

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

MDNR Division of State Parks
MDNR Harry S. Truman State Park WWTF Marina Low Pressure Pipe
28761 State Park Road W
Warsaw, MO 65355

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 12, 2024
Effective Date

September 11, 2026
Expiration Date

John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The current Truman Marina treatment system consists of one pressure sewer line carrying sewage from the marina and storing it in a two-lagoon system. Solids are retained in the lagoon system and liquids are land applied using a surface irrigation system. The proposed construction extends the pressure sewer line approximately 600 feet in a southwest direction using a 2-inch 80 schedule pvc pipe, diverting flow from the lagoon system and into a new low pressure pipe system (LPP). The LPP system consist of one 5,000 gallons septic tank, two pump tanks, one 2,000 gallons and one 3,000 gallons, two manifolds, one with a 3-way valve and one with a 4-way valve, and 7 lateral fields for liquid absorption. Each lateral field will have an approximate area of 2,600 square feet and 520 feet of laterals. The new system will handle all the flows from the Harry S. Truman marina and will replace the existing lagoon and surface irrigation system.

Once the LPP system is properly working a closure plan will need to be submitted to the Kansas City Regional Office for review and approval for to the closure of the 2 lagoon/spray surface irrigation system.

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

The department is not required to determine 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 Andrew Novinger P.E., with OWN, INC and as described in this permit.
3. 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).

4. State and federal law does not permit bypassing of raw wastewater, therefore steps must be taken to ensure that raw wastewater does not discharge during construction. If a sanitary sewer overflow or bypass occurs, report the appropriate information to the department's KC Regional Office per 10 CSR 20-7.015(9)(G).
5. 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.
6. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of one 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 <https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem>. See <https://dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting> for more information.
7. 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 <https://dnr.mo.gov/water/business-industry-other-entities/permits-certification-engineering-fees/section-401-water-quality> for more information.
8. In accordance with 10 CSR 20-6.010(12), a full closure plan shall be submitted to the department's KC Regional Office for review and approval of any permitted wastewater treatment system being replaced. The closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit No. MO-0136018. Closure shall not commence until the submitted closure plan is approved by the department. Form J – *Request for Termination of a State Operating Permit*, shall be submitted to the Water Protection Program for termination of any existing Missouri state operating permit, once closure is completed in accordance with the approved closure plan.
9. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
 - Facilities shall be readily accessible by authorized personnel from a public right of way at all times. 10 CSR 20-8.140 (2) (D). 10 CSR 20-8.130 (B)
 -

Unless another distance is determined by the Missouri Geological Survey or by the department's Public Drinking Water Branch, the minimum distance between wastewater treatment facilities and all potable water sources shall be at least 300 feet. 10 CSR 20-8.140 (2) (C) 1.

- All wastewater treatment facilities shall be provided with an alternate source of electric power or pumping capability to allow continuity of operation during power failures. 10 CSR 20-8.140 (7) (A) 1.
- Electrical systems and components in raw wastewater or in enclosed or partially enclosed spaces where hazardous concentrations of flammable gases or vapors that are normally present, shall comply with the NFPA 70 National Electric Code (NEC) (2017 Edition), as approved and published August 24, 2016, requirements for Class I, Division 1, Group D locations. 10 CSR 20-8.140 (7) (B)
- An audiovisual alarm or a more advanced alert system, with a self-contained power supply, capable of monitoring the condition of equipment whose failure could result in a violation of the operating permit, shall be provided for all wastewater treatment facilities. 10 CSR 20-8.140 (7) (C)
- No piping or other connections shall exist in any part of the wastewater treatment facility that might cause the contamination of a potable water supply. 10 CSR 20- 8.140 (7) (D) 1.
- A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140 (7) (E)
- All wastewater treatment facilities must have a screening device, comminutor, or septic tank for the purpose of removing debris and nuisance materials from the influent wastewater. 10 CSR 20-8.150 (2)
- A septic tank must have a minimum capacity of at least 1,000 gallons. 10 CSR 20-8.180 (2) (A)
- The septic tank shall be baffled. 10 CSR 20-8.180 (2) (B)
- Subsurface systems shall—
 - o 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 (7) (A) 1. A.
 - o Provide adequate surface drainage where slopes are less than two percent; 10 CSR 20-8.200 (7) (A) 1. B.

- o Provide surface and subsurface water diversion where necessary, such as a curtain or perimeter drain; 10 CSR 20-8.200 (7) (A) 1. C. and
- o Have a ten-foot buffer from the property line. 10 CSR 20-8.200 (7) (A) 1. D.
- Subsurface systems shall be, at a minimum, preceded by preliminary treatment. 10 CSR 20-8.200 (7) (B).
- Loading rates shall not exceed the values assigned by the site and soil evaluation. 10 CSR 20-8.200 (7) (C).
- All network piping and low pressure distribution piping and fittings with polyvinyl chloride (PVC) shall meet ASTM Standard D 1785 *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Pipe, Schedules 40, 80, or 120* as approved and published August 1, 2015, or equivalent rated to meet or exceed ASTM D2466 *Standard Specification for Poly(Vinyl Chloride) (PVC) Plastic Drain, Waste, and Vent Pipe and Fittings* as approved and published August 1, 2017. These standards shall hereby be incorporated by reference into this rule, as published by ASTM International, 100 Barr Harbor Drive, P.O. Box C700, West Conshohocken, PA 19428- 2959. This rule does not incorporate any subsequent amendments or additions. 10 CSR 20-8.200 (8) (A) 2.
- Manifold design for LPP systems shall address freeze protection while assuring uniform distribution and to minimize drain down of laterals into other laterals at a lower elevation between dosing events. 10 CSR 20-8.200 (8) (A) 3.
- The orifice number and spacing shall be designed to provide a distribution of no more than six square feet per orifice with an orifice size of not less than one-eighth inch. 10 CSR 20-8.200 (8) (C) 1.

10. Upon completion of construction:

- A. The MDNR Division of State Parks will become the continuing authority for operation and maintenance of these facilities;
- B. Submit an electronic copy of the as built's if the project was not constructed in accordance with previously submitted plans and specifications; and
- C. Submit the Statement of Work Completed form to the department in accordance with 10 CSR 20-6.010(5)(N) (<https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155>) and request the operating permit be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The MDNR Parks Division would like to eliminate the possibility of flooding the existing wastewater treatment system. The 2019 flood breached the feature #003 marina lagoon, causing excessive work involving cleanup and damage repair. Replacing the current lagoon and feature #004, marina irrigation field system with a low-pressure pipe (LPP) system, would eliminate the possibility of flooding the WWTF. High lake water levels would not interfere with the operation of the proposed wastewater treatment system. Once the LPP system is installed, the lagoon and irrigation field will be properly closed.

2. FACILITY DESCRIPTION

The MDNR Harry S. Truman State Park WWTF is located at 28761 State Park Road W, Warsaw, in Benton County, Missouri and serves a hydraulic population equivalent of approximately 20 people.

The current facility consists of a two-cell storage lagoon and irrigation system. Wastewater is irrigated to the surface and sludge is retained in lagoon.

The proposed system upgrade will be capable of treating 3,000 gallons per day (gpd). At this time there is no request to increase the permitted flow. As a precautionary measure, the tankage and lateral fields have been increased in size to accommodate additional flow should high-flow events ever occur. A safety factor of approximately 50 percent has been applied to the design parameters of the project, resulting in the components of the proposed system being designed to adequately treat flows up to 3,000 gpd.

New Low Pressure Pipe System Parameters:

Design Flow	3,000 GPD
Soil Absorption Rate	0.2 GPD/s.f.
Minimum Absorption Field Area	15,000 s.f.
Proposed Absorption Field Area	18,200 s.f.
Total Length of Laterals	3,640'
Lateral Line Length (Each)	65'
Number of Lateral Lines	56
Lateral Line Spacing	5'
Number of Lateral Fields	7
Zones Per Lateral Field	1
Total Number of Zones	7
Orifices Per Lateral Line	13
Orifice Spacing	5'
Total Number of Orifices	728

Orifice Size	5/32"
Approximate Orifice Flow Rate	0.6 gpm
Approximate Flow Rate Per Zone	71 gpm
Minimum Pressure (Head) at Distal Orifice	5'
Supply Pipe	2-1/2" sch 80 pvc
Lateral Pipe	1-1/2" sch 80 pvc
Approximate Dosing Volume	500 gal
Area Required Per Dose	3,000 s.f.
Maximum Doses Per Day	6

3. COMPLIANCE PARAMETERS

The existing facility can meet the requirements in their existing operating permit, MO-0136018, issued April 1, 2021. There are no permitted effluent limitations for subsurface dispersal systems.

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

- Subsurface Soil Dispersal System. The soils at this site are rated for 0.20 gpd/sf. Soil morphology review was conducted and on-site soils were determined to be acceptable for this system. The soil investigation report was completed on February 12, 2024, by Doug Carmichael, (E-26658) Registered MO Professional Engineer.
 - Soils Report. Describes four (4) soil pits locations being investigated for the installation of an LPP system.
 - Soil test pit #1 and #2, located in the area to install the future LLP system, had surface soils that were described as silt loam with an application rating of 0.2 gallons per square foot per day. 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.
 - The restrictive horizon for soil pit #1 and #2 is: 36 inches based on a soils report submitted for review on August 27, 2024. This new report places the water table at the minimum acceptable depth for the construction of the LPP system without the need for importing soils.
 - Soil test pit #3 was also apt for the installation of a LPP system but was not selected.
 - Soil test pit #4 did not provide adequate characteristics for the installation of a LPP system due to be in an area with disturbed soils.

- Hydraulic loading rate used in the design was at 0.2 gallons per square foot per day. Pump filters will be provided by the pump supplier. A total of 4 high head pumps will be located within 2 pump tanks. One tank will be connected to a 4-way valve to select the field to be used, a second tank will connect to a 3-way valve for a total of 7 different lateral fields where to pump the wastewater. Lines between pump tanks and lateral fields is 2 inches. Pump design parameters are approximately 71 gallons per minute at 68 feet total dynamic head.
- Regarding soils used for leach field trenches: Any soils to be imported to the property, the contractor shall supply the following:
 - Physical characteristics that are uniform in texture, structure, and pore space.
 - transportation methods that ensure uniformity and consistency of the physical characteristics as close as possible to the original state upon delivery.
 - A sandy to loamy material, with less than 10 percent clay and less than 15 percent organic debris present.
 - methods for removal of the organic layer.
 - No compaction of imported soils.
 - Placement in small “lifts” increments of four to six inches.
 - Native soils is to be used for the vertical separation for the subsurface soil dispersal system with the fill for the cap being imported soils.
- Low-Pressure Piping (LPP) – The low-pressure piping is divided into seven zones with eight lines per zone and 3640 linear feet of distribution laterals.
 - The end of each line contains a 1 1/2-inch clean out with valve box.
 - The lateral spacing is 5-foot off center with the orifices spaced 5-feet apart, for 13 orifices per lateral line.
 - The manifold length is 37-feet and the orifice openings are 5/32 inch.
 - The total area needed for loading is 15,000 square feet and there is 18,200 square feet available.

5. OPERATING PERMIT

Operating permit MO-0136018 will be expiring on March 31, 2026. A renewal application must be filed before October 2, 2025, regardless of the status of these construction activities. If you have questions on completing the renewal application, please contact the NPDES permitting section at 573-522-4502 or at cleanwaterpermits@dnr.mo.gov. The renewal application will be Form B and Form I

- Form B, <https://dnr.mo.gov/document-search/form-b-application-operating-permit-facilities-receive-primarily-domestic-waste-have-design-flow-less-or-equal-100000-gallons-day-mo-780-1512>
- Form I, <https://dnr.mo.gov/document-search/form-i-permit-application-operation-wastewater-irrigation-systems-mo-780-1686>

Upon completion of construction, MDNR, Harry Truman State Park WWTF, will qualify for coverage under the general operating permit MOG823. A Statement of Work Complete, an updated Form B, and operating permit fee of \$150 will need to be sent for processing and the site-specific permit will be terminated.

The modified permit will include a new permitted feature to reflect the construction of the Low-Pressure Pipe System and the removal of the two lagoons and existing surface irrigation systems.

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:

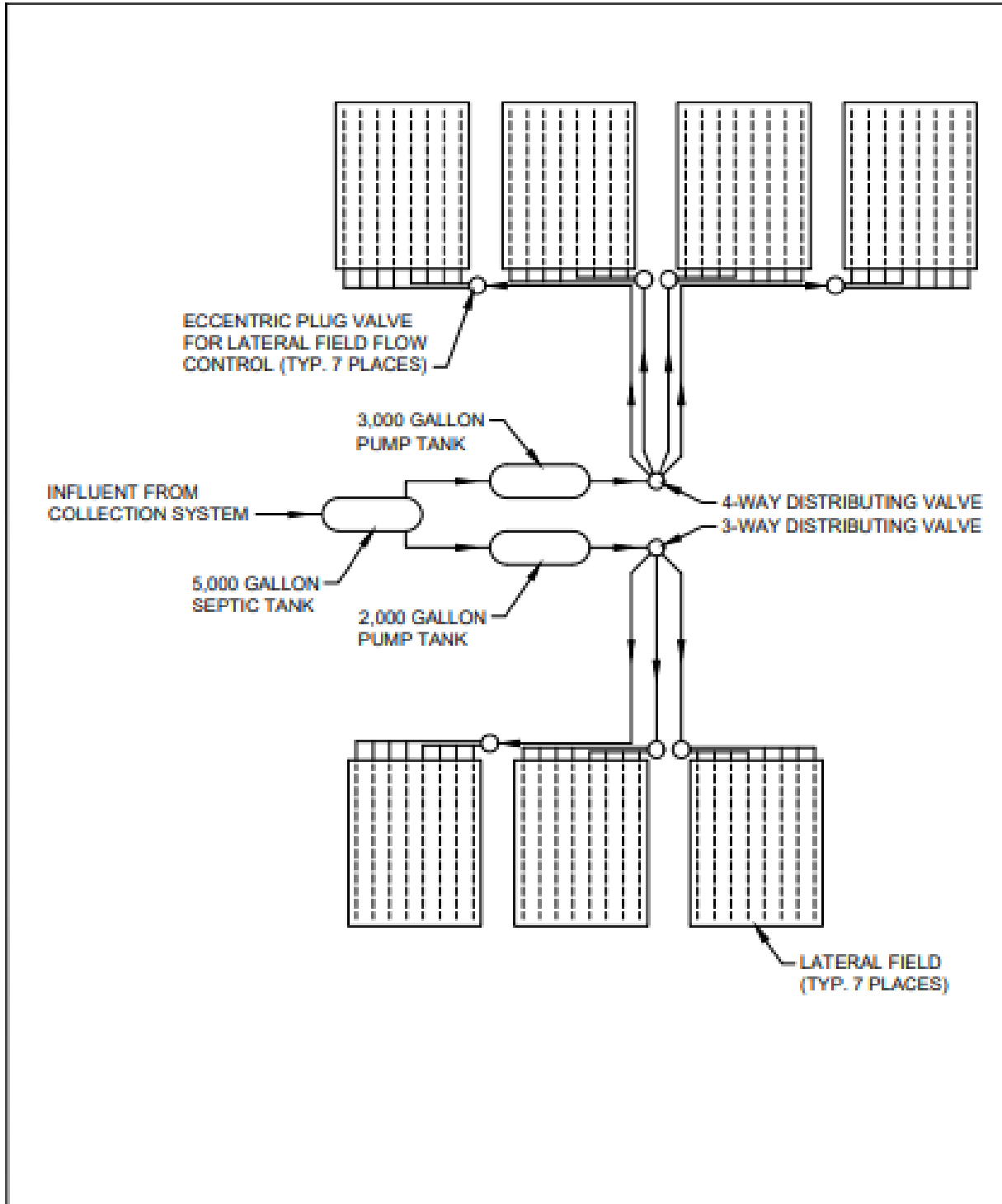
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: <https://ahc.mo.gov>

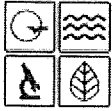
Francisco Cortalezzi, EI
Engineering Section
francisco.cortalezzi@dnr.mo.gov

Chia-Wei Young, P.E.
Engineering Section
chia-wei.young@dnr.mo.gov

APPENDIX

- **Process Flow Diagram**





MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
**APPLICATION FOR CONSTRUCTION PERMIT –
 WASTEWATER TREATMENT FACILITY**

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

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: MDNR Project #: X2308-01
- 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 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 Harry S Truman Wastewater Treatment Facility	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 830,610
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2.3 PROJECT DESCRIPTION
Provide new Low Pressure Pipe treatment system, close existing lagoon/spray irrigation system.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
Sludge to be removed from septic tank regularly by licensed hauler.

2.5 DESIGN INFORMATION

A. Current population: _____; Design population: _____

B. Actual Flow: 1,000 gpd; Design Average Flow: 1,990 gpd;
 Actual Peak Daily Flow: 3,000 gpd; Design Maximum Daily Flow: 3,000 gpd; Design Wet Weather Event: _____

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 Harry S Truman State Park		TELEPHONE NUMBER WITH AREA CODE 660-438-7711	E-MAIL ADDRESS Nathan.Graessle@dnr.mo.gov	
ADDRESS (PHYSICAL) 28761 State Park Road W	CITY Warsaw	STATE MO	ZIP CODE 65335	COUNTY Benton

Wastewater Treatment Facility: Mo-0136018 (Outfall 003 Of 008)

3.1 Legal Description: _____ 1/4, _____ 1/4, _____ 1/4, Sec. 2 _____, T 40N, R 23W
(Use additional pages if construction of more than one outfall is proposed.)3.2 UTM Coordinates Easting (X): 462329 Northing (Y): 4236629
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)3.3 Name of receiving streams: N/A LPP System**4.0 PROJECT OWNER**

NAME MDNR Division of State Parks		TELEPHONE NUMBER WITH AREA CODE 573-751-5360	E-MAIL ADDRESS Nathan.Graessle@dnr.mo.gov	
ADDRESS P O Box 176	CITY Jefferson City	STATE MO	ZIP CODE 65102	

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 MDNR Division of State Parks		TELEPHONE NUMBER WITH AREA CODE 573-751-5360	E-MAIL ADDRESS Nathan.Graessle@dnr.mo.gov	
ADDRESS P O Box 176	CITY Jefferson City	STATE MO	ZIP CODE 65102	

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 NOB. 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 NOC. 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 NOD. 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 OWN, Inc.		TELEPHONE NUMBER WITH AREA CODE 417-866-2741	E-MAIL ADDRESS anovinger@weareown.com	
ADDRESS 3213 S. West Bypass	CITY Springfield	STATE MO	ZIP CODE 65807	

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 Nathan Graessle		DATE 2-8-2024
TITLE OR CORPORATE POSITION Design Engineer, MO State Parks	TELEPHONE NUMBER WITH AREA CODE 573-751-5360	E-MAIL ADDRESS Nathan.Graessle@dnr.mo.gov

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): Mar - Oct

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) Low Pressure Pipe System

9.0 STORAGE BASINS

9.1 Number of storage basins: 3 (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 <u>18'-10"</u>	Width <u>8'-0"</u>	Depth <u>8'-0"</u>	Freeboard _____	Depth _____	Safety _____	% Slope _____
Basin #2:	Length <u>12'-8"</u>	Width <u>6'-0"</u>	Depth <u>6'-0"</u>	Freeboard _____	Depth _____	Safety _____	% Slope _____
Basin #3:	Length <u>16'-0"</u>	Width <u>6'-0"</u>	Depth <u>6'-0"</u>	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 0.4 Maximum % field slopes _____
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ Sec. _____ T _____ R _____ County _____ Acres
Location: _____ ¼, _____ ¼, _____ ¼, _____ 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 _____ Seasonal _____ Off-season _____

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

Design:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week
Actual:	_____ inches/year	_____ inches/hour	_____ inches/day	_____ inches/week

10.5 Total irrigation per year (gallons): Design: _____ gal Actual: _____ 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) Soil Absorption Rate (LPP System)
 Nutrient Management Plan (N&P) If N&P is selected, is the plan included? YES NO

INSTRUCTIONS FOR COMPLETING APPLICATION FOR CONSTRUCTION PERMIT – WASTEWATER TREATMENT FACILITIES

All blanks must be filled in when the application is submitted to the Missouri Department of Natural Resources. This includes the **required signature**.

Note: Use the form Application for Construction Permit – Sewer Extension, MO 780-1632, if only collection system component(s) are to be constructed.

A land disturbance permit is required if construction will result in the disturbance of one or more acres of land. A land disturbance permit is available through the department's ePermitting system at dnr.mo.gov/env/wpp/epermit/help.htm. A permit fee in accordance with 10 CSR 20-6.011 is required.

After receiving a complete application, the Department enters the application information into the Missouri Clean Water Information System. You may search for the status of a construction permit online at dnr.mo.gov/mocwis_public/applicationInprocessSearch.do.

Part A – Basic Application Information

- 1.0 If the answer to any of the questions in this section is no, this application may be considered incomplete and returned to the applicant.
- 1.1 Check the appropriate box. If the project is funded with federal or state monies, supply the funding agency name and project number.
- 1.2 Check the appropriate box. Provide the date of department approval for the antidegradation report. Include a copy of the approved *Water Quality and Antidegradation Review* with this application. Not every construction project may require an antidegradation review. For more information, guidance documents and forms concerning antidegradation visit dnr.mo.gov/env/wpp/permits/antideg-implementation.htm.
- 1.3 Check the appropriate box and provide the date of department approval. Per 10 CSR 20-8.110(2), a facility plan must be submitted to the department prior to the submittal of a construction permit application. The department has developed a fact sheet to aid in the development of an approvable facility plan, Facility Plan Guidance for Wastewater Treatment Facilities, Fact Sheet--PUB2416.
- 1.4 Complete only if No. 1.3 is answered No. Check the appropriate box. Include the exemption reason from 10 CSR 20-6.010(4)(B).
- 1.5 Check the appropriate box. Provide a copy of the appropriate plans and specifications for department review when applying for a construction permit per 10 CSR 20-8.110 and 10 CSR 20-6.010. A Missouri registered professional engineering seal, signature and date is required on each sheet of the plans and the cover of the technical specifications. An electronic copy of the construction permit application and the information listed below in Portable Document Format (PDF) searchable format or department approved equivalent per 10 CSR 20-6.010(5)(G), along with one (1) paper copy for projects not seeking department funding or two (2) paper copies for projects seeking department funding under 10 CSR 20-4.
- 1.6 Check the appropriate box. A summary of design shall accompany the plans and specifications when applying for a construction permit per 10 CSR 20-6.010(5)(G) and 10 CSR 20-8.110(8). The department has developed a fact sheet to aid in the development of an acceptable summary of design. This document is available online at dnr.mo.gov/pubs/pub2417.htm.
- 1.7 Check the appropriate box if an operating permit modification is needed. Include the applicable operating permit application. New outfalls, discharges, projects converting to land application, or a lagoon upgrade require an operating permit modification application. Contact the Department for clarification. Projects that may not need an operating permit modification check the N/A box and indicate whether you want to review the draft prior to public notice should the Department determine a modification is required. The Department can modify your operating permit without an application for projects that are adding chlorine disinfection, constructing to meet current operating permit limits, or constructing to meet limits in a schedule of compliance.
 - Form A is available online at dnr.mo.gov/forms/780-1479-f.pdf.
 - Form B is available online at dnr.mo.gov/forms/780-1512-f.pdf.
 - Form B2 is available online at dnr.mo.gov/forms/780-1805-f.pdf.
- 1.8 Check the appropriate box. More information about the Compliance and Enforcement Water Protection Program is available online at dnr.mo.gov/env/wpp/enf/index.html.

- 1.9 Check the appropriate box. Include payment or payment confirmation for the fee with your application. See 10 CSR 20-6.011(2) and Wastewater Treatment Facility Permit Fees -- PUB2564.
- Note:** The department returns incomplete construction permit applications and related engineering documents and the application forfeits the fees. See 10 CSR 20-6.011(5)(A). The applicant forfeits the fees when the applicant withdraws construction applications. See 10 CSR 20-6.011(5)(B).
- 2.1 Provide the name of the proposed construction project.
- 2.2 Provide the estimated project construction cost. The estimated and final project construction cost will be useful to the department in conducting affordability analyses.
- 2.3 Briefly describe the construction project by providing the number and capacity of each new unit.
- 2.4 Briefly describe the method of sludge handling, use and disposal at the treatment facility.
- 2.5 Provide the project design information and when required in the units specified.
- A. Provide the current population and the design population to be served by the wastewater treatment facility.
- B. Provide the estimated design flow information in accordance with 10 CSR 20-8.110(3).
- 2.6 Provide the additional project information in accordance with 10 CSR 20-8.110(5).
- A. Attach a topographic map of the area extending at least one mile beyond the facility property boundaries. This map must show the outline of the facility and the following information. A topographic map is available online at dnr.mo.gov/internetmapviewer or from the Department of Natural Resources' Missouri Geological Survey in Rolla, Mo., at 573-368-2125. (Submittals of more than one map may be necessary to show the entire area.)
1. The area surrounding the wastewater treatment facility, including all unit processes.
 2. The major pipes or other structures through which wastewater enters the treatment facility and the pipes or other structures through which treated wastewater is discharged from the treatment facility. Include outfalls from bypass piping, if applicable.
 3. The actual point of discharge.
 4. Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment facility and 2) listed in public record or otherwise known to the applicant.
 5. Any areas where biosolids produced by the treatment facility are treated, stored, or disposed.
 6. If the treatment facility receives waste classified as hazardous under the Resource Conservation and Recovery Act, or RCRA, by truck, rail, or special pipe, show on the map where hazardous waste enters the treatment works and where it is treated, stored or disposed.
 7. Outline any wastewater land application sites.
- B. Provide a process flow diagram with the influent and effluent design average flow and peak flow capabilities. Also, depict all of the treatment facility components and the corresponding hydraulic capacities of each component. In addition, include all recycle flows in the diagram. If land application is used, depict all irrigation equipment and application sites.
- 3.0 Complete the Wastewater Treatment Facility information. Include the Missouri State Operation Permit number, outfall number, physical location, and other appropriate contact information.
- 3.1 Provide the project legal description. The department's mapping system is available online at dnr.mo.gov/internetmapviewer.
- 3.2 A Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates.
- 3.3 Provide the name of the receiving stream(s) to which the discharge is directed and any subsequent tributary until a continuous flowing stream is reached.
- 4.0 Complete Project Owner information. Include the legal name, address, phone number with area code and email address.
- 5.0 Complete Continuing Authority contact information. If same as the Project Owner, write "Same as above". 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. 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 <https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf>. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: <https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0>, unless the continuing

authority is an individual(s), government, or otherwise not required to register with the SoS. See 10 CSR 20-6.010(2) for the regulatory requirement regarding continuing authority.

- 5.1 Check the appropriate box. Include a letter signed by the continuing authority (if not same as the project owner) stating they will "accept, operate and maintain" the wastewater treatment facility after successful construction. If the continuing authority will not accept and agree to operate and maintain the wastewater treatment facility, this application will be considered incomplete.
- 5.2 Complete if the continuing authority is a Missouri Public Service Commission, or PSC, regulated entity. See 10 CSR 20-6.010(2)(B)3 for more information. This information is not necessary for existing wastewater treatment facilities currently permitted with a PSC entity as owner and continuing authority.
- 5.3 Complete if the continuing authority is a property owners association. See 10 CSR 20-6.010(2)(B)5 for more information. This information is not necessary for existing wastewater treatment facilities currently permitted with the property owners association as owner and continuing authority.
- 6.0 Complete Engineer contact information.
- 7.0 Check the appropriate box and include check or confirmation number. Applicants can pay fees online by credit card or eCheck through a system called JetPay.
- Per Section 37.001, RSMo, a transaction fee will be included. The transaction fee is paid to the third party vendor JetPay, not the Department of Natural Resources.
 - Be sure to select the correct fee type and corresponding URL to ensure your payment is applied appropriately. If you are unsure what type of fee to pay, please contact the Water Protection Program's Budget, Fees, and Grants Management Unit by phone at (573) 522-1485 for assistance.
 - Upon successful completion of your payment, JetPay provides a payment confirmation. Submit this form with a copy of the payment confirmation if requesting a new permit or a permit modification. For permit renewals of active permits, the Department will invoice fees annually in a separate request.
 - If you are unable to make your payment online, but want to pay with credit card, you may email your name, phone number, and invoice number, if applicable, WPPFEES@dnr.mo.gov. The Budget, Fees, and Grants Management Unit will contact you to assist with the credit card payment. **Please do not include your credit card information in the email.**
 - Applicants can find fee rates in 10 CSR 20-6.011 and Wastewater Treatment Facility Permit Fees -- PUB2564 (<https://dnr.mo.gov/pubs/pub2564.htm>).

WP 04 Construction Permits: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/592/>

- 8.0 The owner of the construction project must sign the application.

Part B – Land Application

Complete Part B only if the proposed construction project includes land application of wastewater from a treatment facility.

- 8.0 Provide the applicable Facility Information land application information. Check the appropriate boxes.
- 9.0 Provide the applicable Storage Basins information. Check the appropriate boxes.
- Freeboard – The depth from the top of the berm to the emergency spillway. Minimum depth • is one foot.
 - Safety Volume – The depth to contain the 25-year, 24-hour storm event. Minimum depth is • one foot.
 - Maximum Operating Water Level – The water level at the bottom of the safety volume. • Minimum depth is two feet below the top of the berm.
 - Minimum Operating Water Level – The water level above the bottom of the lagoon basin for • seal protection. Minimum depth is two feet and may be greater when additional treatment volume is included.
 - Total Depth is from the top of the berm to the bottom of the lagoon basin including freeboard. •
- 10.0 Provide the applicable Land Application System information. Check the appropriate boxes.
- 10.7 Check the appropriate box. If the land application rate is based on a Nutrient Management Plan, or N and P, include the plan with this application for department review.

Mail the completed form and applicable fee to the department.

If there are any questions concerning this form, please contact the Department of Natural Resources, Water Protection Program at 800-361-4827 or 573-751-1300 or visit dnr.mo.gov/env/wpp.