

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



**CONSTRUCTION PERMIT**

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

Department of Natural Resources - Missouri State Parks  
c/o Jim Kunce, Project Manager  
Crowder State Park  
76 MO-128  
Trenton, MO 64683

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, 2026

Effective Date

April 15, 2028

Expiration Date

Handwritten signature of Heather Peters in black ink.

Heather Peters, Director, Water Protection Program

## CONSTRUCTION PERMIT

### I. CONSTRUCTION DESCRIPTION

Installation of a ~ 1,200 ft 8-in SDR-26 PVC, eight manholes, a duplex pump station, and ~ 393 ft 1.5-inch SDR-11 HDPE, followed by a 4,200-gallon baffled septic tank, a 5,000-gallon septic tank with MicroFAST 4.5 treatment unit, a 3,000-gallon pump tank with dosing effluent pump, and a 18,000 ft<sup>2</sup> drip distribution absorption field with 9,100 ft of drip tubing.

The design flow for the group campground facility will be 1,800 gpd, which is estimated based on total park water records and includes up to a maximum of 120 campers (divided into two sites with three cabins each), up to a projected 50 additional members of the public, and one additional employee administering a dining hall. The operating permit will include this facility and other wastewater treatment systems within Crowder State Park.

A closure plan will need to be submitted to the Northeast Regional Office for review and approval prior to any closure activities.

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.

**Cost Analysis for Compliance** - The department has made a reasonable search for empirical data indicating the permit is affordable (i.e., Missouri State Parks). While this facility is a POTW, a cost analysis for compliance is not feasible, because the facility is a state park and does not charge a sewer use fee.

### 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 sealed, signed, and dated by Jacob Schweikert, P.E., with George Butler Associates, 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 Northeast Regional Office per 10 CSR 20-7.015(9)(G).
5. The completed project shall be field tested to verify actual pumped volume of each dose. The timer controls shall be set to ensure a dosing rate not to exceed the allowable rate of **0.10** gallons per day per square foot (gpd/ft<sup>2</sup>).
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. In accordance with 10 CSR 20-6.010(12), a full closure plan shall be submitted to the department's Northeast Regional Office for review and approval of any permitted wastewater treatment system being replaced. Closure shall not commence until the submitted closure plan is approved by the department.
8. 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), 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(3)(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: 10 CSR 20-8.130(3)(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)
- 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)
- 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(3)(D)
- 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(4)(B) 1.
- Electrical equipment. Electrical equipment shall be provided with the following requirements:
  - 10 CSR 20-8.130(4)(B)2.A. Electrical equipment must comply with 10 CSR 20-8.140(7)(B);
  - Utilize corrosive resistant equipment located in the wet well; 10 CSR 20-8.130(4) (B)2.B.
  - Provide a watertight seal and separate strain relief for all flexible cable; 10 CSR 20-8.130(4)(B)2.C.
  - Install a fused disconnect switch located above ground for the main power feed for all pumping stations. 10 CSR 20-8.130(4)(B)2.D.
  - When such equipment is exposed to weather, it shall comply with the requirements of weatherproof equipment; enclosure NEMA 4; NEMA 4X where necessary; and *NEMA Standard 250-2014*, published December 15, 2014. 10 CSR 20-8.130(4)(B)2.E.
  - Install lightning and surge protection systems; 10 CSR 20-8.130(4)(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(4)(B)2.G.
- Provide Ground Fault Circuit Interruption (GFCI) protection for all outdoor receptacles. 10 CSR 20-8.130(4)(B)2.H.
- Water level controls must be accessible without entering the wet well. 10 CSR 20-8.130(4)(C)
- Valves shall not be located in the wet well unless integral to a pump or its housing. 10 CSR 20-8.130(4)(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(4)(E)
- 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(4)(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.
- Submersible pump stations shall meet the applicable requirements under section (3) of this rule, except as modified in this section. 10 CSR 20-8.130(6)
  - 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(6)(A)
  - A minimum access hatch dimensions of twenty-four inches by thirty-six inches (24" x 36") shall be provided. 10 CSR 20-8.130(6)(B)1.
- A portable pump connection on the discharge line with rapid connection capabilities shall be provided. 10 CSR 20-8.130(6)(B)2.
- Alarm systems with an uninterrupted power source shall be provided for pumping stations. 10 CSR 20-8.130(7)
- Force main system shall be designed to withstand all pressures (including water hammer and associated cyclic reversal of stresses) and to maintain a velocity of at least two feet per second (2 fps). 10 CSR 20-8.130(9)(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 300 feet. 10 CSR 20-8.140(2)(C)1.
- 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)
- 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)
- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20-8.140(7)(D)1.
  - A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
  - All wastewater treatment facilities must have a screening device, comminutor, or septic tank for the purpose of removing debris and nuisance materials from the influent wastewater. 10 CSR 20-8.150(2)
  - Subsurface systems shall—
    - Exclude unstabilized fill and soils that have been highly compacted and/or disturbed, such as old road beds, foundations, or similar things; 10 CSR 20-8.200 (8)(A)1.A.
    - Provide adequate surface drainage where slopes are less than two percent (2%); 10 CSR 20-8.200(8)(A)1.B.
    - Provide surface and subsurface water diversion where necessary, such as a curtain or perimeter drain; 10 CSR 20-8.200(8)(A)1.C. and
    - Have at least a 10-foot buffer from the property line. 10 CSR 20-8.200(8)(A)1.D.
  - The vertical separation between the bottom of the drip lines and/or the trench and a limiting layer, including but not limited to, bedrock; restrictive horizon; or seasonal high water table, shall be no less than:
    - Twelve inches (12") for systems dispersing secondary or higher quality effluent; 10 CSR 20-8.200(8)(A)2.B.
  - Subsurface systems shall be, at a minimum, preceded by preliminary treatment. 10 CSR 20-8.200(8)(B)
  - Loading rates shall not exceed the values assigned by the site and soil evaluation. 10 CSR 20-8.200(8)(C)
  - The location and size of the drains and buffers must be factored into the total area required for the drip dispersal system. 10 CSR 20-8.200(10)(A)1.
  - The drip dispersal lines shall be placed at a minimum depth of six inches (6") below the surface. 10 CSR 20-8.200(10)(B)1.
  - Emitters and drip dispersal lines shall be placed at a minimum on a two foot (2') spacing to achieve even distribution of the wastewater and maximum utilization of the soil. 10 CSR 20-8.200(10)(B)2.

9. Upon completion of construction:
  - A. The Department of Natural Resources - Missouri State Parks 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) ([dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155](http://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155)) and submit a [Form B - Application for an Operating Permit for Domestic or Municipal Wastewater \(<100,000 gallons per day\)](#) and \$150 [fee](#) to the Engineering Section of the Water Protection Program 60 days prior to operation. The MOG823 operating permit will be issued to cover the park's wastewater treatment systems.

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

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

Replacement of the current treatment system, which is not permitted and is at the end of its useful life.

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

The existing system includes vitrified clay pipe (VCP) installed in approximately 1979. The treatment lagoon is in a floodplain and reportedly relies on evaporation and pumping. Sludge has built up in the lagoon. The pump is also at the end of its life.

The new subsurface absorption system will replace the lagoon basin. All of the collection system will be replaced or abandoned in place as needed.

The Crowder State Park is located at 76 MO-128 in Trenton, Grundy County. The Group Camp is located northwest of Crowder Lake. Based on water use records, the group camp potentially averages a usage of 1,505 gpd. However, the park's total peak-day recorded usage was in July 2024 at 2,600 gpd. The parks maintenance/residence area uses ~ 610 gpd and the lake restroom uses ~ 200 gpd. Subtracting these from the park's total peak-day usage is 1,790 gpd. Therefore, the engineer proposed a design average flow of 1,800 gpd for the group camp treatment system. The group camp system serves a maximum of 120 campers (including meals) as well as an estimated 50 additional users of the public lavatory. A contingency plan was provided in case higher flows occur.

### **3. COMPLIANCE PARAMETERS**

The proposed facility will be a no-discharge drip distribution subsurface absorption system. The proposed facility will not have reporting requirements other than reporting sludge removal from the system.

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

#### **Construction will cover the following items:**

- Components are designed for a Population Equivalent of 18 (a design average flow of 1,800 gpd) based on hydraulic loading to the system.
- Influent Pump Station – Construction of a duplex grinder pump station with each 1/3-hp submersible pump capable of operating at 13 gpm at 39 feet of TDH. The tank will be 60-inches in diameter and 102 inches deep.
- Flow Measurement – Accurate flow measurement will give the treatment facility a means of improved data analysis.
  - Flow to the system is determined via the park’s water records.
  - The grinder pump station could measure flow; however, the return flows from the drip distribution system will be routed up-pipe of the grinder pump station. Therefore, the grinder pump station cannot be used for accurate reporting of system flows.
  - Note that an operating permit will be required for all of the wastewater treatment systems in the park. In order to request a future exemption for being less than 3,000 gpd, the facility would need to submit at least one year of representative *daily* flow records to verify that park flows never exceed 3,000 gpd on the maximum day.
- Septic Tank – A septic tank provides passive primary treatment as the settleable solids in raw wastewater settle onto the bottom of the tank. Raw wastewater will flow by gravity to the 4,200-gallon one-compartment septic tank with inlet and outlet tee-drop pipes. The precast concrete tank will have inner dimensions of 12 ft, 3 in by 6 ft, 7 in, and a water depth of at least 72 inches. An 8-in SaniTEE effluent filter will be installed on the discharge. The septic tanks provide ~ 2.33 days of detention at design average flow. Effluent from the septic tank will flow into a tank designed for secondary treatment. Settled solids in the septic tank shall be removed by a contract hauler.
- Fixed Activated Sludge Treatment (FAST) unit – A 5,000-gallon septic tank with a MicroFAST 4.5 treatment unit will provide secondary treatment. The precast concrete tank will have inner dimensions of 14 ft, 1 in by 7 ft, 3 in, and a water depth of at least 59.25 inches. A regenerative blower will provide oxygen. Effluent will flow to a dosing tank.
- Dosing Tank – Construction of one 3,000-gallon dosing tank to pump secondary-treated wastewater to the drip lines. The dosing tank has inner dimensions of 14 ft, 10 in by 8 ft, with a water level depth of 43 inches to the outlet for a wastewater volume of ~ 1,000 gal. The dosing tank has a single 1-hp submersible pump capable

of 32 gpm at 86 ft TDH. The pump transfers wastewater to five separate zones of the absorption field by means of a 1.5-inch HDPE/PVC distribution manifold.

- **Subsurface Soil Dispersal System** – The soils at this site are rated for 0.10 to 0.15 gpd/sf. The facility decided to use a conservative design loading rate of **0.10 gpd/sf** for the entire system. Soil morphology review was conducted during the construction permit application review and on-site soils were determined to be acceptable for this system in the area to be used for the absorption field. The soil investigation was completed by Christopher Stiens, Soil Scientist with Advanced Aquatics, Stiens Soil Evaluations, LLC, on June 20, 2025.
  - **Soils Report.** The soils scientist dug five pits over the proposed site. Soil test pits #L3 and L5A are located in the area of the proposed absorption field (with #L5B located just north of the field) and had soils described as silty clay loam with an application rating of at least 0.1 gallons per day per square foot. A small area of the field will include 5-6 in of imported soils; specifications for the imported soils are on Sheet C-109.
  - **Subsurface Drip Dispersal System** – The system will dose five zones at 0.10 gpd/ft<sup>2</sup>, which will dose 1,800 gpd. Each zone is ~3,600 ft<sup>2</sup>, for a total area of 18,000 ft<sup>2</sup>. A total of 10 combo air/vacuum release valves will be installed. A distributing zone valve will be installed. The drip field contains 9,100 linear feet of 16-mm tubing fitted with emitters every 2 ft that are capable of dispersing 0.6 gallons per hour. The field will be split into five zones each containing a total of 70 runs of drip lines that are 130-ft in length.
  - The manifold and return lines will be 1.5-in Sch 80 HDPE supply lines. The drip dispersal lines will be installed 10 inches deep.
  - **Imported Soil** - The facility will have to import ~ 31 cubic yards of soils, which must be approved by the engineer before placement, and shall be sandy loam, silt loam, loam, or loamy sand containing less than 10% clay as described by the USDA. With the use of imported soils, the depth of the soil column is being increased by an average of 0.5 ft, allowing for a minimum of 12 inches of vertical separation of native soil below the drip lines for final treatment of the effluent and a suitable soil cover to allow placing the drip lines at a depth of 10 inches below the surface.
  - **Interceptor Drain** – An interceptor drain diverts surface and subsurface runoff around the treatment field. The soils report indicates perched water tables at a depth of 17-22 inches in the vicinity of soil pits L3 & L5B. The absorption field will have a 6-in interceptor drain installed to a depth of 24 inches around its perimeter.
- **Emergency Power** – A portable 2.5 kW diesel generator and transfer switch will be provided to operate the treatment facility in event of power failure. In addition, the high tide telemetry alarm system will have back-up power. A High-Tide Control System with backup power will monitor the treatment system.

## **5. OPERATING PERMIT**

After completion of construction project submit: (1) statement of work completed, (2) as-builts if the project was not constructed in accordance with previously submitted plans and specifications, (3) application Form B, and (4) the first annual

fee. Missouri State Operating Permit, General Permit MO-G823xxx, will be issued after receipt of the above documents.

## **V. NOTICE OF RIGHT TO APPEAL**

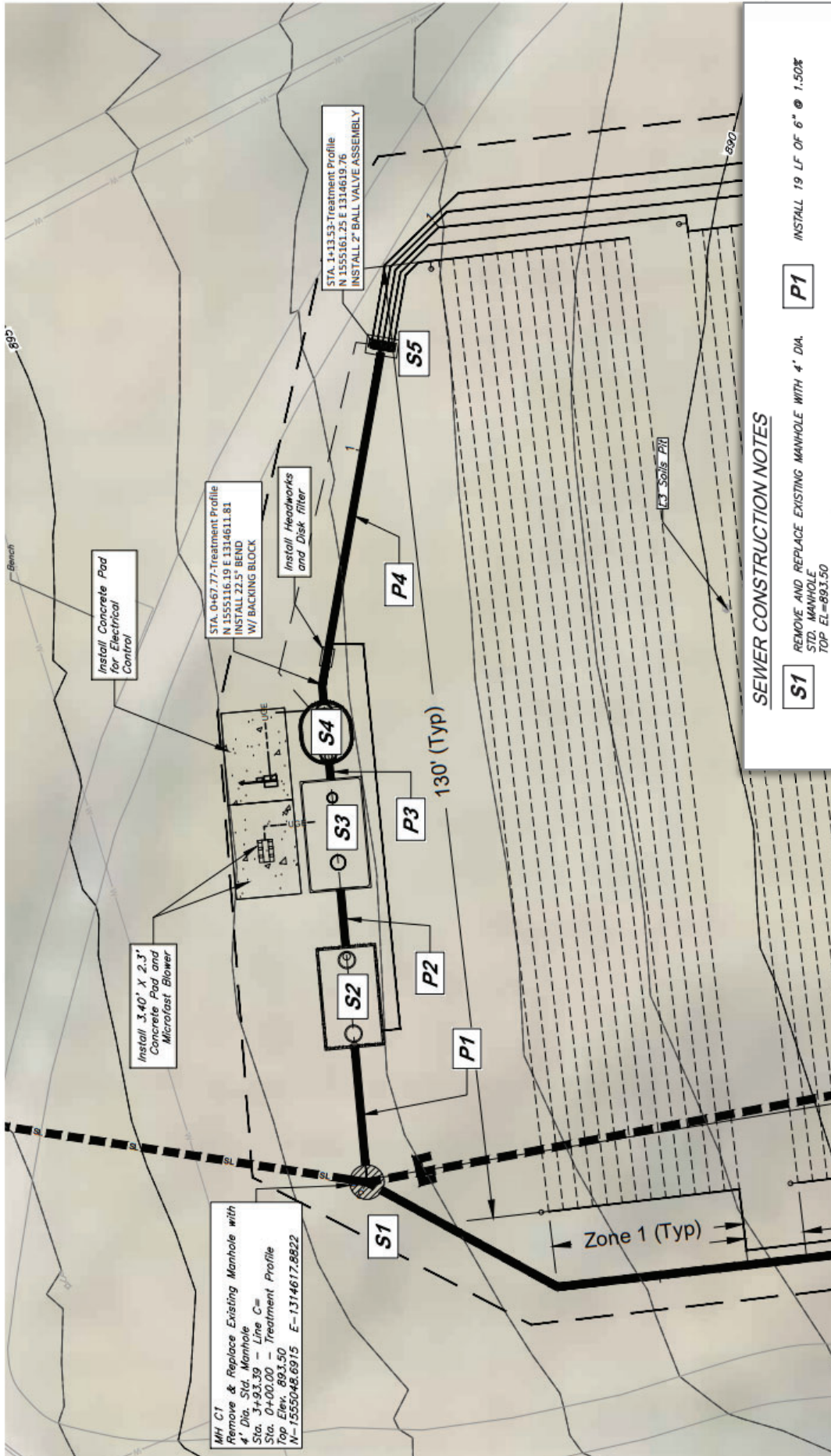
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, 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](mailto:scott.adams@dnr.mo.gov)

## **APPENDICES**

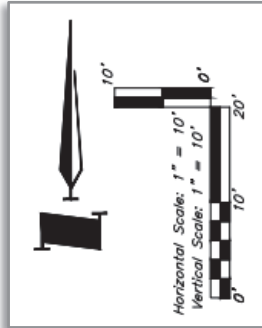
- **Plan Drawings**
- **Contingency Plan for Group Campsite at Crowder State Park**



**SEWER CONSTRUCTION NOTES**

- S1** REMOVE AND REPLACE EXISTING MANHOLE WITH 4' DIA. STD. MANHOLE  
 TOP EL.=893.50  
 PROPOSED FL IN E 1.5" HDPE FM =889.55  
 PROPOSED FL OUT N 6" PVC =889.36
- S2** PROPOSED 4200 GALLON BAFFLED SEPTIC TANK, OR APPROVED EQUAL, W/ SANITEE. SEE DETAIL SHEET ON C-110.
- S3** 5000 GAL. SEPTIC TANK W/ MICROFAST 4.5 UNIT OR APPROVED EQUAL. SEE DETAIL ON SHEET C-110.
- S4** INSTALL 3000 GAL PUMP TANK W/ DOSING EFFLUENT PUMP. SEE DETAIL FOR PUMP TANK ON SHEET C-110.
- S5** INSTALL LEACH FIELD ZONE VALVE.
- P1** INSTALL 19 LF OF 6" @ 1.50%
- P2** INSTALL 8 LF OF 6" PVC @ 9.04%
- P3** INSTALL 3 LF OF 6" PVC @ 7.70%
- P4** INSTALL 48 LF OF 1.5" HDPE FM

**"CAUTION"**  
 Many park utilities located on site. It is the contractor's responsibility to locate utilities prior to construction.





- REQUIREMENTS**
1. Minimum area of 18,000 sq. ft.
  2. 9,100 Lf of dispersal tubing placed 2 ft. O.C.
  3. 70 Lengths vary of 130'.
  4. Minimum of 4,500 emitters to be installed on a 2'x2' grid.
  5. Supply line and return lines shall be installed at 8-10" below grade.
  6. Dispersal tubing shall be installed at 10" below finished grade.
  7. Contractor to pump out and remove existing septic tanks.
  8. Import 31 C.C. soil for mound system.

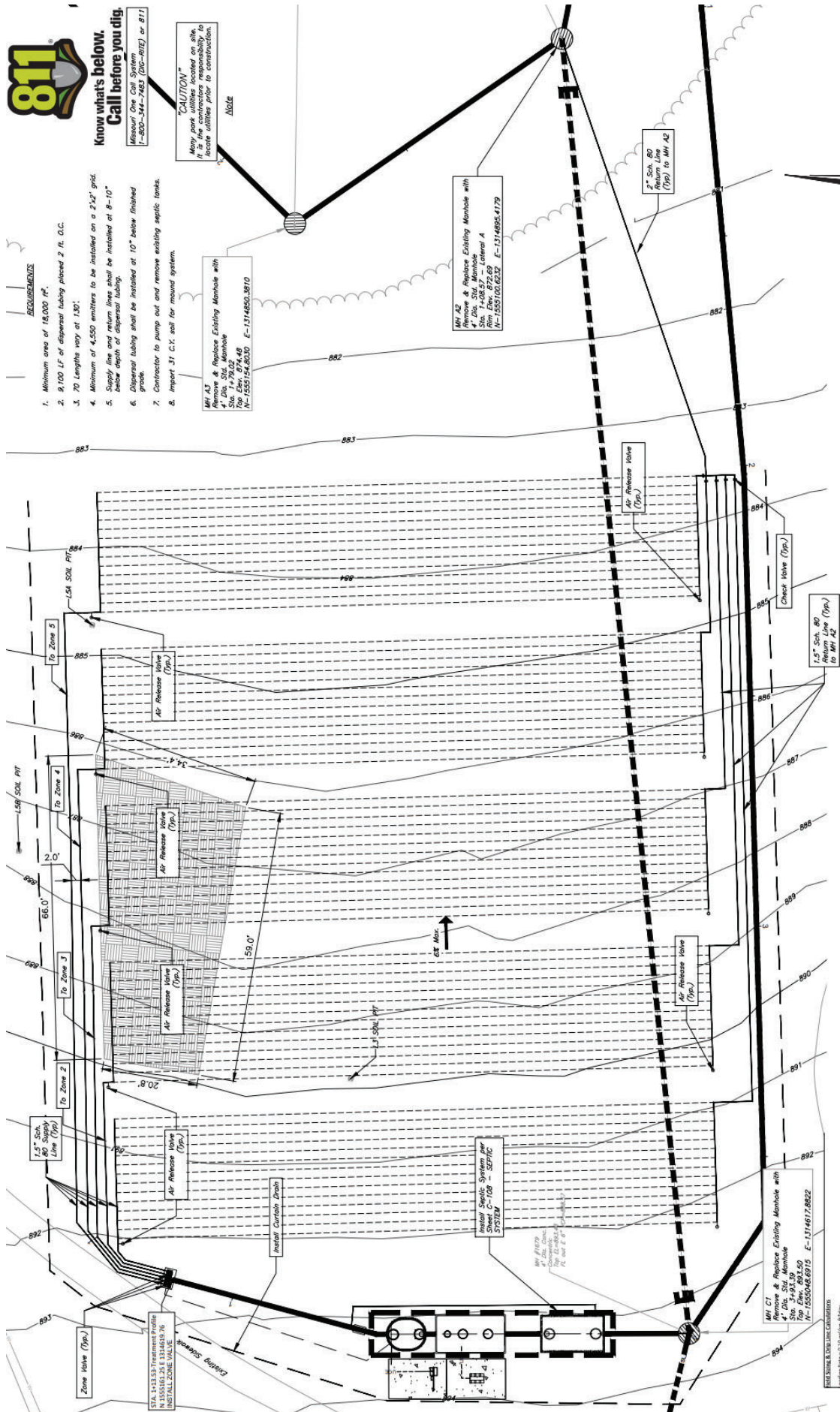
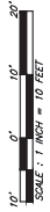
**CAUTION**  
 Many park utilities located on site. It is the contractor's responsibility to locate utilities prior to construction.

**NOTE**

**MI A2**  
 Remove & Replace Existing Manhole with 4' Dia. Std. Manhole  
 Sta. 3+02.77  
 Top Elev. 874.48  
 N-1555154.8030 E-1314850.3810

**MI A2**  
 Remove & Replace Existing Manhole with 4' Dia. Std. Manhole  
 Sta. 3+02.77  
 Top Elev. 874.48  
 N-1555154.8030 E-1314850.4179

**2" Sch. 80**  
 Return Line (Typ) to MI A2



**MI B1E2**  
 Remove & Replace Existing Manhole with 4' Dia. Std. Manhole  
 Sta. 3+02.39  
 Top Elev. 881.50  
 N-1555046.8910 E-1314617.8822

**MI C1**  
 Remove & Replace Existing Manhole with 4' Dia. Std. Manhole  
 Sta. 3+02.39  
 Top Elev. 881.50  
 N-1555046.8910 E-1314617.8822

PHIL SHINE & DAVE JAMES CONSULTANTS

## Contingency Plan for Group Campsite at Crowder State Park

The sanitary sewer at Crowder State Park's Group Campsite was designed based on measured peak flow from 2025 of 1,790 GPD. An average peak flow of 1,505 GPD was measured across the camp's open season. An average daily flow value of 1,800 GPD was used to design the system. A 3,000-gallon pump tank was sized to handle larger flows or pump outages. This 3,000-gallon tank is 1.65 times the anticipated peak flow volume, providing storage for a period of 40-hours at design flow rates. In the event of high-water in the pump tank an alarm will trigger notifying park staff. High water alarm response requires a pumper truck to remove excess effluent in pump tank and septic tanks as necessary. In a functioning system, effluent will pump down over time and should be evaluated when considering a response.

Daily monitoring of the system and quick response to alarms will minimize impact and disruption to the system. Another option may be supplying temporary sanitation units (Porta Potties) to reduce peak load on the system. Currently, it is common for larger camp reservations to provide their own temporary sanitation units onsite in addition to the park system.

### 1. Monitoring and Detection

- Regular Monitoring: Implement daily checks of pump tank levels and system performance.
- Alarm System: Ensure the high-water alarm is fully operational and staff are trained to respond promptly.

### 2. Immediate Response Procedures

- Activation of Alarm: Upon alarm activation:
  - Notify park staff immediately.
  - Assess the tank levels and determine the required response.
- Deployment of Resources:
  - Pumper Truck:
    - Schedule a pumper truck for immediate effluent removal.
    - Maintain a contract with a local pumping service for quick response.
  - Temporary Sanitation Units:
    - Deploy portable toilets (porta-potties) in high-use areas.
    - Establish a list of approved vendors for rapid deployment.

### 3. Communication Plan

- Internal Communication:
  - Notify all park staff about the situation and assigned roles.
- Visitor Communication:
  - Use signage to inform visitors of potential sanitation issues.
  - Provide updates via park social media and website if necessary.

### 4. Long-Term Solutions

- Capacity Assessment:
  - Evaluate system capacity regularly to determine if upgrades are needed.
- User Education:
  - Inform campers and park visitors about proper waste disposal practices.
  - Encourage larger groups to bring their own sanitation units.

### 5. Post-Event Review

- Debriefing:
  - Conduct a review of the response effectiveness after each incident.
  - Identify areas for improvement and update the contingency plan accordingly.
- Reporting:
  - Document the incident, response actions taken, and any follow-up actions required.

### 6. Training and Drills

- Staff Training:
  - Regularly train staff on emergency procedures and equipment operation.
- Simulation Drills:
  - Conduct drills to practice response to excess flow situations.

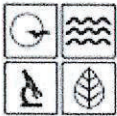
## Conclusion

This contingency plan aims to ensure a swift and effective response to excess flows, minimizing disruption and maintaining sanitation standards at Crowder State Park. Regular reviews and updates will ensure the plan remains relevant and effective.

Sincerely,



Jacob Schweikert P.E.



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**

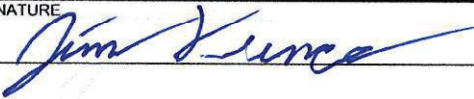
**1.0 APPLICATION INFORMATION** (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project?  YES  N/A Funding Agency: MO-OA Project #: X232202
- 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 Sewer System Improvements Crowder State Park	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 983,900
2.3 PROJECT DESCRIPTION Replace existing treatment system with single septic tank and no discharge drip irrigation field. Replace existing collection system of the north and south group campsites. Close and remove existing lagoon.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION Septic tank holding prior to dispersal field. Standard maintenance and procedures for septic tanks.	
2.5 DESIGN INFORMATION A. Current population: <u>120</u> ; Design population: <u>120</u> B. Actual Flow: _____ gpd; Design Average Flow: <u>2000</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 type="checkbox"/> YES <input checked="" type="checkbox"/> NO B. Is a process flow diagram attached? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME Crowder State Park		TELEPHONE NUMBER WITH AREA CODE (660)359-6473		E-MAIL ADDRESS
ADDRESS (PHYSICAL) 8598, 76 MO-128		CITY Trenton	STATE MO	ZIP CODE 64683
COUNTY Grundy				
Wastewater Treatment Facility: Mo- (Outfall Of )				
3.1 Legal Description: <u>NE</u> ¼, <u>SE</u> ¼, <u>NW</u> ¼, Sec. <u>12</u> , T <u>61</u> , R <u>25</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): 443380 Northing (Y): 4438885 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: _____				
4.0 PROJECT OWNER				
NAME Department of Natural Resources Missouri State Parks		TELEPHONE NUMBER WITH AREA CODE (573)751-2479		E-MAIL ADDRESS moparks@dnr.mo.gov
ADDRESS 1659 E. Elm St.		CITY Jefferson City	STATE MO	ZIP CODE 65102-0176
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 Department of Natural Resources Missouri State Parks		TELEPHONE NUMBER WITH AREA CODE (573)751-2479		E-MAIL ADDRESS moparks@dnr.mo.gov
ADDRESS 1659 E. Elm St.		CITY Jefferson City	STATE MO	ZIP CODE 65102-0176
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 checked="" 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 Jacob Schweikert / GBA		TELEPHONE NUMBER WITH AREA CODE 573-397-5606		E-MAIL ADDRESS jschweikert@gbateam.com
ADDRESS 9801 Renner Boulevard		CITY Lenexa	STATE KS	ZIP CODE 66219
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input type="checkbox"/> JETPAY CONFIRMATION NUMBER				
8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
PROJECT OWNER SIGNATURE 				
PRINTED NAME Jim Kunce			DATE 11/07/2025	
TITLE OR CORPORATE POSITION Project Manager		TELEPHONE NUMBER WITH AREA CODE (816)562-3401		E-MAIL ADDRESS jim.kunce@dnr.mo.gov
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 1 Total Acres 0.28 Maximum % field slopes 6  
Location: NE ¼, SE ¼, NW ¼, 12 Sec. 61 T 25 R Grundy County 0.15 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) Subsurface soil dispersal system

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: 2000 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) Soil Study  
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included?  YES  NO

**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](http://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](http://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](http://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](http://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](http://dnr.mo.gov/forms/780-1479-f.pdf).
  - Form B is available online at [dnr.mo.gov/forms/780-1512-f.pdf](http://dnr.mo.gov/forms/780-1512-f.pdf).
  - Form B2 is available online at [dnr.mo.gov/forms/780-1805-f.pdf](http://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](http://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](http://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](http://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](mailto: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](http://dnr.mo.gov/env/wpp).