

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

KR LAND MANAGEMENT, LLC
Seven Springs Winery
846 Winery Hills Estates
Linn Creek, MO 65052

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 6, 2026
Effective Date

March 5, 2028
Expiration Date



Heather Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Installation of a collection system and drip dispersal subsurface wastewater treatment system to treat flows from a new ten one-bedroom cabins. The event center has a design average flow of 1,200 gallons per day (gpd) at maximum capacity.

The system includes installation of approximately 204 lf of 8-inch SDR-40 PVC gravity main connected to one 2,000-gallon dual compartment septic tank followed by a 2,000-gallon dual compartment tank containing a MicroFAST 1.5 treatment system. Flow will then proceed to a 2,500-gallon dosing tank containing a STA-RITE Step 30 0.5-hp submersible filtered effluent pump, rated for 8.1 gpm at 87.1 TDH. The dosing tank will pump flows to a three-zone drip dispersal field for final treatment.

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

II. COST ANALYSIS FOR COMPLIANCE

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

The department is not required to complete a cost analysis for compliance because the facility is not a combined or separate sanitary sewer system for a publicly-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 Ethan Shackelford, P.E., with Alpha Engineering and Surveying, 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 Southwest 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 0.2 gallons per day per square foot.
6. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the one hundred- (100-) year flood elevation per 10 CSR 20-8.140(2)(B). The minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300') per 10 CSR 20-8.140(2)(C)1.
7. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the department's ePermitting system available online at <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.
8. A United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Department of the Army permit and a Section 401 Water Quality Certification issued by the department may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied or notification is provided that no Section 404 permit is required by the USACE. You must contact your local USACE district since they determine what waters are jurisdictional and which permitting requirements may apply. You may call the department's Water Protection Program, Operating Permits Section at 573-522-4502 for more information. See <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.
9. 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 one hundred- (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 three hundred feet (300'). 10 CSR 20-8.140 (2) (C) 1.
- Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D)
- 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.
- 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.
- 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)
- A septic tank must have a minimum capacity of at least one thousand (1,000) gallons. 10 CSR 20-8.180 (2) (A)
- The septic tank shall be baffled. 10 CSR 20-8.180 (2) (B)
- 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 a ten-foot (10') 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:
 - Forty-eight inches (48") where karst features are present unless the site can be reclassified. 10 CSR 20-8.200 (8) (A) 2. C.
- 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.

10. Upon completion of construction:

- A. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications;
- B. 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>)
- C. An application for Operating Permit (Form B) was submitted to the department and received on February 9, 2026. The operating permit modification fee of \$100.00 needs to be submitted to the Engineering Section of the Water Protection Program at least 60 days prior to operation.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

This project provides a no-discharge wastewater treatment facility to an existing Winery for the proposed new rental cabins.

2. FACILITY DESCRIPTION

A new sewage treatment facility will serve 10 new rental single bedroom cabins at Seven Springs Winery. The facility will provide secondary treatment and drip soil dispersion.

The Seven Springs Winery is located at 846 Winery Hills Estates, Linn Creek, in Camden County, Missouri.

3. COMPLIANCE PARAMETERS

The proposed wastewater treatment facilities will be complete no-discharge. All liquid waste will be treated and disposed on-site. Periodic removal of waste sludges will be necessary. 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 for this drip dispersal system.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Seven Springs Winery was issued a construction permit CP0002314 on June 7, 2022, and extended to expire on June 6, 2026, for a no-discharge wastewater treatment facility to an existing Winery tasting center and a separate no-discharge wastewater treatment facility to six single bedroom cabins. After receipt of the final Statement of Work Completed and application fee, General Operating Permit MO-G823198 will be issued.

This CP0002583 is being issued for a third treatment system, which will also be permitted under General Operating Permit MO-G823198 upon completion.

Construction will cover the following items:

- Components are designed for a Population Equivalent of 12 based on a design average flow of 60 gpd per capita with 2 people in each bedroom per cabin. The total design average flow is 1,200 gpd.
Drip Dispersal Field approximate location:
Field Site #3: UTM (zone 15) X = 525,900, Y = 4214282.
- **Collection System**
 - **Gravity Sewer** – Approximately 204 lf of 8-inch SDR-40 PVC gravity pipe with two manholes and one septic tank to convey wastewater from 10 one-bedroom cabins to the treatment tanks.

- **Treatment Tanks**

- **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 2,000-gallon dual compartment septic tank. When the water level reaches a certain height, the wastewater flows into the second compartment by two tee-drop pipes. The septic tank is approximately 13 ft x 6.5 ft x 5.5 ft with a water level depth of 4.5 ft. Settled solids in the septic tank will be removed by a contract hauler.
- **MicroFAST 1.5 Biological Treatment Tank** – Septic tank effluent flows into a 2,000-gallon concrete tank containing a MicroFAST 1.5 Biological Treatment System for secondary treatment prior to drip dispersal. Effluent from treatment tanks will flow in the 2,500-gallon Dosing Tank.
- The MicroFast 1.5 Treatment Systems (MFTS) can treat a maximum design average flow of 1,500 gpd and a maximum pumped inflow rate of 7.8 gpm with a maximum hourly flow not to exceed 10 percent of the design daily flow. The MFTS shall come equipped with a regenerative type of blower capable of delivering 45 CFM. The control panel is equipped with an alarm system consisting of a visual and audible alarm capable of signaling blower circuit failure and high-water conditions.

- **Subsurface Soil Dispersal System**

- **Soil Evaluation** - Absorption field size is based on a loading rate of 0.20 gallons per square foot per day and is in accordance with the recommended rates in the soil report. According to the geohydrologic evaluation dated September 25, 2025, the site is considered a losing setting due to proximity to karst features; therefore, a 48-inch depth to the limiting layer is required. Detailed soil analysis was performed by Melissa Bettes, Soil Scientist, on February 4, 2026. In the soils investigation, there was one pit dug in the location of the proposed absorption field.
- **Soil Test Field One Pit** – located in the dispersal field area, with a limiting application rating of 0.2 gpd/ft² for an alternative system. Soils in this area were overall classified as provisionally suitable for alternative systems.
- **Imported Soil** – The soil report indicated that the soil at the depth of 32 inches the soil is unsuitable. Therefore, with the drip dispersal lines being placed at a minimum depth of 8 inches below the surface and 48 inches of vertical separation between the bottom of the drip lines and the limiting layer due to karst features present on the site, a minimum of 24 inches of imported soil will be used. The facility will import soils from off site, which must be approved by an onsite soil scientist before placement and shall be with a minimum loading rate of 0.20 gallons per square foot per day.

- **Dosing Tank**– A SI precast commercial jet concrete 2,500-gallon single compartment tank will receive secondary level effluent from the Biological Treatment Tank. The dosing tank will have a high-water alarm and timer controls. One pump, with a disc filter on the discharge side, will be used in the dosing tank to pressurize the drip irrigation system.
 - STA-RITE Step 30 pump – 0.5 hp/115V submersible filtered effluent pump, capable of pumping 8.1 gpm against 87.1 feet of head. The actual dosing rate is approximately 4.42 gpm; the flushing rate is approximately 8.1 gpm.
 - Disc Filter – BioDisc-150 mesh filter, maximum flow of 30 gpm.
- **Drip Irrigation System** – Design hydraulic loading rate of 0.2 gallons per day per square foot. The facility has selected the GEOFLOW subsurface drip dispersal system. The preliminary treatment system is designed to treat BOD₅ and TSS of less than 20 mg/l prior to the drip field. The design average flow of the GEOFLOW drip system is 1,200 gpd and anticipated organic loading of 1.46 pounds BOD₅ per acre per day.
 - 1.25-inch supply lines and 0.5-inch ID GeoFlow lines with one combo air/vacuum release valve per zone will be installed in each drip dispersal field. The drip distributing valve will be a HT-4403 series valve.
 - Dispersal Fields – The dispersal fields consist of three zones, each zone is 2,000 ft² and contains 1,000 lineal feet of drip dispersal pipe divided into 10 lines of 1.25-inch tubing fitted with emitters every 2 ft and have an emitter rate of 0.53 gallons per hour. Drip lines are to be installed at a depth of eight inches, with excess water and flush water returned to the dosing tank through 1.25-inch PVC return lines; flushing is automatic. The system will dose three 2,000 ft² zones at 0.2 gpd/ft², in six doses per day per zone for approximately 15.06 minutes.
- **Surface Water Diversion** – Surface water diversion is provided around the dispersal field to divert surface runoff as recommended in the soil report.

5. OPERATING PERMIT

After completion of construction project CP0002314 for the initial treatment systems, submit Statement of Work Completed, and as-builts if the project was not constructed in accordance with previously submitted plans and specifications. An application for Operating Permit (Form B) was submitted to the department and received on January 20, 2022. After receipt of the final Statement of Work Completed and application fee, General Operating Permit MO-G823198 will be issued.

After completion of construction project CP0002583 for the new treatment system, submit a separate Statement of Work Completed, and as-builts if the project was not constructed in accordance with previously submitted plans and specifications.

Thereafter operating permit MO-G823198 will be modified to reflect the construction activities.

V. NOTICE OF RIGHT TO APPEAL

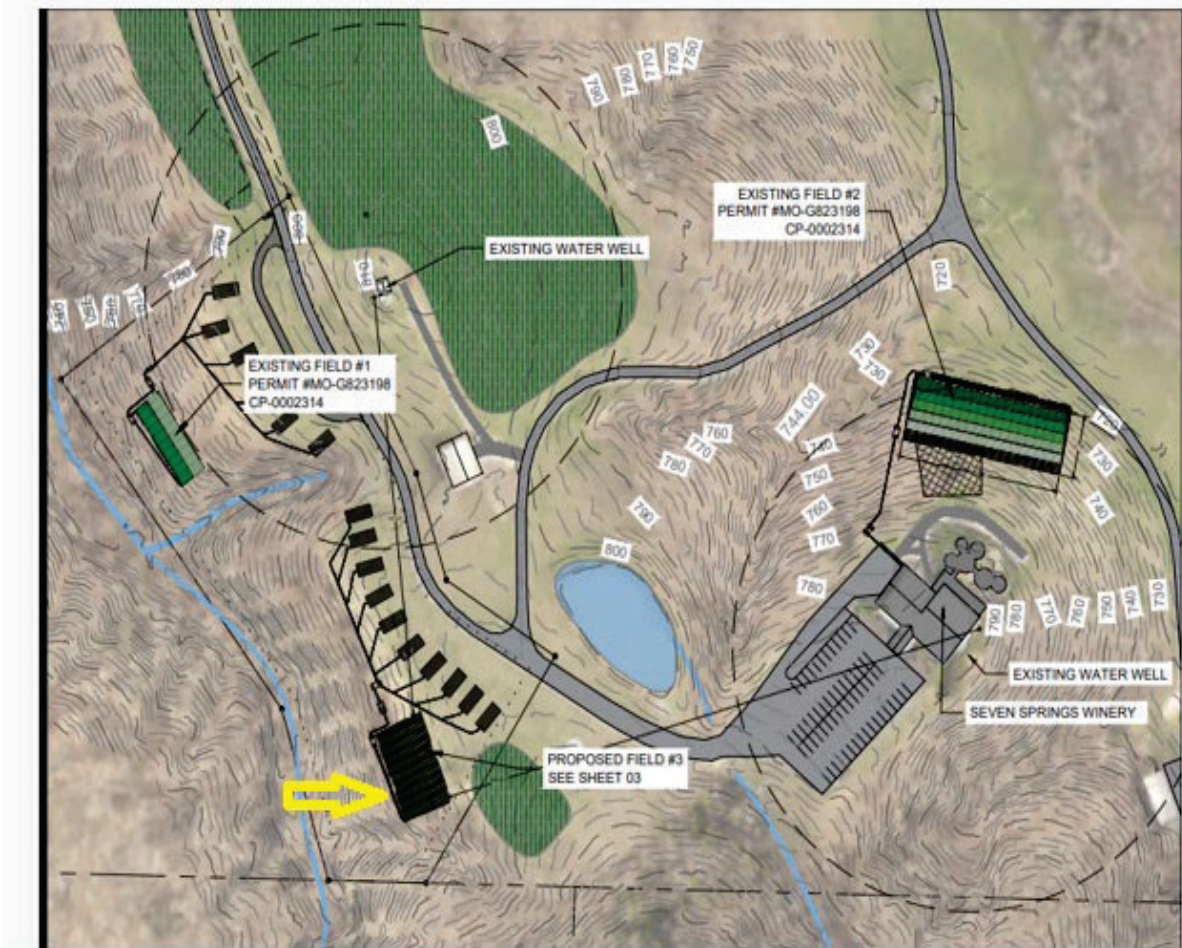
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered,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

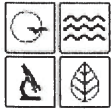
Tasneem Khan, P.E.
Engineering Section
tasneem.khan@dnr.mo.gov

Appendix

Site Map – The new dispersal field will be permitted under CP0002583 is shown in the photo below marked with yellow arrow







MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
**APPLICATION FOR CONSTRUCTION PERMIT –
 WASTEWATER TREATMENT FACILITY**

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Treatment Facility form has been developed in a modular format and consists of Part A and B. **All applicants must complete Part A.** Part B should be completed for applicants who currently land-apply wastewater or propose land application for wastewater treatment. **Please read the accompanying instructions before completing this form. Submittal of an incomplete application may result in the application being returned.**

PART A – BASIC INFORMATION

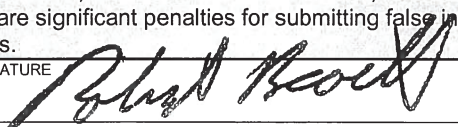
1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? YES N/A Funding Agency: _____ Project #: _____
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
 YES Date of Approval: _____ N/A
- 1.3 Has the department approved the proposed project's facility plan*?
 YES Date of Approval: _____ NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan* for wastewater treatment facilities included with this application?
 YES NO Exempt because _____
- 1.5 Is a copy of the appropriate plans* and specifications* included with this application?
 YES Denote which form is submitted: Hard copy Electronic copy (See instructions.) NO
- 1.6 Is a summary of design* included with this application? YES NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
 YES Date of submittal: _____
 Enclosed is the appropriate operating permit application and fee submittal. Denote which form: A B B2
 N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? YES NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? YES NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application? YES NO
 See Section 7.0

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

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT Seven Springs Winery	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 35000
2.3 PROJECT DESCRIPTION Seven Springs Winery will be constructing a third field for ten rental cabins.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION N/A	
2.5 DESIGN INFORMATION A. Current population: _____; Design population: <u>20</u> B. Actual Flow: _____ gpd; Design Average Flow: <u>1200</u> gpd; Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: _____ gpd; Design Wet Weather Event: _____	
2.6 ADDITIONAL INFORMATION A. Is a topographic map attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO B. Is a process flow diagram attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME Seven Springs Winery		TELEPHONE NUMBER WITH AREA CODE 432-220-7977		E-MAIL ADDRESS rbooth429@gmail.com
ADDRESS (PHYSICAL) 846 Winery Hills Estates		CITY Linn Creek	STATE MO	ZIP CODE 65052
		COUNTY Camden		
Wastewater Treatment Facility: Mo- (Outfall Of)				
3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. _____, T _____, R _____ (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): _____ Northing (Y): _____ For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>N/A</u>				
4.0 PROJECT OWNER				
NAME Seven Springs Winery		TELEPHONE NUMBER WITH AREA CODE 432-220-7977		E-MAIL ADDRESS rbooth429@gmail.com
ADDRESS 846 Winery Hills Estates		CITY Linn Creek	STATE MO	ZIP CODE 65052
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 Same as Owner		TELEPHONE NUMBER WITH AREA CODE		E-MAIL ADDRESS
ADDRESS		CITY	STATE	ZIP CODE
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 checked="" 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 checked="" 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 checked="" 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 checked="" type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Ethan K. Shackelford/Alpha Engineering and Surv LLC		TELEPHONE NUMBER WITH AREA CODE 573-348-9799		E-MAIL ADDRESS ethan@alphaes.net
ADDRESS PO Box 282		CITY Osage Beach	STATE MO	ZIP CODE 65065
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input checked="" type="checkbox"/> JETPAY CONFIRMATION NUMBER 20071567				
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 Robert Boothe			DATE 11/20/2025	
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE 432-220-7977		E-MAIL ADDRESS rbooth429@gmail.com
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM P.O. BOX 176 JEFFERSON CITY, MO 65102-0176				
END OF PART A.				
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHETHER PART B NEEDS TO BE COMPLETE.				

PART B – LAND APPLICATION ONLY

(Submit only if the proposed construction project includes land application of wastewater.)

8.0 FACILITY INFORMATION

8.1 Type of wastewater to be irrigated: Domestic State/National Park Seasonal business
 Municipal Municipal with a pretreatment program or significant industrial users
 Other (explain) _____

8.2 Months when the business or enterprise will operate or generate wastewater:
 12 months per year Part of the year (list months): _____

8.3 This system is designed for:
 No-discharge.
 Partial irrigation when feasible and discharge rest of time.
 Irrigation during recreational season, April – October, and discharge during November – March.
 Other (explain) _____.

9.0 STORAGE BASINS

9.1 Number of storage basins: _____ (Use additional pages if greater than three basins.)

9.2 Type of basins: Steel Concrete Fiberglass Earthen Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.
Basin #1: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____
Basin #2: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____
Basin #3: Length _____ Width _____ Depth _____ Freeboard _____ Depth _____ Safety _____ % Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).
Basin #1: Maximum operating water level _____ ft Minimum operating water level _____ ft
Basin #2: Maximum operating water level _____ ft Minimum operating water level _____ ft
Basin #3: Maximum operating water level _____ ft Minimum operating water level _____ ft

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

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

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

10.0 LAND APPLICATION SYSTEM

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

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

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

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

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

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

10.7 Land application rate is based on:
 Hydraulic Loading Other (describe) _____
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included? YES NO