

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**

MISSOURI CLEAN WATER COMMISSION



**CONSTRUCTION PERMIT**

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

Public Water Supply District No. 2 of St. Charles County  
100 Water Dr.  
O'Fallon, MO 63368

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.

July 28, 2023  
Effective Date

July 27, 2025  
Expiration Date

  
\_\_\_\_\_  
John Hoke, Director, Water Protection Program

## CONSTRUCTION PERMIT

### COLLECTION SYSTEM:

The proposed wastewater collection system project will consist of a new (upgraded/replacement) lift station, including a new wet well with additional depth (~ 8 ft by 8 ft by 15 ft deep), a valve vault, flowmeter vault, two 23-hp submersible pumps (capable of pumping 170 gpm against 171 ft TDH) and associated controls, related piping to connect the new wet well to the existing influent gravity main and force main (~28 ft 8-in SDR26 PVC gravity and ~159 ft of 4-in SDR21 PVC force main), an influent sewer trash basket, bypass pumping portal, stand-by generator, and all necessary appurtenances to make a complete and usable wastewater collection system. The existing wet well will also be converted to a manhole upstream of the new lift station, and one additional manhole will be constructed. There will be no change in flow to the station, but the flow to the station was recalculated to be a design average of 42.9 gpm (~ 62,000 gpd) peaking at 168 gpm (10,138 gph). The project will also include general site work appropriate to the scope and purpose of the project.

On July 12, 2023, the Missouri Clean Water Commission approved a variance from the two-hour minimum emergency storage capacity, as required by 10 CSR 20-8.130(7)(A), allowing only 63 minutes of detention time at the peak hourly flow, but with a dedicated diesel-powered stand-by generator and an uninterruptible power supply for the control panel and alarms.

These activities will be in the vicinity of 1506 Gem Ct. (off Prospect Lakes Dr.) in western Lake St. Louis, St. Charles County, and will discharge to an existing sewer system to be treated at the O'Fallon Wastewater Treatment Plant, Missouri State Operating Permit No. MO-0028720.

### PERMIT CONDITIONS:

1. All construction shall be in accordance with the plans and specifications received from Crawford, Murphy & Tilly, Inc., on February 22, 2023, and sealed, signed, and dated by Matthew Sainz, P.E. on February 20, 2023.
2. 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).
3. 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 St. Louis Regional Office per 10 CSR 20-7.015(9)(E)2.
4. This construction permit is invalid for projects required to comply with the requirements contained in 10 CSR 20-4, "Grants and Loans".

5. 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."
  - A. 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.
  - B. Sewer mains shall be laid at least 10 feet 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 inches 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.
  - C. Manholes shall be located with the top access at or above grade level.
  - D. Manholes should be located at least 10 feet horizontally from any existing or proposed water main.
  - E. Sewers crossing water mains shall be laid to provide a minimum vertical distance of 18 inches 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:
    - 1) 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
    - 2) Either the water main or sewer line may be continuously encased or enclosed in a watertight carrier pipe which extends 10 feet 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.

6. 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 may 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). For more information, 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).
7. 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.
8. Submit the Statement of Work Completed form to the department in accordance with 10 CSR 20-6.010(5)(D). Submit an electronic copy of the as-built drawings with this form if the project was not constructed in accordance with previously submitted plans and specifications. [dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155](http://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155)
9. Upon completion of construction, the Public Water Supply District No. 2 of St. Charles County will become the continuing authority for operation, maintenance, and modernization of these facilities.

Scott Adams, P.E.  
Engineering Section  
scott.adams@dnr.mo.gov

## **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](mailto: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 <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting>.

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.

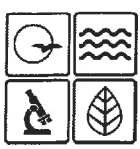
**PERMIT CONDITIONS: (continued)**

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 [statement of work complete](#) 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.

Mogse 0513 MO-0028720  
 AP: 41576



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM  
**APPLICATION FOR CONSTRUCTION PERMIT**  
**SEWER EXTENSION**

**RECEIVED**  
 FEB 23 2023  
 Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED 300.00	CHECK NO. 23655
DATE RECEIVED 2-22-23 MH	

**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.)

- 1.1 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 specifications\* included with this application?  YES  NO  
 If the project is using standard specifications, name of community: \_\_\_\_\_
- 1.4 Is a summary of design\* included with this application?  YES  NO
- 1.5 Is the appropriate fee or JetPay confirmation included with this application?  YES  NO  
 See Section 7.0

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

**2.0 PROJECT INFORMATION**

2.1 NAME OF PROJECT  
 Prospect Lift Station Improvements

ADDRESS	CITY	STATE	ZIP CODE	COUNTY
1506 Gem Ct.	Wentzville	MO	63385	St. Charles

2.2 Legal Description: ¼, ¼, ¼, Sec. 32, T 47N, R 2E

- 2.3 Project Components (check all that apply):
- Gravity sewers  Pumping stations  Force mains  Alternative sewer system  Other (Describe below.)

2.4 PROJECT DESCRIPTION  
 This project will include two new manholes and 28 linear feet of 8" PVC gravity sewer. One new lift station will be constructed, which is intended as a direct replacement for the existing lift station on the site. The design average flow is 42.9 gpm and the peak hourly flow is 168 gpm. 159 linear feet of 4" PVC force main is provided and the new force main will connect to the existing force main on site. Other miscellaneous site improvements are included such as site security and a concrete access road, a stand-by generator, new controls, new valve vault and piping, and a new flow meter and vault on the force main. No new connections are expected to the existing collection system and the hydraulic and organic loading is not expected to change.

2.5 DESIGN INFORMATION

- A. Population or number of lots to be served by this extension: Existing population of 620 persons
- B. Estimated flow to be contributed by this extension: Design Average Flow: 61758 gpd Design Peak Hourly Flow: 10104 gph
- C. Industrial Wastes: Type: None Flow: N/A gpd
- D. Receiving Sewer: Size: 8 inches Capacity: 550 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: 1 lift station being replaced
- G: Estimated costs associated with piping: \$ 30,000 Estimated costs associated with lift station(s): \$ 740,000

**3.0 PROJECT OWNER**

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS	
Public Water Supply District No. 2 of St. Charles Coun	(636) 561-3737x156	khampe@waterdistrict2.com	
ADDRESS	CITY	STATE	ZIP CODE
100 Water Dr.	O'Fallon	MO	63368

CHARTER NUMBER (SECRETARY OF STATE) or REGISTERED AGENT  
 D00000479



**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 Public Water Supply District No. 2 of St. Charles Coun		TELEPHONE NUMBER WITH AREA CODE (636) 561-3737x156	EMAIL ADDRESS khampe@waterdistrict2.com
ADDRESS 100 Water Dr.	CITY O'Fallon	STATE MO	ZIP CODE 63368

CHARTER NUMBER (SECRETARY OF STATE)  
D00000479

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**

ENGINEER NAME / COMPANY NAME Matthew Sainz / Crawford, Murphy & Tilly		TELEPHONE NUMBER WITH AREA CODE 314.571.9107	EMAIL ADDRESS msainz@cmtengr.com
ADDRESS One Memorial Drive Suite 500	CITY St. Louis	STATE MO	ZIP CODE 63102

**6.0 RECEIVING WASTEWATER TREATMENT FACILITY**

NAME City of O'Fallon, MO		TELEPHONE NUMBER WITH AREA CODE 636-240-2000	EMAIL ADDRESS msuddarth@ofallon.mo.us
MISSOURI STATE OPERATING PERMIT # MO-0028720		COUNTY St. Charles	REMAINING CAPACITY (GPD) 4,250,000

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.  YES  NO  N/A

6.3 If the receiving treatment plant or continuing authority is regulated by the Public Service Commission (PSC) for sewer activities, a Certificate of Convenience and Necessity has been received?  Yes - Date:  No  N/A


**OPTIONAL QUESTIONS REGARDING MILITARY SERVICE**

Have you or an immediate family member ever served in the U.S. Armed Forces?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No
If yes, would you like information about military-related services in Missouri?	<input type="checkbox"/> Yes	<input checked="" type="checkbox"/> No

**7.0 Application Fee**

Check Number 23655  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 SIGNATURE 

PRINTED NAME Kevin Hampe	DATE 02/21/2023
TITLE OR CORPORATE POSITION Senior Engineer	TELEPHONE NUMBER WITH AREA CODE 636-561-3737x156
EMAIL ADDRESS khampe@waterdistrict2.com	

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 <a href="mailto:DNR.WPPEngineerSection@dnr.mo.gov">DNR.WPPEngineerSection@dnr.mo.gov</a>
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**9.0 SEWER EXTENSION CHECKLIST**

**SEWER EXTENSION DESIGN CERTIFICATION:** Answer all questions yes or N/A. Answer N/A only if the question is clearly not applicable to the design of the proposed sewer extension.

	REGULATION		YES	N/A
1.	8.110(3)(A)	Is the design flow based on actual flow data for an existing system?	<input type="checkbox"/>	<input type="checkbox"/>
2.	8.110(3)(B)	Are average design flows, peak hourly flows and I&I contributions for new systems calculated?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	8.110(9)(B)	Is there a detailed plan showing tributary area, boundaries, pertinent elevations, topography, existing and proposed facilities?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
4.	8.120(2)	Does the sewer exclude water from roofs, streets, groundwater from foundation drains and combined wastewater?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
5.	8.120(3)(A)	Is the pipe installation, embedment and backfill designed to prevent damage to the pipe and its joints?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
7.	8.120(3)(A)2	Is the pipe covered with at least 36" of soil or sufficiently insulated to prevent freezing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
8.	8.120(3)(B)	Is deflection testing specified to ensure no pipe exceeds a deflection of 5% of the inside diameter?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
12.	8.120(4)(E)	Are the manholes watertight, constructed and installed in accordance with the manufacturer's recommendations and procedures?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
13.	8.120(4)(F)	Do the specifications include a requirement for inspection and testing for manholes?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**10.0 PRESSURE SEWERS, GRINDER PUMP, STEP AND STEG SEWER CHECKLIST**

	REGULATION		YES	N/A
16.	8.125(5)(A)1.	Does the cleaning velocity of $\geq 2$ ft/s happen more than once per day?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
17.	8.125(5)(A)2.	Is the diameter of the pressure sewer main pipe at least 1.5"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
18.	8.125(5)(B)	Are appurtenances compatible with the piping system?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
20.	8.125(5)(C)	Do service line pipes have a minimum diameter of 1.25"?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 pump.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
22.	8.125(5)(D)1.B	Are multiple unit pump stations owned, operated and maintained by an approved continuing authority?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
23.	8.125(5)(D)3.	Is there at least 70 gallons of storage in the grinder pump unit?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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)?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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 dedicated to freeboard and ventilation?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
28.	8.125(6)(F)	Are duplex pumps provided for the design flow of 1,500 gallons or greater?	<input type="checkbox"/>	<input checked="" type="checkbox"/>

**11.0 PUMP STATION CHECKLIST**

	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"?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
30.	8.130(2)(A) 8.140(2)(B)	Is the pump station designed to withstand the 100-year flood?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
33.	8.130(3)(D)	Are valves located outside wet well unless integral to a pump or its housing?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
34.	8.130(3)(F) 8.140(8)(J)	Do wet and dry wells have separate ventilation systems?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
35.	8.130(3)(G)	Does all potable water brought to pump stations comply with 8.140(7)(D)?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
36.	8.130(6)	Is an alarm system provided with uninterrupted power?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
37.	8.130(7)(A)	Is there 2 hours retention of the peak hourly flow for a design flow > 100,000 gpd or 4 hrs retention of the peak hourly flow for a design flow < 100,000 gpd?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
38.	8.130(7)(B)	Are there independent utility substations provided for emergency power capable of starting and operating the pump station at its rated capacity?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
39.	8.130(8)(A)	Is the force main velocity of ≥ 2 ft/s maintained?	<input checked="" type="checkbox"/>	<input type="checkbox"/>
40.	8.130	Are there complete operation instructions for the pumping stations provided that include emergency procedures, maintenance schedules, special tools and spare parts that may be necessary?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**12.0 SUCTION LIFT PUMP AND SUBMERSIBLE PUMP STATION CHECKLIST**

	REGULATION		YES	N/A
41.	8.130(4)	Are the suction lift pumps of the self priming or vacuum priming type?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
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?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
43.	8.130(4)(B)	Are there dual vacuum pumps capable of removing air from the suction lift pump?	<input type="checkbox"/>	<input checked="" type="checkbox"/>
44.	8.130(5)(A)	Are submersible pumps readily removable and replaceable without personnel entering, or disconnecting any pipe in the wet well?	<input checked="" type="checkbox"/>	<input type="checkbox"/>

**13.0 SEWER EXTENSION CHECKLIST -- CERTIFICATION STATEMENT**

For any questions answered "N/A" provide an explanation. Also provide any useful general comments regarding design for review engineer.

Section 9 N/A: Item 2 - The system is existing, not new. But, DAF and PHF have been calculated and I&I has been considered in the calculations. Item 10 - Sewers over 8" diameter are not included in this project. But, all manholes do have at least 42" inside diameter and a clear opening of 22". Item 11 - cleanouts are not used on this project.

Section 10 N/A: Pressure sewers, grinder pumps, STEP, and STEG sewers are not included in this project.

Section 11 N/A: Items 31 and 34 - The project does not include a dry well. Item 37 - A variance application is submitted for this requirement. Item 38 - Independent substations are not included in this project.

Section 12 N/A: Items 41, 42, and 43 - Suction lift pumps are not used on this project.

Missouri Professional Engineer's seal, signature and date:

*Matthew Sainz*  
2/2/123



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**BEFORE THE  
MISSOURI CLEAN WATER COMMISSION**

<b>In The Matter Of:</b>	)	
Public Water Supply District No. 2 of St. Charles County	)	No. CWC-V-2-2023
O’Fallon Wastewater Treatment Plant	)	
Emergency Storage Volume Variance	)	

**ORDER GRANTING VARIANCE NO. CWC-V-2-2023**

The Missouri Clean Water Commission (Commission) hereby grants variance request CWC-V-2-2023 to the Public Water Supply District No. 2 of St. Charles County. Specifically, the Commission approves a variance from the pump station design requirement contained in 10 CSR 20-8.130(7)(A) mandating a minimum emergency storage of two hours of sewage at peak flows. This variance allows the Public Water Supply District No. 2 of St. Charles County to install a reasonable amount of emergency storage, along with an emergency generator and other site-specific design considerations, as an alternative to the minimum pump station design requirement in rule.

On **May 5, 2023**, the Commission issued a public notice and provided an opportunity for public comment on the requested variance. The Commission has determined that based on the administrative record the variance request satisfies the requirements of Section 644.061, Revised Statutes of Missouri (RSMo) and, if properly maintained and operated, the alternative emergency storage solution should provide a comparable level of protection against sanitary sewer overflows as the protection intended by the complete storage design requirement. Further, the proposed variance is consistent with a proposed rulemaking to revise 10 CSR 20-8.130(7) to allow for such alternative emergency storage solutions.

The Missouri Clean Water Commission directs staff to implement Variance No. CWC-V-2-2023 as presented. The term of this variance is for the life of the pump station or until the pending proposed rulemaking of 10 CSR 20-8.130(7) becomes effective.

This decision of the Commission is subject to appeal to the Administrative Hearing Commission pursuant to Sections 644.061.5, 640.013, and 621.250, RSMo.

SO ORDERED on July 12, 2023.

**Order Granting Variance No. CWC-V-2-2023**  
Public Water Supply District No. 2 of St. Charles County  
O'Fallon Wastewater Treatment Plant  
Emergency Storage Volume Variance  
July 12, 2023

Missouri Clean Water Commission

  
Chair

  
Vice-Chair

  
Commissioner

  
Commissioner

  
Commissioner

  
Commissioner

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Commissioner