous conditions may exist, such as digester vaults and other locations where potentially explosive atmospheres of flammable gas or vapor with air may accumulate. 10 CSR 20-8.140(8)(K)
  o Provisions for local lockout/tagout on stop motor controls and other devices; 10 CSR 20-8.140(8)(L)
  o Provisions for an arc flash hazard analysis and determination of the flash protection boundary distance and type of PPE to reduce exposure to major electrical hazards shall be in accordance with NFPA 70E Standard for Electrical Safety in the Workplace (2018 Edition), as approved and published August 21, 2017. 10 CSR 20-8.140(8)(M)

Multiple pumps shall be provided except for design average flows of less than fifteen hundred (1,500) gallons per day. 10 CSR 20-8.130(3)(B)1.

• Electrical equipment. Electrical equipment shall be provided with the following requirements:
  o 10 CSR 20-8.130(3)(B)2.A. Electrical equipment must comply with 10 CSR 20-8.140(7)(B);
  o Utilize corrosive resistant equipment located in the wet well; 10 CSR 20-8.130(3)(B)2.B.
  o Provide a watertight seal and separate strain relief for all flexible cable; 10 CSR 20-8.130(3)(B)2.C.
  o Install a fused disconnect switch located above ground for the main power feed for all pumping stations. 10 CSR 20-8.130(3)(B)2.D.
When such equipment is exposed to weather, it shall comply with the requirements of weather proof equipment; enclosure NEMA 4; NEMA 4X where necessary; and *NEMA Standard 250-2014*, published December 15, 2014. 10 CSR 20-8.130(3)(B)2.E.

- Install lightning and surge protection systems; 10 CSR 20-8.130(3)(B)2.F.
- Install a one hundred ten volt (110 V) power receptacle inside the control panel located outdoors to facilitate maintenance; 10 CSR 20-8.130(3)(B)2.G.
- Provide Ground Fault Circuit Interruption (GFCI) protection for all outdoor receptacles. 10 CSR 20-8.130(3)(B)2.H.

- Water level controls must be accessible without entering the wet well. 10 CSR 20-8.130(3)(C)

- Valves shall not be located in the wet well unless integral to a pump or its housing. 10 CSR 20-8.130(3)(D)

- Covered wet wells shall have provisions for air displacement to the atmosphere, such as an inverted and screened “j” tube or other means. 10 CSR 20-8.130(3)(E)

- The distance between wastewater pumping stations and all potable water sources shall be at least fifty feet (50') in accordance with 10 CSR 23-3.010(1)(B). 10 CSR 20-8.130(2)(D)

- 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.

- There shall be no physical connection between any potable water supply and a wastewater pumping station, which under any conditions, might cause contamination of the potable water supply. If a potable water supply is brought to the station, 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 20-8.130(3)(G)
  - Where a potable water supply is to be used for any purpose in a wastewater treatment facility other than direct connections, a break tank, pressure pump, and pressure tank or a reduced pressure backflow preventer consistent with the department’s Public Drinking Water Branch shall be provided. 10 CSR 20-8.140(7)(D)3.A.
  - For indirect connections, a sign shall be permanently posted at every hose bib, faucet, hydrant, or sill cock located on the water system beyond the break tank or backflow preventer to indicate that the water is not safe for drinking. 10 CSR 20-8.140(7)(D)3.B.
  - Where a separate non-potable water supply is to be provided, a break tank will not be necessary, but all system outlets shall be posted with a permanent sign indicating the water is not safe for drinking. 10 CSR 20-8.140(7)(D)4.

- Submersible pump stations shall meet the applicable requirements under 10 CSR 20-8.130(3), except as modified in this section. 10 CSR 20-8.130(5)
Pump Removal. Submersible pumps shall be readily removable and replaceable without personnel entering, dewatering, or disconnecting any piping in the wet well. 10 CSR 20-8.130(5)(A)

Valve Chamber and Valves. Valves required under subsection (3)(D) of this rule shall be located in a separate valve chamber. 10 CSR 20-8.130(5)(B)

A minimum access hatch dimensions of twenty-four inches by thirty-six inches (24" x 36") shall be provided. 10 CSR 20-8.130(5)(B)1.

- Alarm systems with an uninterrupted power source shall be provided for pumping stations. 10 CSR 20-8.130(6)

- An audiovisual alarm or a more advanced alert system, with a self-contained power supply, capable of monitoring the condition of equipment whose failure could result in a violation of the operating permit, shall be provided for all wastewater treatment facilities. 10 CSR 20-8.140(7)(C)

- Force main system shall be designed to withstand all pressures (including water hammer and associated cyclic reversal of stresses), and maintain a velocity of at least two feet (2') per second. 10 CSR 20-8.130(8)(A)

- Unless another distance is determined by the Missouri Geological Survey or by the department’s Public Drinking Water Branch, the minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300'). 10 CSR 20-8.140(2)(C)1.

- 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 sampling points shall be designed so that a representative and discrete twenty-four (24) hour automatic composite sample or grab sample of the effluent discharge can be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters. 10 CSR 20-8.140(6)(B)

- All outfalls shall be posted with a permanent sign indicating the outfall number (i.e., Outfall #001). 10 CSR 20-8.140(6)(C)

- All wastewater treatment facilities shall be provided with an alternate source of electric power or pumping capability to allow continuity of operation during power failures. 10 CSR 20-8.140(7)(A)1.

- Electrical systems and components in raw wastewater or in enclosed or partially enclosed spaces where hazardous concentrations of flammable gases or vapors that are normally present, shall comply with the NFPA 70 National Electric Code (NEC) (2017 Edition), as approved and published August 24, 2016, requirements for Class I, Division 1, Group D locations. 10 CSR 20-8.140(7)(B)

- A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
- 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 20-8.140(7)(F), 10 CSR 20-8.190(3)(D)

- Emergency Power. Disinfection processes, when used, shall be provided during all power outages. 10 CSR 20-8.190(2)(A), 10 CSR 20-8.140(7)(A)2.

- The UV dosage shall be based on the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190(5)(A)1.

- The UV system shall deliver the target dosage based on equipment derating factors and, if needed, have the UV equipment manufacturer verify that the scale up or scale down factor utilized in the design is appropriate for the specific application under consideration. 10 CSR 20-8.190(5)(A)3.

- The UV system shall deliver a minimum UV dosage of thirty thousand microwatt seconds per centimeters squared (30,000 μW • s/cm²). 10 CSR 20-8.190(5)(A)4.

- For open channel or closed vessel UV systems. The combination of the total number of banks or closed vessels shall be capable of treating the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190(5)(B)1 & 2.

- The UV system must continuously monitor and display at the UV system control panel the following minimum conditions:
  - The relative intensity of each bank or closed vessel system; 10 CSR 20-8.190(5)(C)1.A.
  - The operational status and condition of each bank or closed vessel system; 10 CSR 20-8.190(5)(C)1.B.
  - The ON/OFF status of each lamp in the system; 10 CSR 20-8.190(5)(C)1.C. and
  - The total number of operating hours of each bank or each closed vessel system. 10 CSR 20-8.190(5)(C)1.D.

- The UV system shall include an alarm system. Alarm systems shall comply with 10 CSR 20-8.140(7)(C). 10 CSR 20-8.190(5)(C)2.

10. Upon completion of construction:

A. The City of Bourbon will become the continuing authority for operation and maintenance of these facilities;

B. Submit an electronic copy of the as built if the project was not constructed in accordance with previously submitted plans and specifications; and

C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N). When the facility applies for their next operating permit renewal, they will be expected to include an updated facility description on their application.
IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The operating permit includes a schedule of compliance for \( E. coli \) bacteria. The proposed project is to add an ultraviolet disinfection system, an effluent pump station to force flow through the UV reactor, a new effluent flow meter, and upgraded effluent piping to route wastewater through the UV system or to bypass the UV system during the nonrecreational season.

2. FACILITY DESCRIPTION

The Bourbon WWTF was constructed in about 1977, with improvements in about 2000. The facility currently includes a flow splitter (with overflows going to a stormwater clarifier and later blended with effluent), manual bar screen, oxidation ditch and 3 secondary clarifiers, aerobic sludge digesters, and sludge holding tank. The Design Average Flow is listed on the operating permit as 580,000 gpd.

The proposed construction includes 4 manholes, approximately 200 linear feet of 12- to 18-inch C900 PVC PR 235 pipe, an effluent lift station with 4 pumps (2 pumps rated at approximately 2.68 hp (with VFDs) capable of approximately 325 gpm against a total dynamic head of 16.75 ft with both pumps operating, and 2 pumps 12.1 hp capable of 2,230 gpm against a total dynamic head of 20.8 ft with both pumps operating, all equipped with VFDs) in a wet well that is approximately 13 feet by 7½ feet and 12 feet deep, an ultraviolet disinfection system capable of 30.0 mJ/cm\(^2\) at a minimum 60% transmittance, and an effluent flow meter.

The Bourbon WWTF is located at 440 Highway J, Bourbon, in Crawford County, Missouri. The facility has a design average flow of 580,000 gpd and serves a hydraulic population equivalent of approximately 2,425 people.

3. COMPLIANCE PARAMETERS

The existing facility can meet an \( E. coli \) of 126 CFU per 100 mL. The proposed project is required to meet final effluent limits of 206 CFU per 100 mL as established in Operating Permit MO-0094765, issued on November 1, 2020.

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

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Units</th>
<th>Monthly average limit</th>
</tr>
</thead>
<tbody>
<tr>
<td>( E. coli )</td>
<td>/100mL</td>
<td>206</td>
</tr>
</tbody>
</table>

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA
Existing major components that will remain in use include the following:

- Flow splitter (with overflows going to a stormwater clarifier and later blended with effluent)
- Manual bar screen
- Oxidation ditch
- 3 secondary clarifiers (with RAS to the beginning of the oxidation ditch and WAS to the digesters)
- Aerobic sludge digesters
- Sludge holding tank

Construction will cover the following items:

- Components are designed for a peak flow of 2.75 MGD (114,583 gph or 1,910 gpm), based on hydraulic loading to the system.

- Effluent Pump Station – Construction of a quadruplex pump station prior to the UV system, with the following pumps:
  - Two 2.68 hp submersible pumps (with VFDs) capable of operating at approximately 325 gpm against a total dynamic head (TDH) of 16.75 ft with both pumps operating
  - Two 12.1 hp submersible pumps (with VFDs) capable of operating at approximately 2,230 gpm against a TDH of approximately 20.8 ft with both pumps operating

- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
  - Non-Contact Ultraviolet (UV) – A closed channel, gravity flow, low pressure high intensity (LPHO) UV non-contact disinfection system capable of treating a peak flow of 2.75 MGD while delivering a minimum UV intensity of 30 mJ/cm² with an expected ultraviolet transmissivity of 60% or greater. The enclosed UV system consists of 8 lamps per rack, 7 racks per bank, and 2 banks, for a total of 112 lamps in the system. Wastewater flows through 36 “Activated Fluoropolymer” (AFP) tubes located between the non-amalgam mercury vapor UV lamps. The two non-contact UV reactors are arranged in series. The disinfected effluent will flow by gravity through flow measurement equipment and to Outfall No. 001.

- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
  - Non-contact Doppler radar flow meter shall measure the secondary treated and disinfected wastewater prior to discharge at Outfall No. 001.

- The outfall location will not change.
• Emergency Power – An automatic transfer switch will be provided for the proposed pump station and UV disinfection system. A portable generator will be obtained, as needed, to operate the system in event of power failure.

5. OPERATING PERMIT

These construction activities do not require a modification to the operating permit. It is expected that the facility owner will include a new facility description and process flow diagram in their next operating permit renewal application to reflect the installation of a UV disinfection system and associated pump station.

This facility does not meet the requirements of the MOGD general permit issued on July 1, 2019, since it is publically owned and exceeds the allowed design flow.

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
• Facility Location
• Process Flow Diagram
Appendix 1 – Facility Location

Bourbon WWTF
Outfall #001

Bourbon
Crawford County

Highway J
Leasburg
Sullivan
West Sullivan
St. Cloud

Appendix Page 1

Disinfection Upgrades
Bourbon WWTF, MO-0094765
Appendix Page 1

Permit No. CP0002273
# 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. Submission of an incomplete application may result in the application being returned.

## Part A – Basic Information

### 1.0 Application Information

<table>
<thead>
<tr>
<th>Question</th>
<th>Option</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is this a Federal/State funded project?</td>
<td>□ YES</td>
<td>☑ N/A</td>
</tr>
<tr>
<td>Funding Agency:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project #:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?</td>
<td>□ YES</td>
<td>☑ N/A</td>
</tr>
<tr>
<td>Date of Approval:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Has the department approved the proposed project's facility plan?</td>
<td>☑ YES</td>
<td>□ NO</td>
</tr>
<tr>
<td>Date of Approval:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(If No, complete No. 1.4.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a copy of the facility plan for wastewater treatment facilities included with this application?</td>
<td>□ YES</td>
<td>☑ NO</td>
</tr>
<tr>
<td>Denote which form is submitted: ☑ Hard copy ☑ Electronic copy (See instructions.)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Is a summary of design included with this application?</td>
<td>□ YES</td>
<td>☑ NO</td>
</tr>
<tr>
<td>Has the appropriate operating permit application (A, B, or B2) been submitted to the department?</td>
<td>□ YES</td>
<td>□ NO</td>
</tr>
<tr>
<td>Date of submittal:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Enclosed is the appropriate operating permit application and fee submittal. Denote which form: □ A □ B □ B2</td>
<td>☑ N/A:</td>
<td></td>
</tr>
<tr>
<td>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?</td>
<td>☑ YES</td>
<td>□ NO</td>
</tr>
<tr>
<td>Is the facility currently under enforcement with the department or the Environmental Protection Agency?</td>
<td>□ YES</td>
<td>☑ NO</td>
</tr>
<tr>
<td>Is the appropriate fee or JetPay confirmation included with this application?</td>
<td>☑ YES</td>
<td>□ NO</td>
</tr>
</tbody>
</table>

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

## 2.0 Project Information

<table>
<thead>
<tr>
<th>Section</th>
<th>Information</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Name of Project</td>
<td>Bourbon Wastewater Treatment Facility Disinfection Upgrades</td>
</tr>
<tr>
<td>2.2 Estimated Project Construction Cost</td>
<td>$1,360,000.00</td>
</tr>
<tr>
<td>2.3 Project Description</td>
<td>Project consists of construction of a new effluent pump station, ultraviolet disinfection reactor, and a minimal amount of upsized replacement gravity sewer piping</td>
</tr>
<tr>
<td>2.4 Sludge Handling, Use and Disposal Description</td>
<td>N/A to this project</td>
</tr>
<tr>
<td>2.5 Design Information</td>
<td>A. Current population: 1,567; Design population: 2,425</td>
</tr>
<tr>
<td></td>
<td>B. Actual Flow: 360K gpd; Design Average Flow: 360K gpd; Actual Peak Daily Flow: 915K gpd; Design Maximum Daily Flow: 1.3 gpd; Design Wet Weather Event: 2.75 MGD</td>
</tr>
<tr>
<td>2.6 Additional Information</td>
<td>A. Is a topographic map attached? □ YES ☑ NO</td>
</tr>
<tr>
<td></td>
<td>B. Is a process flow diagram attached? ☑ YES □ NO</td>
</tr>
</tbody>
</table>

**Ref:WVFD**

**Nov 8 2021**

Water Protection Program
### 3.0 WASTEWATER TREATMENT FACILITY

<table>
<thead>
<tr>
<th>NAME</th>
<th>TELEPHONE NUMBER WITH AREA CODE</th>
<th>E-MAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bourbon Wastewater Treatment Plant</td>
<td>573-259-5550</td>
<td><a href="mailto:c.bremer@cityofbourbon.com">c.bremer@cityofbourbon.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDRESS (PHYSICAL)</th>
<th>CITY</th>
<th>STATE</th>
<th>ZIP CODE</th>
<th>COUNTY</th>
</tr>
</thead>
<tbody>
<tr>
<td>440 Highway J</td>
<td>Bourbon</td>
<td>MO</td>
<td>65441</td>
<td>Crawford</td>
</tr>
</tbody>
</table>

Wastewater Treatment Facility: Mo-0094765 (Outfall 1 Of 1)

3.1 Legal Description: ¼, ¼, ¼, ¼, Sec. 27, T 40N, R 03W
(Use additional pages if construction of more than one outfall is proposed)

3.2 UTM Coordinates: Easting (X): 653483, Northing (Y): 4225459
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Tributary to Boone Creek

### 4.0 PROJECT OWNER

<table>
<thead>
<tr>
<th>NAME</th>
<th>TELEPHONE NUMBER WITH AREA CODE</th>
<th>E-MAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Bourbon, Missouri</td>
<td>(573) 732-5550</td>
<td><a href="mailto:c.bremer@cityofbourbon.com">c.bremer@cityofbourbon.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>ADDRESS</th>
<th>CITY</th>
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<tr>
<td>423 N. Old Hwy. 66</td>
<td>Bourbon</td>
<td>MO</td>
<td>65441</td>
</tr>
</tbody>
</table>

### 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.

<table>
<thead>
<tr>
<th>NAME</th>
<th>TELEPHONE NUMBER WITH AREA CODE</th>
<th>E-MAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>City of Bourbon, Missouri</td>
<td>(573) 732-5550</td>
<td><a href="mailto:c.bremer@cityofbourbon.com">c.bremer@cityofbourbon.com</a></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
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</tr>
</tbody>
</table>

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.

- 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.

- Is a copy of the as-filed restrictions and covenants included with this application? [ ] YES [ ] NO
- 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
- 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
- Is a copy of the Missouri Secretary of State’s nonprofit corporation certificate included with this application? [ ] YES [ ] NO

### 6.0 ENGINEER

<table>
<thead>
<tr>
<th>ENGINEER NAME / COMPANY NAME</th>
<th>TELEPHONE NUMBER WITH AREA CODE</th>
<th>E-MAIL ADDRESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gary W. Davis, PE / Bartlett &amp; West, Inc.</td>
<td>573-659-6731</td>
<td><a href="mailto:gary.davis@bartwest.com">gary.davis@bartwest.com</a></td>
</tr>
</tbody>
</table>

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</tr>
</thead>
<tbody>
<tr>
<td>1719 Southridge Drive, Suite 100</td>
<td>Jefferson City</td>
<td>MO</td>
<td>65109</td>
</tr>
</tbody>
</table>

### 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 knowingly violations.

PROJECT OWNER SIGNATURE: [Signature]

PRINTED NAME: Dave Lafferty

TITLE OR CORPORATE POSITION: Mayor

TELEPHONE NUMBER WITH AREA CODE: 573-259-9446

E-MAIL ADDRESS: dave.lafferty@cityofbourbon.com

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.