STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

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

Pleasant Grove RV Park, LLC
Jon Barnes
0.25 miles north of intersection of Highway AA and Pleasant Grove Road
Perry, MO 63462

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.

March 31, 2025
Effective Date

March 30, 2027
Expiration Date

John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

A new collection system and wastewater treatment facility is proposed for the business located in the SW ¼, NW ¼, NE ¼, of section 36, Township 55N, Range 7W in Ralls County, MO 63462. The business will consist of 110 RV lots to be rented during the period from April 1st through October 31th and remain closed from November 1 through March 31 Installation of approximately 3,138 linear feet of 6-inch SDR 35 PVC pipe, 1,830 linear feet of 8-inch SDR 40 PVC pipe and 17 manholes, a 22,032.5 gallons septic tank, a single storage lagoon with a capacity of approximately 634,624 gallons, one drip onsite absorption field with approximate dimension of 134 by 120 feet, one onsite surface irrigation area with approximate dimensions of 1.35 acres, one offsite surface irrigation area with approximate dimensions of 33.8 acres. Site has a hydraulic population of approximate 330 people, and design flow of approximate 14,370 gallons. Sludge will remain in the lagoon.

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

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 Jeff Eric Browning P.E. with Allied-Engineering Services, LLC 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 0.15 gallons per square foot per day.

6. Regarding soils used for the drip system area, if any soils are to be imported, the contractor shall supply the following:
   1) Physical characteristics that soils are uniform in texture, structure, and pore space.
   2) Transportation method that ensure uniformity and consistency of the physical characteristics as close as possible to the original state upon delivery.
   3) A sandy to loamy material, with less than 10 percent clay and less than 15 percent organic debris present.
   4) Methods for the removal of the organic layer.
   5) No debris present.
   6) Placement in small "lift".
   7) Native soil is to be used for the vertical separation for the subsurface soil dispersal system with the fill for the cap being imported soils.
   8) Imported soils should be allowed to settle for several days prior to installation of the subsurface soil dispersal system.

7. Loading rates shall not exceed the values assigned by the site and soil evaluation. 10 CSR 20-8.200(8)(C)

8. 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.

9. 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.

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

- 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.

- No treatment unit with a capacity of 22,500 gallons per day (gpd) or less shall be located closer than the minimum distance of 200 feet to a neighboring residence and 50 feet to property line for lagoons; See 10 CSR 20-2.010(68) for the definition of a residence. 10 CSR 20-8.140(2)(C)2

- Facilities shall be always readily accessible by authorized personnel from a public right–of-way. 10 CSR 20-8.140(2)(D)

- 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)

- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20-8.140(7)(D)1.

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

- Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards. The following shall be provided to fulfill the particular needs of each wastewater treatment facility:
    - Fencing. Enclose the facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140 (8) (A)
    - Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140(8)(B)
    - First aid equipment; 10 CSR 20-8.140(8)(C)
    - Posted "No Smoking" signs in hazardous areas; 10 CSR 20-8.140(8)(D)
    - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140(8)(E)
    - 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)
- Ventilation shall include the following:
  - Isolate all pumping stations and wastewater treatment components installed in a building where other equipment or offices are located from the rest of the building by an air-tight partition, provide separate outside entrances, and provide separate and independent fresh air supply; 10 CSR 20-8.140(8)(J)1.
  - Force fresh air into enclosed screening device areas or open pits more than four feet deep. 10 CSR 20-8.140(8)(J)2.
  - Dampers are not to be used on exhaust or fresh air ducts. Avoid the use of fine screens or other obstructions on exhaust or fresh air ducts to prevent clogging; 10 CSR 20-8.140(8)(J)3.
  - Where continuous ventilation is needed (e.g., housed facilities), provide at least 12 complete air changes per hour. Where continuous ventilation would cause excessive heat loss, provide intermittent ventilation of at least 30 complete air changes per hour when facility personnel enter the area. Base air change demands on 100 percent fresh air; 10 CSR 20-8.140(8)(J)4.
  - Electrical controls. Mark and conveniently locate switches for operation of ventilation equipment outside of the wet well or building. Interconnect all intermittently operated ventilation equipment with the respective wet well, dry well, or building lighting system. The manual lighting/ventilation switch is expected to override the automatic controls. For a two-speed ventilation system with automatic switch over where gas detection equipment is installed, increase the ventilation rate automatically in response to the detection of hazardous concentrations of gases or vapors; 10 CSR 20-8.140(8)(J)5.
  - Fabricate the fan wheel from non-sparking material. Provide automatic heating and dehumidification equipment in all dry wells and buildings. 10 CSR 20-8.140(8)(J)6.
- 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)

- 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)

- A septic tank must have a minimum capacity of at least 1,000 gallons. 10 CSR 20-8.180(2)(A)

- The septic tank shall be baffled. 10 CSR 20-8.180(2)(B)

- Treatment prior to surface irrigation shall provide performance equivalent to that obtained from a primary wastewater lagoon cell designed and constructed in accordance with 10 CSR 20-8.200(4), except that the lagoon depth may be increased to include wastewater storage in addition to the primary volume. 10 CSR 20-8.200(4)(B).

- 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(5)(A)1.

- The minimum berm width shall be eight feet to permit access of maintenance vehicles. 10 CSR 20-8.200(5)(A)2.

- Minimum freeboard shall be two feet. 10 CSR 20-8.200(5)(A)3.

- An emergency spillway shall be provided that—
    - Prevents the overtopping and cutting of berms; 10 CSR 20-8.200(5)(A)4.A.
    - Is compacted and vegetated or otherwise constructed to prevent erosion; 10 CSR 20-8.200(5)(A)4.B. and
    - Has the ability for a representative sample to be collected, if discharging. 10 CSR 20-8.200(5)(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(5)(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 x 10-7 cm/sec. 10 CSR 20-8.200(5)(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(5)(C)2.:

  Equation 200-1

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

  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.

- Seep collars shall be provided on drainpipes where they pass through the lagoon seal. 10 CSR 20-8.200(5)(C)4.

- Unlined corrugated metal pipe shall not be used for influent lines due to corrosion problems. 10 CSR 20-8.200(5)(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(5)(D)2.

- The influent line(s) shall be located along the bottom of the lagoon so that the top of the pipe is just below the average elevation of the lagoon seal; however, there shall be an adequate seal below the pipe. 10 CSR 20-8.200(5)(D)3.

- The wetted application area of a surface irrigation system must be located
    - Outside of flood-prone areas having a flood frequency greater than once every 10 years; 10 CSR 20-8.200(7)(B)1.
    - At least 150 feet from existing dwellings or public use areas, excluding roads or highways; 10 CSR 20-8.200(7)(B)2.A.
    - At least 50 feet inside the property line; 10 CSR 20-8.200(7)(B)2.B.
    - At least 300 feet from any sinkhole, losing stream, or other structure or physiographic feature that may provide direct connection between the ground water table and the surface; 10 CSR 20-8.200(7)(B)2.C.
    - At least 300 feet from any existing potable water supply well not located on the property. Adequate protection shall be provided for wells located on the application site; 10 CSR 20-8.200(7)(B)2.D.
    - One hundred feet to wetlands, ponds, gaining streams (classified or unclassified; perennial or intermittent); 10 CSR 20-8.200(7)(B)2.E. and
    - If an established vegetated buffer or the wastewater is disinfected, the setbacks established in subsections (A)–(E) above may be decreased if the applicant demonstrates the risk is mitigated. 10 CSR 20-8.200(7)(B)2.F.

- The wetted application area of a surface irrigation system must be Fenced, or if not fenced, provide in the construction permit application or the facility plan, the—
    - Method of disinfection being utilized; 10 CSR 20-8.200(7)(B)3.A.
    - Suitable barriers in place, 10 CSR 20-8.200(7)(B)3.B. or
    - Details on how public access is limited and not expected to be present. 10 CSR 20-8.200(7)(B)3.C.

- At a minimum, treatment prior to irrigation shall provide performance equivalent to that obtained from a primary wastewater lagoon. 10 CSR 20-8.200(7)(C)

- For facilities that operate and generate flows only from April through October season, a minimum storage capacity of 45 days shall be provided. For facilities that operate or generate flows only from November through March, the minimum storage listed in subsection (A)–(D) above is required. 10 CSR 20-8.200(7)(C)1.E.

- Public Access Areas. Wastewater shall be disinfected prior to irrigation (not storage) in accordance with 10 CSR 20-8.190. 10 CSR 20-8.200(7)(F)

- The public shall not be allowed into an area when irrigation is being conducted; 10 CSR 20-8.200(7)(F)2. and

- 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; 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 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:
    - Twenty-four inches 10 CSR 20-8.200(8)(A)2.A. or

- 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 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 spacing to achieve even distribution of the wastewater and maximum utilization of the soil. 10 CSR 20-8.200(10)(B)2.

11. Upon completion of construction:

    A. Pleasant Grove RV Park, LLC will become the continuing authority for operation and maintenance of these facilities;

    B. Submit an electronic copy of the as builts 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 issuance of the operating permit, MOG823. The operating permit fee has been paid.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

A new collection system and wastewater treatment facility is proposed for the business located in the SW ¼, NW ¼, NE ¼ , of section 36, Township 55N, Range 7W in Ralls County, MO 63462. The business will consist of 110 RV lots to be rented during the period from April 1 through October 31 and remain closed from November 1 through March 31. The new facility will be no-discharge and have two surface, and one subsurface land application systems.

2. FACILITY DESCRIPTION

The wastewater treatment facility will consist of 1- 22,032.5 gallons septic tank, a single storage lagoon with a capacity of approximately 634,624 gallons, onsite drip system with approximate dimension of 134 by 120 feet, onsite surface irrigation area with approximate dimensions of 1.35 acres and offsite surface irrigation area with approximate dimensions of 33.8 acres.

The Pleasant Grove RV Park will be owned and operated by Pleasant Grove RV Park, LLC and is located in Ralls County, close to the intersection of Pleasant Grove Rd and Fanning Hills Pl. Ralls County, Missouri with property legal description as: 52.86 AC IN SEC 36-55-7 N 59 ACRES. W1/2 NE1/4, EXCEPT THE N6.32 AC LOCATED IN THE W1/2 NE1/4 This land is owned by Fifth Generation Farms, LLC and is private property. The facility is expected to be open for business from April 1 through October 30. The estimated hydraulic equivalent population is 330. The design flow is calculated at 14,370 gpd. The facility expects to have all RV rental spaces occupied simultaneously only 17 days during any business season. The estimated hydraulic population equivalent is 330.

3. COMPLIANCE PARAMETERS

The proposed wastewater treatment facility will be a complete no-discharge treatment facility. Lagoon wastewater will be treated and dispersed on-site. Only when necessary, the wastewater will be dispersed on the offsite surface irrigation area located across from road EE and used as fertilizer. Periodic removal of waste sludge will be necessary, and it will be conducted by a registered waste hauler. A Missouri State Operating Permit is required to be maintained. Monitoring of the facility will be required along with keeping records of maintenance activities. There are currently no sampling requirements.

The proposed project is required to meet the requirements of MOGD823247 Table A, Table B, Table C and Table D, monitor storage basin freeboard, maintain records of when wastewater was land applied and not exceed limits in table D for surface application.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Construction will cover the following items:

Collection system and treatment facility is designed to serve an RV park with 110 full hook-up spaces, a laundry with two washing machines, bathrooms, and pavilion.

- Sewage collection system: Consists of approximately 3,138 linear feet of 6-inch SDR 35 PVC pipe, 1,830 linear feet of 8-inch SDR 40 PVC pipe and 17 manholes.

- Treatment facility consists of a 22,032.5 gallons septic tank connecting via gravity to a single storage lagoon and to three land application systems.

- Lagoon system: Single lagoon – wastewater flows into the lagoon by gravity through an 8 inch PVC pipe. Lagoon has a storage capacity of 45 days after the 2,400 gpd is subtracted from the drip system. The lagoon will have 0.5 feet of freeboard depth above the spillway elevation, 2.0 feet of freeboard volume between the spillway and upper pump down elevation, 10.5 feet of storage depth, and 2.0 feet of permanent volume depth. The pond will be 15 feet deep from berm to floor. The lagoon surface is trapezoidal with its longest dimensions being approximately 85 feet by 14 feet at the bottom (175 by 104 at the top of the berm). The lagoon design includes a 10 feet width berm (top), with a slope of 3:1 and a clay seal for the floor and internal sides with a thickness of 2.7 feet and a permeability smaller than $1x10^{-7}$ cm/s. The spillway dimensions are 20 feet bottom with, 8:1 side slope and 28 feet top width.

- Three land application systems are proposed, two onsite, one subsurface absorption system and one surface irrigation system; and one offsite surface irrigation system.

    - Onsite Subsurface Absorption System: A wet well with a 2 hp pump to deliver 28 gpm at 62’ of TDH will be installed to transfer wastewater from the lagoon to the onsite subsurface application system. The onsite subsurface application system will be fenced – Influent water will be disc filtered before dripped to the soil. Drip area has dimensions of approximately 134 x 120 feet or 16,080 ft^2 and is designed for 2,400 gpd. Topsoil removed from within the property area will be used as fill for the subsurface drip system to meet the minimum 24” vertical separation between the bottom of the drip lines and/or the trench and limiting layer. Absorption field will be divided in 3 zones, each having 10 driplines with an approximate length of 268 feet each for a total of 8,040 feet. A mechanical index control valve will rotate the flow cycles to each zone supply line. The return manifold(s) is 1.5 inch PVC Sch 40 solid wall pipe

placed at 4 inches below the drip lines. An air/ vacuum relief valve will be placed in a valve box per plans at the high elevation of both supply and return manifolds for each zone. The proposed drip line is Netafim Bioline with pressure compensated 0.4 GPH emitters spaced every 2'. Drip line shall be "plowed in" at 8 inches deep, spaced 2 feet on center and on the contour. Installation shall conform to the manufacturer's recommendations. An interceptor curtain drain trench will be constructed 10 feet horizontally above the drip system from 1 inch clean rock over a 4 inch perforated plastic tile to direct surface water away from the absorption system.

- Onsite Surface Irrigation System: Will be constructed fenced with an approximate total surface area of 1.35 acres and is expected to be used sporadically. A local custom applicator will be hired to land apply wastewater as needed. The proposed land application rate is set at 24 inch/per year per acre. A surface irrigation hose, a traveling gun irrigation system and an irrigation pump will be used to apply lagoon effluent to the onsite surface land application area for nutrient utilization. The land application area will be maintained in a cool season grass. Design volume of lagoon effluent to be land applied at this location is calculated at 873,282 gallons per year. The proposed traveling gun is a Kifco model KFNG2.5B-G23S with the ability to transfer wastewater to the irrigation field at variable rate from 50 gpm at 254 TDH to 175 gpm at 208 TDH.

- An Offsite fenced surface irrigation area is proposed in a field south of highway EE with a legal description as: 22.22 AC IN SEC 36-55-7 N 1035' OF E 935' OF SE1/4 and 15.8 AC IN SEC 31-55-6 THE WEST 628.99' OF THE NORTH 1062.6' OF THE NW FRL. EX. R/W and is expected to be used sporadically. This land is owned by Fifth Generation Farms as well, is private property with no public access. Lagoon effluent will be truck hauled using a local wastewater hauler to this offsite proposed land application area if required. The design application rate proposed for this site is 0.2 inches/hour, 0.5 inch/day, 2.5 inches/week, and 24 inches/year. Design volume of lagoon effluent to be land applied at this location is calculated at 1,546,172 gallons per year. This offsite surface land application area has a proposed area of approximately 33.8 acres and is only expected to be used occasionally.

5. OPERATING PERMIT

After completion of construction project submit statement of work completed, as-builts if the project was not constructed in accordance with previously submitted plans and specifications, and request the operating permit be issued. Form B and Form I was received May 9, 2024; the Operating Permit fee of $150.00 has been received and deposited.

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:

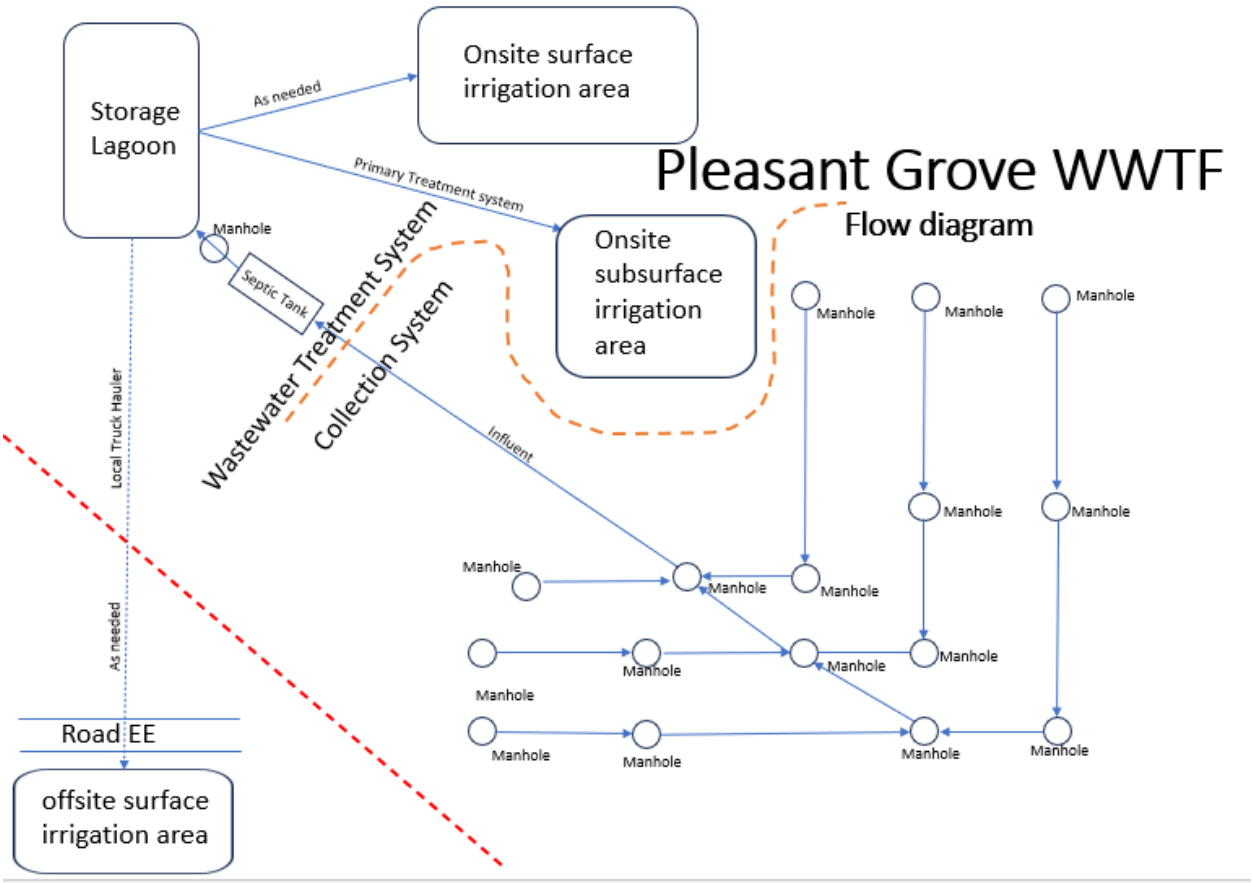
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: https://ahc.mo.gov

Francisco Cortalezzi, E.I.
Engineering Section
francisco.cortalezzi@dnr.mo.gov

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

APPENDIX

- **Process Flow Diagram**


Pleasant Grove WWTF
Flow diagram
Storage Lagoon
As needed
Onsite surface irrigation area
Primary Treatment system
Onsite subsurface irrigation area
Manhole
Septic Tank
Wastewater Treatment System
Collection System
Influent
Local Truck Hauler
As needed
Road EE
offsite surface irrigation area
Manhole

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 Private no-discharge facility

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
Pleasant Grove RV Park, LLC

2.2 ESTIMATED PROJECT CONSTRUCTION COST
$

2.3 PROJECT DESCRIPTION
this is a proposed 110 lot seasonal RV park with a storage lagoon, sub-surface absorption field and surface land application.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
Subsurface absorption and land application.

2.5 DESIGN INFORMATION

A. Current population: n/a ; Design population: n/a

B. Actual Flow: 2036 gpd; Design Average Flow: 3415 gpd;
Actual Peak Daily Flow: 14355 gpd; Design Maximum Daily Flow: 3928 gpd; Design Wet Weather Event: 25-24

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	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Pleasant Grove RV Park, LLC	(573)565-3469	jbarnes@tricountyelectrical.com

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
TBD Pleasant Grove Road	Perry	MO	63462	Ralls

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

3.1 Legal Description: SW ¼, NW ¼, NE ¼, Sec. 36, T 55N, R 7W
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 15S 617 Northing (Y): 4374227
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Ely Creek-Salt River (Mark Twain Lake); Lick Creek

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Jon Barnes	(573)470-0999	jbarnes@tricountyelectrical.com

ADDRESS	CITY	STATE	ZIP CODE
PO Box 428	Perry	MO	63462

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	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Pleasant Grove RV Park, LLC	(417)236-5099	

ADDRESS	CITY	STATE	ZIP CODE
PO Box 428	Perry	MO	63462

5.1 A letter from the continuing authority, if different than the owner, is included with this application. ☐ YES ☐ NO ☑ N/A

5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.

A. Is a copy of the certificate of convenience and necessity included with this application? ☐ YES ☐ NO

5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.

A. Is a copy of the as-filed restrictions and covenants included with this application? ☐ YES ☐ NO

B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? ☐ YES ☐ NO

C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? ☐ YES ☐ NO

D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO

6.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Jeff E. Browning, PE	(573)470-7447	jeff@alliedengineering.us

ADDRESS	CITY	STATE	ZIP CODE
P.O. Box 22	Silex	MO	63377

7.0 APPLICATION FEE

☑ CHECK NUMBER ☐ JETPAY CONFIRMATION NUMBER

8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PROJECT OWNER SIGNATURE Jon Barnes

PRINTED NAME	DATE
Jon Barnes	6/24/2023

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Owner	(573)470-0999	jbarnes@tricountyelectrical.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): Mar-Dec

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: 1 (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.

	Length	Width	Depth	Freeboard	Depth	Safety	% Slope
Basin #1:	104	104	15	2	12.5	.5	33
Basin #2:							
Basin #3:							

9.4 Storage Basin operating levels (report as feet below emergency overflow level).

	Maximum operating water level	Minimum operating water level
Basin #1:	2 ft	5 ft
Basin #2:	____ ft	____ ft
Basin #3:	____ ft	____ ft

9.5 Design depth of sludge in storage basins.
Basin #1: n/a ft Basin #2: _____ ft Basin #3: _____ ft

9.6 Existing sludge depth, if the basins are currently in operation.
Basin #1: n/a ft Basin #2: _____ ft Basin #3: _____ ft

9.7 Total design sludge storage: n/a dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Number of irrigation sites 1 Total Acres 2.3 Maximum % field slopes 1.5

Location:	SE ¼,	NW ¼,	NE ¼,	36 Sec.	55N T	7W R	Ralls County	2.3 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 2036 Seasonal 3415 Off-season 0

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

Design:	.7 inches/year	.2 inches/hour	.5 inches/day	.7 inches/week	2.3 acres
Actual:	.5 inches/year	.2 inches/hour	.5 inches/day	.5 inches/week	2.3 acres

10.5 Total irrigation per year (gallons): Design: 394k gal Actual: 365k 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

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
JETPAY CONFIRMATION NUMBER	

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

☑ An operating permit for a new or unpermitted facility. Construction Permit # _____
(Include completed antidegradation review or request for antidegradation review, see instructions)

☐ A new site-specific operating permit formerly general permit #MOG _____

☐ A site-specific operating permit renewal: Permit #MO- _____ Expiration Date _____

☐ A site-specific operating permit modification: Permit #MO- _____ Reason: _____

☐ General permit (NON-POTWs) (MOGD –discharging < 50,000 GPD *or* MOG823 – Land Application of Domestic Wastewater):
Permit #MO- _____ Expiration Date _____

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? ☐ YES ☐ NO

2. FACILITY

NAME			TELEPHONE NUMBER WITH AREA CODE
Pleasant Grove RV Park, LLC			(573)565-3469
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE
TBD Pleasant Grove Road	Perry	MO	63462

2.1 Legal description: Sec. 36 , T 55N , R 7W County Ralls

2.2 UTM Coordinates Easting (X): 15S 617 Northing (Y): 4374227
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: Ely Creek-Salt River (Mark Twain Lake); Lick Creek

2.4 Number of outfalls: 2 Wastewater outfalls: n/a Stormwater outfalls: 2 Instream monitoring sites: n/a

3. OWNER:

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Pleasant Grove RV Park, LLC	jbarnes@tricountyelectrical.c	(573)565-3469	
ADDRESS	CITY	STATE	ZIP CODE
PO Box 428	Perry	MO	63462

3.1 Request review of draft permit prior to public notice? ☐ YES ☑ NO

3.2 Are you a publicly owned treatment works? ☐ YES ☑ NO
If yes, please attach the Financial Questionnaire. See: https://dnr.mo.gov/forms/780-2511-f.pdf

3.3 Are you a privately owned treatment works? ☐ YES ☑ NO

3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? ☐ YES ☑ NO

4. CONTINUING AUTHORITY:

NAME	EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	
Pleasant Grove RV Park, LLC	jbarnes@tricountyelectrical.c	(573)565-3469	
ADDRESS	CITY	STATE	ZIP CODE
PO Box 428	Perry	MO	63462

If the continuing authority is different than the owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

NAME	TITLE	CERTIFICATE NUMBER
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE

6. FACILITY CONTACT

NAME		TITLE	
Jon Barnes		Owner/Operator	
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE	
jbarnes@tricountyelectrical.com		(573)470-0999	
ADDRESS	CITY	STATE	ZIP CODE
PO Box 428	Perry	MO	63462

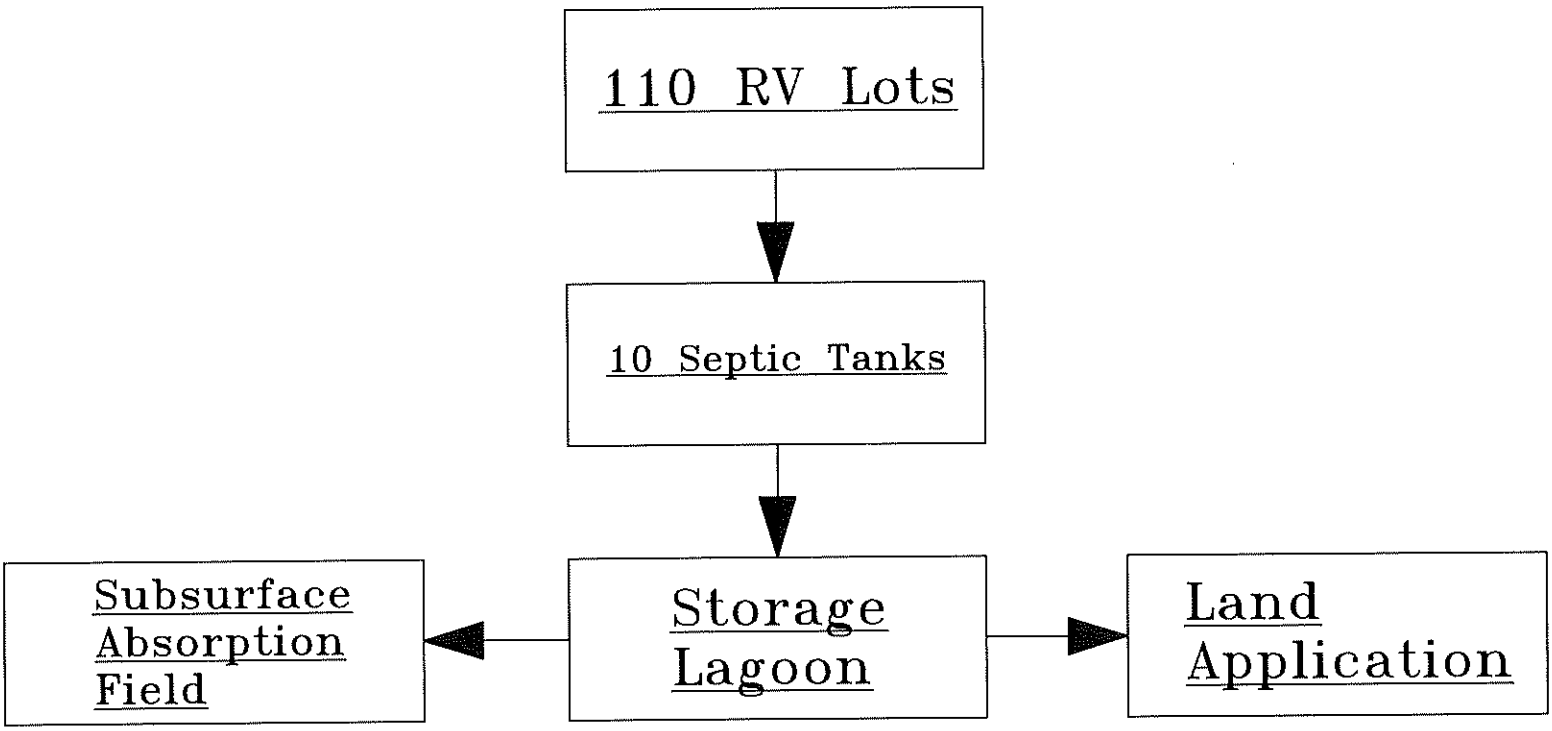
7. DESCRIPTION OF FACILITY

7.1 Process Flow Diagram or Schematic: Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents, and outfalls. Specify where samples are taken. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram.
Attach sheets as necessary.

See Attachment

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.
Please see the following website:
https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce

Attached


110 RV Lots
10 Septic Tanks
Subsurface Absorption Field
Storage Lagoon
Land Application

8. ADDITIONAL FACILITY INFORMATION

8.1 Number of people presently connected or population equivalent (P.E.) 330 Design P.E. 330

8.2 Connections to the facility: 110

Number of units presently connected: 0

Residential: _____ Commercial: 110 Industrial: _____

8.3 Design flow: 3415 | Actual flow: 2036

8.4 Will discharge be continuous through the year? ☐Yes ☑ No
Discharge will occur during the following months: no-discharge
How many days of the week will discharge occur?_____

8.5 Is industrial wastewater discharged to the facility? ☐Yes ☑ No
If yes, attach a list of the industries that discharge to your facility

8.6 Does the facility accept or process leachate from landfills? ☐Yes ☑ No

8.7 Is wastewater land applied? ☑Yes ☐ No
If yes, attach Form I. See: https://dnr.mo.gov/forms/780-1686-f.pdf

8.8 Does the facility discharge to a losing stream or sinkhole? ☐Yes ☑ No

8.9 Has a wasteload allocation study been completed for this facility? ☐Yes ☑ No

9. LABORATORY CONTROL INFORMATION

LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

Lab work conducted outside of plant. ☑Yes ☐ No

Push-button or visual methods for simple test such as pH, settlable solids. ☐Yes ☑ No

Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content. ☐Yes ☑ No

More advanced determinations, such as BOD seeding procedures, fecal coliform/*E. coli*, nutrients (including Ammonia), Oil & Grease, \ total oils, phenols, etc. ☐Yes ☑ No

Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph. ☐Yes ☑ No

10. COLLECTION SYSTEM

10.1 Are there any municipal satellite collection systems connected to this facility? ☐ Yes ☑ No
If yes, please list all connected to this facility, contact phone number and length of each collection system

FACILITY NAME	CONTACT PHONE NUMBER	LENGTH OF SYSTEM (FEET OR MILES)

10.2 Length of pipe in the sewer collection system? (If available, include totals from satellite collection systems)
9141 Feet, or _____ Miles (either unit is appropriate)

10.3 Does significant infiltration occur in the collection system? ☐Yes ☑ No
If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:

11. BYPASSING

Does any bypassing occur in the collection system or at the treatment facility? ☐ Yes ☑ No

If yes, explain:

12. SLUDGE HANDLING, USE AND DISPOSAL

12.1 Is the sludge a hazardous waste as defined by 10 CSR 25? ☐ Yes ☑ No

12.2 Sludge production, including sludge received from others: n/a____Design dry tons/year _____Actual dry tons/year

12.3 Capacity of sludge holding structures:
Sludge storage provided: _____ cubic feet; _____ days of storage; _____ average percent solids of sludge;
☐ No sludge storage is provided. ☐ Sludge is stored in lagoon.

12.4 Type of Storage:
☐ Holding tank ☐ Building
☐ Basin ☐ Lagoon
☐ Concrete Pad ☐ Other (Describe) _____

12.5 Sludge Treatment:
☐ Anaerobic Digester ☐ Lagoon ☐ Composting
☐ Storage Tank ☐ Aerobic Digester ☐ Other (Attach description)
☐ Lime Stabilization ☐ Air or Heat Drying

12.6 Sludge Use or Disposal:
☐ Land Application ☐ Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
☐ Contract Hauler ☐ Hauled to Another treatment facility
☐ Incineration ☐ Sludge Retained in Wastewater treatment lagoon
☐ Solid waste landfill

12.7 Person responsible for hauling sludge to disposal facility:
☐ By applicant ☐ By others (complete below)

NAME	EMAIL ADDRESS		
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

12.8 Sludge use or disposal facility
☐ By applicant ☐ By others (Complete below.)

NAME	EMAIL ADDRESS		
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?
☐ Yes ☐ No (Explain)

13. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127, National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure a timely, complete, accurate, and nationally- consistent set of data. One of the following options must be checked in order for this application to be considered complete. Visit https://dnr.mo.gov/env/wpp/edmr.htm to for information on the Department's eDMR system and how to register.

☑ I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.

☐ I have already registered an account online to participate in the Department's eDMR system through MoGEM.

☐ I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

☐ The permit I am applying for does not require the submission of discharge monitoring reports.

14. JETPAY

Permit fees may be payed online by credit card or eCheck through a system called JetPay. Use the URL provided to access JetPay and make an online payment.

New Site Specific Permit: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591/

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

Modification Fee: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/

New General Domestic WW: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/772/

15. CERTIFICATION

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.

NAME (TYPE OR PRINT)	OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Jon Barnes	Owner/operator	(573)470-0999
SIGNATURE: Jon Barnes		DATE SIGNED: 5/1/2024

MO 780-1512 (03-21)