

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Sunrise RV Park, L.L.C.
Keith Henke, Owner
Sunrise RV Park WWTF
4592 Brandes Rd
Moscow Mills, MO 63362

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.

July 21, 2026
Effective Date

July 20, 2028
Expiration Date

A handwritten signature in black ink, appearing to read "Heather Peters".

Heather Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Construction of a 10,000-gal septic tank, a 10,000-gal pump tank, a 10,000-gal overflow tank, a hydraulic disc filter unit, and a drip dispersal field consisting of 18 zones, each with 2,400 ft of dispersal tubing. The design average flow for this facility will be 16,825 gallons per day (gpd).

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 Jacob Dean, P.E., with Great River Engineering, 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 St. Louis 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 square foot per day.
6. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the department's ePermitting system available online at <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
7. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - 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)
 - 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.

- 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 roadbeds, 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:
 - Twenty-four inches (24"); 10 CSR 20-8.200(8)(A)2.A.
- 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.
- Imported Soils. When a facility is importing soils for the subsurface soil dispersal systems, the following shall be specified: 1. Physical characteristics that are uniform in texture, structure, and pore space; 2. Transportation methods that ensures 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 ten percent (10%) clay and less than fifteen percent (15%) organic debris present; 4. Methods for removal of the organic layer; 5. No compaction of imported soil; 6. Placement in small "lift" increments of four to six inches (4"–6") instead of one (1) thick layer; and 7. Native soil is to be used for the vertical separation for the subsurface soil dispersal systems with the fill for the cap being imported soils. 10 CSR 20-8.110(7)(C)

8. Upon completion of construction:

- Sunrise RV Park, L.L.C., will become the continuing authority for operation and maintenance of these facilities;
- Submit an electronic copy of the as-built plans if the project was not constructed in accordance with previously submitted plans and specifications;
- Submit the [Statement of Work Completed form](#) to the department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit be modified to reflect the completed construction. Form B to modify the operating permit was previously submitted.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Upgrades are needed to resolve violations documented in Referral Notice of Violation No. SL170142 and Abatement Order 2018-WPCB-1557.

2. FACILITY DESCRIPTION

In 2017, the department discovered that an RV park with an unpermitted septic tank system was discharging to a tributary to Big Creek. The system was reportedly constructed without a permit and consisted of septic tanks and an unpermitted surface irrigation system. The department determined that the facility exceeded 3,000 gpd, disqualifying it from the exemptions provided by 10 CSR 20-6.010(1)(B)11. and (5)(B)3.

The facility will add a septic tank, pump tank with emergency overflow tank, disc filter, and an 18-zone drip dispersal system with imported soils to meet a minimum vertical separation. The design average flow was recalculated. The facility will be designed to not discharge.

The Sunrise RV Park WWTF is located at 4592 Brandes Road, which is southeast of Moscow Mills, in Lincoln County, Missouri. The facility has a design average flow of 16,825 gpd and serves a hydraulic population equivalent of approximately 169 people.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet the requirements of [MOG823277](#), Parts V and VII through XII for a subsurface no-discharge wastewater facility.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

- The site reportedly has six existing septic tanks (four 1,500-gallon septic tanks and two 5,000-gallon septic tanks for a total existing capacity of 16,000 gallons) and an irrigation spray head for land application. The surface irrigation spreadhead will be removed.

Construction will cover the following items:

- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
 - Electromagnetic Meter – An electromagnetic 1-inch flow meter shall measure the influent wastewater following septic tanks and screening. The flow meter can measure from 0.31 gpm up to 30.8 gpm.
- 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 through the existing tanks and into the new 10,000-gal two-compartment septic tank. When the water level reaches a certain height, the wastewater flows into the second compartment. The septic tank compartments will have inside dimensions of 10'5" by 9' and 5' by 9' with a water level depth of 8'10". The combined total of septic tanks provides approximately 1.5 days of detention at design average flow. Settled solids in the septic tank shall be removed by a contract hauler.
 - Wastewater will flow from the septic tanks to a 10,000-gal pump tank with inner dimensions of 16ft by 9ft and a water level depth of 8ft 10 inches. An identical 10,000-gal emergency overflow tank will double the pump tank's capacity. A 1-hp screened pump capable of 18.2 gpm at 161 ft TDH (for backwashing) and 31.5 gpm at 129 ft TDH (during dosing) will be used to dose the drip dispersal fields.
- Subsurface Soil Dispersal System – The facility is importing soils across the absorption site to ensure a six-inch bury depth and at least 24 inches of vertical separation with soils rated for at least 0.2 gpd/sf. The facility decided to use a conservative design loading rate of 0.2 gpd/sf for the entire system.
 - Soil morphology review was conducted during the construction permit review, and onsite soils were determined to be acceptable for this system if soils are imported. The soil investigation was completed by Douglas Gaines, CPSS/SC, with GAINES SOIL CONSULTING, on November 1, 2018, and December 26, 2024. In the soils investigation, there were seven pits dug over the proposed site.

- Three absorption zones are represented by soil test pit #2.
Approximately 17 inches of soil will be imported to achieve a minimum 30 inches of soil with a minimum long-term acceptance rate of 0.2 gpd/sf.
- Four absorption zones are represented by soil test pit #3. No additional soil will need to be imported to achieve a minimum 30 inches of soil with a minimum long-term acceptance rate of 0.2 gpd/sf.
- Five absorption zones are represented by soil test pit #4.
Approximately 26 inches of soil will be imported to achieve a minimum 30 inches of soil with a minimum long-term acceptance rate of 0.2 gpd/sf.
- Six absorption zones are represented by soil test pit #5. Approximately 8 inches of soil will be imported to achieve a minimum 30 inches of soil with a minimum long-term acceptance rate of 0.2 gpd/sf.
- Five absorption zones are represented by soil test pit #7.
Approximately 20 inches of soil will be imported to achieve a minimum 30 inches of soil with a minimum long-term acceptance rate of 0.2 gpd/sf.
- All soils at the site were described as silt loam or silty clay loam with an application rating ranging from 0.225 to 0.25 gallons per square foot per day above a certain depth. To ensure the long term loading rate is above 0.2 gpd/sq.ft., sufficient soils will be imported for the absorption field to provide at least 30 inches (6 inches above the drip lines and 24 inches beneath). Specifications for placement of the fill require a specific range of acceptable soil moisture content and the type of construction equipment (tracked) to be used to avoid over compaction.
- Disc screening filters (Arkal, 115-micron) will be used ahead of the manifold with 2-in and ¾-in supply lines and ½-in ID GeoFlow lines installed 6-in deep.
- Drip – The facility has selected the ASDD25 “Perc-Rite®” subsurface drip dispersal system using the NETAFIM Bioline. The system will dose 18 zones (two at a time) at 0.2 gpd/sq.ft., which requires 36 dosing events per day at initial conditions and 60 doses for the design average flow. Each zone is 4,800 sq.ft., for a total of 1.98 acres. A total of 54 combo air/vacuum release valves will be installed. The drip distributing valves will be 24v zone valve assemblies at each zone. The drip field area contains 43,200 linear feet of 0.5-inch tubing fitted with emitters every two ft and capable of a standard loading at 0.61 gph.

- Imported Soil - The facility will have to import approximately 3,393 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. This meets the requirements of the NETAFIM design recommendations for importing soils. The imported soils will be used from an area immediately adjacent to the dispersal field.
- Emergency Power – A 26 kW standby liquid petroleum/natural gas generator will be provided to operate the treatment facility in event of power failure.

5. OPERATING PERMIT

After completion of construction project submit: (1) a [Wastewater Construction Statement of Work Completed MO 780-2155](#) and (2) as-builts, if the project was not constructed in accordance with previously submitted plans and specifications. An [application Form B](#) and initial operating permit fee were already submitted. Missouri State Operating Permit, General Permit MO-G823277, will be issued after receipt of the above documents. [[10 CSR 20-6.010\(5\)\(N\)](#)]

V. NOTICE OF RIGHT TO APPEAL

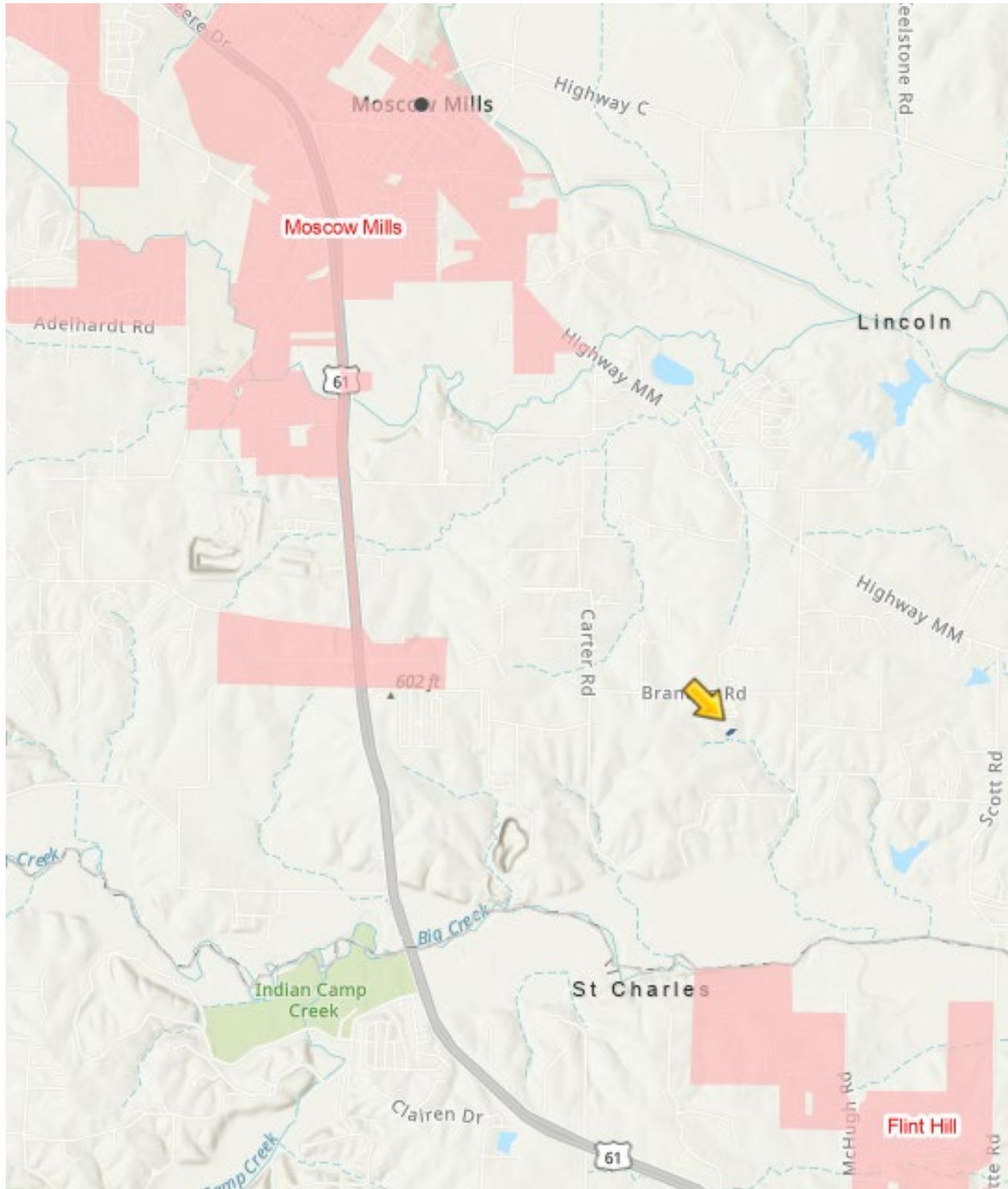
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to [Section 621.250 RSMo](#). To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered,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

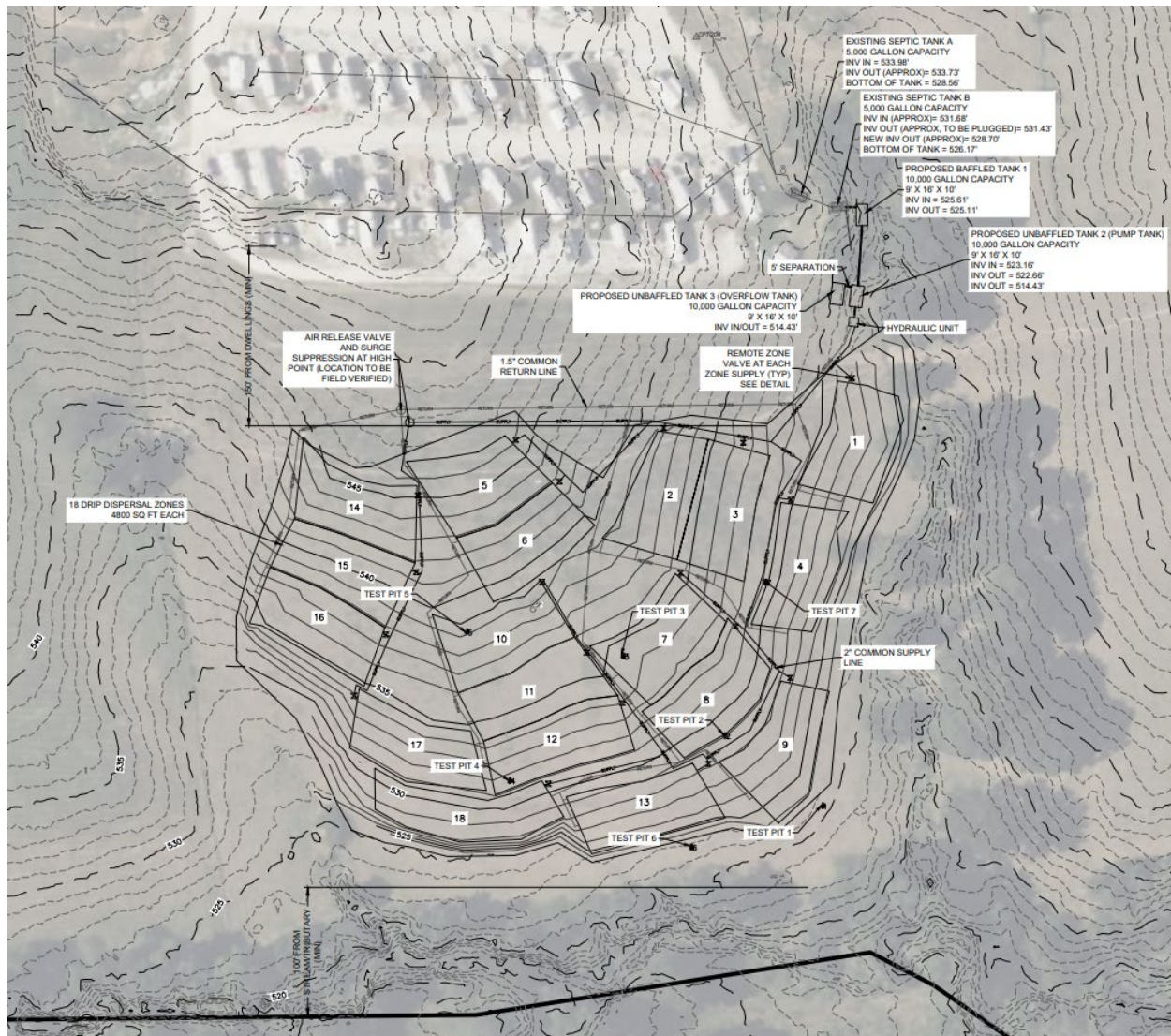
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

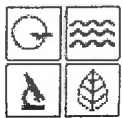
Scott Adams, P.E.
Engineering Section
scott.adams@dnr.mo.gov

Appendix 1: Site Maps

Sunrise RV Park is located at 4546 Brandes Rd., in Moscow Mills, Missouri 63362







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: 4/15/25 ☐ 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 Sunrise RV Park Wastewater Treatment Facility	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 759,147
2.3 PROJECT DESCRIPTION This project involves the construction of a new drip irrigation field including a new supply and return system, a new septic tank, and a new pump tank with a parallel excess storage tank.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION Solids will be settled out in the septic tanks and pumped and hauled periodically.	
2.5 DESIGN INFORMATION A. Current population: <u>253</u> ; Design population: <u>373</u> B. Actual Flow: <u>10525</u> gpd; Design Average Flow: <u>16825</u> gpd; Actual Peak Daily Flow: <u>43245</u> gpd; Design Maximum Daily Flow: <u>16825</u> gpd; Design Wet Weather Event: <u>na</u>	
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 Sunrise RV Park WWTF		TELEPHONE NUMBER WITH AREA CODE (636) 237-3052	E-MAIL ADDRESS keithhenke@hotmail.com	
ADDRESS (PHYSICAL) 4592 Brandes Road	CITY Moscow Mills	STATE MO	ZIP CODE 63362	COUNTY Lincoln
Wastewater Treatment Facility: Mo- G823000 (Outfall 0 Of 0)				
3.1 Legal Description: <u>SE ¼, NW ¼, SE ¼, Sec. 22, T 48N, R 1E</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>683035</u> Northing (Y): <u>4308488</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>NA</u>				
4.0 PROJECT OWNER				
NAME Sunrise RV Park, Keith Henke		TELEPHONE NUMBER WITH AREA CODE (636) 237-3052	E-MAIL ADDRESS keithhenke@hotmail.com	
ADDRESS 4592 Brandes Road	CITY Moscow Mills	STATE MO	ZIP CODE 63362	
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 Sunrise RV Park, Keith Henke		TELEPHONE NUMBER WITH AREA CODE (636) 237-3052	E-MAIL ADDRESS keithhenke@hotmail.com	
ADDRESS 4592 Brandes Road	CITY Moscow Mills	STATE MO	ZIP CODE 63362	
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 Jacob Dean / Great River Engineering		TELEPHONE NUMBER WITH AREA CODE (417) 886-7171	E-MAIL ADDRESS jdean@greatriv.com	
ADDRESS 2826 South Ingram Mill Road	CITY Springfield	STATE MO	ZIP CODE 65101	
7.0 APPLICATION FEE				
☐ CHECK NUMBER ☒ JETPAY CONFIRMATION NUMBER 20076602				
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 Keith Henke			DATE 4-10-26	
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE (636) 237-3052	E-MAIL ADDRESS keithhenke@hotmail.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

See Attached.

9.1 Number of storage basins: 7 (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

See Attached.

10.1 Number of irrigation sites 18 Total Acres 2 Maximum % field slopes 5%
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

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

10.3 Wastewater flow (dry weather) gallons per day: Average annual 16k Seasonal na Off-season na

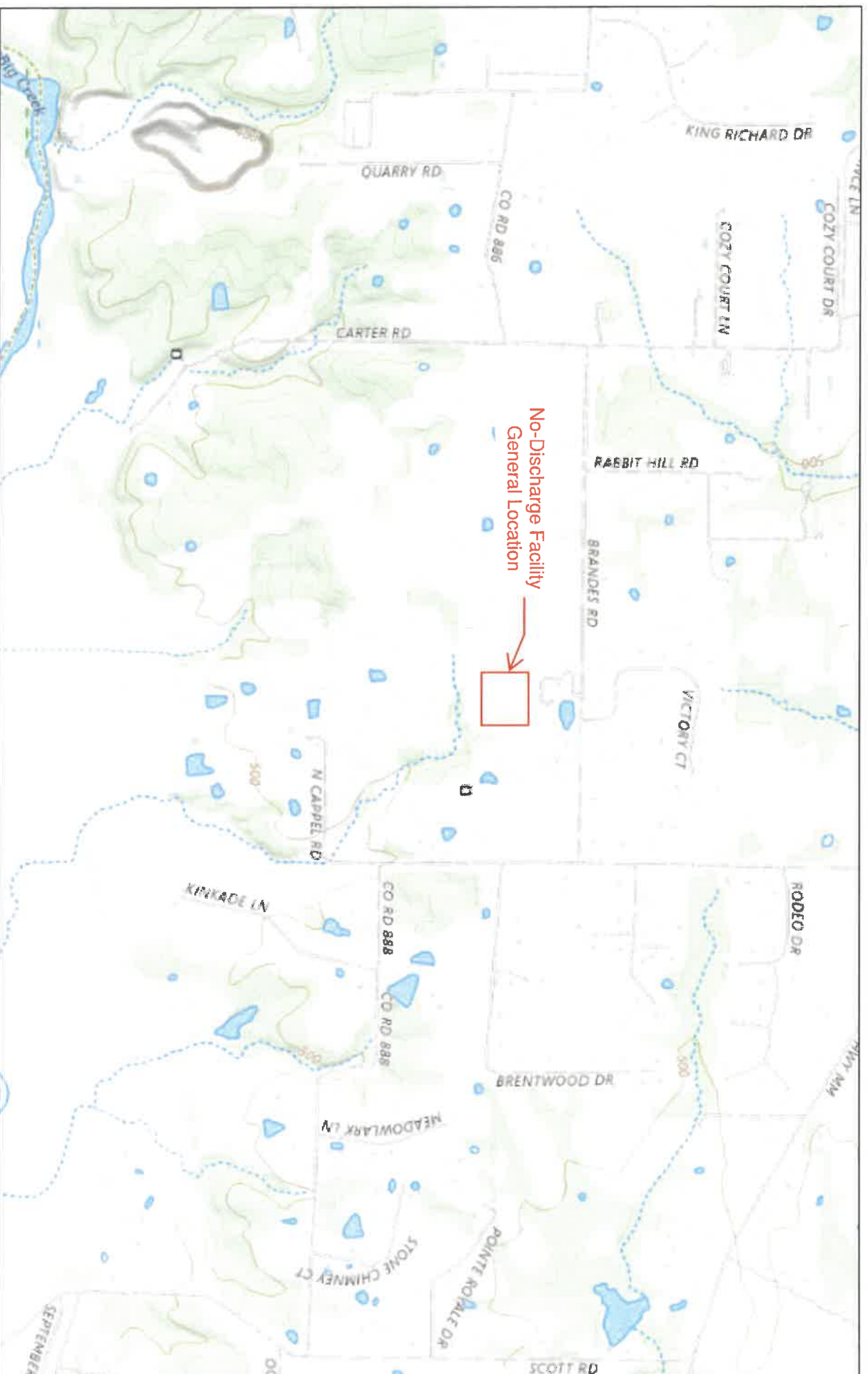
10.4 Land application rate (design flow including 1-in-10 year storm water flows):
Design: 117 inches/year 0.013 inches/hour 0.32 inches/day 2.25 inches/week
Actual: 117 inches/year 0.013 inches/hour 0.32 inches/day 2.25 inches/week

10.5 Total irrigation per year (gallons): Design: 6.1M gal Actual: 5.5M gal

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

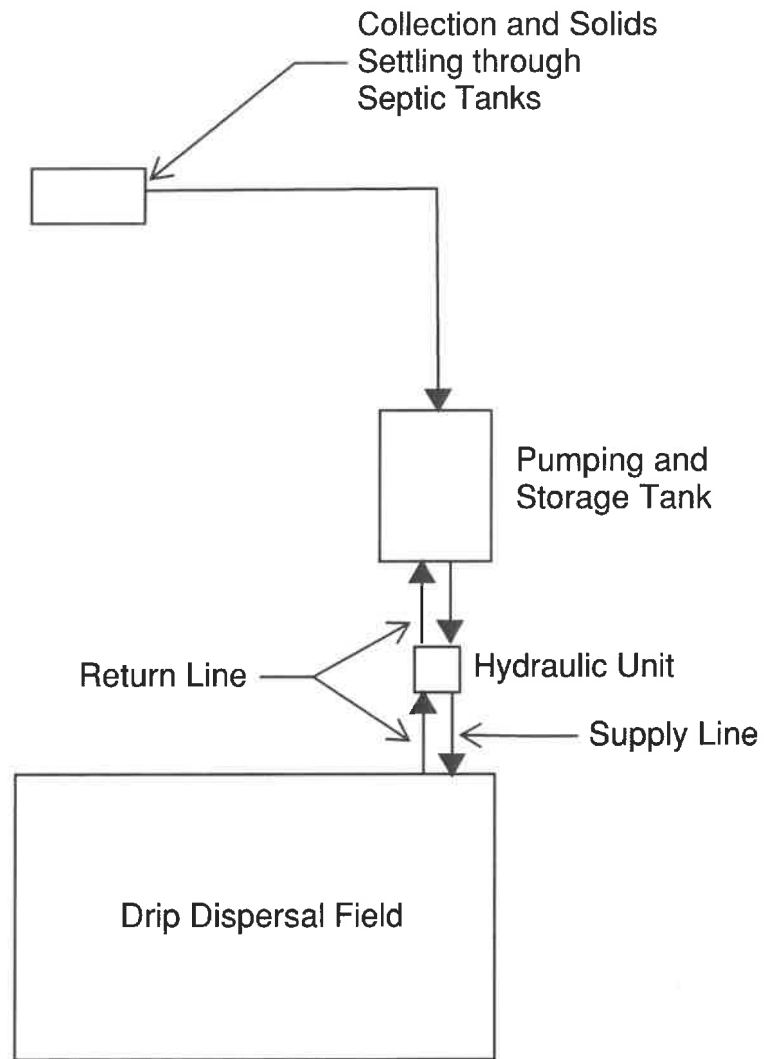
10.7 Land application rate is based on:
☒ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N&P) If N&P is selected, is the plan included? ☐ YES ☐ NO

Sunrise RV Park WWTF Topographic Map



4/2/2026

Process Flow Diagram or Schematic



Project Number: 5503
Project Name: Sunrise RV Park
Project Location: Moscow Mills



Part B Section 9.0 Sludge Storage Basins

9.1 Number of storage basins: 7

9.2 Type of basins: Concrete Septic Tanks

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.

Existing 1,500 gallon	Basin #1	Length	10	Width	5	Depth	5	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Existing 1,500 gallon	Basin #2	Length	10	Width	5	Depth	5	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Existing 1,500 gallon	Basin #3	Length	10	Width	5	Depth	5	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Existing 1,500 gallon	Basin #4	Length	10	Width	5	Depth	5	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Existing 5,000 gallon	Basin #5	Length	16	Width	9	Depth	6	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Existing 5,000 gallon	Basin #6	Length	16	Width	9	Depth	6	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*
Proposed Septic Tank	Basin #7	Length	16	Width	9	Depth	10	Freeboard	NA (closed system)	Depth	NA (closed system)	Safety	NA (closed system)	% Slope	0	*

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

Existing 1,500 gallon	Basin #1	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Existing 1,500 gallon	Basin #2	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Existing 1,500 gallon	Basin #3	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Existing 1,500 gallon	Basin #4	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Existing 5,000 gallon	Basin #5	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Existing 5,000 gallon	Basin #6	Maximum Operating water level	ft	Minimum Operating water level	ft	*
Proposed Septic Tank	Basin #7	Maximum Operating water level	ft	Minimum Operating water level	ft	*

Operating water level is one (1) foot less than height of each septic tank.

9.5 Design depth of sludge in storage basins.

9.6 Existing sludge depth, if the basins are currently in operation.

Existing 1,500 gallon	Basin #1	1.25	ft	*	Existing 1,500 gallon	Basin #1	unk	ft	*
Existing 1,500 gallon	Basin #2	1.25	ft	*	Existing 1,500 gallon	Basin #2	unk	ft	*
Existing 1,500 gallon	Basin #3	1.25	ft	*	Existing 1,500 gallon	Basin #3	unk	ft	*
Existing 1,500 gallon	Basin #4	1.25	ft	*	Existing 1,500 gallon	Basin #4	unk	ft	*
Existing 5,000 gallon	Basin #5	1.29	ft	*	Existing 5,000 gallon	Basin #5	unk	ft	*
Existing 5,000 gallon	Basin #6	1.29	ft	*	Existing 5,000 gallon	Basin #6	unk	ft	*
Proposed Septic Tank	Basin #7	1.17	ft	*	Proposed Septic Tank	Basin #7	NA	ft	*

9.7 Total design sludge storage: 5.13 dry tons and 789 cubic feet

* Denotes estimated values for existing tanks not designed within this construction project.

Project Number: 5503
Project Name: Sunrise RV Park
Project Location: Moscow Mills



Part B Section 10.0 Land Application System

Number of Irrigation Sites			Total Acres		2.00		Maximum % field slopes		5%	
1	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 22	T 48N	R 1E	Lincoln County	0.1 Acres	
2	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 23	T 48N	R 1E	Lincoln County	0.1 Acres	
3	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 24	T 48N	R 1E	Lincoln County	0.1 Acres	
4	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 25	T 48N	R 1E	Lincoln County	0.1 Acres	
5	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 26	T 48N	R 1E	Lincoln County	0.1 Acres	
6	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 27	T 48N	R 1E	Lincoln County	0.1 Acres	
7	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 28	T 48N	R 1E	Lincoln County	0.1 Acres	
8	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 29	T 48N	R 1E	Lincoln County	0.1 Acres	
9	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 30	T 48N	R 1E	Lincoln County	0.1 Acres	
10	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 31	T 48N	R 1E	Lincoln County	0.1 Acres	
11	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 32	T 48N	R 1E	Lincoln County	0.1 Acres	
12	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 33	T 48N	R 1E	Lincoln County	0.1 Acres	
13	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 34	T 48N	R 1E	Lincoln County	0.1 Acres	
14	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 35	T 48N	R 1E	Lincoln County	0.1 Acres	
15	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 36	T 48N	R 1E	Lincoln County	0.1 Acres	
16	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 37	T 48N	R 1E	Lincoln County	0.1 Acres	
17	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 38	T 48N	R 1E	Lincoln County	0.1 Acres	
18	Location:	SE 1/4	NW 1/4	SE 1/4	Sec 39	T 48N	R 1E	Lincoln County	0.1 Acres	