

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**



**CONSTRUCTION PERMIT**

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

Charles Bellamy  
22246 Audrain Road 9832  
Mexico, MO 65265

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.

February 25, 2019  
Effective Date

December 23, 2021  
Modification Date

February 24, 2023  
Expiration Date

  
Chris Wieberg, Director, Water Protection Program

## **CONSTRUCTION PERMIT**

### **I. CONSTRUCTION DESCRIPTION**

A new earthen basin storage lagoon and sprinkler land application system is proposed. The new surface land application system will include a pump to transfer treated wastewater from the proposed lagoon to the land application site. Wastewater will be applied on a field adjacent to the existing facility, which is owned by the current facility owner's son, at a rate of 34.2 inches per year. The application site will be approximately 5 acres, consisting of 28 solid set sprinklers.

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 in accordance with the plans and specifications submitted by The Sewage Doctor, LLC on July 12, 2018 and revised February 4, 2019.
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 Northeast Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater treatment facility shall be located at least fifty feet (50') from any dwelling or establishment. The lagoon shall be located at least two hundred feet (200') from any residence and fifty feet (50') from the property line.
6. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
7. Wastewater treatment facility shall not be located within one hundred feet (100') of any water well or water supply structure.
8. 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](http://dnr.mo.gov/env/wpp/epermit/help.htm). See [dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm](http://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 [dnr.mo.gov/env/wpp/401/](http://dnr.mo.gov/env/wpp/401/) for more information.
10. Upon completion of construction:
  - A. Charles Bellamy will become the continuing authority for operation, maintenance, and modernization of these facilities;
  - B. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; and
  - C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the operating permit modification be issued.

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

##### **1. CONSTRUCTION PURPOSE**

The existing treatment facility is an extended aeration treatment plant that is not meeting current permitted effluent limits. Construction of a land application system will help bring the facility back into compliance.

##### **2. FACILITY DESCRIPTION**

The existing facility is a six cell extended aeration treatment facility. The first three cells are aerated. There is piping for return flow from the last three cells back to cell one, and clarifiers or sludge storage in the last two cells.

A new earthen basin storage lagoon and sprinkler land application system is proposed. Wastewater will be applied on an adjacent field, which is owned by the current facility owner's son, at a rate of 34.2 inches per year.

The Oakcrest Mobile Home Park WWTP is located at 22246 Audrain Road 9832, Mexico, in Audrain County, Missouri. The facility has a design average flow of 12,200 gpd and serves a hydraulic population equivalent of approximately 132 people.

##### **3. COMPLIANCE PARAMETERS**

The proposed project is required to meet the requirements of MOG823129 Table A and Table B with an expiration date of August 24, 2022. The facility will be required to monitor storage basin freeboard, daily precipitation, irrigation period, daily volume land applied, application area, and application rate.

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

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

- Extended Aeration Package Plant – An existing six cell extended aeration plant will remain in service and discharge into the proposed storage lagoon prior to land application. The first three cells are aerated. There is piping for return flow from the last three cells back to cell one. Two of the 8 ft. by 8 ft. by 8 ft. water depth concrete basins can act as clarifiers or sludge storage basins.

**Construction will cover the following items:**

- Components are designed for a design flow of 12,200 gallons per day and a Population Equivalent of 150 based on organic loading to the system.
- Flow Measurement – Flow measurement will be with pump calibration time clocks.

- Lagoon Cell No. 1 – Lagoon Cell No. 1 will be constructed and sealed with clay rich soils and sodium bentonite. The basin will have 3:1 sloping walls, the depth from the top of the berms to the lagoon floor will be 13 ft, 2 ft will serve as sludge and clay liner depth, and 2 ft of freeboard provides an operating depth of 9 ft. The basin is non-aerated and has a surface area of 0.82 acres and a wastewater volume of 1,476,026 gallons between the maximum operating level and minimum operating level. This provides approximately 121 days of retention at the proposed design flow of 12,200 gpd and 100 days with the 1 in 10-year rainfall (23.2 inches) minus evaporation (13 inches) of 10.2 inches for the proposed 90-day storage period. The berm width will be 8 ft. The geohydrologic evaluation for the proposed site gave a slight overall geologic limitation and a slight collapse potential.
- Land Application Pump Station – Construction of a land application pump vault to transfer treated wastewater from Lagoon Cell No. 1 to the land application site with one 3 HP pump capable of operating at 52 gpm at 167 feet of TDH.
- Land Application Site – The land application site is in the vicinity of at 22246 Audrain Road 9832, Mexico, in Audrain County. The land application site is owned by the current facility owner's son and is approximately 5 acres with grass hay. The application site is unfenced and is located in an unused pasture away from the facility and any surrounding buildings and property lines. Maximum application rates are 0.08 inches/hour, 0.32 inch/day, 0.95 inches/week, and 34.2 inches/year. The wetted application area will be established at least one hundred fifty feet (150') from existing dwellings or public use areas, excluding roads or highways, and at least fifty feet (50') inside the property line. A soils evaluation was completed by Brian Mayhan that suggested a surface application rate of up to 42.3 inches per year and 1.18 inches per week. There is approximately 10 acres of reserve area available at this property. A geohydrologic evaluation was also completed by the Missouri Geological Survey that stated that there are no known springs, sinkholes, or other geologic structures within 1 mile of the site.
- Wastewater Irrigation –
  - Solid Set Sprinklers – The distribution includes 7 sprinklers per zone with 4 zones, for a total of 28 sprinklers. The sprinklers will be Rain Bird 30 H series and operate at 6.4 gpm. The sprinklers will be set with a height 4 ft above existing grade and have a nozzle size of 3/16 inch. The wetted diameter for each sprinkler will be 100 ft. There will be approximately 5700 lf of 2-inch PVC supply pipe constructed for the sprinkler system.

## **5. OPERATING PERMIT**

The existing site-specific operating permit MO-0035441 will be converted to MOG823129 general operating permit upon construction completion. Submit the Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(D) and request the general operating permit be issued.

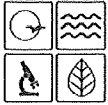
## **6. CONSTRUCTION PERMIT MODIFICATION**

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 February 24, 2023.

With your CP application, an operating permit modification was submitted to reflect the change in your operating permit. Your operating permit application for a renewal will be due before your CP is expired. The modification action does not fulfill the renewal application obligation. A renewal application should be filed before Saturday, January 1, 2022.

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

RECEIVED AP 30943  
 CR0002030  
 SEP 25 2018



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.
DATE RECEIVED	CHECK NO.
DATE RECEIVED	

**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  
**DAKCREST MHP**

2.2 PROJECT DESCRIPTION  
**SPRINKLERS**

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION  
**LEAVE IN TANK & TAKE TO MEXICO SERABO PLANT**

2.4 DESIGN INFORMATION  
 A. Current population: 150; Design population: 132  
 B. Actual Flow: 8700 gpd; Design Average Flow: 12,200 gpd;  
 Actual Peak Daily Flow: 8700 gpd; Design Maximum Daily Flow: 12,200 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  
 \$ 150,000.00 TO 200,000.00

3.0 WASTEWATER TREATMENT FACILITY					
NAME	OAKCREST MHP		TELEPHONE NUMBER WITH AREA CODE	573 581 3082 CW Bellamy@outlook.com	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY	
22246 AR 9832	MEXICO	MO	65265	Audrain	
Wastewater Treatment Facility: Mo-0035 (Outfall 1 Of )					
3.1 Legal Description: SW 1/4, NW 1/4, Sec. 14, T50N R9W (Use additional pages if construction of more than one outfall is proposed.)					
3.2 UTM Coordinates Easting (X): 595768 Northing (Y): 4329573 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)					
3.3 Name of receiving streams: SCATTERING FORK					
4.0 PROJECT OWNER					
NAME	Charles Bellamy		TELEPHONE NUMBER WITH AREA CODE	573 581 3082 CW Bellamy@outlook.com	
ADDRESS	CITY	STATE	ZIP CODE	COUNTY	
22246 AR 9832	MEXICO	MO	65265	Audrain	
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	Charles Bellamy		TELEPHONE NUMBER WITH AREA CODE	573 581 3082 CW Bellamy@outlook.com	
ADDRESS	CITY	STATE	ZIP CODE	COUNTY	
22246 AR 9832	MEXICO	MO	65265	Audrain	
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 checked="" 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 checked="" 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	DENNIS SIEVERS SEWAGE DOCTOR LLC		TELEPHONE NUMBER WITH AREA CODE	573 808 1875 THESEWAGE DOCTOR@GMAIL.COM	
ADDRESS	CITY	STATE	ZIP CODE	COUNTY	
1209 STRATON DR	COLUMBIA	MO	65203	Audrain	
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					
<i>Charles Bellamy</i>					
PRINTED NAME			DATE		
CHARLES BELLAMY			9-11-18		
TITLE OR CORPORATE POSITION			TELEPHONE NUMBER WITH AREA CODE		
OWNER			573 581 3082 CW BELLAMY AT OUTLOOK.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.					