

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. 1 of Ralls County, Missouri
Norwoods Subdivision WWTF|
3316 Market Street
Hannibal, MO 63401

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.

September 30, 2026

Effective Date

September 29, 2028

Expiration Date

A handwritten signature in black ink, appearing to read 'Heather S. Peters', is written over a horizontal line.

Heather S. Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. Construction Description

The construction proposed includes the installation of a subsurface irrigation system, utilizing drip piping. To accommodate the flows for the facility, the subsurface field being constructed will cover an approximate area of 0.47 acres, which provides enough application area for the design flow of the facility assuming an application rate of 0.2 gallons per day per square foot (gpd/sf). The existing recirculating sand filter and ultraviolet disinfection system will be decommissioned once construction is completed.

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 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 determine a cost analysis for compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

III. Construction Permit Conditions

The permittee is authorized to construct subject to the following conditions:

1. This construction permit does not authorize discharge.
2. All construction shall be consistent with plans and specifications signed and sealed by Mark Bross, P.E. with Klingner & Associates, PC on February 2, 2026, and as described in this permit.
3. Regulation 10 CSR 20-4.040(18)(B)1 requires that projects be publicly advertised, allowing sufficient time for bids to be prepared and submitted. Projects should be advertised at least 30 days prior to bid opening.
4. The department must be contacted in writing prior to making any changes to the plans and specifications that would directly or indirectly have an impact on the capacity, flow, system layout, or reliability of the proposed wastewater treatment facilities or any design parameter that is addressed by 10 CSR 20-8, in accordance with 10 CSR 20-8.110(11).
5. All changes in contract price or time within the approved scope of work must be by change order in accordance with 10 CSR 20-4.040(19).

6. 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).
7. The completed project shall be field tested to verify actual pumped volume of each dose. The timer controls shall be set to ensure a dosing rate not to exceed the allowable rate of 0.2 gallons per square foot per day.
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 [Missouri Gateway for Environmental Management \(MoGEM\) website](#). See the [Electronic Permitting \(ePermitting\) website](#) for more information.
9. A United States Army Corps of Engineers (USACE) Clean Water Act Section 404 Department of the Army permit and a Section 401 Water Quality Certification issued by the department may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied or notification is provided that no Section 404 permit is required by the USACE. You must contact your local USACE district since they determine what waters are jurisdictional and which permitting requirements may apply. You may call the department's Water Protection Program, Operating Permits Section at 573-522-4502 for more information. See the [Section 401 water quality certification website](#) for more information.
10. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - Subsurface systems shall—
 - Exclude unstabilized fill and soils that have been highly compacted and/or disturbed, such as old roadbeds, foundations, or similar things; 10 CSR 20-8.200(8)(A)1.A.
 - Provide adequate surface drainage where slopes are less than 2 percent; 10 CSR 20-8.200(8)(A)1.B.
 - Provide surface and subsurface water diversion where necessary, such as a curtain or perimeter drain; 10 CSR 20-8.200(8)(A)1.C. and
 - Have a 10-foot buffer from the property line; 10 CSR 20-8.200(8)(A)1.D.
 - The vertical separation between the bottom of the drip lines and/or the trench and a limiting layer, including but not limited to, bedrock; restrictive horizon; or seasonal high-water table, shall be no less than:
 - 24 inches; 10 CSR 20-8.200(8)(A)2.A. or
 - 12 inches for systems dispersing secondary or higher quality effluent; 10 CSR 20-8.200(8)(A)2.B. or
 - 48 inches where karst features are present unless the site can be reclassified; 10 CSR 20-8.200(8)(A)2.C.

- Subsurface systems shall be, at a minimum, preceded by preliminary treatment; 10 CSR 20-8.200(8)(B).

11. Upon completion of construction:

- A. The Ralls County PWSD No. 1 will become the responsible authority for operation and maintenance 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;
- C. Submit the [Statement of Work Completed form](#) to the department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification public noticed on June 26, 2026, be issued.

IV. Review Summary

1. Construction Purpose

The existing Outfall No. 3 at the Norwoods Wastewater Treatment Facility (WWTF) does not comply with existing effluent ammonia limits for discharges at that location, and the existing treatment train for Outfall No. 3 cannot meet ammonia limits without alteration to the treatment process. By converting this portion of the facility to a no-discharge system, the ammonia limits will no longer apply, allowing the issue of meeting effluent limits to be resolved, and will improve the water quality of the receiving stream.

2. Facility Description

The Norwoods Subdivision WWTF is located at 52608 Norwoods Place, Hannibal, Missouri, in Ralls County. The proposed work for this project will replace the existing Outfall No. 3, which has a design average flow of 4,856 gallons per day (gpd) and serves a hydraulic population equivalent of approximately 65 people.

3. Compliance Parameters

The proposed project will convert Outfall No. 3 at the Norwoods Subdivision WWTF into a no-discharge land application permitted feature. As a result, existing wastewater limits for this portion of the treatment facility will no longer apply, as the wastewater will no longer be discharged to a receiving waterbody.

4. Review of Major Treatment Design Criteria

- A. Existing major components that will remain in use include the following:

The existing recirculating sand filter will be decommissioned as a part of the proposed construction. However, the existing lift station that is part of this sand filter will be retrofit with 3 well pumps, each with a 30 horsepower (HP) driver, capable of pumping 150 gallons per minute (gpm) at 57 foot (ft) total dynamic head (TDH).

- B. Construction will cover the following items:

- Septic Tank – A septic tank provides passive primary treatment as the settleable solids in raw wastewater settle onto the bottom of the tank. Raw wastewater will

flow by gravity to the 5,000 gallon two-compartment septic tank. When the water level reaches a certain height, the wastewater flows into the second compartment by two tee-drop pipes. The first septic tank compartment is approximately 11 ft by 7 ft by 10.75 ft, while the second tank compartment is approximately 5.5 ft by 7 ft by 10.75 ft, with a water level depth of 10.33 ft. The septic tanks provide approximately 1 day of detention at design average flow. The wastewater shall then flow to a 3,000 gallon two-compartment dosing tank. The first dosing tank compartment is approximately 6.7 ft by 5 ft by 10.7 ft, and the second dosing tank compartment is approximately 3.3 ft by 5 ft by 10.7 ft. One screened simplex 0.5 HP pump, each capable of 10 gpm at 34 ft of TDH, is in the second compartment of the dosing tank. The pumped wastewater will then be distributed to a subsurface soil dispersal system. Settled solids in the septic tank shall be removed by a contract hauler.

- Subsurface Soil Dispersal System – The soils at this site are rated for 0.05 to 0.3 gpd per square foot (sf) within the first 24 inches of the soil. The facility decided to use a conservative design loading rate of 0.2 gpd per sf for the entire system. As a result, placement of the application site is critical, to ensure the application area is in areas where soil can sustain that application rate. Soil morphology review was conducted during the facility plan application review and on-site soils were determined to be acceptable for this system. The soil investigation was completed by Scott Wegman, Certified Professional Soil Classifier with Elijah's Brook, Inc. on September 21, 2022.
 - Soils Report. In the soils investigation, there were 10 pits dug over the proposed site, although only 6 pits are within the immediate area the application field will be located at.
 - Soil test pit #1, located in the periphery of the application site, had a surface soil that was described as silt loam to silty clay loam with an application rating ranging from 0.05 to 0.3 gpd/sf.
 - Soil test pit #2, located in the periphery of the application site, had a surface soil that was described as silt loam with an application rating ranging from 0.18 to 0.3 gpd/sf.
 - Soil test pit #7, located in the application site, had a surface soil that was described as silt loam to silty clay loam with an application rating ranging from 0.15 to 0.3 gpd/sf.
 - Soil test pit #8, located in the application site, had a surface soil that was described as silty clay loam with an application rating ranging from 0.18 to 0.25 gpd/sf.
 - Soil test pit #9, located in the periphery of the application site, had a surface soil that was described as silt loam to silty clay loam with an application rating ranging from 0.08 to 0.3 gpd/sf.
 - Soil test pit #10, located in the application site, had a surface soil that was described as silty clay loam with an application rating ranging from 0.15 to 0.3 gpd/sf.

- Specifications for placement of the fill prescribe a specific range of acceptable soil moisture content and the type of construction equipment (tracked) to be used to avoid over compaction.
- Drip – The system will dose 4 zones at 0.2 gpd/sf. Each zone is 0.12 acres, for a total of 0.47 acres. The drip field area is 20,300 square feet and contains 5,000 linear feet of 1.25-inch tubing fitted with emitters every 5 ft and capable of loading at peak flow of less than 0.2 gpd/sf.

5. Operating Permit

Missouri State Operating Permit No. MO-0122564 will require modification to reflect the construction activities, which was successfully public noticed from June 26, 2026, to July 26, 2026, with no comments received. Once construction is completed, submit the Statement of Work Completed to the department in accordance with 10 CSR 20-6.010(5)(N) and request the operating permit modification be issued.

V. Notice of Right to Appeal

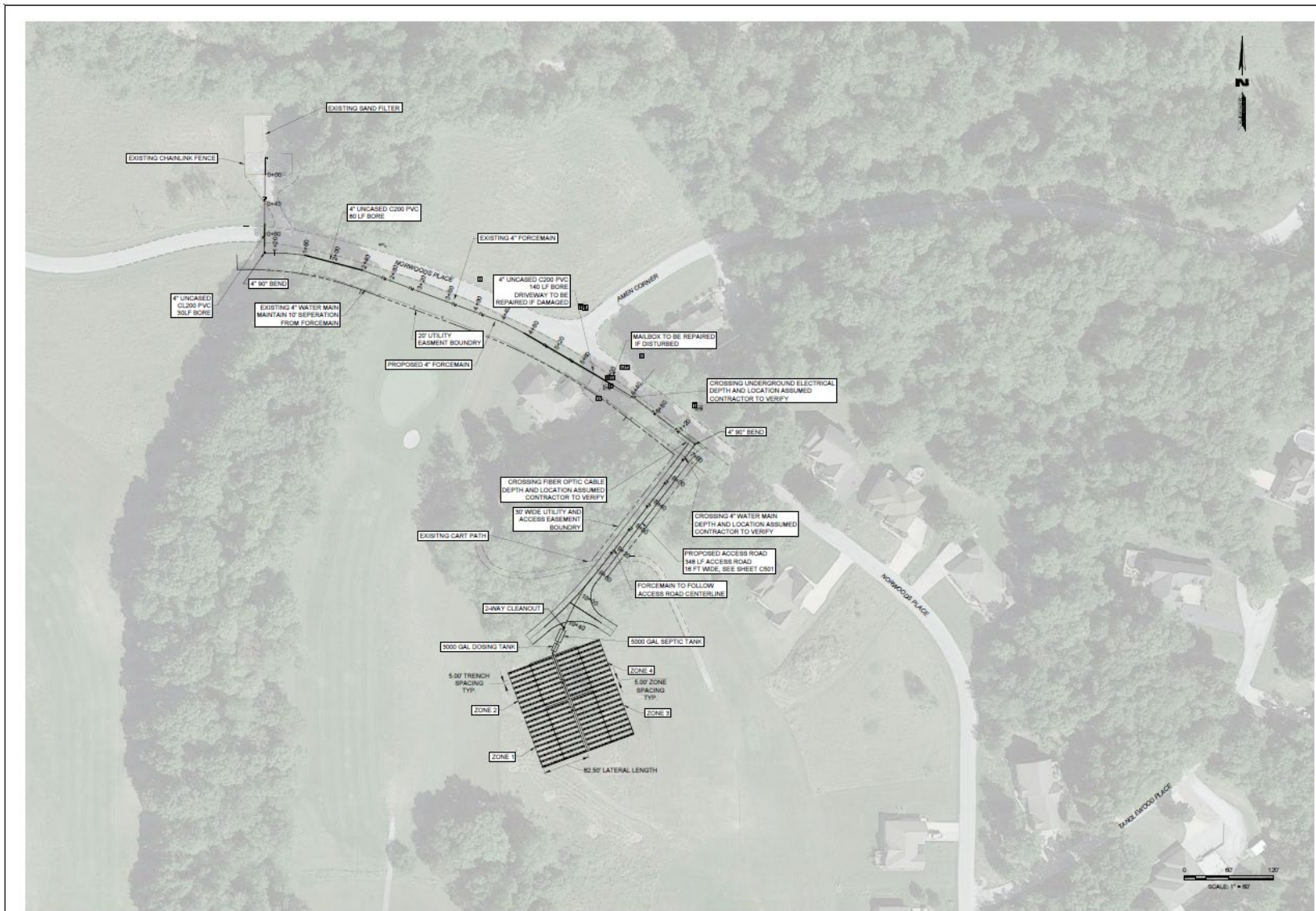
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the AHC. Any appeal should be directed to:

Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

Joshua Brown, P.E.
Financial Assistance Center
joshua.brown@dnr.mo.gov

APPENDIX

1. System Layout



KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors
www.klingner.com

Hannibal, Missouri
4910 Park Grand Road
971.221.0009

Colum, IL, Suburban, IL
Galesburg, IL, Peoria, IL, D.C.
Columbia, MO, California, IL

[illegible]

NORWOODS SEPTIC SYSTEM
RALLS COUNTY PWSD NO. 1 52651 NORWOODS PL. HANNIBAL, MO

Non-Reduced Sheet Size: 32" x 34"

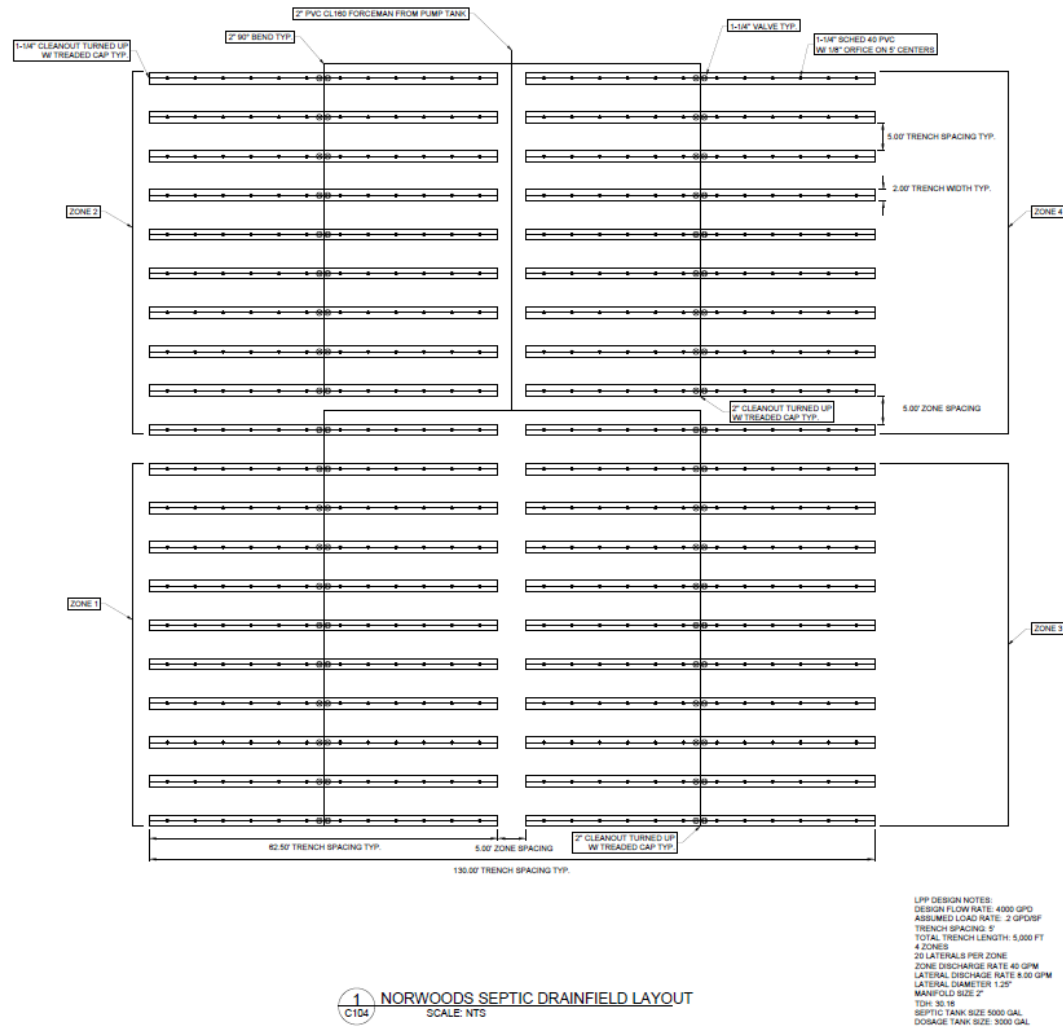
DEBITED MCB	CREDITED SAL
FIELD	FIELD BOOK
CHECKED MCB	CHECK DATE 2020/2028

SHEET TITLE
PROJECT
OVERVIEW

11/11/2017

PROJECT NO. 21-1081
DRAWING ISSUED DATE: 2/20/2025

SHEET
C100



LPP DESIGN NOTES:
DESIGN FLOW RATE: 4000 GPD
ASSUMED LOAD RATE: 2 GPD/SF
TRENCH SPACING: 5'
TOTAL TRENCH LENGTH: 5,000 FT
4 ZONES
20 LATERALS PER ZONE
ZONE DISCHARGE RATE 40 GPM
LATERAL DISCHARGE RATE 8.00 GPM
LATERAL DIAMETER 1.25"
MANIFOLD SIZE 2"
TDH: 30.15
SEPTIC TANK SIZE 5000 GAL
DOSAGE TANK SIZE 3000 GAL

1 NORWOODS SEPTIC DRAINFIELD LAYOUT
C104 SCALE: NTS

KLINGNER
& ASSOCIATES, P.C.
Engineers • Architects • Surveyors
www.klingner.com

Hannibal, Missouri
 4810 Footh David Road
 Hannibal, MO 63050
 314.221.0000

Quincy, Illinois
 601 S. Main Street
 Quincy, IL 62450
 217.221.0000

Galena, Illinois
 101 S. Main Street
 Galena, IL 61230
 815.221.0000

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REVISION HISTORY

[illegible]

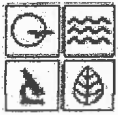
NORWOODS SEPTIC SYSTEM	RALLS COUNTY PWSO NO. 1 52651 NORWOODS PL, HANNIBAL, MO
------------------------	---

Non-Reduced Sheet Size: 22" x 34"	
Full sheet plans have been prepared using standard scales. Reduced size plans may not conform to standard scales.	
DESIGNED MCB	DRAWN SAL
FIELD	FIELD BOOK
CHECKED MCB	CHECK DATE 2/20/2008

SHEET TITLE
DRAINFIELD
LAYOUT

PROJECT NO. 21-1081
DRAWING ISSUED DATE: 2/20/2026
SHEET

C104



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

RECEIVED

APPLICATION FOR CONSTRUCTION PERMIT – SEP 08 2025
WASTEWATER TREATMENT FACILITY

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1,000-	CHECK NO. 1059
DATE RECEIVED 9/8/25	

Water Protection Program

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Treatment Facility 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: DNR-SRF Project #: 21-1081
- 1.2 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
☐ YES Date of Approval: _____ ☒ N/A
- 1.3 Has the department approved the proposed project's facility plan*?
☐ YES Date of Approval: _____ ☒ NO (If No, complete No. 1.4.)
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan* for wastewater treatment facilities included with this application?
☒ YES ☐ NO ☐ Exempt because _____
- 1.5 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
- 1.6 Is a summary of design* included with this application? ☒ YES ☐ NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
☐ YES Date of submittal: _____
☒ Enclosed is the appropriate operating permit application and fee submittal. Denote which form: ☐ A ☒ B ☐ B2
☐ N/A: However, In the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? ☐ YES ☐ NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? ☒ YES ☐ NO
- 1.9 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 Norwoods Subdivision WWTF	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 376,000
2.3 PROJECT DESCRIPTION Existing sand filter shall be decommissioned. Lift station will be retrofitted to pump through 1,068ft of 4" PVC forcemain to 5000gal septic tank, which will flow into 3000gal dosing tank, which will pump into the drainfield, comprised of two zones of six 69.25' laterals	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION 5000gal septic tank shall contain sludge. Sludge to be disposed of by contracted sludge hauler in compliance with regulations.	
2.5 DESIGN INFORMATION A. Current population: <u>63</u> ; Design population: <u>120</u> B. Actual Flow: <u>2100</u> gpd; Design Average Flow: <u>4000</u> gpd; Actual Peak Daily Flow: <u>6558</u> gpd; Design Maximum Daily Flow: <u>8640</u> gpd; Design Wet Weather Event: <u>100 year</u>	
2.6 ADDITIONAL INFORMATION A. Is a topographic map attached? ☒ YES ☐ NO B. Is a process flow diagram attached? ☒ YES ☐ NO	

3.0 WASTEWATER TREATMENT FACILITY				
NAME Norwoods Subdivison WWTF		TELEPHONE NUMBER WITH AREA CODE 573-221-6615		E-MAIL ADDRESS tstuhlman@alliancewater.com
ADDRESS (PHYSICAL) 52608 Norwoods Place	CITY Hannibal	STATE MO	ZIP CODE 63401	COUNTY Ralls
Wastewater Treatment Facility: Mo- 0122564 (Outfall 1 Of 1)				
3.1 Legal Description: _____ ¼, _____ ¼, _____ ¼, Sec. <u>5</u> , T <u>56N</u> , R <u>5W</u> (Use additional pages if construction of more than one outfall is proposed.)				
3.2 UTM Coordinates Easting (X): <u>630089</u> Northing (Y): <u>4393894</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)				
3.3 Name of receiving streams: <u>Tributary to Little Bear Creek</u>				
4.0 PROJECT OWNER				
NAME Public Water Supply District No 1 of Ralls County		TELEPHONE NUMBER WITH AREA CODE 573-221-6615		E-MAIL ADDRESS tstuhlman@alliancewater.com
ADDRESS 3316 Market Street	CITY Hannibal	STATE MO	ZIP CODE 63401	
5.0 CONTINUING AUTHORITY: A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements.				
NAME Public Water Supply District No 1 of Ralls County		TELEPHONE NUMBER WITH AREA CODE 573-221-6615		E-MAIL ADDRESS
ADDRESS 3316 Market Street	CITY Hannibal	STATE MO	ZIP CODE 63401	
5.1 A letter from the continuing authority, if different than the owner, is included with this application. ☐ YES ☐ NO ☒ 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? ☐ YES ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ 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? ☐ YES ☐ NO				
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO				
6.0 ENGINEER				
ENGINEER NAME / COMPANY NAME Klingner & Associates, P.C.		TELEPHONE NUMBER WITH AREA CODE 573-221-0020		E-MAIL ADDRESS mcb@klingner.com
ADDRESS 4510 Paris Gravel Road	CITY Hannibal	STATE MO	ZIP CODE 63401	
7.0 APPLICATION FEE				
☐ CHECK NUMBER ☐ JETPAY CONFIRMATION NUMBER				
8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.				
PROJECT OWNER SIGNATURE 				
PRINTED NAME Aaron Ball			DATE 8-26-25	
TITLE OR CORPORATE POSITION President		TELEPHONE NUMBER WITH AREA CODE 573-221-6615		E-MAIL ADDRESS tstuhlman@alliancewater.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.				

PART B – LAND APPLICATION ONLY**(Submit only if the proposed construction project includes land application of wastewater.)****8.0 FACILITY INFORMATION**

8.1 Type of wastewater to be irrigated: ☒ Domestic ☐ State/National Park ☐ Seasonal business
☐ Municipal ☐ Municipal with a pretreatment program or significant industrial users
☐ Other (explain) _____

8.2 Months when the business or enterprise will operate or generate wastewater:
☒ 12 months per year ☐ Part of the year (list months): _____

8.3 This system is designed for:
☒ No-discharge.
☐ Partial irrigation when feasible and discharge rest of time.
☐ Irrigation during recreational season, April – October, and discharge during November – March.
☐ Other (explain) _____.

9.0 STORAGE BASINS

9.1 Number of storage basins: 0 (Use additional pages if greater than three basins.)

9.2 Type of basins: ☐ Steel ☐ Concrete ☐ Fiberglass ☐ Earthen ☐ Earthen with membrane liner

9.3 Storage basin dimensions at inside top of berm (feet). Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

Basin #1: Length _____	Width _____	Depth _____	Freeboard _____	Depth _____	Safety _____	% Slope _____
Basin #2: Length _____	Width _____	Depth _____	Freeboard _____	Depth _____	Safety _____	% Slope _____
Basin #3: Length _____	Width _____	Depth _____	Freeboard _____	Depth _____	Safety _____	% Slope _____

9.4 Storage Basin operating levels (report as feet below emergency overflow level).

Basin #1: Maximum operating water level _____ ft	Minimum operating water level _____ ft
Basin #2: Maximum operating water level _____ ft	Minimum operating water level _____ ft
Basin #3: Maximum operating water level _____ ft	Minimum operating water level _____ ft

9.5 Design depth of sludge in storage basins.

Basin #1: _____ ft Basin #2: _____ ft Basin #3: _____ ft

9.6 Existing sludge depth, if the basins are currently in operation.

Basin #1: _____ ft Basin #2: _____ ft Basin #3: _____ ft

9.7 Total design sludge storage: _____ dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Number of irrigation sites 1 Total Acres .11 Maximum % field slopes 7
Location: _____ 1/4, _____ 1/4, _____ 1/4, 54 Sec. 5 T 5 R Ralls County .11 Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ 1/4, _____ 1/4, _____ 1/4, _____ Sec. _____ T _____ R _____ County _____ Acres
(Use additional pages if greater than three irrigation sites.)

10.2 Type of vegetation: ☐ Grass hay ☒ Pasture ☐ Timber ☐ Row crops
☐ Other (describe) _____

10.3 Wastewater flow (dry weather) gallons per day: Average annual 2100 Seasonal - Off-season -

10.4 Land application rate (design flow including 1-in-10 year storm water flows):

Design: <u>53.8</u> inches/year	<u>.006</u> inches/hour	<u>.147</u> inches/day	<u>1.03</u> inches/week
Actual: <u>28.2</u> inches/year	<u>.003</u> inches/hour	<u>.077</u> inches/day	<u>.541</u> inches/week

10.5 Total irrigation per year (gallons): Design: 1460000 gal Actual: 766500 gal

10.6 Actual months used for irrigation (check all that apply):

☒ Jan ☒ Feb ☒ Mar ☒ Apr ☒ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☒ Oct ☒ Nov ☒ Dec

10.7 Land application rate is based on:

☒ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N&P) If N&P is selected, is the plan included? ☐ YES ☐ NO



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

**FORM B: APPLICATION FOR OPERATING PERMIT FOR
FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND
HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000
GALLONS PER DAY**

FOR AGENCY USE ONLY

CHECK NUMBER

DATE RECEIVED

FEE SUBMITTED

JETPAY CONFIRMATION NUMBER

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

- ☐ An operating permit for a new or unpermitted facility. Construction Permit # _____
(Include completed antidegradation review or request for antidegradation review, see instructions)
- ☐ A new site-specific operating permit formerly general permit #MOG _____
- ☐ A site-specific operating permit renewal: Permit #MO- _____ Expiration Date _____
- ☒ A site-specific operating permit modification: Permit #MO- 0122564 Reason: Facility Upgrade
- ☐ General permit (NON-POTWs) (MOGD –discharging < 50,000 GPD or MOG823 – Land Application of Domestic Wastewater):
Permit #MO- _____ Expiration Date _____

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? ☐ YES ☐ NO

2. FACILITY

NAME Norwoods Subdivison WWTF		TELEPHONE NUMBER WITH AREA CODE 573-221-6615	
ADDRESS (PHYSICAL) 52608 Norwoods Place	CITY Hannibal	STATE MO	ZIP CODE 63401
2.1 Legal description: Sec. 5 , T 56N , R 5W		County Ralls	
2.2 UTM Coordinates Easting (X): 630089 Northing (Y): 4393894 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: Tributary to Little Bear Creek			
2.4 Number of outfalls: 1 Wastewater outfalls: 1 Stormwater outfalls: - Instream monitoring sites: -			

3. OWNER:

NAME Public Water Supply District No 1 of Ralls County		EMAIL ADDRESS tstuhlman@alliancewater.co		TELEPHONE NUMBER WITH AREA CODE 573-221-6615	
ADDRESS 3316 Market Street	CITY Hannibal	STATE MO	ZIP CODE 63401		
3.1 Request review of draft permit prior to public notice? ☒ YES ☐ NO					
3.2 Are you a publicly owned treatment works? ☒ YES ☐ NO If yes, please attach the Financial Questionnaire. See: https://dnr.mo.gov/forms/780-2511-f.pdf					
3.3 Are you a privately owned treatment works? ☐ YES ☒ NO					
3.4 Are you a privately owned treatment facility regulated by the Public Service Commission? ☐ YES ☒ NO					

4. CONTINUING AUTHORITY:

NAME PWSD 1 of Ralls County		EMAIL ADDRESS tstuhlman@alliancewater.co		TELEPHONE NUMBER WITH AREA CODE 573-221-6615	
ADDRESS 3316 Market Street	CITY Hannibal	STATE MO	ZIP CODE 63401		

If the continuing authority is different than the owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

NAME Tyler Stuhlman	TITLE Local Manager	CERTIFICATE NUMBER
EMAIL ADDRESS tstuhlman@alliancewater.com		TELEPHONE NUMBER WITH AREA CODE 573-221-6615

6. FACILITY CONTACT

NAME Tyler Stuhlman		TITLE Local Manager	
EMAIL ADDRESS tstuhlman@alliancewater.com		TELEPHONE NUMBER WITH AREA CODE 573-221-6615	
ADDRESS 3316 Market Street	CITY Hannibal	STATE MO	ZIP CODE 63401

7. DESCRIPTION OF FACILITY

7.1 Process Flow Diagram or Schematic: Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents, and outfalls. Specify where samples are taken. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram.

Attach sheets as necessary.

Attached sheets include both a plan view and diagrammatic representation of the proposed process for the facility overhaul.

Influent arrives into facility lift station and is then pumped southeast via a 4" PVC forcemain to a 5000 gallon septic tank. Flow proceeds from the septic tank to the 3000 gallon dosing tank, where it is then pumped through the drainfield, which consists of two zones of six 69.25' laterals.

The existing sand filter and outfall will be decommissioned.

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

Please see the following website:

<https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce>

8. ADDITIONAL FACILITY INFORMATION		
8.1	Number of people presently connected or population equivalent (P.E.) <u>63</u>	Design P.E. <u>120</u>
8.2	Connections to the facility: <u>17</u> Number of units presently connected: <u>17</u> Residential: <u>17</u> Commercial: <u> </u> Industrial: <u> </u>	
8.3	Design flow: <u>4000</u>	Actual flow: <u>2,100</u>
8.4	Will discharge be continuous through the year? ☒ Yes ☐ No Discharge will occur during the following months: <u>All</u> How many days of the week will discharge occur? <u>7</u>	
8.5	Is industrial wastewater discharged to the facility? ☐ Yes ☒ No If yes, attach a list of the industries that discharge to your facility	
8.6	Does the facility accept or process leachate from landfills? ☐ Yes ☒ No	
8.7	Is wastewater land applied? ☒ Yes ☐ No If yes, attach Form I. See: https://dnr.mo.gov/forms/780-1686-f.pdf	
8.8	Does the facility discharge to a losing stream or sinkhole? ☐ Yes ☒ No	
8.9	Has a wasteload allocation study been completed for this facility? ☐ Yes ☒ No	
9. LABORATORY CONTROL INFORMATION		
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL		
Lab work conducted outside of plant. ☐ Yes ☒ No Push-button or visual methods for simple test such as pH, settleable solids. ☐ Yes ☒ No Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content. ☐ Yes ☒ No More advanced determinations, such as BOD seeding procedures, fecal coliform/ <i>E. coli</i> , nutrients (including Ammonia), Oil & Grease, \ total oils, phenols, etc. ☐ Yes ☒ No Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph. ☐ Yes ☒ No		
10. COLLECTION SYSTEM		
10.1 Are there any municipal satellite collection systems connected to this facility? ☐ Yes ☒ No If yes, please list all connected to this facility, contact phone number and length of each collection system		
FACILITY NAME	CONTACT PHONE NUMBER	LENGTH OF SYSTEM (FEET OR MILES)
10.2 Length of pipe in the sewer collection system? (If available, include totals from satellite collection systems) <u> </u> Feet, or <u>.5</u> Miles (either unit is appropriate)		
10.3 Does significant infiltration occur in the collection system? ☐ Yes ☒ No If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:		

11. BYPASSINGDoes any bypassing occur in the collection system or at the treatment facility? ☐ Yes ☒ No

If yes, explain:

12. SLUDGE HANDLING, USE AND DISPOSAL**12.1** Is the sludge a hazardous waste as defined by 10 CSR 25? ☐ Yes ☒ No**12.2** Sludge production, including sludge received from others: 4.38 Design dry tons/year 2.30 Actual dry tons/year**12.3** Capacity of sludge holding structures:Sludge storage provided: 1049 cubic feet; 2767 days of storage; 2.5% average percent solids of sludge;
☐ No sludge storage is provided. ☐ Sludge is stored in lagoon.**12.4** Type of Storage: ☒ Holding tank ☐ Building
☐ Basin ☐ Lagoon
☐ Concrete Pad ☐ Other (Describe) _____**12.5** Sludge Treatment:☐ Anaerobic Digester ☐ Lagoon ☐ Composting
☒ Storage Tank ☐ Aerobic Digester ☐ Other (Attach description)
☐ Lime Stabilization ☐ Air or Heat Drying**12.6** Sludge Use or Disposal:☐ Land Application ☐ Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
☐ Contract Hauler ☒ Hauled to Another treatment facility
☐ Incineration ☐ Sludge Retained in Wastewater treatment lagoon
☐ Solid waste landfill**12.7** Person responsible for hauling sludge to disposal facility:☐ By applicant ☒ By others (complete below)

NAME		EMAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

12.8 Sludge use or disposal facility☐ By applicant ☒ By others (Complete below.)

NAME		EMAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?☒ Yes ☐ No (Explain)

13. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127, National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure a timely, complete, accurate, and nationally- consistent set of data. One of the following options must be checked in order for this application to be considered complete. Visit <https://dnr.mo.gov/env/wpp/edmr.htm> to for information on the Department's eDMR system and how to register.

- ☐ I will register an account online to participate in the Department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before any reporting is due, in compliance with the Electronic Reporting Rule.
- ☒ I have already registered an account online to participate in the Department's eDMR system through MoGEM.
- ☐ I have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.
- ☐ The permit I am applying for does not require the submission of discharge monitoring reports.

14. JETPAY

Permit fees may be payed online by credit card or eCheck through a system called JetPay. Use the URL provided to access JetPay and make an online payment.

New Site Specific Permit: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591/>

Construction Permits: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/592/>

Modification Fee: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/>

New General Domestic WW: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/772/>

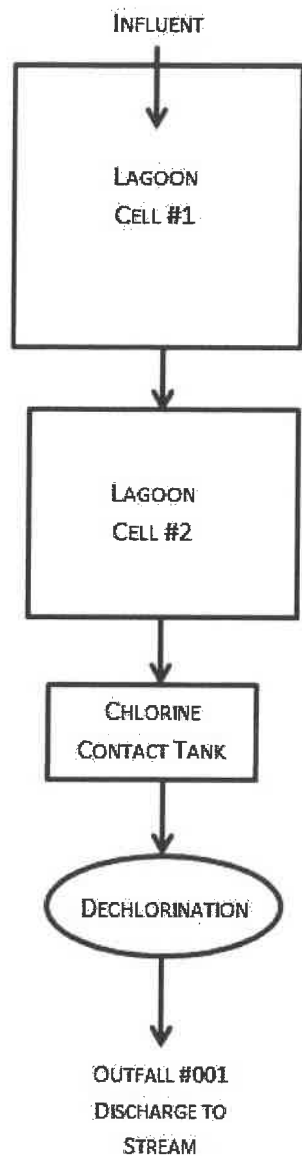
15. CERTIFICATION

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that 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 that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

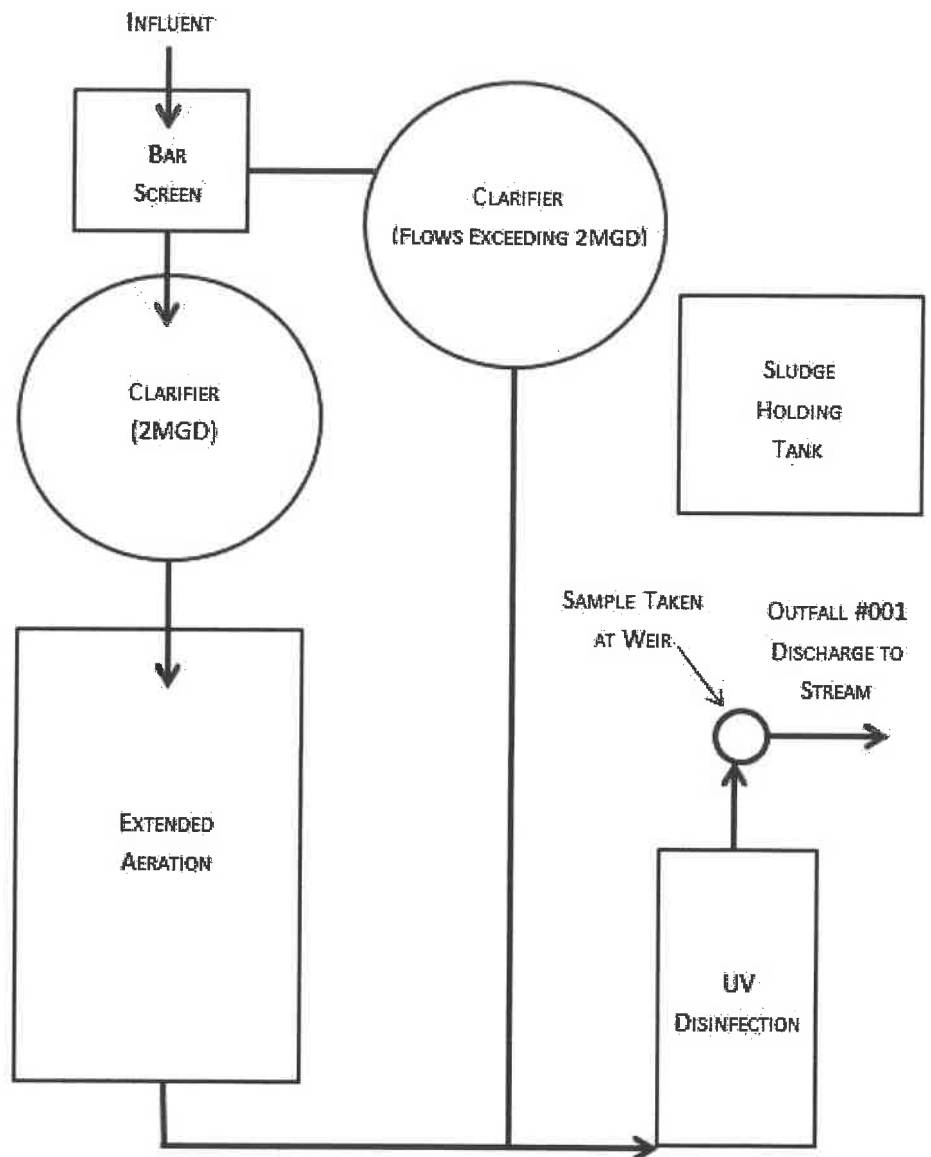
NAME (TYPE OR PRINT)	OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Aaron Ball	President	573-221-6615
SIGNATURE 		DATE SIGNED 8-26-25

7.1 Process Flow Diagram Examples

WASTEWATER TREATMENT LAGOON



WASTEWATER TREATMENT FACILITY

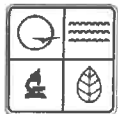


7.2 A topographic map is available on the Web at <https://modnr.maps.arcgis.com/apps/webappviewer/index.html?id=1d81212e0854478ca0dae87c33c8c5ce> or from the Department of Natural Resources' Geological Survey Division in Rolla at 573-368-2125.

8.1-8.6 Self-explanatory.

8.7 If wastewater is land applied submit Form I: www.dnr.mo.gov/forms/780-1686-f.pdf.

8.9-8.9 Self-explanatory



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
**FORM I – PERMIT APPLICATION FOR
OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

FOR AGENCY USE ONLY

PERMIT NUMBER

MO -

DATE RECEIVED

INSTRUCTIONS: The following forms must be submitted with Form I: **FORM B** or **B2** for domestic wastewater.
FORM A for industrial wastewater.

1. FACILITY INFORMATION

1.1 Facility Name

Norwoods Subdivison WWTF

1.2 Permit Number

MO- 0122564

1.3 Type of wastewater to be irrigated: ☒ Domestic ☐ Municipal ☐ State/National Park ☐ Seasonal business
☐ Municipal with Pretreatment Program or Significant Industrial Users ☐ Other (explain) _____

SIC Codes (list all that apply, in order of importance) _____

1.4 Months when the business or enterprise will operate or generate wastewater:

☒ 12 months per year ☐ Part of year (list Months): _____

1.5 This system is designed for:

☒ No-discharge ☐ Partial irrigation when feasible and discharge rest of time.
☐ Irrigation during recreation season (April – October) and discharge during November – March.
☐ Other (explain) _____

1.6 List the Facility outfalls which will be applicable to the irrigation system.

Outfall Numbers: 1 _____

2. STORAGE BASINS

2.1 Number of storage basins: 0

Type of basin: ☐ Steel ☐ Concrete ☐ Fiberglass ☐ Earthen
☐ Earthen with membrane liner

3. LAND APPLICATION SYSTEM

3.1 Number of irrigation sites 1 Total Acres .11

Location: _____ ¼, _____ ¼, _____ ¼, Sec 54 T 5 R 5 Ralls County .11 Acres

Location: _____ ¼, _____ ¼, _____ ¼, Sec _____ T _____ R _____ County _____ Acres

Attach pages as needed.

3.2 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings, and other pertinent features.

3.3 Type of vegetation: ☐ Grass hay ☒ Pasture ☐ Timber ☐ Row crops ☐ Other (describe) _____

3.4 Wastewater flow (dry weather) gallons/day:

Average annual: 2100 gpd Seasonal _____ Off-season _____

Months of seasonal flow: _____

3. LAND APPLICATION SYSTEM (continued)

3.5 Land Application rate per acre (design flow including 1 in 10 year stormwater flows):

Design: 53.8 inches/year .006 inches/hour .147 inches/day 1.03 inches/week

Actual: 28.2 inches/year .003 inches/hour .077 inches/day .541 inches/week

Total Irrigation per year (gallons): 1460000 Design 766500 Actual

Actual months used for Irrigation (check all that apply):

☒ Jan ☒ Feb ☒ Mar ☒ Apr ☒ May ☒ Jun ☒ Jul ☒ Aug ☒ Sep ☒ Oct ☒ Nov ☒ Dec

3.6 Land Application Rate is based on:

☐ Nutrient Management Plan (N&P)

☒ Hydraulic Loading

☐ Other (describe) _____

3.7 Equipment type: ☐ Sprinklers ☐ Gated pipe ☐ Center pivot ☐ Traveling gun ☒ Other (describe) LPP

Equipment Flow Capacity: 4000 Gallons per hour 2433 Total hours of operation per year

3.8 **Public Use Areas.** Public access shall not be allowed to public use area irrigation sites when application is occurring. Method of Public Access Restriction:

☐ Site is Fenced

☐ Wastewater disinfection prior to irrigation

☒ Site is not for public use

☐ Other (describe): _____

3.9 Separation distance (in feet) from the outside edge of the wetted irrigation area to nearby down gradient features:

_____ Permanent flowing stream _____ Losing Stream _____ Intermittent (wet weather) stream _____ Lake or pond

18 Property boundary 275 Dwellings _____ Water supply well _____ Other (describe) _____

3.10 The facility must develop and retain an Operation and Maintenance (O&M) Plan for the irrigation system.

Date of O&M Plan: _____

4. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.

OWNER OR AUTHORIZED REPRESENTATIVE

Aaron Ball

OFFICIAL TITLE

President

EMAIL ADDRESS

TELEPHONE NUMBER WITH AREA CODE

(573) 221-6615

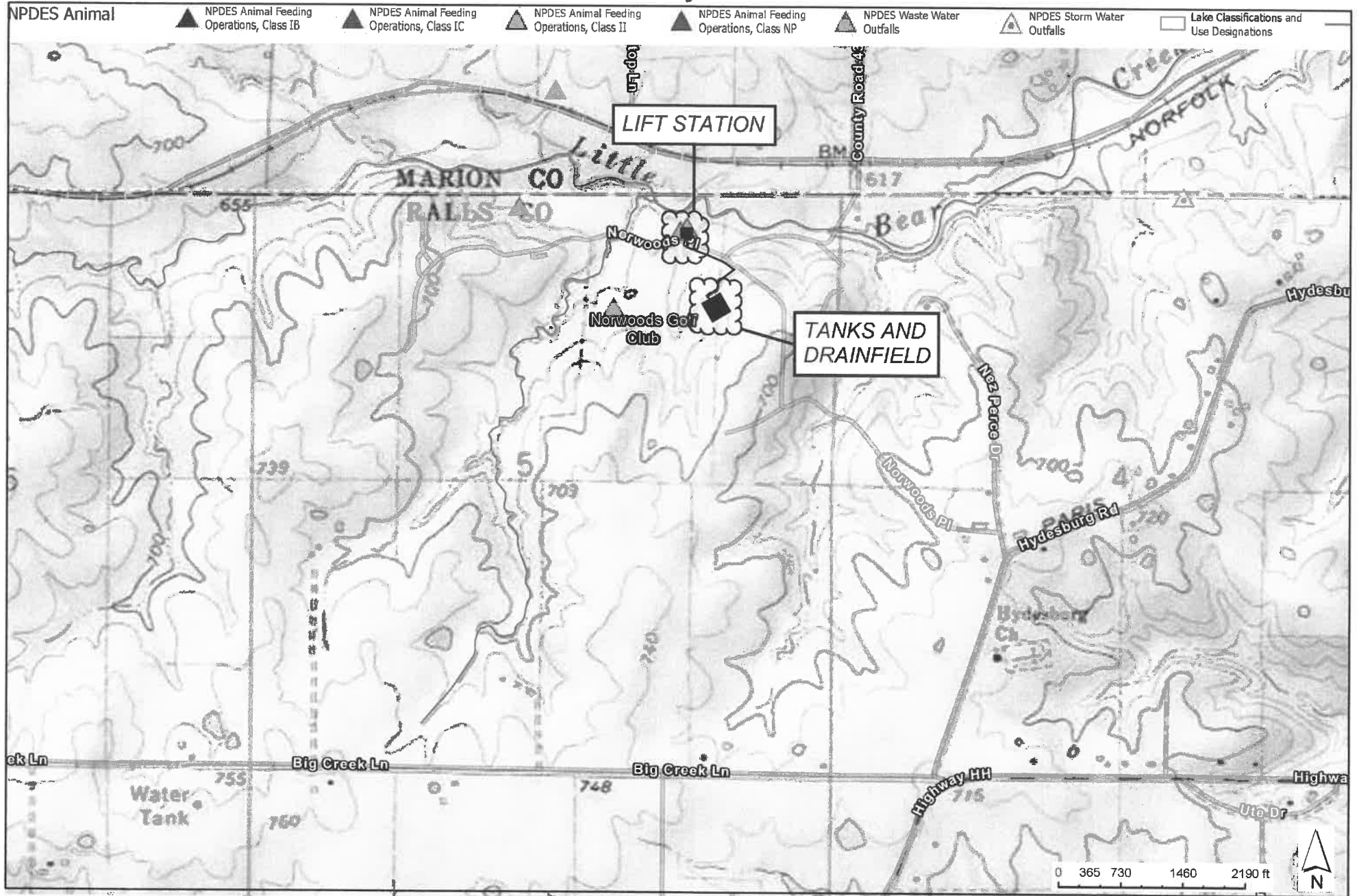
SIGNATURE



DATE SIGNED

8-26-25

Water Quality Standards

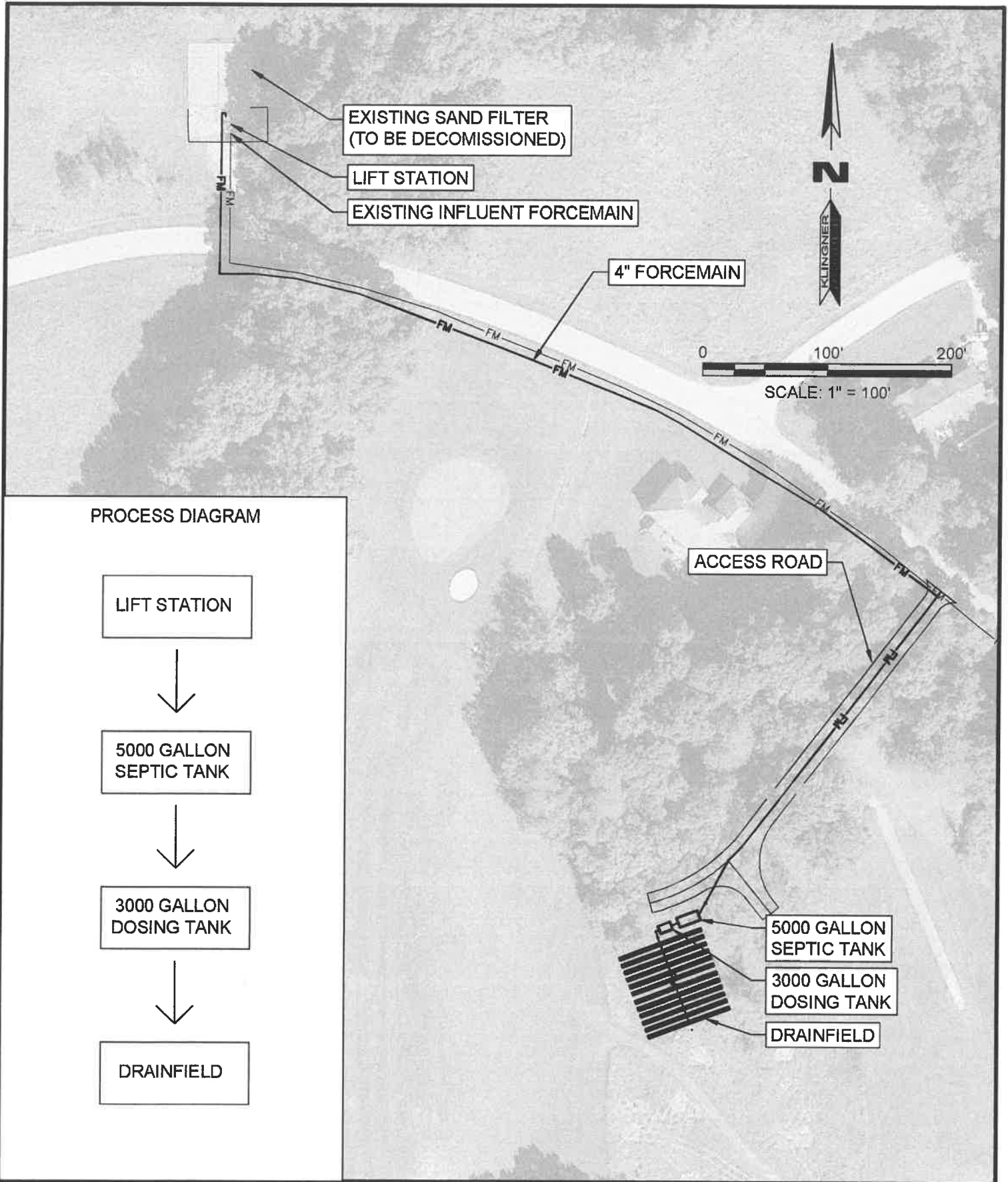


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July 29, 2025 12:39 PM CDT



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**PRELIMINARY
 NOT FOR
 CONSTRUCTION**

NORWOODS SEPTIC SYSTEM

**RALLS COUNTY PWSD NO. 1 52651
 NORWOODS PL, HANNIBAL, MO**

DESIGNED MCB & SAL	DRAWN SAL	SHEET TITLE NORWOODS WWTF - FACILITY PLAN AND PROCESS DIAGRAM
FIELD	FIELD BOOK	
CHECKED MCB	CHECK DATE 7/29/2025	SHEET C100
DRAWING ISSUED DATE	PROJECT NO. 21-1081	

SUMMARY OF DESIGN

NORWOODS WWTF

Ralls County PWSD #1 is retrofitting the Norwoods wastewater treatment facility, located in Hannibal, MO to meet limits on ammonia and modernize the facility. The current facility discharges into an unnamed tributary of Little Bear Creek. The overall project will convert the facility to a non-discharging facility and includes the decommissioning of the existing sand filter, retrofitting of the lift station with new pumps, and the construction of 1,068' of 4" PVC forcemain, 5000-gallon septic tank and 3000-gallon dosing tank, an .11-acre drainfield, and 348' access road. The following is a summary of the design for the facility:

Hydraulic Loadings

Design Average Flow:	2100 gpd
Design Max Daily Flow:	4000 gpd
Design Peak Hourly Flow:	360 Gal/hour (8640 gpd)
Current Population Equivalent:	63 PE
Design Population Equivalent:	120 PE

Drainfield Design

Zones:	2
Manifold size:	2"
Laterals per zone:	6
Lateral spacing:	4'
Lateral length:	69.25'
Total Lateral Length:	833.33'
Lateral size:	1-1/4" SCH 40 PVC
Orifice sizing:	1/8" on 5' centers
Assumed Loading Rate:	1.2 gpd/sf
Zone Discharge Rate:	26.67 GPM
Lateral Discharge Rate:	8.87 GPM
TDH:	12.81



Septic Tank

Material: Precast Concrete
Outer Dimensions: 17'-6" x 8' x 11'-9"
Typical Wall Thickness: 6"

Dosing Tank:

Material: Precast Concrete
Outer Dimensions: 10'-6" x 5'-6" x 9'-3"
Typical Wall Thickness: 3"
Dosing Pump Size: .5hp
Dosing Pump Electrical: 208V/1Ø/60hz

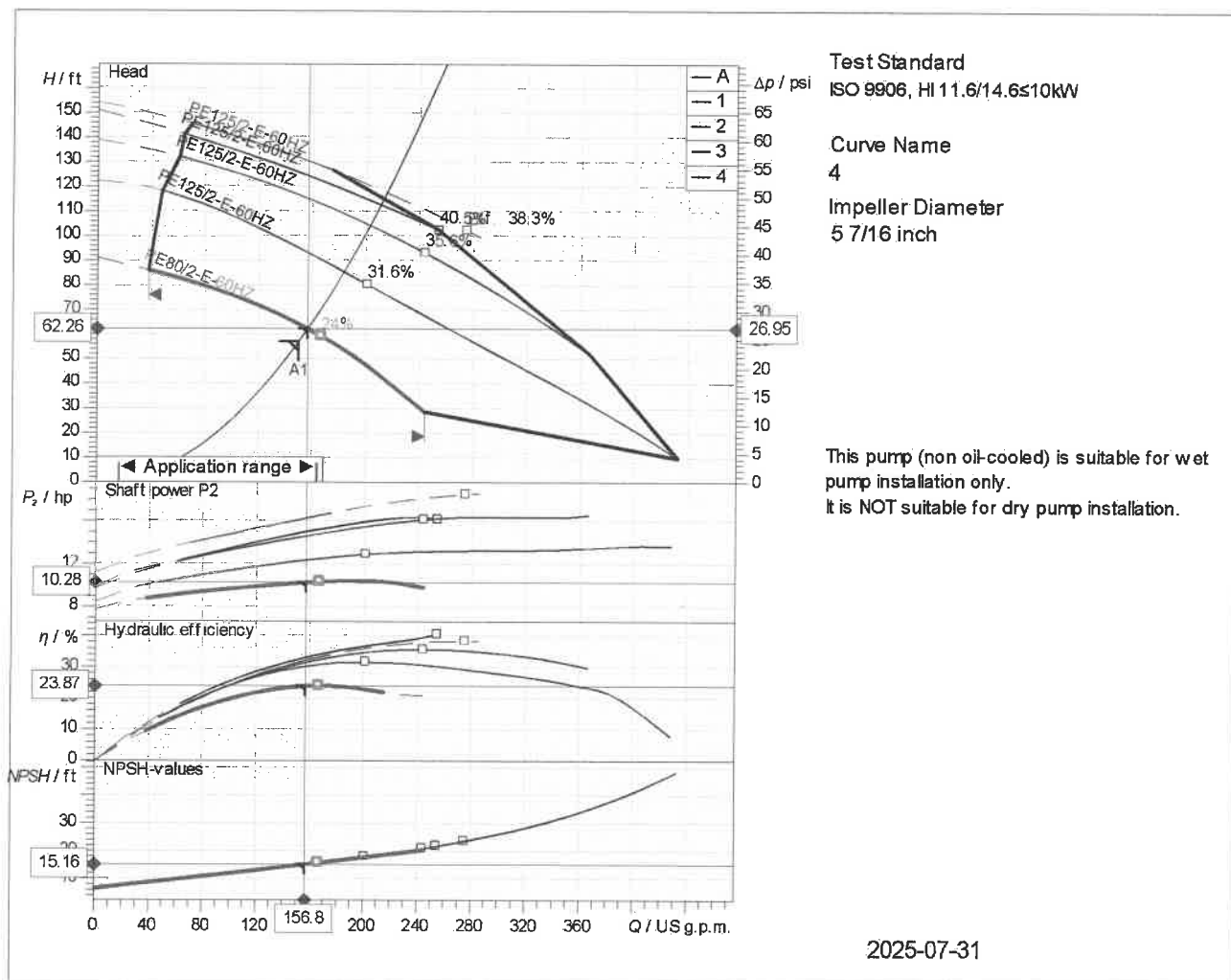
Forcemain:

Length: 1,068'
Pipe Type: 4" CL200 PVC

Lift Station Pumps:

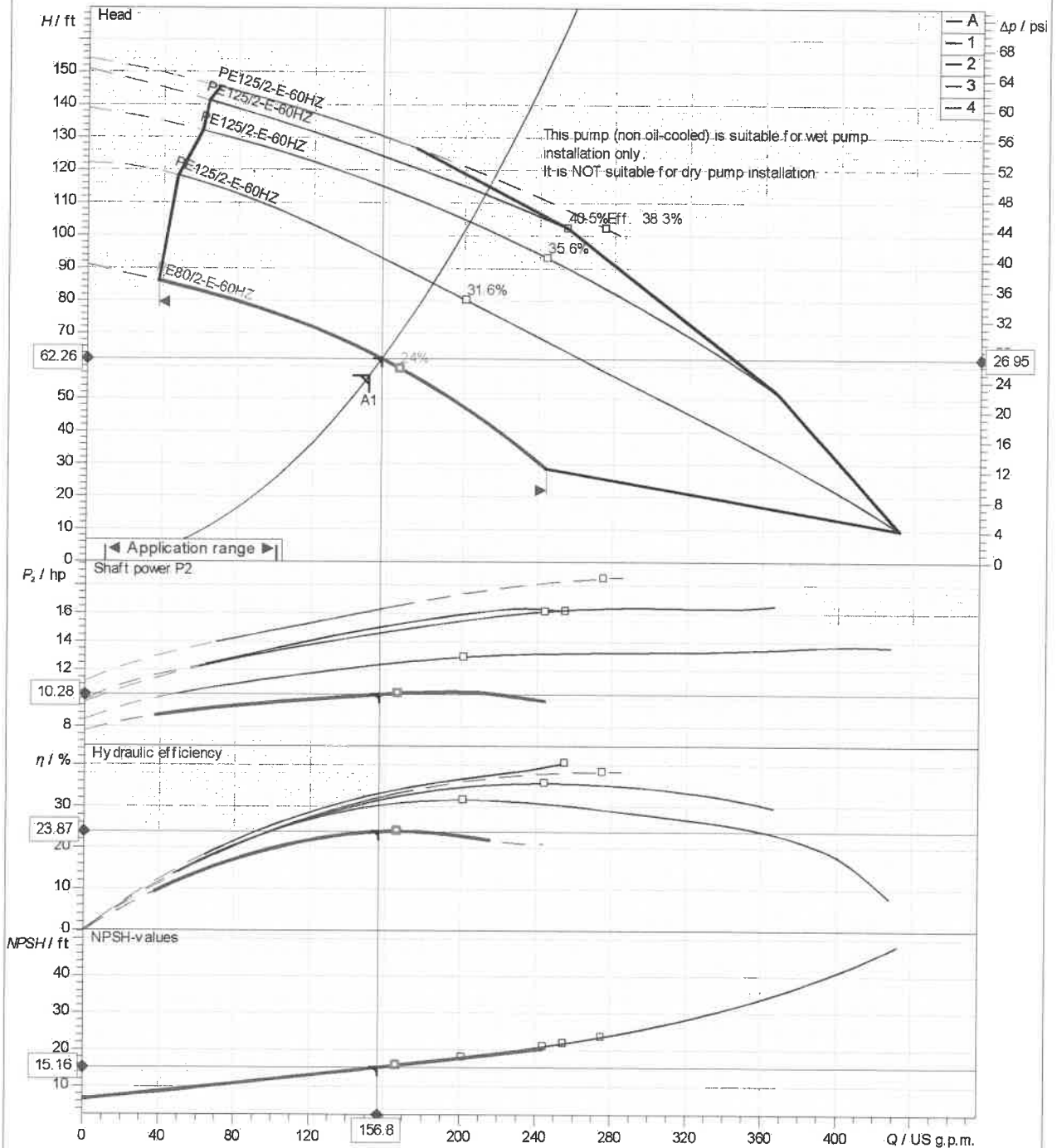
Quantity: 2 (Duplex)
Pump Size: 10hp
Duty Point: 150gpm @ 57' TDH
Electrical: 230V/3Ø/60hz
Pump Curve: *See Attached Data Sheet*

XFP 81E VX 60HZ (wet pit)



Operating data specification		Power input	
Flow	156.8 US g.p.m.	Head	11.4 hp
Efficiency	23.9 %	Shaft power	62.3 ft
NPSH	15.2 ft	Fluid	10.3 hp
Temperature	68 °F	Nature of system	Water
No. of pumps	1		Single head pump
Pump data		Make	
Type	XFP 81E VX 60HZ (wet pit)	Impeller	SULZER
Series	XFP PE1-PE3	Impeller size	Vortex impeller
N° of vanes	4	Suction flange	5 7/16 inch
Free passage	2.56 inch	Type of installation	DN80
Discharge flange	DN80		
Moment of inertia	0.346 lb ft²		Wet well installation with pedestal
Motor data		Frequency	
Rated voltage	460 V	Nominal Speed	60 Hz
Rated power P2	10.7 hp	Efficiency	3520 rpm
Number of poles	2	Rated current	90.2 %
Power factor	0.83	Rated torque	13.3 A
Starting current	98 A	Degree of protection	16 lbf ft
Starting torque	43.2 lbf ft	No. starts per hour	IP 68
Insulation class	H		15

Curve number		Pump performance curves XFP 81E VX 60HZ (wet pit)				SULZER	
Reference curve XFP81E VX 60HZ							
					Discharge DN80	Frequency 60 Hz	
Density 62.32 lb/ft³	Viscosity 1.082E-5 ft²/s	Test Standard ISO 9906, HI 11.6/14.6≤10kW			Rated speed 3524 rpm	Date 2025-07-31	
Flow 156.8 US g.p.m.	Head 62.3 ft	Shaft power 10.3 hp	Power input 11.4 hp	Rated power P2 10.7 hp	Hyd. efficiency 23.9 %	NPSH 15.2 ft	



Wet well installation with pedestal

Impeller size 5 7/16 inch	N° of vanes 4	Impeller Vortex impeller	Solid size 2.56 inch	Revision
------------------------------	------------------	-----------------------------	-------------------------	----------

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Frequency
60 Hz

PE2

Motor performance curve

SULZER

PE80/2-E-60HZ

Rated power
10.7 hp

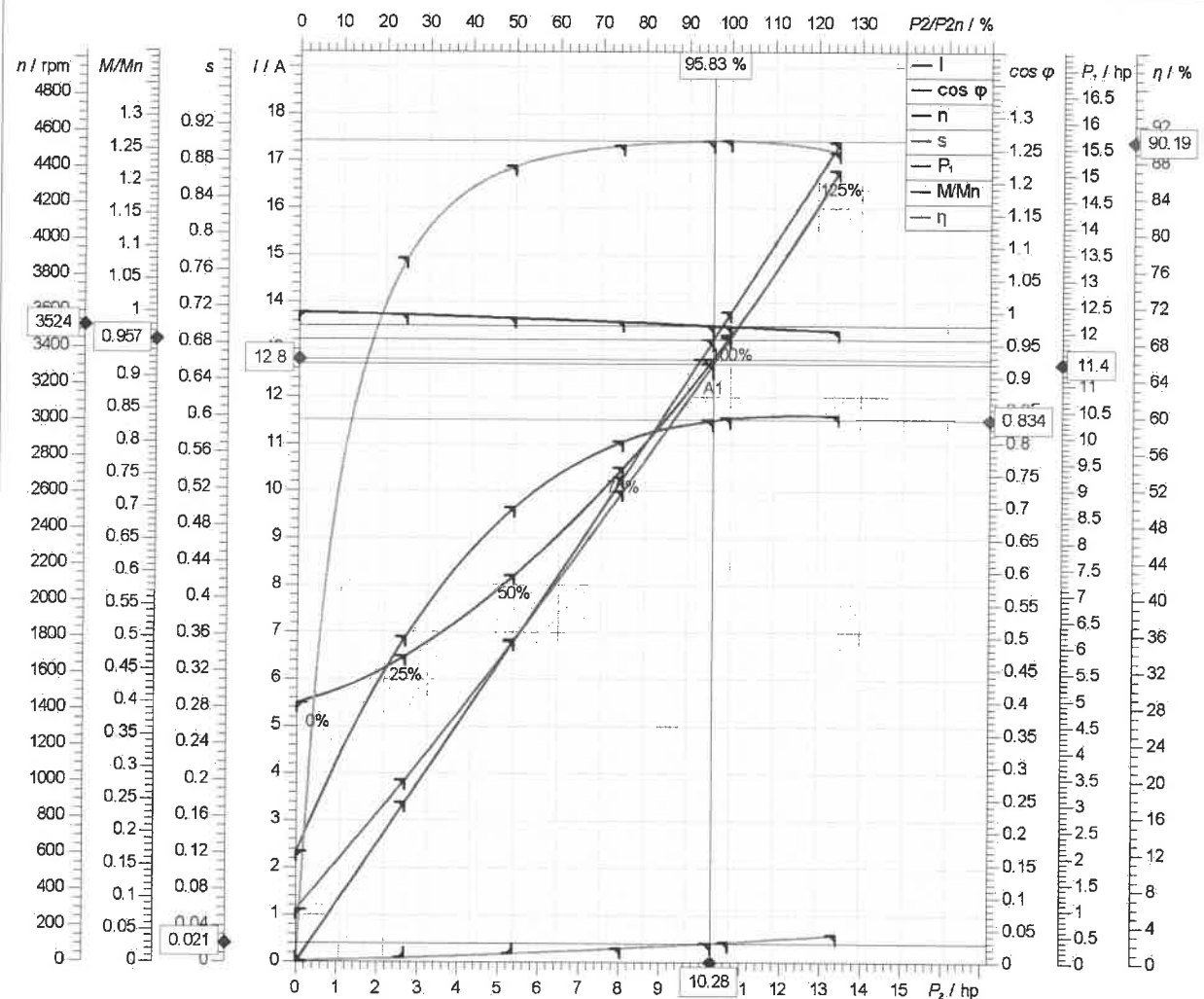
Service factor
1.3

Nominal Speed
3520 rpm

Number of poles
2

Rated voltage
460 V

Date
2025-07-31



Symbol	No load	25 %	50 %	75 %	100 %	125 %
P ₂ / hp	0	2.682	5.364	8.046	10.73	13.41
P ₁ / hp	0.9989	3.471	6.137	8.971	11.9	15.08
I / A	5.501	6.494	8.212	10.49	13.31	16.8
cos φ	0.1699	0.5003	0.6994	0.8006	0.8367	0.8401
n / rpm	3596	3582	3565	3544	3520	3492
s / %	0.1116	0.4978	0.9766	1.551	2.224	3
M / lbf ft	0	3.933	7.903	11.92	16.01	20.17
η / %	0	77.26	87.41	89.69	90.19	88.94

Tolerance according to VDE 0530 T1 12.84 for rated power

Starting current
98 A

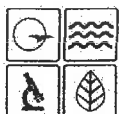
Starting torque
43.2 lbf ft

Moment of inertia
0.346 lb ft²

No. starts per hour
15

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Data version



MISSOURI DEPARTMENT OF NATURAL RESOURCES
FINANCIAL ASSISTANCE CENTER

APPLICANT ASSURANCE OF LOCAL SHARE AVAILABILITY FOR PROJECT FUNDING

1. APPLICANT/CONTINUING AUTHORITY

NAME OF APPLICANT/CONTINUING AUTHORITY

Ralls County PWSD No. 1

PROJECT NAME

Norwoods WWTF Improvements

PROJECT NUMBER

C295909-01

2. SOURCE AND AMOUNT OF FUNDS

SOURCE OF FUNDS

NAME OF ACCOUNT OR FUNDING INSTITUTION PROVIDING FUNDING (EXAMPLE: WATER/SEWER FUND, GENERAL EXPENSES FUND, BANK OF XYZ)

AMOUNT OF FUNDS

FUNDS FOR INELIGIBLE PROJECT COSTS, IF AN ENGINEERING AGREEMENT AMENDMENT EXCEEDS FINAL FUNDING AMOUNT, ETC

a. Checking Acct- Wastewater Commerce

\$ 85,000.00

b.

\$

c.

\$

d.

\$

3. ACTIONS REQUIRED

FINANCIAL ARRANGEMENT COMPLETED TO DATE OR FUTURE ACTIONS REQUIRED TO OBTAIN FUNDS?

PROCEDURES, IF ANY, TO BE TAKEN TO USE THE ABOVE FUNDS. EXAMPLE: BOARD/COUNCIL/ALDERMAN APPROVAL NEEDED; NEED TO SECURE FUNDING FROM BANK; MONEY IS IN THE BANK AND READILY AVAILABLE; A LINE OF CREDIT IS ESTABLISHED, ETC.

SCHEDULE TO COMPLETE ACTIONS

a. Board Council Approval at any monthly meeting can make this happen. Money is available in the account

Complete before funding closing

b.

c.

d.

4. CERTIFICATION

The authorized representative certifies that funds to finance any ineligible expenses or cost overruns of the project that exceed the final funding amount will be available within 90 days of loan closing or grant award, and that the information submitted on this form (including any attached pages) is true and correct to the best of their knowledge and that they are authorized to sign and submit this form. The applicant agrees, if a loan, grant, or loan/grant combination is awarded based on this form, to comply with all applicable terms, conditions, and procedures of the Department of Natural Resources; the applicable rules and regulations of the Missouri Clean Water Commission; and the terms and conditions of the loan, grant, or loan/grant agreement.

NAME OF AUTHORIZED REPRESENTATIVE (PRINT OR TYPE)

Aaron Ball

TITLE OF AUTHORIZED REPRESENTATIVE (PRINT OR TYPE)

President

SIGNATURE OF AUTHORIZED REPRESENTATIVE

DATE

8-26-25

EMAIL (PREFERRED) OR MAIL COMPLETED APPLICATION TO:

Missouri Department of Natural Resources
Financial Assistance Center
P.O. Box 176
Jefferson City, MO 65102-0176
800-361-4827 or 573-751-1192
fac@dnr.mo.gov