STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of N	Vatural Resources hereby issues a permit to:
Construction Permit ID: Title of Project: Owner: Address:	MOGC00731 Savers Farm Subdivision - Phase 8 Cape Land and Development LLC 2985 Boutin Drive Cape Girardeau, MO 63701
	eneral site work appropriate to the scope and purpose of the project and will include all the necessary blete and usable collection system. The construction of this project will be in the vicinity of the county ring Permit ID below:
County: Cape Girardeau	Receiving Permit ID: MO0022853
for the construction of (describ	ped construction project):
	hase 8. Construction of approximately 4,040 lf of 8 inch PVC SDR35 gravity sewer lines holes to serve a 148 PE and a design average flow of 14,800 gpd.
This project utilizes Standar 8, 2022.	d Construction Specifications for the City of Jackson, Missouri approved on February
	Castle Leoch Dr. in Jackson, Cape Girardeau County and discharges to an existing son WWTP, MO0022853. George Harris P.E., Staff Engineer with the City of Jackson, er dated April 14, 2024.
RSMo, and regulation promul As the Department does not expermit does not include approv	I facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, gated thereunder, or this permit may be revoked by the Department of Natural Resources (Department) camine structural features of design or the efficiency of mechanical equipment, the issuance of this val of these features.
August 09, 2024 Issue Date	John Holee, Director Water Protection Program

August 08, 2026 Expiration Date

APPLICABILITY

- 1. This permit authorizes the construction of gravity sewer extensions, force mains, and lift stations. Non-earthen flow equalization storage basins at lift stations and inline storage, which flows back into the lift station or collection system, are also included.
- 2. The Missouri Department of Natural Resources may require a site-specific sewer extension construction permit due to compliance and enforcement actions in accordance with 10 CSR 20-6.010(13)(C).
- 3. This permit does not apply to:
 - A. Earthen storage basins;
 - B. Exempt projects in accordance with 10 CSR 20-6.010(1)(B), 10 CSR 20-6.010(5)(B), and RSMo 644.051 unless requested by the applicant or required by enforcement.

PREREQUISITES:

- 1. The Sewer Extension Construction Permit application, appropriate fee, and documentation in accordance with 10 CSR 20-6.010(5)(G).
- 2. Submit the Sewer Extension Construction Permit application at least sixty (60) days in advance of the start of construction in accordance with 10 CSR 20-6.010(5)(F).
- 3. Submit an electronic copy of the construction permit application and documents to DNR.WPPEngineerSection@dnr.mo.gov in accordance with 10 CSR 20-6.010(5)(G)3.
- 4. The plans and specifications, each signed, sealed, and dated by a professional engineer registered in the State of Missouri in accordance with 10 CSR 20-8 and 10 CSR 20-6.010.
- 5. The Design Certification form, Engineering Report, or Summary of Design, signed, sealed, and dated by a professional engineer registered in the State of Missouri, certifying the design of the system is in accordance with 10 CSR 20-6 and 10 CSR 20-8.
- 6. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting the wastewater for treatment and indicating the permitted treatment facility has the available capacity.
- 7. A statement from the continuing authority, as defined in 10 CSR 20-6.010, accepting responsibility for the operation and maintenance of these facilities.

PERMIT CONDITIONS:

- 1. This permit authorizes the activities and scope of work detailed in the plans and specifications submitted with the request.
- 2. The construction must be in accordance with the final plans and specifications received by the Department. Revisions that affect capacity, flow, or system layout must be approved by the Department prior to construction.

PERMIT CONDITIONS: (continued)

- 3. If construction will incorporate minor changes from previously submitted plans and specifications (i.e., changes that do not affect the capacity, flow, or system layout), submit an electronic copy of the as-built plans and specifications in accordance with 10 CSR 20-8.110(11).
- 4. State and Federal Law does not permit bypassing of raw wastewater; therefore, the applicant must take steps 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 regional office per 10 CSR 20-7.015(9)(E) or through the Online Bypass/SSO Reporting service on the Missouri Gateway for Environmental Management (MoGEM) portal found at https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem.

See https://dnr.mo.gov/document-search/missouri-gateway-environmental-management-mogem-frequently-asked-questions-pub2988/pub2988 for more information.

- 5. Protection of drinking water supplies must meet the requirements of 10 CSR 20-8.120(5).
 - A. There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply.
 - B. Lay sewers at least 50 feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures.
- 6. Position manholes so that the top access is at or above grade level.
- 7. In addition to the requirements for a construction permit, see 10 CSR 20-6.200 for land disturbance requirements 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. Applicants shall obtain land disturbance permits through the Department's ePermitting system, available online at <a href="https://dnr.mo.gov/data-e-services/water/electronic-permitting-ep

See https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/stormwater/construction-land-disturbance for more information.

8. Entities applying for funding under 10 CSR 20-4, "Grants and Loans" will need to comply with those requirements in addition to the requirements of 10 CSR 20-8.

PERMIT CONDITIONS: (continued)

9. The Department may require a United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) or a permit waiver for the activities described in this permit. If construction activity will disturb any land below the ordinary high water mark of Jurisdictional Waters of the U.S., then a 404/401 is required. Fulfillment of these requirements is necessary before the permit is considered valid. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's 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.

- 10. If this project eliminates a wastewater treatment facility under the jurisdiction of the Department, then the applicant shall submit a full closure plan with a Facility Closure Request Form, Form MO 780-2512, to the Department's appropriate regional office for review and approval. In accordance with 10 CSR 20-6.010(12), the closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit. Closure shall not commence until the Department approves the submitted closure plan.
- 11. If this project is part of a project to resolve an enforcement action or is receiving funding from the Department, submit a <u>statement of work complete</u> following the completion of construction.
- 12. Applicants may submit, prior to the expiration date of this permit, a written request that additional time is needed in accordance with 10 CSR 20-6.010(5)(H)3.



MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT – SEWER EXTENSION

FOR DEPARTMENT USE ONLY			
APP NO.	CP NO.		
FEE RECEIVED	CHECK NO.		
DATE RECEIVED			

NOTE ▶ Please Read the accompanying instructions before completing this form								
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 Is this a Federal/State funded project? ☐ YES ☑ N/A Funding Agency: Project #:								
1.2 Has the Department of Natural Resources approved the proposed project's engineering report*? ☐ YES Date of Approval: ☐ NO ☐ N/A								
1.3 Is a copy of the appropriate plans* and s	·	•	☑ YES □ NO					
If the project is using standard specificati	ons, name of community: City of c	lackson						
1.4 Is a summary of design* included with the	s application? TYES Z NO)						
1.5 Is the appropriate fee or JetPay confirma See Section 7.0	tion included with this application?	YES	☑ NO					
* Must be affixed with a Missouri registered p	rofessional engineer's seal, signat	ure and date						
2.0 PROJECT INFORMATION 2.1 NAME OF PROJECT								
Savers Farm Subdivision - Phase 8								
ADDRESS	CITY	STATE	ZIP CODE	COUNTY				
Castle Leoch Drive	Jackson	MO	63755	Cape Girardeau				
2.2 Legal Description: 1/4, 1/2	4, Sec. ,	T 31N ,	R 13E					
2.3 Project Components (check all that apply ☑ Gravity sewers □ Pumping station 2.4 PROJECT DESCRIPTION		tive sewer sy	stem Other (D	escribe below.)				
Proposed improvements will tie into the existing corner of the proposed development.	ng 8" sanitary sewer located on the	e Bent Creek	Golf Course proper	ty at the south west				
2.5 DESIGN INFORMATION A. Population or number of lots to be served	by this extension: 40							
B. Estimated flow to be contributed by this ex	ktension: Design Average Flow:	14800 gpd	Design Peak Hourly	/ Flow: 2467 gph				
C. Industrial Wastes: Type:	Flow: gpd							
D. Receiving Sewer: Size: 8 inches	Capacity: 342 gpm							
E. Does this project (check all that apply):								
✓ Connect to an existing treatment plant ☐ Resolve enforcement issue ☐ Eliminate or consolidate an existing treatment plant								
F. Estimated number of onsite systems being removed:								
G: Estimated costs associated with piping: \$	240000 Estimated costs a	ssociated wit	h lift station(s): \$					
3.0 PROJECT OWNER								
NAME Cape Land & Development, LLC	TELEPHONE NUMBER WITH AF 573-335-3382	REA CODE	EMAIL ADDRESS bowilliamsconstruc	ction@aol.com				
ADDRESS 2985 Boutin Drive	CITY Cape Girardeau	STATE MO	ZIP CODE 63701					
CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED A	AGENT	. 1 l						

MO 780-1632 (10-22)

4.0 CONTINUING AUTHORITY: A continuing at for ensuring compliance with the permit requirent Continuing authority should be a relatively permit when needed, of the permitted facility or activity. hired by the permittee to sample or operate and analytical laboratory. To access the regulatory rewater Commission Chapter 6. A continuing auth (SoS's) webpage: Missouri Secretary of State, unrequired to register with the SoS.	nents and anent entit . A continu maintain t equiremen nority's nar	provide of ty responding authorities the system of regarding the must	continuous stable for the cority is not, he m for a define continuing be listed exa	able oversige ongoing open owever, an e ed time perion authority, 10 ctly as it app	ht of the permitted facility or activity. The ration, maintenance and modernization, entity or individual that is contractually d, such as a certified operator or 0 CSR 20-6.010(2), please visit Clean ears on the Missouri Secretary of State's
		100		11-35	
NAME			IUMBER WITH AR	EA CODE	EMAIL ADDRESS
City of Jackson - Public Works	TY YTI	(573) 243-2300		STATE	jsanders@jacksonmo.org
	ackson			MO	63755
CHARTER NUMBER (SECRETARY OF STATE)					
4.1 Has appropriate continuing authority accepts A letter from the continuing authority accepting r different than the original owner of the construct Treatment Facility Acceptance" Form 780-2584.	responsibili ion), or a p	ity for cor properly e	ntinued main exec <u>ute</u> d "Co		
5.0 ENGINEER	All III				and the second of the second o
ENGINEER NAME / COMPANY NAME Brian Strickland, PE / Strickland Engineering		ELEPHONE N 7 3-243-4 (IUMBER WITH AR D 80	EA CODE	EMAIL ADDRESS bstrick@stricklandengineering.com
· ·	ackson			STATE MO	ZIP CODE 63755
6.0 RECEIVING WASTEWATER TREATMENT	FACILITY	/	39.817.3		
NAME Jackson Municipal WWTP		73) 243-3	IUMBER WITH ARI 3568	EA CODE	EMAIL ADDRESS
MISSOURI STATE OPERATING PERMIT # MO-0022853		ounty ape Girar	deau		REMAINING CAPACITY (GPD) 500,000
6.1 If different from the owner, has a letter been accept the expanded flow or has a properly exem MO 780-2584 form been provided? YES 6.2 A letter from the receiving wastewater treatm	cuted Con	tinuing A	uthority and	Receiving W	demonstrating that they agree to astewater Treatment Facility Acceptance
☐ YES ✓ NO ✓ N/A 6.3 If the receiving treatment plant or continuing				blic Service	
Certificate of Convenience and Necessity has be OPTIONAL QUESTIONS REGARDING MILITA			Yes – Date:		No ☑ N/A
Have you or an immediate family member ever s U.S. Armed Forces?			☐ Ye	es	□ No
If yes, would you like information about military-related sin Missouri?		vices	☐ Ye	es	□ No
7.0 Application Fee	7.70				
☐ Check Number			☐ JetPay C	Confirmation	Number
8.0 PROJECT OWNER: I certify under penalty of law this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure 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 there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. PROJECT OWNER SIGNATURE					
Printed NAME					DATE
Brandon Williams					5/17/24
TITLE OR CORPORATE POSITION Manager		3-335-33	IUMBER WITH AR	EA CODE	EMAIL ADDRESS bowilliamsconstruction@aol.com
	107	1			25 milia i i 300 i 311 de la Olivera de la O
Mail completed copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES WATER PROTECTION PROGRAM PO BOX 176 JEFFERSON CITY, MO 65102-0176			Submit completed electronic copy to: Missouri Department of Natural Resources at DNR.WPPEngineerSection@dnr.mo.gov		

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9.0 S	EWER EXTENSIO	N CHECKLIST		e Pi
SEWI applic	ER EXTENSION D able to the design	ESIGN CERTIFICATION: Answer all questions yes or N/A. Answer N/A only if the question is of the proposed sewer extension.	clearly	not
	REGULATION		YES	N/A
1.	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	V	
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems calculated?	V	
3.	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	V	
4.	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?	V	
5.	8.120(3)(A)	Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?	V	
6.	8.120(3) (A)1	Is all sewer pipe constructed with a slope to obtain mean velocities of not less than 2 feet per second?	V	
7,	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	V	
8.	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	V	
9.	8.120(4)(A)	Are manholes located at the end of each line, at all changes in grade, size or alignment and at all intersections?	V	
10.	8.120(4)(C)	Are manholes at least 42 inches in diameter with a clear opening of 22 inches on sewer line larger than 8"?	V	
11	8.120(4)(C)	Where cleanouts are used at the end of a lateral instead of a manhole, they are a minimum diameter of 8 inches or larger and equal to the diameter for pipes < 8"?	V	
12.	8.120(4)(E)	Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?	V	
13.	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	7	П
14.	8.120(5)(A)	Is the sewer free from physical connections to a potable water supply system and no water pipes come in contact with a sewer manhole?	V	
15.	8.120(5)(B)	Are sewers and manholes located at least 50 feet horizontally from any existing or proposed water supply well, sources, structures?	V	
10.0 I	RESSURE SEWE	ERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST	Sil Sil	190,1
	REGULATION		YES	N/A
16.	8.125(5)(A)1.	Does the cleaning velocity of ≥ 2 ft/s happen more than once per day?		
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?		
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?		
19.	8.125(5)(B)2.	Are isolation valves located: upstream of major pipe intersections; both sides of stream, bridge and RR crossings; at terminal end of system?		
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?		
21.	8.125(5)(D)1.A	Do simplex grinder pump stations service only a single equivalent dwelling unit (EDU)? i.e. 1 residence – 1 grinder pumpt.		
22.	8.125(5)(D)1.B	Are multiple unit pump stations owned, operated and maintained by an approved continuing authority?		
23.	8.125(5)(D)3.	Is there at least 70 gallons of storage in the grinder pump unit?		
24.	8.125(5)(D)4.	Do grinder pump stations have shutoff valves, check valves and anti-siphon valves (where siphoning could occur) that are accessible from the ground surface?		
25.	8.125(5)(D)7., 8.130(3)(B)2.	Are units serviceable and replaceable under wet conditions without electrical hazard and is electrical equipment suitable for hazardous locations (National Electrical Code, Class I, Group D, Division 1 location)?		
26.	8.125(5)(D)8., 8.125(2)(F)6.	Are provisions in place to avoid interruption of service due to mechanical or power failure by providing standby power, storage capacity, or interconnection with another disposal system?		
27.	8.125(6)(D)	In a STEP system is at least one septic tank (1,000 gallons or more) provided for each EDU with 20% of tank volume dedicatied to freeboard and ventillation?		
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?		

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11.0	PUMP STATION C	HECKLIST					ш,	
	REGULATION					YES	IN	I/A
29.	8.125(7)(C)	Is the minimum d	iameter sewer main pip	oe and service line of S	STEG sewer at least 4"?	T	$\forall 1$	П
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station	s the pump station designed to withstand the 100-year flood?				Ti	
31.	8.130(3)(A)	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?				T		
32.	8.130(3)(B)	If the design flow provided?	If the design flow is 1,500 gpd or more, are there at least 2 pumps or pneumatic ejectors					
33	8.130(3)(D)		d outside wet well unle	ss integral to a pump o	or its housing?	П	\top	П
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry w	ells have separate ven	tilation systems?				一
35.	8.130(3)(G)	Does all potable	water brought to pump	stations comply with 8	.140(7)(D)?	\Box	Ť	П
36.	8.130(6)	Is an alarm syste	m provided with uninter	rrupted power?		一	\top	Ħ
37.	8.130(7)(A)		etention of the peak ho eak hourly flow for a de		ow > 100,000 gpd or 4 hrs			
38.	8.130(7)(B)	Are there indeper		provided for emergen	cy power capable of starting			
39.	8.130(8)(A)		velocity of ≥ 2 ft/s main			П	\top	П
40.	8.130				ions provided that include and spare parts that may be			
12.0	SUCTION LIFT PU		SIBLE PUMP STATIO	N CHECKLIST		A THE	<u> </u>	
	REGULATION					YES	N	l/A
41.	8.130(4)	Are the suction lif	t pumps of the self prim	ning or vacuum priming	type?	П	1	\neg
42.	8.130(4)(A)	Is the combined total of dynamic suction lift at the "pump off" elevation and required net positive suction head at design operating conditions less than or equal to 22 feet?					[
43.	8.130(4)(B)	Are there dual va	cuum pumps capable o	of removing air from the	e suction lift pump?	П	+	\neg
44.	8.130(5)(A)	Are submersible			hout personnel entering, or		1	
13.0	SEWER EXTENSI		CERTIFICATION STA	TEMENT	a stevies are a	1,000		
Misso		ngineer's seal, signa	ature and date:	* PORTS	BRIAN W STRICKLAND NUMBER PE-30135			
	Brian Strickland		4:0		· ·			
		gineering - 113 W. I						
City:	Jackson	State: MO ZIP Code: 63755						
Telephone Number with Area Code: 573-243-4080 Email:bstrick@stricklandengineering.com								
VIO 780-1	632 (10-22)							