

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION



# CONSTRUCTION PERMIT

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

Branson Lake Properties 5909 Ponderosa Court St. Louis, MO 63128
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for the construction of (described facilities):

See attached.
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Permit Conditions:

See attached.
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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.

September 1, 2016  
Effective Date

Sara Parker Pauley  
Sara Parker Pauley, Director, Department of Natural Resources

August 31, 2018  
Expiration Date

John Madras  
John Madras, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

The 22 cabins (300 gpd/unit) and 12 campground sites (60 gpd/site) at the facility have been removed and will be replaced with 41 new units – 9 six bedroom units, 8 five bedroom units, and 24 four bedroom units – located within 21 buildings, plus a recreational complex for 22 buildings total. The system will have a design population equivalent of 380 and a design average flow of 24,500 gpd with approximately 6222 gpd being black water and 17,640 gpd being grey water. The buildings will be plumbed to separate the gray and black water flow. Grey water will be wastewater from bathtubs, showers, bathroom sinks, and laundry rooms. Black water will be wastewater from toilets, kitchen sinks, and dishwashers.

The 6000 gallon duplex STEP tank which served the removed units will be relocated to the west or 2 three thousand gallon STEP tanks may be used instead. The black water collection system will include twelve 3000 gallon STEP tanks each with an HE8-51 effluent pump capable of delivering 11 gpm at 92.4 ft TDH or engineer approved equal. Individual STEP tanks will pump to the relocated duplex STEP tank, which will pump to the Jakes Creek Trail WWTF (MO-0132241). There will be 127 lf of 4 in SCH 40 PVC gravity sewer, 216.66 lf of 1.5 in SDR-21 PVC low pressure main, and 545.84 lf of 2 in SDR-21 PVC low pressure main to connect to the relocated 6000 gallon STEP tank or 2 three thousand gallon STEP tanks. Approximately 111 lf of 2 in SDR-21 PVC low pressure main will connect from the relocated STEP tank to the existing low pressure main.

Grey water will be discharged from the buildings into 12 three thousand gallon recirculation tanks and into a subsurface irrigation system. A 130 micron filter will be provided at the inlet to the recirculation tanks. Supply and return lines for the subsurface system will be 2 in SCH 40 PVC.

Top soil will need to be imported to the site for the subsurface irrigation system. The minimum depth of soil needed will be 12 in below the drip tubing and the soil will need to be approved by a soil scientist. Field estimation of the clay percentage will help determine the extent of the area to be excavated for the imported soil and lab analysis would also be beneficial. Loading rate for imported soils is dependent upon the texture and structure. Even though the naturally occurring orientation may be destroyed during transport, it can give a qualified Soil Scientist a starting point for making a conservative estimate of loading rate. Care must be taken when using imported soil. It should be handled very carefully during the excavation, transportation, and installation to reduce any and all adverse effects that would reduce its ability to treat and hydrologically control the effluent. The imported soil should not be handled when wet and the Soil Scientist should be able to verify that what was designated as the imported soil is what is actually placed in the soil treatment area. There shall be no soil disturbance to the drip field sites except the minimum required for installation.

The loading rate will be approved by a Soil Scientist and will be no greater than 0.3 gallons per day per square foot (gpd/sf) based on imported soil properties. The drip field areas below were calculated using a loading rate of 0.3 gpd/sf, but the actual loading rate may be lower and, therefore, require larger drip areas.

The six bedroom units will require a minimum drip area of 1800 square feet per unit and will have 300 total feet of drip line per zone with 150 emitters. The five bedroom units will require a minimum drip area of 1500 square feet per unit and will have 250 total feet of drip line per zone with 125 emitters. The four bedroom units will require a minimum drip area of 1200 square feet per unit (7,200 square feet per 6-plex of four bedroom units) and will have 200 total feet of drip line per zone with 100 emitters. The recreational complex will require a minimum drip area of 1666 square feet and will share a drip field with one of the 6-plex buildings of four bedroom units.

There will be at least two drip field zones per unit. Space between lines will be 3 ft with emitters spaced at 2 ft. The emitter flow rate will be 0.53 gallons per hour (gph) per emitter. There will be 24 doses per day per zone with the pump on for 8.29 minutes and off for 53 minutes.

## **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 in accordance with the plans and specifications submitted by M.E. Stalzer & Associates on November 16, 2015 and revised on July 5, 2016.
3. The department must be contacted in writing prior to making any changes to the approved 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(8).
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)(E)2.

5. This construction permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans"
6. Protection of drinking water supplies shall be in accordance with 10 CSR 20-8.120(10). "There shall be no physical connections between a public or private potable water supply system and a sewer, or appurtenance thereto which would permit the passage of any wastewater or polluted water into the potable supply. No water pipe shall pass through or come in contact with any part of a sewer manhole."
7. Sewers in relation to water works structures shall meet the requirements of 10 CSR 23-3.010 with respect to minimum distances from public water supply wells or other water supply sources and structures.
  - A. Sewer mains shall be laid at least 10 ft horizontally from any existing or proposed water main. The distances shall be measured edge-to-edge. In cases where it is not practical to maintain a 10-foot separation, the department may allow a deviation on a case-by-case basis, if supported by data from the design engineer. Such a deviation may allow installation of the sewer closer to a water main, provided that the water main is in a separate trench or on an undisturbed earth shelf located on either side of the sewer and at an elevation so the bottom of the water main is at least 18 in above the top of the sewer. If it is impossible to obtain proper horizontal and vertical separation as described above for sewers, the sewer must be constructed of slip-on or mechanical joint pipe or continuously encased and be pressure tested to 150 pounds per square inch to assure water tightness.
  - B. Manholes should be located at least 10 ft horizontally from any existing or proposed water main.
  - C. Manholes shall be located with the top access at or above grade level.
  - D. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 in between the outside of the water main and the outside of the sewer. This shall be the case where the water main is either above or below the sewer. The crossing shall be arranged so that the sewer joints will be equidistant and as far as possible from the water main joints. Where a water main crosses under a sewer, adequate structural support shall be provided for the sewer to maintain line and grade. When it is impossible to obtain proper vertical separation as stipulated above, one of the following methods must be specified:
    - a. The sewer shall be designed and constructed equal to the water pipe and shall be pressure tested to assure water tightness prior to backfilling; or
    - b. Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends 10 ft on both sides of the crossing, measured perpendicular to the water main. The carrier pipe shall be of materials approved by the department for use in water main construction.

8. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits will only be obtained by means of the department's ePermitting system available online at [www.dnr.mo.gov/env/wpp/epermit/help.htm](http://www.dnr.mo.gov/env/wpp/epermit/help.htm). See [www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm](http://www.dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm) for more information.
9. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of jurisdictional waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the department's Water Protection Program at (573) 751-1300 for more information. See [www.dnr.mo.gov/env/wpp/401/](http://www.dnr.mo.gov/env/wpp/401/) for more information.
10. Upon completion of construction;
  - A. Branson Lake Properties will become the continuing authority for operation, maintenance, and modernization of these facilities;
  - B. Submit the enclosed form Statement of Work Completed to the department in accordance with 10 CSR 20-6.010(5)(D);
  - C. Submit a statement from the design engineer verifying what soil loading rate will be used and that imported soil has been handled properly and is adequate for subsurface irrigation at the proposed loading rate;
  - D. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and

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

##### **1. AMMONIA**

The Water Protection Program is providing this notice to inform permittees that EPA's published ammonia criteria for aquatic life protection is lower than the current Missouri criteria. The department has initiated stakeholder discussions on this topic and at this time, there is no firm target date for starting the rulemaking to adopt new standards. More information can be found at <http://dnr.mo.gov/pubs/pub2481.pdf>.

This construction permit is for a subsurface irrigation system. Ammonia limits will not apply.

## **2. CONSTRUCTION PURPOSE**

The proposed grey water subsurface irrigation system will allow the Antlers Resort facility to expand without increasing hydraulic loading to Jakes Creek Trail WWTF (MO-0132241) where their wastewater currently is treated.

## **3. FACILITY DESCRIPTION**

Currently all wastewater from the Antlers Resort is treated at the Jakes Creek Trail WWTF (MO-0132241), which has a design population equivalent of 1037, a permitted design flow of 50,000 gpd, and an actual flow of 18,400 gpd. Jakes Creek Trail WWTF discharges to a Tributary to Table Rock Lake. The existing flow allocation to Jakes Creek Trail from Antlers Resort is 7320 gpd.

A new operating permit (MO-0138304) will be issued for Antlers resort for a subsurface irrigation system to treat 17,640 gpd of grey water from the resort. Black water will continue to be sent to Jakes Creek Trail WWTF at a design flow of approximately 6222 gpd. The greywater will be used to irrigate the turf and landscaping surrounding the proposed buildings.

## **4. COMPLIANCE PARAMETERS**

The Antlers Resort WWTF operating permit will require the facility to report irrigation period, volume irrigated, application area, and application rate on an annual basis. The operating permit also requires the permittee to develop and implement a program for inspection, maintenance, and repair of the low pressure piping, pumps, and treatment system and submit a report annually summarizing inspections, cleaning, and any repairs and replacements during the previous year, as well as any planned maintenance to the system during the upcoming calendar year.

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

Grey water for this system will be wastewater from bathtubs, showers, bathroom sinks, and laundry rooms. Black water will be wastewater from toilets, kitchen sinks, and dishwashers. Black water treatment is not covered under this facility's operating permit and will be pumped to the Jakes Creek Trail WWTF (MO-0132241) for treatment.

Blackwater flow was estimated as five (5) flushes per capita per day at 2.5 gallons per flush, one (1) kitchen sink use per capita per day at one (1) gallon per use, one (1) dishwasher use per day at 12 gallons per use, and the clubhouse was assumed to use 200 gpd/sf with 3000 sf.

The soil loading rate will be approved by a Soil Scientist and will be no greater than 0.3 gallons per day per square foot (gpd/sf) based on imported soil properties. Two foot per second flush velocity will be provided in the drip lines.

**6. OPERATING PERMIT**

This facility will require a new operating permit MO-0138304 to reflect the construction activities. Upon construction completion, submit the enclosed form Statement of Work Completed to the department. The draft operating permit MO-0138304 was on public notice from July 29, 2016 through August 29, 2016. No responses were received.

Cailie Carlile, E.I.  
Engineering Section  
[cailie.carlile@dnr.mo.gov](mailto:cailie.carlile@dnr.mo.gov)

MO-0132241

CP0001810  
AP22398

C25441



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

RECEIVED

NOV 16 2015

Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEES RECEIVED \$1800.00	CHECK NO. 131
DATE RECEIVED 11/16/15	<i>SP</i>

**APPLICATION OVERVIEW**

The Application for Construction Permit – Wastewater Facility form is for construction pertaining to domestic wastewater treatment facilities, agrichemical facilities, and components thereof. This 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 Is this an application for an agrichemical?  YES (See instructions.)  N/A
- 1.3 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?  
 YES Date of Approval: \_\_\_\_\_
- 1.4 Has the department approved the proposed project's facility plan\*?  
 YES Date of Approval: \_\_\_\_\_  NO  N/A (If Not Applicable, complete No. 1.4.)
- 1.5 [Complete only if answered Not Applicable on No. 1.3.] Is a copy of the engineering report\* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?  
 YES  NO
- 1.6 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
- 1.7 Is a summary of design\* included with this application?  YES  NO
- 1.8 Is a general operating permit applicable?  
 YES Submit the appropriate operating permit application to the Regional Office at least 60 days prior to operation.  
 NO Enclose the appropriate operating permit application and fee submittal. Denote which form:  B  B2
- 1.9 Is the facility currently under enforcement with the department or the Environmental Protection Agency?  YES  NO
- 1.10 Is the appropriate fee included with this application?  YES  NO (See instructions for appropriate fee.)

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

**2.0 PROJECT INFORMATION**

2.1 NAME OF PROJECT

ANTLERS RESORT

2.2 PROJECT DESCRIPTION

THE WASTEWATER GENERATED FROM THE RESORT WILL BE DIVIDED INTO GRAY WATER AND BLACK WATER. THE BLACK WATER WILL BE PUMPED TO THE EXISTING JAKES CREEK TRAIL WWTF VIA AN EXISTING LOW PRESSURE SEWER SYSTEM. THE GRAY WATER SYSTEM WILL USE A SUBSURFACE IRRIGATION SYSTEM.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

HANDLED BY CONTRACT HAULER.

2.4 DESIGN INFORMATION

- A. Current population: \_\_\_\_\_; Design population: 392
- B. Actual Flow: \_\_\_\_\_ gpd; Design Average Flow: 2450 gpd;  
Actual Peak Daily Flow: \_\_\_\_\_ gpd; Design Maximum Daily Flow: \_\_\_\_\_ gpd; Design Wet Weather Event: \_\_\_\_\_

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached?  YES  NO
- B. Is a process flow diagram attached?  YES  NO

2.6 ESTIMATED PROJECT CONSTRUCTION COST

\$ 200,000.00

**3.0 WASTEWATER TREATMENT FACILITY**

NAME JAKES CREEK TRAIL WWTF		TELEPHONE NUMBER WITH AREA CODE (417) 338-5599		EMAIL ADDRESS	
ADDRESS (PHYSICAL) 3 TREEHOUS LANE #11		CITY VILLAGE OF INDIAN POINT	STATE MO	ZIP CODE 65616	COUNTY STONE
Wastewater Treatment Facility: Mo- 0132241 (Outfall Of )					
3.1 Legal Description: ¼, ¼, ¼, Sec. 32, T 23, R 22 (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: TABLE ROCK LAKE					

**4.0 PROJECT OWNER**

NAME BRANSON LAKE PROPERTIES		TELEPHONE NUMBER WITH AREA CODE (314) 368-0101		EMAIL ADDRESS	
ADDRESS 715 AUTUM RD		CITY ST LOUIS	STATE MO	ZIP CODE 63125	

**5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.**

NAME BRANSON LAKE PROPERTIES		TELEPHONE NUMBER WITH AREA CODE (314) 368-0101		EMAIL ADDRESS	
ADDRESS 715 AUTUM RD		CITY ST LOUIS	STATE MO	ZIP CODE 63125	

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 MICHAEL STALZER, P.E.		TELEPHONE NUMBER WITH AREA CODE (417) 860-9697		EMAIL ADDRESS	
ADDRESS 210 S. 3RD STREET		CITY BRANSON	STATE MO	ZIP CODE 65616	

**7.0 PROJECT OWNER:** I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.

PROJECT OWNER SIGNATURE  


PRINTED NAME  
PAUL LARSON

DATE  
11/11/2015

TITLE OR CORPORATE POSITION  
OWNER

TELEPHONE NUMBER WITH AREA CODE  
(314) 368-0101

EMAIL ADDRESS  
jane.kohler@larsonfinancial.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  Subsurface  
 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: 12 (Use additional pages if greater than two 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 \_\_\_\_\_

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

9.5 Design depth of sludge in storage basins.  
 Basin #1: \_\_\_\_\_ ft Basin #2: \_\_\_\_\_ ft

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

9.7 Total design sludge storage: \_\_\_\_\_ dry tons and 1600 cubic feet

**10.0 LAND APPLICATION SYSTEM**

10.1 Type of land application:  Fixed Head Sprinklers  Center Pivot  Traveling Gun  Drip Dispersal  
 Subsurface Low Pressure Pipe  Other (describe) \_\_\_\_\_

10.2 Number of irrigation sites 21 Total Acres 1.35 Maximum % field slopes 10  
 Location: \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ Sec. 36 T 23 R 22 County STO 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.)

10.3 Type of vegetation:  Grass hay  Pasture  Timber  Row crops  
 Other (describe) TURF AND PLANTINGS AROUND THE BUILDINGS

10.4 Wastewater flow (dry weather) gallons per day: Average annual 1764 Seasonal \_\_\_\_\_ Off-season \_\_\_\_\_

10.5 Land application rate (design flow including 1-in-10 year storm water flows):  
 Design: \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour 0.48 inches/day \_\_\_\_\_ inches/week  
 Actual: \_\_\_\_\_ inches/year \_\_\_\_\_ inches/hour \_\_\_\_\_ inches/day \_\_\_\_\_ inches/week

10.6 Total irrigation per year (gallons): Design: \_\_\_\_\_ gal Actual: \_\_\_\_\_ gal

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

10.8 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