

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Amy Grace
Last Resort RV LLC
2825 Bluff Blvd.
Holiday, FL 34691

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.

November 27, 2023
Effective Date

November 26, 2025
Expiration Date



John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

South system:

A sewage collection system with approximately 1,228 lineal feet of 4-inch and 6-inch SDR-35 PVC gravity sewer and 6 manholes; treatment system with two 2,000 gallon septic tanks, pumping tanks, two 1,500 gallon LPP drainfield dosing tanks equipped with effluent pumps, a soil absorption field with an area of approximately 14,700 square feet, separated into 6 zones, each zone with approximately 490 lineal feet of 1.0-inch LPP distribution pipe, soil loading rate of 0.15 gal/sq. ft., complete and usable to treat the waste from a population equivalent of 22, with an average daily design flow of 2,160 gallons.

North system:

A sewage collection system with approximately 1,419 lineal feet of 4-inch and 6-inch SDR-35 PVC gravity sewer and 7 manholes, treatment system with two 2,000 gallon septic tanks, pump tanks, two 1,500 gallon LPP drainfield dosing tanks equipped with effluent pumps, a soil absorption field with an area of approximately 15,600 square feet, separated into 6 zones, each zone with approximately 520 lineal feet of 1.0-inch LPP distribution pipe, soil loading rate of 0.15 gal/sq. ft., complete and usable to treat the waste from a population equivalent of 23, with an average daily design flow of 2,340 gallons.

South Drainfield approximate location: UTM (zone 15) X = 477,550, Y = 4,235,280.

North Drainfield approximate location: UTM (zone 15) X = 477,660, Y = 4,235,375.

This is a non-discharging facility to be located in the SW ¼, Sec. 4, T40N, R21W, Benton County, Missouri. This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make complete and usable wastewater treatment facilities.

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 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 Martin Heins, P.E., with OCD 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 Kansas City 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. 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.
 - 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.
 - 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.
 - 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)
 - A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140 (7) (E)
 - Subsurface systems shall—
 - o 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 (7) (A) 1. A.
 - o Provide adequate surface drainage where slopes are less than two percent; 10 CSR 20-8.200 (7) (A) 1. B

- o Provide surface and subsurface water diversion where necessary, such as a curtain or perimeter drain; 10 CSR 20-8.200 (7) (A) 1. C and
 - o Have a ten foot buffer from the property line. 10 CSR 20-8.200 (7) (A) 1. D
- The vertical separation between the bottom of the trench and a limiting layer, including but not limited to, bedrock; restrictive horizon; or seasonal high water table, shall be no less than:
 - o Twenty-four inches (24"); 10 CSR 20-8.200 (7) (A) 2. A.
- Loading rates shall not exceed the values assigned by the site and soil evaluation. 10 CSR 20-8.200 (7) (C)
- All network piping and low pressure distribution piping and fittings with polyvinyl chloride (PVC) shall meet ASTM Standard D 1785 *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, or 120* as approved and published August 1, 2015, or equivalent rated to meet or exceed ASTM D2466 *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings* as approved and published August 1, 2017. These standards shall hereby be incorporated by reference into this rule, as published by ASTM International, 100 Barr Harbor Drive, PO Box C700, West Conshohocken, PA 19428-2959. This rule does not incorporate any subsequent amendments or additions. 10 CSR 20-8.200 (8) (A) 2.
- Manifold design for LPP systems shall address freeze protection while assuring uniform distribution and to minimize drain down of laterals into other laterals at a lower elevation between dosing events. 10 CSR 20-8.200 (8) (A) 3.

10. Upon completion of construction:

- A. Last Resort RV LLC will become the continuing authority for operation and maintenance of these facilities;
- B. Submit an electronic copy of the as built 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 submit a Form B - Application for an Operating Permit for Domestic or Municipal Wastewater ($\leq 100,000$ gallons per day) and modification fee of \$75.00 to the Engineering Section of the Water Protection Program 60 days prior to operation.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Wastewater treatment facilities are being constructed to serve an expansion of an RV campground.

2. FACILITY DESCRIPTION

The campground has 13 existing on-site soil absorption systems consisting of septic tanks and gravity fed soil absorption fields. The existing systems have design flows varying from 277 gpd up to 1,260 gpd; they have a total combined design flow of 7,399 gpd .

New treatment facilities will serve an expansion of camping RV spots at The Last Resort Campground. There are two expansion projects. The south loop will add 24 RV spots and the north loop will add 26 RV spots. Each expansion loop will be served by a separate collection system and treatment facility. Both wastewater treatment facility consists of septic tanks, dosing tanks, and LPP subsurface soil absorption fields. The proposed south loop system will serve 24 sites at 2,160 gpd, and the north loop system will serve 26 sites at 2,340 gpd. Design flows are based on 90 gpd/RV. After construction the 15 soil absorption systems will have a total combined design flow of 11,899 gpd.

The Last Resort Campground WWTF; will be owned and operated by Last Resort RV LLC and is located at 28819 Black Rock Ave., Warsaw, Benton County, Missouri. The South Loop facility has a design average flow of 2160 gpd and serves a hydraulic population equivalent of 22; the North Loop facility has a design average flow of 2340 gpd and serves a hydraulic population equivalent of 23.

3. COMPLIANCE PARAMETERS

The proposed wastewater treatment facilities will be complete no-discharge treatment facilities. All liquid waste will be treated and disposed on-site. Periodic removal of waste sludge 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.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The overall project is an expansion of 50 RV camping spots at an existing campground.

South Loop System:

24 full hook-up RV spaces. Sewage collection system consists of approximately 1,228 lineal feet of 4-inch and 6-inch SDR-35 PVC gravity sewer with 6 manholes. Treatment system with two 2,000 gallon septic tanks connected in series; two 1,500 lift station tanks in series, the second tank equipped with two 0.5 HP effluent pumps, each with a capacity of 21 gpm at a TDH of 69 feet; flow to be pumped through 1.5 inch PVC force main to the LPP drainfield dosing tank (two 1,500 gallon tanks in series) equipped with two 2.0 HP effluent pumps, dosing rate of 40 gpm, 2-inch PVC manifold pipe, a soil absorption field with an area of approximately 14,700 square feet, separated into 6 zones; automatic distributing valves for zone selection;

approximate effective zone size of 2,450 sq. ft. with 490 lineal feet of 1.0-inch LPP distribution pipe, 7 laterals, 70 feet each, placed 7 feet on center (effective area is based on 5 feet absorption width); bury depth is approximately 12 inches; at design flow each zone will be dosed 2.7 times a day for approximately 3.4 minutes. Design flow is 2,160 gpd.

North Loop System:

26 full hook-up RV spaces. Sewage collection system consists of approximately 1,419 lineal feet of 4-inch and 6-inch SDR-35 PVC gravity sewer with 7 manholes. Treatment system with two 2,000 gallon septic tanks connected in series; two 1,500 lift station tanks in series, the second tank equipped with two 0.5 HP effluent pumps, each with a capacity of 18 gpm at a TDH of 88 feet; flow to be pumped through 1.5 inch PVC force main to the LPP drainfield dosing tank (two 1,500 gallon tanks in series) equipped with two 2.0 HP effluent pumps, dosing rate of 43 gpm, 2-inch PVC manifold pipe, a soil absorption field with an area of approximately 15,600 square feet, separated into 6 zones; automatic distributing valves for zone selection; approximate effective zone size of 2,600 sq. ft. with 520 lineal feet of 1.0-inch LPP distribution pipe, 8 laterals, 65 feet each, placed 7 feet on center (effective area is based on 5 feet absorption width); bury depth is approximately 12 inches; at design flow each zone will be dosed 2.6 times a day for approximately 3.5 minutes. Design flow is 2,340 gpd.

Treatment facility drainfields are more than 380 feet from the public water supply well. A private well is located on a separate property to the west; drainfields are over 330 feet from the west property line.

All absorption field sizes are based on a loading rate of 0.15 gallons per square foot per day. Detailed soil analysis was performed by Timothy O. Knoernschild, Soil Scientist, February 7, 2023. The soil loading rate is in accordance with the recommended rates in the soil report. In the soils investigation there was a soil pit dug in the location of each absorption field. Depth to limiting layer, bed rock is 40 inches, at the North Loop system. Depth to limiting layer is over 49 inches at the South Loop System.

5. OPERATING PERMIT

After completion of construction project submit: statement of work completed, as-built if the project was not constructed in accordance with previously submitted plans and specifications, and ensure that Application Form B, and modification fee has been submitted. Missouri State Operating Permit, General Permit MO-G823133, will be modified as appropriate.

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>

Andrew Appelbaum, P.E.
Engineering Section
andy.appelbaum@dnr.mo.gov



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

FOR DEPARTMENT USE ONLY

APP NO.	CP NO.
FEE RECEIVED	CHECK NO.
DATE RECEIVED	

APPLICATION OVERVIEW

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

PART A – BASIC INFORMATION

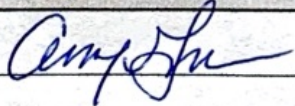
1.0 APPLICATION INFORMATION (Note – If any of the questions in this section are answered NO, this application may be considered incomplete and returned.)

- 1.1 Is this a Federal/State funded project? ☐ YES ☒ N/A Funding Agency: _____ Project #: _____
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____ ☒ N/A
- 1.3 Has the department approved the proposed project's facility plan*?
☒ YES Date of Approval: 5-23 ☐ 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: 10/18/2022
☐ 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 Last Resort RV LLC	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 225,000
2.3 PROJECT DESCRIPTION Southeast expansion of existing RV Park. Existing RV Park operates under DNR Permit MO-G823133. Existing population (per the permit) is 150 people. Existing Flow is 6,405 to 6,590 gpd. Proposed expansion will add 50 RV spots, 150 people, 4,500 gpd.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION Septic tanks to be pumped on regular intervals as required for proper system maintenance (3 year frequency anticipated). Sludge to be pumped and disposed by licensed pumping contractor and disposed of in compliance with applicable MoDNR regulations.	
2.5 DESIGN INFORMATION A. Current population: <u>150</u> ; Design population: <u>+ 150</u> B. Actual Flow: _____ gpd; Design Average Flow: <u>4500</u> gpd; Actual Peak Daily Flow: _____ gpd; Design Maximum Daily Flow: <u>4500</u> gpd; Design Wet Weather Event: <u>N.A.</u>	
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 Last Resort RV - Southeast Expansion - North & South		TELEPHONE NUMBER WITH AREA CODE 727-200-2510		E-MAIL ADDRESS agrace@gracecommunities.com
ADDRESS (PHYSICAL) 28819 Black Rock Ave.	CITY Warsaw	STATE MO	ZIP CODE 65355	COUNTY Benton
Wastewater Treatment Facility: Mo- (Outfall Of)				
3.1 Legal Description: SW <u>1/4</u> , <u>1/4</u> , <u>1/4</u> , Sec. 4 <u>1/4</u> , T 40 <u>1/4</u> , R 21 <u>1/4</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>-93.2573</u> Northing (Y): <u>38.2650</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>N.A. No outfall.</u>				
4.0 PROJECT OWNER				
NAME Last Resort RV LLC		TELEPHONE NUMBER WITH AREA CODE 727-200-2510		E-MAIL ADDRESS agrace@gracecommunities.com
ADDRESS 2825 Bluff Blvd.	CITY Holiday	STATE FL	ZIP CODE 34691	
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 Last Resort RV LLC		TELEPHONE NUMBER WITH AREA CODE 727-200-2510		E-MAIL ADDRESS agrace@gracecommunities.com
ADDRESS 2825 Bluff Blvd.	CITY Holiday	STATE FL	ZIP CODE 34691	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> N/A				
5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.				
A. Is a copy of the certificate of convenience and necessity included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.				
A. Is a copy of the as-filed restrictions and covenants included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Martin Heins / OCD Services, LLC		TELEPHONE NUMBER WITH AREA CODE 913-202-3813		E-MAIL ADDRESS mheins1313@gmail.com
ADDRESS 32583 Hanna Ave	CITY Warsaw	STATE MO	ZIP CODE 65355	
7.0 APPLICATION FEE				
<input type="checkbox"/> CHECK NUMBER <input checked="" type="checkbox"/> JETPAY CONFIRMATION NUMBER 20044090				
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 Amy Grace			DATE 6-7-2023	
TITLE OR CORPORATE POSITION Owner		TELEPHONE NUMBER WITH AREA CODE 727-200-2510		E-MAIL ADDRESS agrace@gracecommunities.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: _____ 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 _____ 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