

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Roger W Sparks
Missouri-American Water Company
Trimble WWTF
0.86 mi SW of I US-169 and SW 208th St.
Trimble, MO 64492

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 13, 2023
Effective Date

September 12, 2025
Expiration Date



John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction will include the installation of a new Enaqua ultraviolet disinfection system as well as a magnetic flow meter and precast concrete structures for both a diversion valve and to house the flow meter. A concrete pad and canopy structure will protect the UV system from environmental conditions. All of this will be installed above the existing outfall line, which will be used as the UV bypass after construction is complete. The final effluent will be released from the same outfall location. The disinfection system is rated for a design average flow of 200,000 GPD (0.2 MGD) or 1,000,000 GPD (1 MGD) peak flow. Requisite electrical controls, alarms, and protections are also being installed under the canopy.

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 complete a cost analysis for compliance because the facility is not a combined or separate sanitary sewer system for a publically-owned treatment works.

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 Emily Wicoff P.E. with Snyder & Associates and as described in this permit.
3. The Department must be contacted in writing prior to making any changes to the plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(11).

4. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the Department's Kansas City Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater 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.
6. 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.
7. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - 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 the UV disinfection facilities. 10 CSR 20-8.140 (7) (C)
 - Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D)
 - Disinfection and dechlorination, when used, shall be provided during all power outages. 10 CSR 20-8.140 (7) (A) 2 and 10 CSR 20-8.190 (2) (A)
 - 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: 10 CSR 20-8.130(2)(C)
 - 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)
- Portable blower and hose sufficient to ventilate accessed confined spaces; 10 CSR 20-8.140(8)(F)
- 10 CSR 20-8.140 (8) (G) Portable lighting equipment complying with NEC requirements. See subsection (7)(B) of this rule;
- 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;
- 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)
- 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)
- Provisions for local lockout/tagout on stop motor controls and other devices; 10 CSR 20-8.140(8)(L)
- 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)
- 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)
- The UV system shall deliver a minimum UV dosage of thirty thousand microwatt seconds per centimeters squared ($30,000 \mu\text{W} \cdot \text{s}/\text{cm}^2$). 10 CSR 20-8.190 (5) (A) 4.
- No Contact UV systems. The combination of the total number of banks 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.
- 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.

8. Upon completion of construction:

- A. Missouri-American Water 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) with a request to issue the modified operating permit. No operating permit modification fee required.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The lagoon facility is currently not meeting seasonal *E. coli* limits established on December 1, 2019. This system will protect human health and the stream use designations of Dicks Creek.

2. FACILITY DESCRIPTION

The Missouri-American Water Company Trimble WWTF is located 0.86 miles west of I-US-169 and southwest of 208th street, Trimble, in Clinton County, Missouri. The facility has a design average flow of 90,000 gpd and serves a hydraulic population equivalent of approximately 900 people. The UV system is rated for 200,000 gpd design flow to account for future facility expansion. The WWTF is a three-cell facultative lagoon, which currently discharges without disinfection. The project will add UV disinfection and a magnetic flow meter post lagoon treatment. The outfall discharges to Dick's Creek.

3. COMPLIANCE PARAMETERS

The existing facility is required to meet *E. coli* limit of 206 colonies/100mL. The proposed project is required to meet final effluent limits of 206 colonies per 100 mL as established in Operating Permit MO-0113751, and 10 CSR 20-7.015(9)(B).

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

Parameter	Units	Monthly average limit
<i>E. coli</i>	#/100mL	206

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Existing Features that will remain in operation include the following:

- Lagoon Cell No. 1 is non-aerated and has a surface area of 4.8 acres, volume of 4,400,000 gallons, 2 ft of freeboard, 3 ft of operating depth, 2 ft of sludge depth, and a clay liner. This provides approximately 49 days of retention time.
- Lagoon Cell No. 2 is non-aerated, has a surface area of 1.75 acres, a volume of 1,470,000 gallons, 2 ft of freeboard, 3 ft of operating depth, 2 ft of sludge depth, and a clay liner. This provides approximately 20 days of retention.
- Lagoon Cell No. 3 is non-aerated and has a surface area of 0.90 acres, a volume of 1,270,000 gallons, 2 ft of freeboard, 6 ft of operating depth, 2 ft of sludge depth, and a clay liner. This provides approximately 19 days of retention.

Construction will cover the following items:

- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
 - Electromagnetic Meter – An effluent electromagnetic 8-inch flow meter shall measure the secondary treated and disinfected wastewater prior to discharge at Outfall No. 001.
- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
 - Non-Contact Ultraviolet (UV) – A gravity flow, low pressure high intensity UV non-contact disinfection system capable of treating a peak flow of 90,000 gpd while delivering a minimum UV intensity of 30 mJ/cm² with an expected ultraviolet transmissivity of thirty-seven percent (37%) or greater. The UV system consists of 8 lamps per reactor. 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.
- Precast Concrete Structures
 - Two precast 72" ID 13-ft deep concrete wet wells will be installed to allow for flow diversion before the UV system and for metering after disinfection.

5. OPERATING PERMIT

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. The Department will conduct an internal operating permit modification to reflect the current facility description upon receipt of the Statement of Work Completed form.

Operating permit MO-0113751 will be expiring on September 30, 2024. A renewal application must be filed before March 30, 2024 regardless of the status of these construction activities. If you have questions on completing the renewal application, please contact the NPDES permitting section at 573-751-1300.

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:

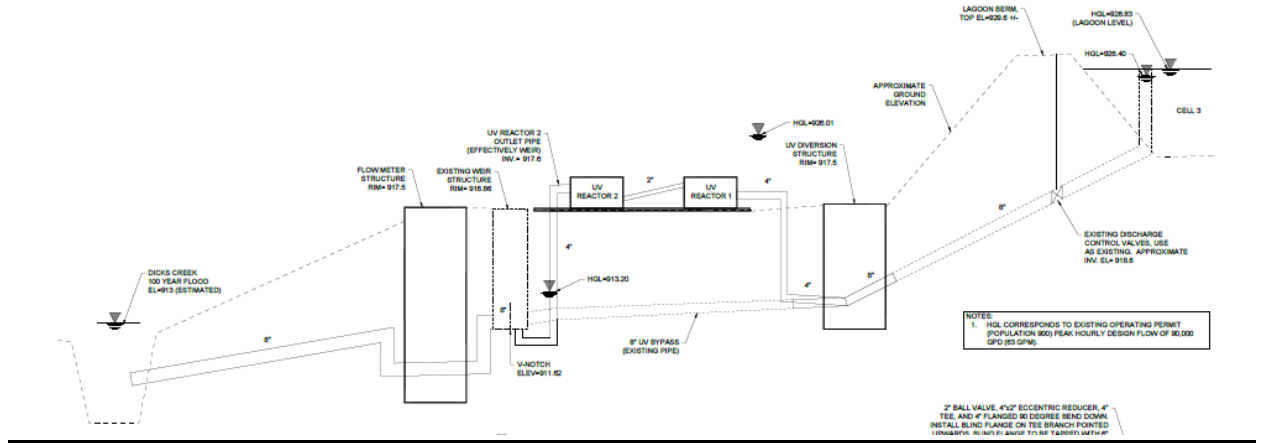
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

Alex Bielefeldt, E.I.
Engineering Section
Alex.Bielefeldt@dnr.mo.gov

Chia-Wei, P.E.
Engineering Section
Chia-Wei.Young@dnr.mo.gov

APPENDIX

• Process Flow Diagram



MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET ADDENDUM
MO-0113751
MAWC TRIMBLE WWTF

This Addendum gives pertinent information regarding modification to the above listed operating permit. An Addendum is not an enforceable part of a Missouri State Operating Permit.

Part I – Proposed Construction

Facility Type: Facultative Lagoon w/ Disinfection

Facility Description:

Three cell lagoon with disinfection via UV exposure sludge is retained in lagoon. Construction is to meet final effluent limits for *E. Coli*. Facility serves around 600 people. The collection system is approximately 2845 lf of force main and 25,400 lf of gravity sewer and 278 connections.

- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
 - Electromagnetic Meter – An effluent electromagnetic 8-inch flow meter shall measure the secondary treated and disinfected wastewater prior to discharge at Outfall No. 001.
- 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 UV non-contact disinfection system capable of treating a peak flow of 90000 gpd while delivering a minimum UV intensity of 30 mJ/cm² with an expected ultraviolet transmissivity of thirty-seven percent (37%) or greater. The enclosed UV system consists of 8 lamps per reactor. 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.
- Pre-cast Concrete Structures
 - Two pre-cast 72" ID 13 ft deep concrete wet wells will be installed to allow for flow diversion before the UV system, and for metering after disinfection.

Part II – Modification Rationale

This operating permit is hereby modified to reflect an update to the facility description, as a result of construction, CP0002387. The updated facility description is listed above.

The continuing authority/owner is registered and in good standing with the Secretary of State's office, Charter Number: 00001468.

No other changes were made at this time.

Part III – Administrative Requirements

On the basis of preliminary staff review and the application of applicable standards and regulations, the Department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the operating permit.

PUBLIC NOTICE:

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this operating permit is tentatively scheduled to begin in August 2023 or is in process.

DATE OF STATEMENT OF BASIS: 7/24/2023

COMPLETED BY:

ALEX BIELEFELDT E.I.
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
ENGINEERING SECTION
Alex.Bielefeldt@dnr.mo.gov

Appendices**APPENDIX - CLASSIFICATION WORKSHEET:**

Item	Points Possible	Points Assigned
Maximum Population Equivalent (P.E.) served , peak day	1 pt./10,000 PE or major fraction thereof. (Max 10 pts.)	1
Design Flow (avg. day) or peak month's flow (avg. day) whichever is larger	1 pt. / MGD or major fraction thereof. (Max 10 pts.)	1
Effluent Discharge		
Missouri or Mississippi River	0	-
All other stream discharges except to losing streams and stream reaches supporting whole body contact recreation	1	-
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	-
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
Direct reuse or recycle of effluent	6	-
Land Application/Irrigation		
Drip Irrigation	3	-
Land application/irrigation	5	-
Overland flow	4	-
Variation in Raw Wastes (highest level only)		
Variations do not exceed those normally or typically expected	0	-
Reoccurring deviations or excessive variations of 100 to 200 percent in strength and/or flow	2	-
Reoccurring deviations or excessive variations of more than 200 percent in strength and/or flow	4	-

Department-approved pretreatment program	6	-
Preliminary Treatment		
STEP systems (operated by the permittee)	3	-
Screening and/or comminution	3	-
Grit removal	3	-
Plant pumping of main flow	3	-
Flow equalization	5	-
Primary Treatment		
Primary clarifiers	5	-
Chemical addition (except chlorine, enzymes)	4	-
Secondary Treatment		
Trickling filter and other fixed film media with or without secondary clarifiers	10	-
Activated sludge (including aeration, oxidation ditches, sequencing batch reactors, membrane bioreactors, and contact stabilization)	15	-
Stabilization ponds without aeration	5	5
Aerated lagoon	8	-
Advanced Lagoon Treatment – Aerobic cells, anaerobic cells, covers, or fixed film	10	-
Biological, physical, or chemical	12	-
Carbon regeneration	4	-
Total from page ONE (1)	----	10

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Solids Handling		
Sludge Holding	5	-
Anaerobic digestion	10	-
Aerobic digestion	6	-
Evaporative sludge drying	2	-
Mechanical dewatering	8	-
Solids reduction (incineration, wet oxidation)	12	-
Land application	6	-
Disinfection		
Chlorination or comparable	5	-
On-site generation of disinfectant (except UV light)	5	-
Dechlorination	2	-
UV light	4	4
Required Laboratory Control Performed by Plant Personnel (highest level only)		
Lab work done outside the plant	0	-
Push – button or visual methods for simple test such as pH, settleable solids	3	-
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations, such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	-
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	-
Total from page TWO (2)	----	9
Total from page ONE (1)	---	10
Grand Total	---	19

- ☐ - A: 71 points and greater
☐ - B: 51 points – 70 points
☐ - C: 26 points – 50 points
☒ - D: 0 points – 25 points



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: N/A ☐ 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 Disinfection Equipment Project Only (exempt per 10 CSR 20-610.4)(B)1.)
- 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: . Operating Permit Modification submittal concurrent with this application
☐ 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 Trimble WWTF UV Disinfection Improvements	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 200k +/-
2.3 PROJECT DESCRIPTION Construction of an ultraviolet disinfection system and associated improvements, including a flow diversion structure and magmeter for effluent flow measurement	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION No change from existing procedures is proposed. Sludge is retained in the existing lagoon cells and will be removed periodically and disposed in accordance with all applicable rules, requirements, and codes.	
2.5 DESIGN INFORMATION A. Current population: <u>620</u> ; Design population: <u>900</u> B. Actual Flow: <u>29.5k</u> gpd; Design Average Flow: <u>90k</u> 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? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO B. Is a process flow diagram attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME MAWC, Trimble Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE (816) 752-8106		E-MAIL ADDRESS Roger.W.Sparks@amwater.com
ADDRESS (PHYSICAL) 0.86 mi W of int US-169 and SW 208th St.	CITY Trimble	STATE MO	ZIP CODE 64492	COUNTY Clinton
Wastewater Treatment Facility: Mo- 0113751 (Outfall 001 Of 1)				
3.1 Legal Description: _____ 1/4, _____ 1/4, W 1/2 1/4, Sec. 26, T 54N, R 33W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 364205 Northing (Y): 4369146 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: Dick's Creek				
4.0 PROJECT OWNER				
NAME Missouri-American Water Company		TELEPHONE NUMBER WITH AREA CODE (816) 752-8106		E-MAIL ADDRESS Roger.W.Sparks@amwater.com
ADDRESS 3524 S Leonard Rd	CITY St. Joseph	STATE MO	ZIP CODE 64503	
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 Missouri-American Water Company		TELEPHONE NUMBER WITH AREA CODE (816) 752-8106		E-MAIL ADDRESS Roger.W.Sparks@amwater.com
ADDRESS 3524 S Leonard Rd	CITY St. Joseph	STATE MO	ZIP CODE 64503	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A				
5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.				
A. Is a copy of the certificate of convenience and necessity included with this application? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.				
A. Is a copy of the as-filed restrictions and covenants included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Emily Wicoff / Snyder & Associates, Inc.		TELEPHONE NUMBER WITH AREA CODE 816-364-5222(o) / 913-626-9337(c)		E-MAIL ADDRESS ewicoff@snyder-associates.com
ADDRESS 802 Francis St.	CITY St. Joseph	STATE MO	ZIP CODE 64501	
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input checked="" type="checkbox"/> JETPAY CONFIRMATION NUMBER 20044797				
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 Roger Sparks			DATE 7/5/2023	
TITLE OR CORPORATE POSITION Engineering Manager		TELEPHONE NUMBER WITH AREA CODE 816-752-8106		E-MAIL ADDRESS Roger.W.Sparks@amwater.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.				

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: _____ 1/4, _____ 1/4, _____ 1/4, _____ 1/4	Sec. _____ T _____ R _____	County _____	Acres _____
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ 1/4	Sec. _____ T _____ R _____	County _____	Acres _____
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ 1/4	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 _____

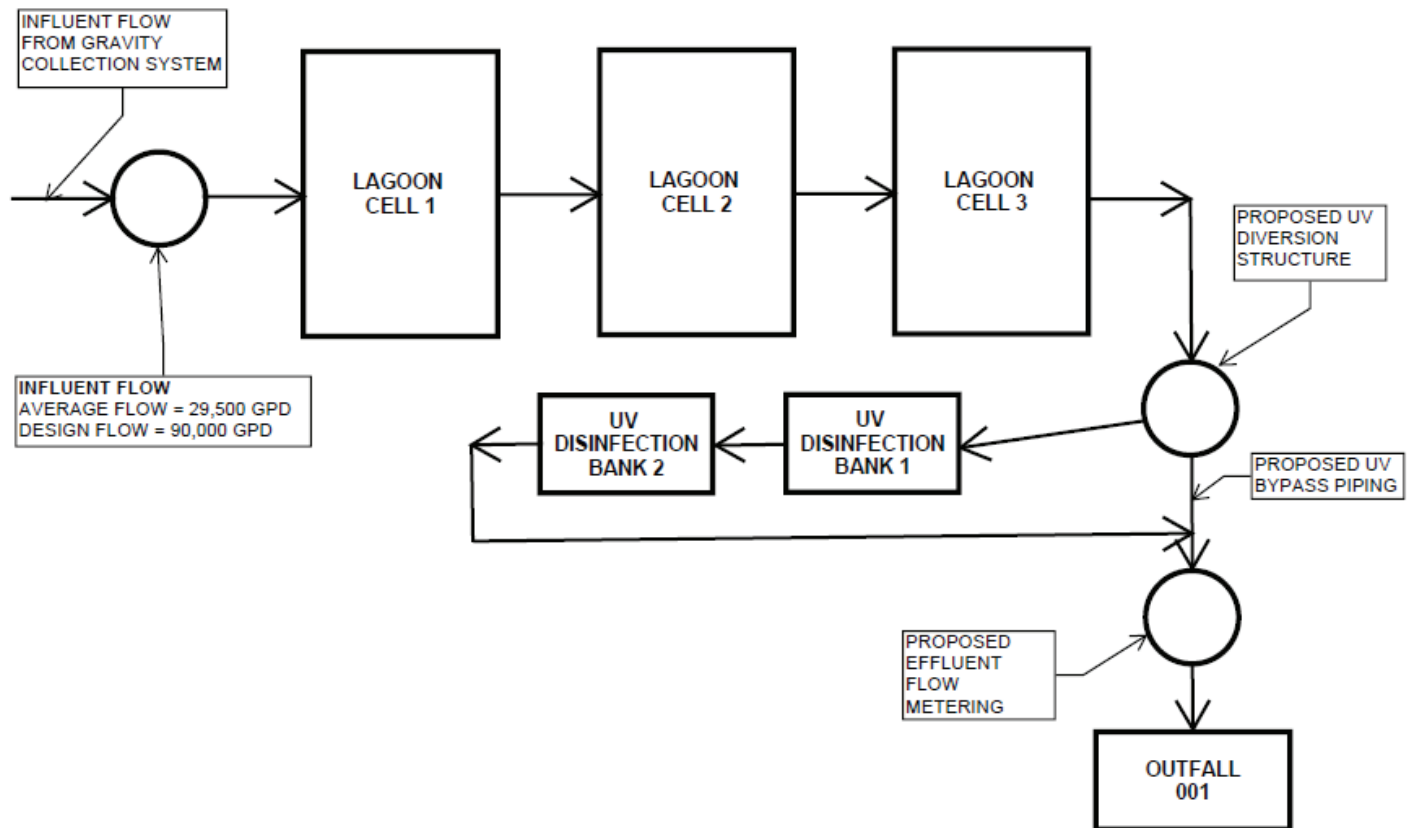
10.4 Land application rate (design flow including 1-in-10 year storm water flows):
 Design: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week
 Actual: _____ inches/year _____ inches/hour _____ inches/day _____ inches/week

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

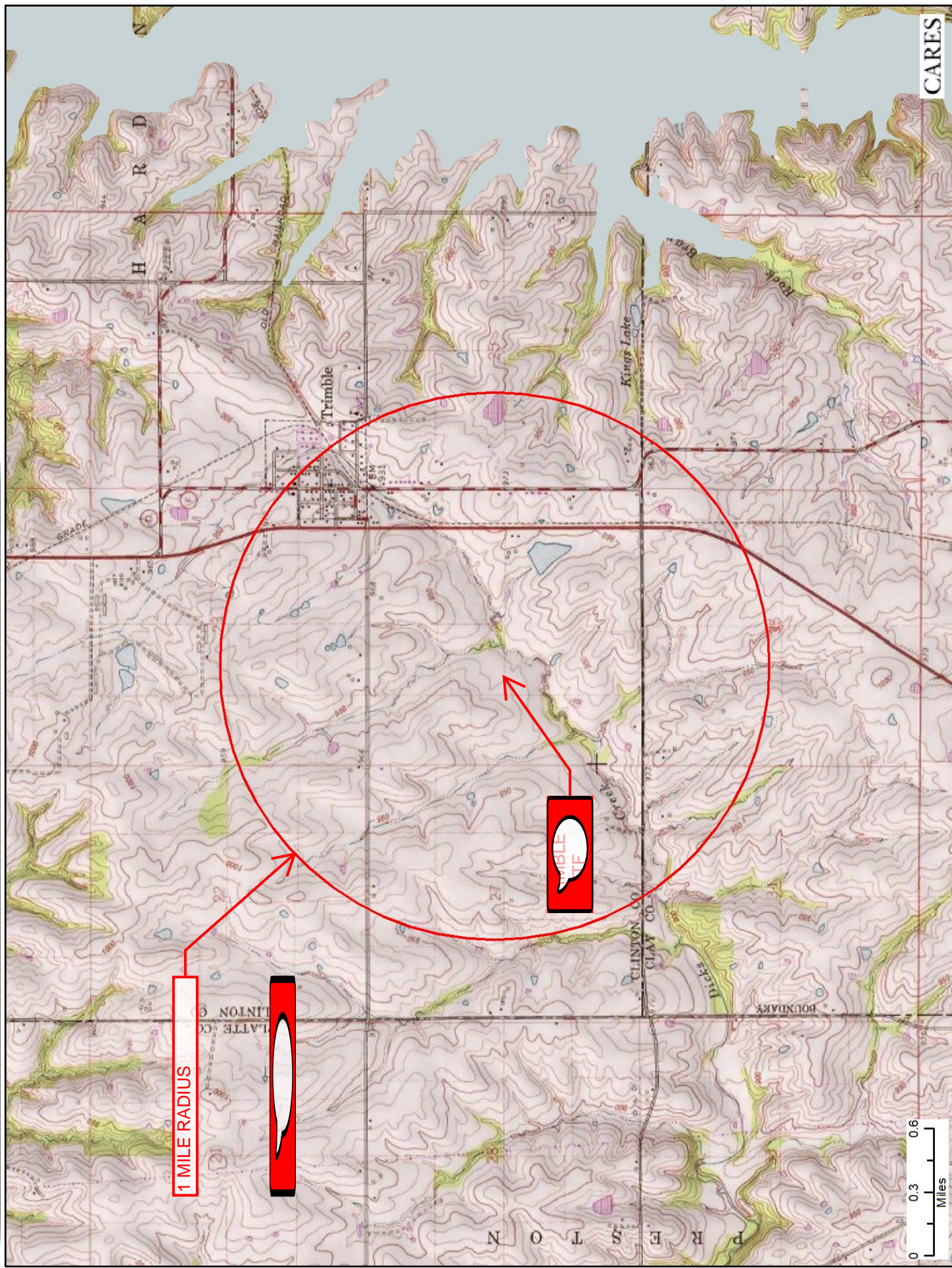
10.6 Actual months used for irrigation (check all that apply):
☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

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

TRIMBLE WWTF PROCESS FLOW DIAGRAM



MAP OF TRIMBLE WWTF AREA



INSTRUCTIONS FOR COMPLETING APPLICATION FOR CONSTRUCTION PERMIT – WASTEWATER TREATMENT FACILITIES

All blanks must be filled in when the application is submitted to the Missouri Department of Natural Resources. This includes the **required signature**.

Note: Use the form Application for Construction Permit – Sewer Extension, MO 780-1632, if only collection system component(s) are to be constructed.

A land disturbance permit is required if construction will result in the disturbance of one or more acres of land. A land disturbance permit is available through the department's ePermitting system at dnr.mo.gov/env/wpp/epermit/help.htm. A permit fee in accordance with 10 CSR 20-6.011 is required.

After receiving a complete application, the Department enters the application information into the Missouri Clean Water Information System. You may search for the status of a construction permit online at dnr.mo.gov/mocwis_public/applicationInprocessSearch.do.

Part A – Basic Application Information

- 1.0 If the answer to any of the questions in this section is no, this application may be considered incomplete and returned to the applicant.
- 1.1 Check the appropriate box. If the project is funded with federal or state monies, supply the funding agency name and project number.
- 1.2 Check the appropriate box. Provide the date of department approval for the antidegradation report. Include a copy of the approved *Water Quality and Antidegradation Review* with this application. Not every construction project may require an antidegradation review. For more information, guidance documents and forms concerning antidegradation visit dnr.mo.gov/env/wpp/permits/antideg-implementation.htm.
- 1.3 Check the appropriate box and provide the date of department approval. Per 10 CSR 20-8.110(2), a facility plan must be submitted to the department prior to the submittal of a construction permit application. The department has developed a fact sheet to aid in the development of an approvable facility plan, Facility Plan Guidance for Wastewater Treatment Facilities, Fact Sheet--PUB2416.
- 1.4 Complete only if No. 1.3 is answered No. Check the appropriate box. Include the exemption reason from 10 CSR 20-6.010(4)(B).
- 1.5 Check the appropriate box. Provide a copy of the appropriate plans and specifications for department review when applying for a construction permit per 10 CSR 20-8.110 and 10 CSR 20-6.010. A Missouri registered professional engineering seal, signature and date is required on each sheet of the plans and the cover of the technical specifications. An electronic copy of the construction permit application and the information listed below in Portable Document Format (PDF) searchable format or department approved equivalent per 10 CSR 20-6.010(5)(G), along with one (1) paper copy for projects not seeking department funding or two (2) paper copies for projects seeking department funding under 10 CSR 20-4.
- 1.6 Check the appropriate box. A summary of design shall accompany the plans and specifications when applying for a construction permit per 10 CSR 20-6.010(5)(G) and 10 CSR 20-8.110(8). The department has developed a fact sheet to aid in the development of an acceptable summary of design. This document is available online at dnr.mo.gov/pubs/pub2417.htm.
- 1.7 Check the appropriate box if an operating permit modification is needed. Include the applicable operating permit application. New outfalls, discharges, projects converting to land application, or a lagoon upgrade require an operating permit modification application. Contact the Department for clarification. Projects that may not need an operating permit modification check the N/A box and indicate whether you want to review the draft prior to public notice should the Department determine a modification is required. The Department can modify your operating permit without an application for projects that are adding chlorine disinfection, constructing to meet current operating permit limits, or constructing to meet limits in a schedule of compliance.
 - Form A is available online at dnr.mo.gov/forms/780-1479-f.pdf.
 - Form B is available online at dnr.mo.gov/forms/780-1512-f.pdf.
 - Form B2 is available online at dnr.mo.gov/forms/780-1805-f.pdf.
- 1.8 Check the appropriate box. More information about the Compliance and Enforcement Water Protection Program is available online at dnr.mo.gov/env/wpp/enf/index.html.

- 1.9 Check the appropriate box. Include payment or payment confirmation for the fee with your application. See 10 CSR 20-6.011(2) and Wastewater Treatment Facility Permit Fees -- PUB2564.
- Note:** The department returns incomplete construction permit applications and related engineering documents and the application forfeits the fees. See 10 CSR 20-6.011(5)(A). The applicant forfeits the fees when the applicant withdraws construction applications. See 10 CSR 20-6.011(5)(B).
- 2.1 Provide the name of the proposed construction project.
- 2.2 Provide the estimated project construction cost. The estimated and final project construction cost will be useful to the department in conducting affordability analyses.
- 2.3 Briefly describe the construction project by providing the number and capacity of each new unit.
- 2.4 Briefly describe the method of sludge handling, use and disposal at the treatment facility.
- 2.5 Provide the project design information and when required in the units specified.
- A. Provide the current population and the design population to be served by the wastewater treatment facility.
- B. Provide the estimated design flow information in accordance with 10 CSR 20-8.110(3).
- 2.6 Provide the additional project information in accordance with 10 CSR 20-8.110(5).
- A. Attach a topographic map of the area extending at least one mile beyond the facility property boundaries. This map must show the outline of the facility and the following information. A topographic map is available online at dnr.mo.gov/internetmapviewer or from the Department of Natural Resources' Missouri Geological Survey in Rolla, Mo., at 573-368-2125. (Submittals of more than one map may be necessary to show the entire area.)
1. The area surrounding the wastewater treatment facility, including all unit processes.
 2. The major pipes or other structures through which wastewater enters the treatment facility and the pipes or other structures through which treated wastewater is discharged from the treatment facility. Include outfalls from bypass piping, if applicable.
 3. The actual point of discharge.
 4. Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment facility and 2) listed in public record or otherwise known to the applicant.
 5. Any areas where biosolids produced by the treatment facility are treated, stored, or disposed.
 6. If the treatment facility receives waste classified as hazardous under the Resource Conservation and Recovery Act, or RCRA, by truck, rail, or special pipe, show on the map where hazardous waste enters the treatment works and where it is treated, stored or disposed.
 7. Outline any wastewater land application sites.
- B. Provide a process flow diagram with the influent and effluent design average flow and peak flow capabilities. Also, depict all of the treatment facility components and the corresponding hydraulic capacities of each component. In addition, include all recycle flows in the diagram. If land application is used, depict all irrigation equipment and application sites.
- 3.0 Complete the Wastewater Treatment Facility information. Include the Missouri State Operation Permit number, outfall number, physical location, and other appropriate contact information.
- 3.1 Provide the project legal description. The department's mapping system is available online at dnr.mo.gov/internetmapviewer.
- 3.2 A Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates.
- 3.3 Provide the name of the receiving stream(s) to which the discharge is directed and any subsequent tributary until a continuous flowing stream is reached.
- 4.0 Complete Project Owner information. Include the legal name, address, phone number with area code and email address.
- 5.0 Complete Continuing Authority contact information. If same as the Project Owner, write "Same as above". 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. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit <https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf>. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: <https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0>, unless the continuing

authority is an individual(s), government, or otherwise not required to register with the SoS. See 10 CSR 20-6.010(2) for the regulatory requirement regarding continuing authority.

- 5.1 Check the appropriate box. Include a letter signed by the continuing authority (if not same as the project owner) stating they will “accept, operate and maintain” the wastewater treatment facility after successful construction. If the continuing authority will not accept and agree to operate and maintain the wastewater treatment facility, this application will be considered incomplete.
- 5.2 Complete if the continuing authority is a Missouri Public Service Commission, or PSC, regulated entity. See 10 CSR 20-6.010(2)(B)3 for more information. This information is not necessary for existing wastewater treatment facilities currently permitted with a PSC entity as owner and continuing authority.
- 5.3 Complete if the continuing authority is a property owners association. See 10 CSR 20-6.010(2)(B)5 for more information. This information is not necessary for existing wastewater treatment facilities currently permitted with the property owners association as owner and continuing authority.
- 6.0 Complete Engineer contact information.
- 7.0 Check the appropriate box and include check or confirmation number. Applicants can pay fees online by credit card or eCheck through a system called JetPay.
- Per Section 37.001, RSMo, a transaction fee will be included. The transaction fee is paid to the third party vendor JetPay, not the Department of Natural Resources.
 - Be sure to select the correct fee type and corresponding URL to ensure your payment is applied appropriately. If you are unsure what type of fee to pay, please contact the Water Protection Program’s Budget, Fees, and Grants Management Unit by phone at (573) 522-1485 for assistance.
 - Upon successful completion of your payment, JetPay provides a payment confirmation. Submit this form with a copy of the payment confirmation if requesting a new permit or a permit modification. For permit renewals of active permits, the Department will invoice fees annually in a separate request.
 - If you are unable to make your payment online, but want to pay with credit card, you may email your name, phone number, and invoice number, if applicable, WPPFEES@dnr.mo.gov. The Budget, Fees, and Grants Management Unit will contact you to assist with the credit card payment. **Please do not include your credit card information in the email.**
 - Applicants can find fee rates in 10 CSR 20-6.011 and Wastewater Treatment Facility Permit Fees -- PUB2564 (<https://dnr.mo.gov/pubs/pub2564.htm>).

WP 04 Construction Permits: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/592/>

- 8.0 The owner of the construction project must sign the application.

Part B – Land Application

Complete Part B only if the proposed construction project includes land application of wastewater from a treatment facility.

- 8.0 Provide the applicable Facility Information land application information. Check the appropriate boxes.
- 9.0 Provide the applicable Storage Basins information. Check the appropriate boxes.
- Freeboard – The depth from the top of the berm to the emergency spillway. Minimum depth • is one foot.
 - Safety Volume – The depth to contain the 25-year, 24-hour storm event. Minimum depth is • one foot.
 - Maximum Operating Water Level – The water level at the bottom of the safety volume. • Minimum depth is two feet below the top of the berm.
 - Minimum Operating Water Level – The water level above the bottom of the lagoon basin for • seal protection. Minimum depth is two feet and may be greater when additional treatment volume is included.
 - Total Depth is from the top of the berm to the bottom of the lagoon basin including freeboard. •
- 10.0 Provide the applicable Land Application System information. Check the appropriate boxes.
- 10.7 Check the appropriate box. If the land application rate is based on a Nutrient Management Plan, or N and P, include the plan with this application for department review.

Mail the completed form and applicable fee to the department.

If there are any questions concerning this form, please contact the Department of Natural Resources, Water Protection Program at 800-361-4827 or 573-751-1300 or visit dnr.mo.gov/env/wpp.