

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Nancy Conley, City Manager
City of Mansfield
122 N Business 60
Mansfield, MO 65704

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.

April 16, 2024
Effective Date

April 15, 2026
Expiration Date



John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction of a two-cell peak-flow earthen basin for equalization of peak flows into the mechanical portion of the WWTF, with manual influent control structure, an automatic effluent gate with actuator controlled via an electromagnetic flow meter and Programmable Logic Controller (PLC). Approximately 180 feet of 6- to 10-inch CL52 ductile iron, ~ 38 ft of 12-inch SDR-35 PVC, and three manholes will be needed to reestablish the flow to the mechanical facility, both around and through the peak-flow equalization basin.

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 Matt VanderTuig, P.E., with Bartlett & West 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. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one 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.
6. 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.
7. 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 100-year flood elevation. 10 CSR 20-8.140(2)(B)
 - 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 300 feet. 10 CSR 20-8.140(2)(C)1.
 - Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140(2)(D)

- 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). For Mansfield's emergency discharge spillway, ensure a discrete grab sample can be obtained as needed if a discharge occurs.
- 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.
- 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.
- 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)
 - Appropriately-placed warning signs for slippery areas, non-potable water fixtures (see subparagraph (7)(D)3.B. of this rule), ..., open service manholes, ..., etc.; 10 CSR 20-8.140(8)(I)
- Lagoon berms shall be constructed of relatively impervious material and compacted to at least 95 percent maximum dry density test method to form a stable structure. 10 CSR 20-8.200(4)(A)1.
- The minimum berm width shall be 8 feet to permit access of maintenance vehicles. 10 CSR 20-8.200(4)(A)2.
- Minimum freeboard shall be two feet. 10 CSR 20-8.200(4)(A)3.
- An emergency spillway shall be provided that—
 - Prevents the overtopping and cutting of berms; 10 CSR 20-8.200(4)(A)4.A.
 - Is compacted and vegetated or otherwise constructed to prevent erosion; 10 CSR 20-8.200(4)(A)4.B. and
 - Has the ability for a representative sample to be collected, if discharging. 10 CSR 20-8.200(4)(A)4.C.
- The soil of the lagoon bottom shall be compacted with the moisture content between 2 percent below and 4 percent above the optimum water content and compacted to at least 95 percent maximum dry density test method. 10 CSR 20-8.200(4)(B)
- The lagoon shall be sealed to ensure that seepage loss is as low as possible and has a design permeability not exceeding 1.0×10^{-7} cm/sec. 10 CSR 20-8.200(4)(C)1.
- The minimum thickness of the compacted clay liner must be 12 inches. For permeability coefficients greater than 1.0×10^{-7} cm/sec or for heads over 5 feet such as an aerated lagoon system, the following formula shall be used to determine minimum seal thickness, Equation 200-1 per 10 CSR 20-8.200(4)(C)2.:

Equation 200-1

$$t = \frac{H \times K}{5.4 \times 10^{-7} \text{ cm/sec}}$$

where:

K = the permeability coefficient of the soil in question;

H = the head of water in the lagoon; and
t = the thickness of the soil seal.

- If used, synthetic seals thickness may vary due to liner material, but the liner thickness shall be no less than .02 inches or twenty 20 mil and be the appropriate material to perform under existing conditions. 10 CSR 20-8.200(4)(C)3.
 - Seep collars shall be provided on drainpipes where they pass through the lagoon seal. 10 CSR 20-8.200(4)(C)4.
 - Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200(4)(D)1.
 - A manhole shall be installed with its invert at least six inches above the maximum operating level of the lagoon, prior to the entrance into the primary cell, and provide sufficient hydraulic head without surcharging the manhole. 10 CSR 20-8.200(4)(D)2.
8. Upon completion of construction:
- A. The City of Mansfield 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 Statement of Work Completed form to the department in accordance with 10 CSR 20-6.010(5)(N) (<https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>) and request the operating permit modification be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The purpose of this project is to remove the existing Outfall #002 from the city's operating permit, MO-0050610. The city is currently under an Abatement Order on Consent (AOC) to eliminate discharges from the wet-weather outfall, Outfall #002, which is currently used when influent flow exceeds the design flow of the treatment plant (310,000 gpd) at Outfall #001.

2. FACILITY DESCRIPTION

The Mansfield WWTF was previously two parallel single-cell wastewater lagoons (3.5-acre and 7.5-acre water surface areas), which were decommissioned at some point after approximately 1990, at which point a manually cleaned bar screen, a new oxidation ditch, clarifiers, sand filters, and UV disinfection system, were constructed. Outfall #002 was an emergency bypass outfall associated with a wet-weather, peak-flow clarifier but will be decommissioned with this project. The proposed two-cell, wet-weather, flow equalization basin will eliminate the peaks that the mechanical plant will receive, and the emergency bypass outfall will no longer be used.

The proposed construction will include converting part of the previously decommissioned lagoon cells into a two-cell, wet-weather, peak-flow, earthen basin with a 20-inch transfer pipe between the two cells.

The Mansfield WWTF is located at the terminus of Eastside Lane, in Mansfield, Wright County, Missouri. The treatment facility will have a design average flow of 310,000 gpd and will serve a hydraulic population equivalent of ~ 3,100 people based on 100 gpd per capita.

3. COMPLIANCE PARAMETERS

The proposed project is required to eliminate discharges from Outfall #002, as required by Abatement Order on Consent #2021-WPCB-1666.

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

Outfall #001 –

Parameter	Units	Daily Maximum Limit	Weekly Average Limit	Monthly Average Limit
Biochemical Oxygen Demand ₅	mg/L		15	10
Total Suspended Solids	mg/L		20	15
<i>E. coli</i>	#/100mL	126		*
Ammonia as N-January	mg/L	*		*
Ammonia as N-February	mg/L	*		*
Ammonia as N-March	mg/L	*		*
Ammonia as N-April	mg/L	12.1		2.7
Ammonia as N-May	mg/L	12.1		2.2
Ammonia as N-June	mg/L	12.1		1.7
Ammonia as N-July	mg/L	12.1		1.5
Ammonia as N-August	mg/L	12.1		1.5
Ammonia as N-September	mg/L	12.1		1.8
Ammonia as N-October	mg/L	*		*
Ammonia as N-November	mg/L	*		*
Ammonia as N-December	mg/L	*		*
Oil & Grease	mg/L	15		10
Total Phosphorous	mg/L	*		*
Total Kjeldahl Nitrogen	mg/L	*		*
Nitrite + Nitrate	mg/L	*		*
Total Nitrogen	mg/L	*		*
Parameter	Units	Minimum Limit		Maximum Limit
pH	SU	6.5		9.0

Outfall #002 – Eliminated

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- The existing treatment plant appears to consist of a manual bar screen, a single ~322,500-gallon oxidation ditch, two 36-ft effective dia. 12-ft-deep (~112,800-gallon) secondary clarifiers (*one previously used for peak flows*), dual automatic-backwash sand filters (each 20 ft by 9 ft (180 sq ft) with 11-inch media depth), an ultraviolet (UV) disinfection unit, and two aerated sludge holding tanks (one 52-ft dia. with a 9-ft side water depth (~142,000 gallons), and one 60-ft dia. with a 9-ft side water depth (~190,000 gallons)). (*Dimensions and volumes based on a 1998 facility plan.*) *The design average flow is 310,000 gpd.*

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 influent electromagnetic 6-inch flow meter shall be installed after the influent bar screen (after the peak flow basin) and would measure the raw influent wastewater and any wastewater returned from the equalization basin prior to flowing into the rest of the existing mechanical treatment facility.
- Wet Weather Flow Equalization – Wet weather flow equalization is used during wet weather events where the peak flow is greater than the design peak capacity of the treatment facility. Once the wet weather event subsides, the flow should be returned to the head of the treatment facility to receive full secondary treatment. The proposed two-cell equalization basin will have a design volume of ~6.45 MG between the 2-ft freeboard and the 1-ft permeant water depth in order to equalize flows from a yearlong synthetic hydrograph. The equalization basin is ~488 ft x ~321 ft x ~6 ft deep for cell 1 and ~471 ft x ~395 ft x ~6 ft deep for cell 2. The slopes of the earthen basin's berms are 3:1. The berm width is 10 ft, which exceeds the 8-foot requirement in 10 CSR 20-8.200(4)(A)2. The basin will be sealed with a compacted clay liner to prevent seepage; the existing soils will be amended by adding 5 percent bentonite, compacted in 6-inch lifts, and have 95 percent standard Proctor density, to ensure a maximum permeability of 1.0×10^{-7} cm/sec, with a minimum 12 inches, which meets the requirements of 10 CSR 20-8.200(4)(C) 1. & 2.

Influent flow to the equalization basin will be via gravity overflow through a manually operated flow control structure when exceeding the design average flow. To return flow from the wet-weather flow equalization basin back to the headworks, there will be an effluent flow control structure with an automatically actuated, 45-degree, v-notch weir gate. The actuator for the weir gate will be controlled by a flow mag meter located within a proposed meter vault just upstream of the existing headworks of the treatment plant. A PLC will operate the weir gate based on the mag meter to ensure the flow entering the facility is no more than the design average flow of 310,000 gpd over the year regardless of the

peak inflow and infiltration. The effluent flow control structure will also have a manually operated slide gate to allow the operator to control flow if needed.

It is noted that the Missouri Geological Survey performed a geohydrologic evaluation for the proposed project in September 2023. The proposed equalization basin for the Mansfield Wastewater Treatment Facility originally received a severe collapse potential rating (report #LWE24018) based on the proximity to karst features and the size of the proposed earthen basin. After discussion with the city's engineering contractors, a revised project plan with smaller cells was submitted. The proximate sinkholes are 60 feet higher in elevation than the proposed basin, and there is no available evidence indicating that these solution features (or any solution features in the vicinity) are greater than 70 feet deep. Based on the best professional judgement of the department's registered geologist, the sinkholes are not representative of the geology that will underlie the proposed equalization basins. Based on the smaller size of the proposed basins and the re-evaluation of the relationship between the nearby sinkholes and the site, the current proposal received a moderate collapse potential rating (#LWE24038). In addition, the nearby losing stream was ~ 0.89 miles downstream and the proposed earthen basins would typically have only one foot of water and not maintain a high-water column. Finally, the city submitted a geotechnical report from Palmerton & Parrish, Inc., recommending that the existing onsite soils be screened then over excavated at least 12 inches and mixed with 5 percent bentonite by weight to meet the required permeability requirements for compacted clay seals.

- Outfall #002 will be abandoned. The wet-weather flow basin will now have an emergency spillway, but it will not be permitted to discharge. Any discharge from the spillway will be considered a bypass and must be in line with permit Special Conditions, Standard Condition Part I, and 40 CFR 122.41(m).

5. OPERATING PERMIT

Operating permit MO-0050610 will require a modification to reflect the construction activities. The modified Mansfield WWTF, MO-0050610, will be public noticed to revise the facility description and to delete Outfall #002. 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.

With your CP application, an operating permit modification was submitted for public notice to reflect the change in your operating permit. Operating permit MO-0050610 will be expiring on March 31, 2025. Your operating permit application for a renewal will be due before your CP is expired. The modification action does not fulfill the renewal application obligation. A renewal application must be filed before October 1, 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 573-522-4502 or cleanwaterpermits@dnr.mo.gov.

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



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 Wastewater Treatment Facility Improvements - Equalization Basin	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 2,332,289
--	---

2.3 PROJECT DESCRIPTION
 This project consists of re-establishing the basin area currently located southwest of the current wastewater treatment facility. This equalization basin will serve as an storage area to flow into the wastewater treatment facility when the City experiences high influent flow due to the high level of I&I present in the system. This project will eliminate the AOC.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
 Current facility has two sludge holding basins and the biosolids are land applied.

2.5 DESIGN INFORMATION


A. Current population: 1,193; Design population: 4,565

B. Actual Flow: 193,640 gpd; Design Average Flow: 233,539 gpd;
 Actual Peak Daily Flow: 270,655 gpd; Design Maximum Daily Flow: 310,000 gpd; Design Wet Weather Event: 10-year, 24-hour

*Design Wet Weather Event - 10-year, 24-hour storm was used to size EQ basin only - treatment plant will not see this flow due to effluent control structure limiting flow to treatment plant to 310,000 gpd max.

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 Mansfield Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE 417-741-0373		E-MAIL ADDRESS waterplant1@mansfieldcityhall.org
ADDRESS (PHYSICAL) Terminus of Eastside Lane	CITY Mansfield	STATE MO	ZIP CODE 65704	COUNTY Wright
Wastewater Treatment Facility: Mo- 0050610 (Outfall 1 Of 1)				
3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. 15, T 28N, R 15W (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 538775 Northing (Y): 4108215 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: Tributary to Fry Creek (C) (3960)				
4.0 PROJECT OWNER				
NAME City of Mansfield		TELEPHONE NUMBER WITH AREA CODE 417-924-8340		E-MAIL ADDRESS nconley@mansfieldcityhall.org
ADDRESS 122 N Business 60	CITY Mansfield	STATE MO	ZIP CODE 65704	
5.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements.				
NAME City of Mansfield		TELEPHONE NUMBER WITH AREA CODE 417-924-8340		E-MAIL ADDRESS nconley@mansfieldcityhall.org
ADDRESS 122 N Business 60	CITY Mansfield	STATE MO	ZIP CODE 65704	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A				
5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.				
A. Is a copy of the certificate of convenience and necessity included with this application? <input type="checkbox"/> YES <input 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 Matt VanderTuig / Bartlett & West		TELEPHONE NUMBER WITH AREA CODE 573-659-6713		E-MAIL ADDRESS matt.vandertuig@bartwest.com
ADDRESS 601 Monroe Street, Suite 201	CITY Jefferson City	STATE MO	ZIP CODE 65101	
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input checked="" type="checkbox"/> JETPAY CONFIRMATION NUMBER 20049311				
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 NANCY CONLEY			DATE 12-18-2023	
TITLE OR CORPORATE POSITION CITY MANAGER		TELEPHONE NUMBER WITH AREA CODE 417-924-8340		E-MAIL ADDRESS nconley@mansfieldcityhall.org
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

*Basin design shown below is for EQ storage only (not land application). All flow which enters EQ storage basin will exit and be treated by wastewater treatment facility prior to discharge

9.1 Number of storage basins: 2

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 <u>488</u>	Width <u>321</u>	Depth <u>5.97</u>	Freeboard <u>2</u>	Depth <u>3.97</u>	Safety <u>1</u>	% Slope <u>0</u>
Basin #2:	Length <u>471</u>	Width <u>395</u>	Depth <u>5.97</u>	Freeboard <u>2</u>	Depth <u>3.97</u>	Safety <u>1</u>	% Slope <u>0</u>
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 <u>1</u> ft	Minimum operating water level <u>3.97</u> ft
Basin #2:	Maximum operating water level <u>1</u> ft	Minimum operating water level <u>3.97</u> ft
Basin #3:	Maximum operating water level _____ ft	Minimum operating water level _____ ft

9.5 Design depth of sludge in storage basins.

Basin #1: 0 ft Basin #2: 0 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: 0 dry tons and 0 cubic feet

10.0 LAND APPLICATION SYSTEM

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

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

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

10.4 Land application rate (design flow including 1-in-10 year storm water flows):

Design:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week
Actual:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week

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

10.6 Actual months used for irrigation (check all that apply):

Jan Feb Mar Apr May Jun Jul Aug Sep Oct Nov Dec

10.7 Land application rate is based on:

Hydraulic Loading Other (describe) _____
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included? YES NO