

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Grand Crowne Resort
430 Highway 165
Branson, MO 65616

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 19, 2019
Effective Date

February 22, 2021
Modification Date

December 20, 2021
Expiration Date


Edward B. Galbraith, Director, Division of Environmental Quality


Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The facility proposed to construct a gray water non-discharging wastewater disposal facility to serve an additional development of the Grand Crowne Resort.

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 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 Michael Stalze, PE 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 square foot per day.
6. The wastewater treatment facility shall be located at least fifty feet (50') from any dwelling or establishment.
7. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
8. 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
9. (300') per 10 CSR 20-8.140(2)(C)1.
10. 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 dnr.mo.gov/env/wpp/epermit/help.htm. See dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.
11. 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 dnr.mo.gov/env/wpp/401/ for more information.

12. Upon completion of construction:

- A. The Grand Crowne Resort will become the continuing authority for operation, maintenance, and modernization of these facilities;
- B. Submit an electronic copy of the as built's if the project was not constructed in accordance with previously submitted plans and specifications;
- C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) and submit a Form B - Application for an Operating Permit for Domestic or Municipal Wastewater ($\leq 100,000$ gallons per day) and fee to the Engineering Section of the Water Protection Program 60 days prior to operation. Identify that the application is for a General permit for land application of domestic wastewater, MO-G823.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The resort's wastewater is currently treated at a permitted wastewater treatment plant (MO-0132241). The Grand Crowne Resort was allocated 18,000 gpd of flow to serve 52 units. The resort currently has 33 units and a 16-plex building. The owner would like to construct additional ten (10) single unit buildings and each building has ten (10) bedrooms, but the developer only has available capacity to build two (2) units. In order to stay within the allocated capacity at its current treatment plant, the wastewater generated from the existing 16-plex building will be split into 20% and 80%. The 20% flow continues to be treated at the wastewater treatment plant and 80% of the flow goes through one (1) proposed 3,500 gpd Bio-Microbics MBR treatment system (including two of 1.0 units & 1.5 unit) before the water discharges into a recirculation tank for land application via a proposed drip irrigation system. The black wastewater (3,500 gpd) generated from proposed 10 single units will be treated at the Jakes Creek Wastewater Treatment Plant. The grey wastewater generated from the proposed buildings will be treated by ten (10) septic tanks with the capacity of 2,000 gallons each and the subsurface drip fields.

2. FACILITY DESCRIPTION

The resort's wastewater is currently treated at the Jakes Creek Wastewater Treatment Facility (MO-0132241).

The proposed Grand Crowne Resort WWTF is a subsurface soil dispersal system to treat the graywater only while the blackwater will be conveyed to the Jakes Creek Wastewater Treatment Facility. The proposed treatment plant includes one (1) 3,500 gpd Bio-Microbics MBR treatment system (including two of 1.0 units & 1.5 unit) for wastewater from the existing 16-plex building before the drain field.

The new no-discharging system is located at 405 Highway 165, Branson city, in Stone County, Missouri. The facility has a design average flow of 15,052 gpd.

3. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The resort's wastewater is currently treated at a permitted wastewater treatment plant (MO-0132241). The Grand Crowne Resort was allocated 18,000 gpd of flow to serve 52 units. The resort currently has 33 units and a 16-plex building. The owner would like to construct additional ten (10) single buildings and each building has ten (10) bedrooms, but the developer only has available wastewater capacity to build less two (2) units. In order to stay within the allocated capacity, the wastewater generated from the existing 16-plex building will be split into 20% and 80%. The 20% of the flow continues to be treated at the wastewater treatment plant and 80% of the flow goes through one (1) proposed 3,500 gpd Bio-Microbics MBR treatment system (including two of 1.0 units & 1.5 unit) before the water discharges into a recirculation tank for land application via a proposed drip irrigation system.

The black wastewater generated from proposed single units will be treated at the Jakes Creek Wastewater Treatment Plant. The grey wastewater generated from the proposed buildings will be treated by the septic tanks and the subsurface drip field.

The 3,500 gpd of black water from lavatory uses from the ten proposed units will be pumped to the Jakes Creek treatment plant and 11,500 gpd of gray water will be treated at the proposed facility. The collection system for 10 new buildings will include 15 of STEP tanks (10 of 2,000-gallon tanks for gray water and 5 of 1,500-gallon tanks for black water) each with an HE8-51 effluent pump. The gray water low pressure main (1,418 lf of 2" SDR-21 PVC) and the black water low pressure main (799 lf of 1.5" SDR-21 PVC) will be constructed to transfer gray water into one (1) of 22,978 gallons (32'x12'x10') recirculation concrete tank and black water into the existing low pressure collection system serving the WWTF. The design flow of the proposed drip irrigation system is 15,052 gpd.

A soil scientist (Amie Henson, OSE ID # 10091) provided the soil reports dated on September 6, 2016 and September 10, 2018. The recommended load rates of drip and LPP systems are 0.2 to 0.3 gallons per sq. foot per day. It appears soils on site are acceptable for this treatment system.

The facility has selected the GEOFLOW subsurface drip dispersal system. The system will dose 6 zones at 0.2 gpd/sq. ft, which provides 24 doses per day per zone. Each zone is 0.288 acres, for a total of 1.72 acres. There will be one (1) 22,978-gallon concrete dose tank with an effluent filter AP4E-2F, two (2) effluent pumps each is capable of pumping 55.5 gallon per minute (gpm) with a total dynamic head of 54.1 feet. There will be two (2) drip distributing valves which is a Zoeller Model 6402 (3 zone operation) distributing valve or approved equal. The drip field area is 75,260 square feet and contains 25,086 linear feet of 0.5 inch tubing fitted with emitters every 2 ft with cleanouts and air release valves and capable of a loading at peak flow of less than 0.2 gallons per sq. foot per day.

4. OPERATING PERMIT MODIFICATION

After completion of construction project submit: statement of work completed, as-builts if the project was not constructed in accordance with previously submitted plans and specifications, and ensure that Application Form B, and fee has been submitted. Missouri State Operating Permit, General Permit MO-G823110, will be issued after receipt of the above documents.

5. CONSTRUCTION PERMIT MODIFICATION

This construction permit is being modified upon the request of the facility owner to extend the construction permit schedule. The construction permit will now expire on December 20, 2021.

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>

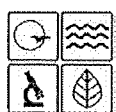
Lei Hou, PE
Engineering Section
lei.hou@dnr.mo.gov

AP31665
CP0002051

RECEIVED

JAN 28 2019

Mod Fee



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

Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$200.00	CHECK NO. 2459
DATE RECEIVED 1-28-19	

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. 1.5.)
- 1.5 [Complete only if answered Not Applicable on No. 1.4] 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

Grand Crowne resort

2.2 PROJECT DESCRIPTION

Modification to existing construction permit CP-0001918/MO-G823107 for the expansion of the drip field, modification to tank sizes, and modification MBR treatment unit size. The wastewater generated by the project will be split into gray water and black water. The black water will be pumped to the Jakes Creek Trail WWTF via an existing low pressure sewer collection system.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Contract Hauler

2.4 DESIGN INFORMATION

- A. Current population: _____; Design population: 392
- B. Actual Flow: _____ gpd; Design Average Flow: 15052 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 WWTF		TELEPHONE NUMBER WITH AREA CODE (417) 338-5599		EMAIL ADDRESS
ADDRESS (PHYSICAL) 3 TREEHOUSE LANE #11	CITY Branson	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: unnamed tributary to Table Rock Lake				
4.0 PROJECT OWNER				
NAME CROWN VIEW RESORT		TELEPHONE NUMBER WITH AREA CODE (417) 335-0031		EMAIL ADDRESS
ADDRESS 405 Hwy 165	CITY Village of Indian Point	STATE MO	ZIP CODE 65616	
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 VILLAGE OF INDIAN POINT		TELEPHONE NUMBER WITH AREA CODE (417) 338-5599		EMAIL ADDRESS
ADDRESS 3 TREEHOUSE LANE #11	CITY Branson	STATE MO	ZIP CODE 65616	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO <input 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 Michael Stalzer, P.E.		TELEPHONE NUMBER WITH AREA CODE (417) 860-9697		EMAIL ADDRESS mestalzer@gmail.com
ADDRESS 3918 N. Highland Ave.,	CITY Tampa	STATE FL	ZIP CODE 33603	
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 C J Perme			DATE 1/16/19	
TITLE OR CORPORATE POSITION President		TELEPHONE NUMBER WITH AREA CODE 417-332-8319		EMAIL ADDRESS Lifestyles.jim@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.				