STATE OF MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



GENERAL PERMIT for SEWER EXTENSION CONSTRUCTION

The Missouri Department of Natural Re	sources hereby issues a permit to:
Owner: Address: The project will also include general site	MOGC00685 Navajo Beach Gravois Arm Sewer District 28982 Harbor Road GRAVOIS MILLS, MO 65037 work appropriate to the scope and purpose of the project and will include all the necessary isable collection system. The construction of this project will be in the vicinity of the county
below and discharge to Receiving Permi	
County: Morgan Recei	ving Permit ID: MO0134821
for the construction of (described constr	uction project):
through 2.0-inch SDR21PVC force m of TDH) and 3 simplex grinder station TDH), to serve 75 PE and a design av Project is in the vicinity of Navajo Be County, and discharges to an existing	f of 8-inch SDR35PVC gravity sewer with 2 manholes, ~1,550 lf of 1.5-inch ain, 1 duplex lift station (each pump capable of operating at 25 gpm at 180 feet as (320-gallon tanks, each pump capable of operating at 10 gpm at 180 feet of erage flow of 7,500 gpd. A portable generator is available. ach Lane and Navajo Beach Drive, southeast of Gravois Mills, Morgan system to be treated at the Gravois Arm Sewer District WWTF, an of the Gravois Arm Sewer District, signed the application.
RSMo, and regulation promulgated ther As the Department does not examine str permit does not include approval of thes	shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, eunder, or this permit may be revoked by the Department of Natural Resources (Department) uctural features of design or the efficiency of mechanical equipment, the issuance of this e features. ion of water pollution control components; it does not apply to other environmentally
January 29, 2024 Issue Date	John Hoke, Director Water Protection Program

January 28, 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					

<u>&</u> ⊕ SEWER EXTENSION					DATE RECEIVED	,
NOTE ► Please Read the accompanying in	structions	before completing	ng th	nis form	LOUIS NAME OF STREET	
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 5	☑ N/A Funding	Ager	ncy: AARP	Proj	ect#:
1.2 Has the Department of Natural Resources approved the proposed project's engineering report*? ☐ YES Date of Approval: ☐ N/A						
1.3 Is a copy of the appropriate plans* and specifications* included with this application? ✓ YES ☐ NO						
If the project is using standard specification	ons, name o	of community:				
1.4 Is a summary of design* included with this	s applicatio	n? 🛛 YES 🗆	NC)		
1.5 Is the appropriate fee or JetPay confirmat See Section 7.0	ion include	d with this applicat	ion?	☑ YES [□NO	
* Must be affixed with a Missouri registered pr	ofessional	engineer's seal, sig	gnati	ure and date.		
2.0 PROJECT INFORMATION 2.1 NAME OF PROJECT						
Navajo Beach Sewer Exstension						
ADDRESS	CITY			STATE	ZIP CODE	COUNTY
Navajo Beach and Red Hollow Road 2.2 Legal Description: 1/4, se 1/4	Gravois Mil	1/4, Sec. 41		MO T 17N	65037 R 26W/27E	Morgan
2.2 Logdi Dosoription. W 74, Se 74	· se	74, 000. 41	<u>'</u>	17/18	20W/27E	
2.3 Project Components (check all that apply) Gravity sewers Pumping stations 2.4 PROJECT DESCRIPTION		ce mains	rnat	ive sewer sys	stem	escribe below.)
The Navajo Beach- Sewer Extension, which entails a new wastewater collection to be conveyed to the Gravois Arm Sewer District WWTF, Permit No. MO-134821. The Gravois Arm Sewer Sewer District is the Continuing Authority of the Gravois Arm Sewer Sewer District WWTF. The Navajo Beach Wastewater collection infrastructure will tie into the District's 6-in FM at March Road and Red Hollow Rd. The proposed extensions will be installed to serve sewer service for approximately 20 residential homes and 1 Restaurant/tavern. The collection system will primarily include individual services of 4-in PVC which convey the sewage to shared duplex grinder stations and shared simplex grinder stations that are owned and maintained by the District. The 1275 feet of 2" force main sewer extension will tie into a pressure system that uses 3-simplex grinder station and 1 duplex station to force wastewater through small diameter pressurized pipes to the main trunk sewer force main. The project will also include 2-concrete manholes and 610 feet of 8" SDR-35 gravity.						
2.5 DESIGN INFORMATION A. Population or number of lots to be served	by this exte	ension: 95 resident	s or	25 lots		
B. Estimated flow to be contributed by this ex	•				Design Peak Hourly	y Flow: 1250 gph
C. Industrial Wastes: Type:	Flow	gpd:				
D. Receiving Sewer: Size: 6 inches	Capa	acity: 400 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: 23 Residential leaking septic systems next to the shoreline.						
G: Estimated costs associated with piping: \$ 153,000 Estimated costs associated with lift station(s): \$ 0						
3.0 PROJECT OWNER						
NAME Gravois Arm Sewer District		TELEPHONE NUMBER WI 816-874-0922	TH AF	REA CODE	EMAIL ADDRESS admin@gasdmo.d	com
ADDRESS 28982 Harbor Road	CITY Gravois M	ills		STATE	ZIP CODE 65037	
CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED A	GENT				1	

MO 780-1632 (10-22)

4.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity, or person(s) that will be legally responsible for ensuring compliance with the permit requirements and provide continuous stable oversight of the permitted facility or activity. The Continuing authority should be a relatively permanent entity responsible for the ongoing operation, maintenance and modernization, when needed, of the permitted facility or activity. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit Clean Water Commission Chapter 6. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: Missouri Secretary of State, unless the continuing authority is an individual(s), government entity, or otherwise not required to register with the SoS. NAME TELEPHONE NUMBER WITH AREA CODE EMAIL ADDRESS Ryan Beatie 573-392-3312 admin@gasdmo.com ZIP CODE ADDRESS CITY STATE 28982 Harbor Road Mo Gravois Mills 65037 CHARTER NUMBER (SECRETARY OF STATE) Tax ID-19306768 4.1 Has appropriate continuing authority acceptance been provided as follows: A letter from the continuing authority accepting responsibility for continued maintenance of the sewer (if the continuing authority is different than the original owner of the construction), or a properly executed "Continuing Authority and Receiving Wastewater Treatment Facility Acceptance" Form 780-2584. ☐ YES ☑ NO ☑ N/A 5.0 ENGINEER EMAIL ADDRESS ENGINEER NAME / COMPANY NAME TELEPHONE NUMBER WITH AREA CODE Jared Wheaton, Alpha Engineering & Surveying iared@alphaes.net 573-714-0366 ADDRESS ZIP CODE Eldon MO 65026 3048 S Hwy 52 **6.0 RECEIVING WASTEWATER TREATMENT FACILITY** TELEPHONE NUMBER WITH AREA CODE EMAIL ADDRESS Gravois Arm Sewer District 573-392-3312 admin@gasdmo.com MISSOURI STATE OPERATING PERMIT # COUNTY REMAINING CAPACITY (GPD) MO-134821 Morgan 185,000 6.1 If different from the owner, has a letter been provided from the receiving treatment facility demonstrating that they agree to accept the expanded flow or has a properly executed Continuing Authority and Receiving Wastewater Treatment Facility Acceptance MO 780-2584 form been provided? ☐ YES ☑ NO ☑ N/A 6.2 A letter from the receiving wastewater treatment facility, if different than the continuing authority, is included with this application. ☑ NO ☐ YES ☑ N/A 6.3 If the receiving treatment plant or continuing authority is regulated by the Public Service Commission (PSC) for sewer activities, a ✓ N/A Certificate of Convenience and Necessity has been received?

Yes – Date: OPTIONAL QUESTIONS REGARDING MILITARY SERVICE Have you or an immediate family member ever served in the Yes ☐ No U.S. Armed Forces? If yes, would you like information about military-related services ☐ Yes V No in Missouri? 7.0 Application Fee ☐ JetPay 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 SIGNATU 11/22/23 EMAIL ADDRESS TELEPHONE NUMBER WITH AREA CODE Chairman of the Gravois Arm Sewer District 573-372-3735 admin@gasdmo.com Mail completed copy to: Submit completed electronic copy to: MISSOURI DEPARTMENT OF NATURAL RESOURCES Missouri Department of Natural Resources WATER PROTECTION PROGRAM at DNR.WPPEngineerSection@dnr.mo.gov PO BOX 176 JEFFERSON CITY, MO 65102-0176

MO 780-1632 (10-22)

		ESIGN CERTIFICATION: Answer all questions yes or N/A. Answer N/A only if the question is	clearly r	not
applio		of the proposed sewer extension.	YES	N/A
ı.	REGULATION 8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	TES	N/A
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems	ᆜ	
		calculated?	V	
3 .	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	V	
ł.	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	
' .	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	$\overline{\mathbf{V}}$	
3.	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?	V	
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	PRESSURE SEWE	RS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST		
	REGULATION		YES	N/A
16.	8.125(5)(A)1.	Does the cleaning velocity of ≥ 2 ft/s happen more than once per day?	$ \mathbf{\nabla} $	
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	V	
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?	V	
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?	\square	Г
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?	V	ΙĒ
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.		V
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?		Ē
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)?	V	Г
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?	V	
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?		V
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?		-

11.0 F	PUMP STATION C	HECKLIST						
	REGULATION					YES 🔽	N/A	
29.	8.125(7)(C)	Is the minimum diameter sewer main pipe and service line of STEG sewer at least 4"?						
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station	Is the pump station designed to withstand the 100-year flood?					
31.	8.130(3)(A)	access provided to	Is the dry well completely separate from the wet well and is a suitable and safe means of access provided to each?					
32.	8.130(3)(B)	If the design flow is 1,500 gpd or more, are there at least 2 pumps or pneumatic ejectors provided?				V		
33	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?						
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry we	Do wet and dry wells have separate ventilation systems?					
35.	8.130(3)(G)	Does all potable w	ater brought to pump s	tations comply with 8.1	140(7)(D)?		V	
36.	8.130(6)	-	n provided with unintern					
37.	8.130(7)(A)		tention of the peak house ak hourly flow for a des		ow > 100,000 gpd or 4 hrs d?	V		
38.	8.130(7)(B)	Are there indepen		provided for emergend	y power capable of starting			
39.	8.130(8)(A)		elocity of ≥ 2 ft/s maint			V		
40.	8.130	Are there complete operation instructions for the pumpting stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?						
12.0 \$		IMP AND SUBMER	SIBLE PUMP STATIO	N CHECKLIST				
11	REGULATION	Are the susting life	pumps of the self prim	ing or veganing malasia	tuno2	YES	N/A	
41.	8.130(4) 8.130(4)(A)				••	ш	V	
72.	0.150(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)		cuum pumps capable of		· · ·		V	
44.	8.130(5)(A)		umps readily removable pipe in the wet well?	e and replaceable with	nout personnel entering, or			
			CERTIFICATION STAT		al comments regarding desig		1	
No. 21 No. 27 No. 35 No. 36 No. 42	Design flow is ba , The District has of , No step tanks are , No water at pum , Alarm is present , The District has , 43, 44, Project is	continuing authority e designed for this p p station. but does not obtain a portable generator	a calling system.	,				
Name	e: Jared Wheaton	_		William .	<i>9</i>			
Addre	ess: 3048 S Hwy	52	9.					
City:	Eldon		State: MO		ZIP Code: 65026			
Telep	phone Number with	n Area Code: 573-71	4-0366	Email:Jared@alphae	es.net			
MO 780-1	632 (10-22)							