Permit No. CP0002497

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

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

Ethan Grotheer, Alderman
City of Fair Play
Fair Play WWTF
4434 South 26th Rd,
Fair Play, MO 65649

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.

November 20, 2025
Effective Date

November 19, 2027
Expiration Date

Heather Peters, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

Phase 1B will include construction of a UV disinfection system, magnetic flow meter vault, non-potable water storage basin and associated pumps, new piping from existing cell 3 effluent structure through the new process equipment, and a new flow control structure between cell 1 and the future proposed Aero-Mod treatment plant. The design average flow will remain 86,000 gpd.

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 combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [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 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 Dane Drysdale, P.E., with Bartlett & West, 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 Southwest Regional Office per 10 CSR 20-7.015(9)(G).

5. 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 dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem. See dnr.mo.gov/data-e-services/water/electronic-permitting-epermitting for more information.

6. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.

10 CSR 20-8.140 Wastewater Treatment Facilities

- Flood protection shall apply to new construction and to existing facilities undergoing major modification. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the 100-year flood elevation. 10 CSR 20-8.140(2)(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 three hundred feet (300'). 10 CSR 20-8.140(2)(C)1.
- Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140(2)(D)
- All sampling points shall be designed so that a representative and discrete 24-hour automatic composite sample or grab sample of the effluent discharge can be obtained at a point after the final treatment process and before discharge to or mixing with the receiving waters. 10 CSR 20-8.140(6)(B)
- All outfalls shall be posted with a permanent sign indicating the outfall number (i.e., Outfall #001). 10 CSR 20-8.140(6)(C)
- 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.
- Disinfection, when used, shall be provided during all power outages. 10 CSR 20-8.140(7)(A)2.
- 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.
- Where a separate non-potable water supply is to be provided, a break tank will not be necessary, but all system outlets shall be posted with a permanent sign indicating the water is not safe for drinking. 10 CSR 20-8.140(7)(D)4.
- A means of flow measurement shall be provided at all wastewater treatment facilities. 10 CSR 20-8.140(7)(E)
- Effluent twenty-four (24) hour composite automatic sampling equipment shall be provided at all mechanical wastewater treatment facilities and at other facilities where necessary under provisions of the operating permit. 10 CSR 20-8.140(7)(F)
- Adequate provisions shall be made to effectively protect facility personnel and visitors from hazards. The following shall be provided to fulfill the particular needs of each wastewater treatment facility:
    - Fencing. Enclose the facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140(8)(A)
    - Gratings over appropriate areas of treatment units where access for maintenance is necessary; 10 CSR 20-8.140(8)(B)
    - First aid equipment; 10 CSR 20-8.140(8)(C)
    - Posted “No Smoking” signs in hazardous areas; 10 CSR 20-8.140(8)(D)
    - Appropriate personal protective equipment (PPE); 10 CSR 20-8.140(8)(E)
    - Portable blower and hose sufficient to ventilate accessed confined spaces; 10 CSR 20-8.140(8)(F)
    - 10 CSR 20-8.140(8)(G) Portable lighting equipment complying with NEC requirements. See subsection (7)(B) of this rule;
    - 10 CSR 20-8.140(8)(H) Gas detectors listed and labeled for use in NEC Class I, Division 1, Group D locations. See subsection (7)(B) of this rule;
    - Appropriately-placed warning signs for slippery areas, non-potable water fixtures (see subparagraph (7)(D)3.B. of this rule), low head clearance areas, open service manholes, hazardous chemical storage areas, flammable fuel storage areas, high noise areas, etc.; 10 CSR 20-8.140(8)(I)
    - Ventilation shall include the following:
        - Force fresh air into enclosed screening device areas or open pits more than four feet (4') deep. 10 CSR 20-8.140(8)(J)2.
    - Provisions for local lockout/tagout on stop motor controls and other devices; 10 CSR 20-8.140(8)(L)
    - Provisions for an arc flash hazard analysis and determination of the flash protection boundary distance and type of PPE to reduce exposure to major electrical hazards shall be in accordance with NFPA 70E *Standard for Electrical Safety in the Workplace* (2018 Edition), as approved and published August 21, 2017. 10 CSR 20-8.140(8)(M)

10 CSR 20-8.190 Disinfection.

- Emergency Power. Disinfection and dechlorination processes, when used, shall be provided during all power outages. 10 CSR 20-8.190(2)(A)
- The UV dosage shall be based on the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190(5)(A)1.
- The UV system shall deliver the target dosage based on equipment derating factors and, if needed, have the UV equipment manufacturer verify that the scale up or scale down factor utilized in the design is appropriate for the specific application under consideration. 10 CSR 20-8.190(5)(A)3.
- The UV system shall deliver a minimum UV dosage of thirty thousand microwatt seconds per centimeters squared (30,000 µW • s/cm2). 10 CSR 20-8.190(5)(A)4.
- Open channel UV systems. The combination of the total number of banks shall be capable of treating the design peak hourly flow, maximum rate of pumpage, or peak batch flow. 10 CSR 20-8.190(5)(B)1.
- The UV system must continuously monitor and display at the UV system control panel the following minimum conditions:
  - The relative intensity of each bank or closed vessel system; 10 CSR 20-8.190(5)(C)1.A.
  - The operational status and condition of each bank or closed vessel system; 10 CSR 20-8.190(5)(C)1.B.
  - The ON/OFF status of each lamp in the system; 10 CSR 20-8.190(5)(C)1.C. and
  - The total number of operating hours of each bank or each closed vessel system. 10 CSR 20-8.190(5)(C)1.D.
- The UV system shall include an alarm system. Alarm systems shall comply with 10 CSR 20-8.140(7)(C). 10 CSR 20-8.190(5)(C)2.

7. Upon completion of construction:

   A. The City of Fair Play will become the continuing authority for operation and maintenance of these facilities;

   B. Submit an electronic copy of the as-built plans 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) (dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155) and request the operating permit modification be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Proposed construction of ultraviolet (UV) disinfection is to consistently meet permitted effluent limits for *E. coli* bacteria. Additional construction is to prepare for future upgrade to a mechanical treatment facility.

2. FACILITY DESCRIPTION

The three-cell lagoon system is not consistently meeting permitted effluent limits and does not have a disinfection system to consistently meet permitted effluent limits for *E. coli* bacteria. However, when planning for certain upgrades affecting the earthen basin, geohydrologic investigation identified recently-formed sinkholes and other depressions, collapses, and at least one berm slope failure at the facility. Further investigation identified the likelihood of construction practices for the original lagoon system, with large boulders used as fill, which over time appears to have formed voids due to long-term soil consolidation/settlement. Boulders (and voids) were notably also observed to be within the berm of cell 2. The collapse potential and overall geologic limitations at the site were classified as severe. Remediation was determined to be not feasible. Therefore, the severe collapse potential rating would remain and continued use of earthen basins at the site was determined to be prohibited. [10 CSR 20-8.110(5)(E)6.G.(III); 10 CSR 20-8.200(3)(B)1.]

As part of a larger initiative that includes mitigation of inflow and infiltration (I&I) in the collection system, the city revised the intended project(s) as follows:

- Prior to Phase 1, the city will reduce sludge using bioaugmentation. The city will then reevaluate sludge levels and composition prior to closing lagoon cells.
- Phase 1a will decommission cell 2 and divert flow directly from cell 1 to cell 3 (ARPA funding) (CP exempt).
- Phase 1b (**this CP0002497**) includes installation an ultraviolet (UV) disinfection system, a flow control structure with weir gate and trash basket, a magnetic flow meter, a non-potable washdown system, and associated piping. (ARPA funding) The *design* for the future Aero-Mod mechanical WWTF would also be accomplished.

Future phases not included in this construction permit:

- Phase 2 would be to construct an Aero-Mod activated sludge facility (proposed to be funded via SRF) and decommission cell 3.
- Phase 3 would be to construct a concrete flow equalization tank and decommission all remaining earthen basin cells (unknown funding).

The Fair Play WWTF is located at 4434 South 26th Rd, Fair Play, in Polk County, Missouri. The design average flow will remain 86,000 gpd (to serve a hydraulic population equivalent of ~860 people), with a design maximum daily flow of 117,000 gpd.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits of 126 *E. coli* colony forming units (cfu) per 100 mL as a most probable number (mpn) calculated as monthly and weekly geometric means during the recreational season as established in a TMDL. The UV system should meet the lower limits.

Note that decommissioning of cell 2 may lead to decreased treatment through a resulting decreased detention time until the mechanical treatment plant is constructed. However, the sludge bioaugmentation is intended to restore some detention time. The city has a contingency plan for installing temporary filters if the two-cell lagoon interferes with the UV disinfection.

Effluent limits following completion of construction will be applicable to the facility:

Parameter	**Units**	**Monthly Average Limit**
Biochemical Oxygen Demand$_5$	mg/L	45
Total Suspended Solids	mg/L	70
E. coli	cfu/100mL	126
Ammonia as N-summer	mg/L	2.3
Ammonia as N-winter	mg/L	3.5
Oil & Grease	mg/L	10
pH	SU	6.5 - 9.0
Parameter	**Units**	**Monthly Average Minimum**
Biochemical Oxygen Demand$_5$ – Percent Removal	%	65
Total Suspended Solids – Percent Removal	%	65

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

After Phase 1 (a & b)

- Lagoon cells 1 & 3 – Influent wastewater is pumped into the lagoon cell by an existing pump station and would enter cell 1 of the lagoon through a new splitter structure (constructed in Phase 1a). Flow proceeds to cell 3 through new piping. After cell 3, flow is routed to the disinfection system. Both cells are nonaerated and have sufficient freeboard. The existing lagoon seal is compacted clay.
- Cell 1 is estimated to have a 4.78-acre top-of-berm area, reportedly has a total depth of 6 ft, and therefore includes ~ 2.855 MG of storage. Cell 3 is estimated to have a 0.65-acre top-of-berm area, reportedly has a total depth of 5 ft, and includes ~ 0.175 MG of storage. Both of these volumes exclude the 2-ft freeboard and a 2-ft sludge storage depth. This provides approximately 35 days of retention at the proposed design flow.

Construction will cover the following items:

- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
    - Open Channel Ultraviolet (UV) – An open channel, gravity flow, low pressure, high intensity UV disinfection system capable of treating a

peak flow of 292,000 gpd while delivering a minimum UV intensity of 30 mJ/cm^2 with an expected ultraviolet transmissivity of 65% or greater. The open channel UV system consists of two banks in series, with four modules per bank, and two lamps per module (16 lamps total). The disinfected effluent will flow by gravity through flow measurement equipment and to Outfall No. 001. The system would be D3200K PTP UV Disinfection equipment by Trojan, or approved equivalent.

- The UV system is ultimately designed for the Phase 2 project, which would include an Aero-Mod activated sludge system. If the lagoon effluent to the proposed UV disinfection system results in permit exceedances, the contingency plan would be to install temporary filters to minimize UV shadowing and improve transmittance.

- Flow Measurement – Installation of accurate flow measurement devices will give the treatment facility a means of improved data analysis.
  - Electromagnetic Meter – An effluent electromagnetic 3-inch flow meter shall measure the equivalent-to-secondary treated and disinfected wastewater prior to discharge at Outfall No. 001. Emerson's three-inch Rosemount 8750W magnetic flow meter system or approved equivalent.

- Non-Potable Water Washdown Pump with one 3-hp pump capable of operating at 30 gpm against a TDH of 263.19 ft using valves to maintain a constant system operating pressure of 100 psig.

- Screening – Installation of screening devices removes nuisance inorganic materials from raw wastewater.
  - Trash basket – A coarse manual trash basket with 0.5-inch holes on two-inch centers will be located in the flow control structure, which is to be used in the future when the mechanical treatment plant is constructed.

- Emergency Power – The city has a backup plan for a portable emergency generator to operate the treatment facility in event of power failure. The operator would be to the site within 20 minutes to stop the discharge and use the lagoon cells as emergency storage until the generator would be installed. The city plans to install a dialer, permanent standby generator, and automatic transfer switch in Phase 2.

5. OPERATING PERMIT

Operating permit MO-0113514 will require a modification to reflect the construction activities. The modified Fair Play WWTF, MO-0113514, will be public noticed to revise the facility description for phases 1a and 1b and to revise the *E. coli* effluent limits with a schedule of compliance. 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.

This facility does not meet the requirements of the MOGDS general permit for treatment works with design flows ≤ 50,000 gallons per day discharging domestic wastewater into rivers or streams, issued on July 1, 2024, as the Fair Play WWTF is publicly owned and has a design flow exceeding the 50,000 gpd limit.

V. NOTICE OF RIGHT TO APPEAL

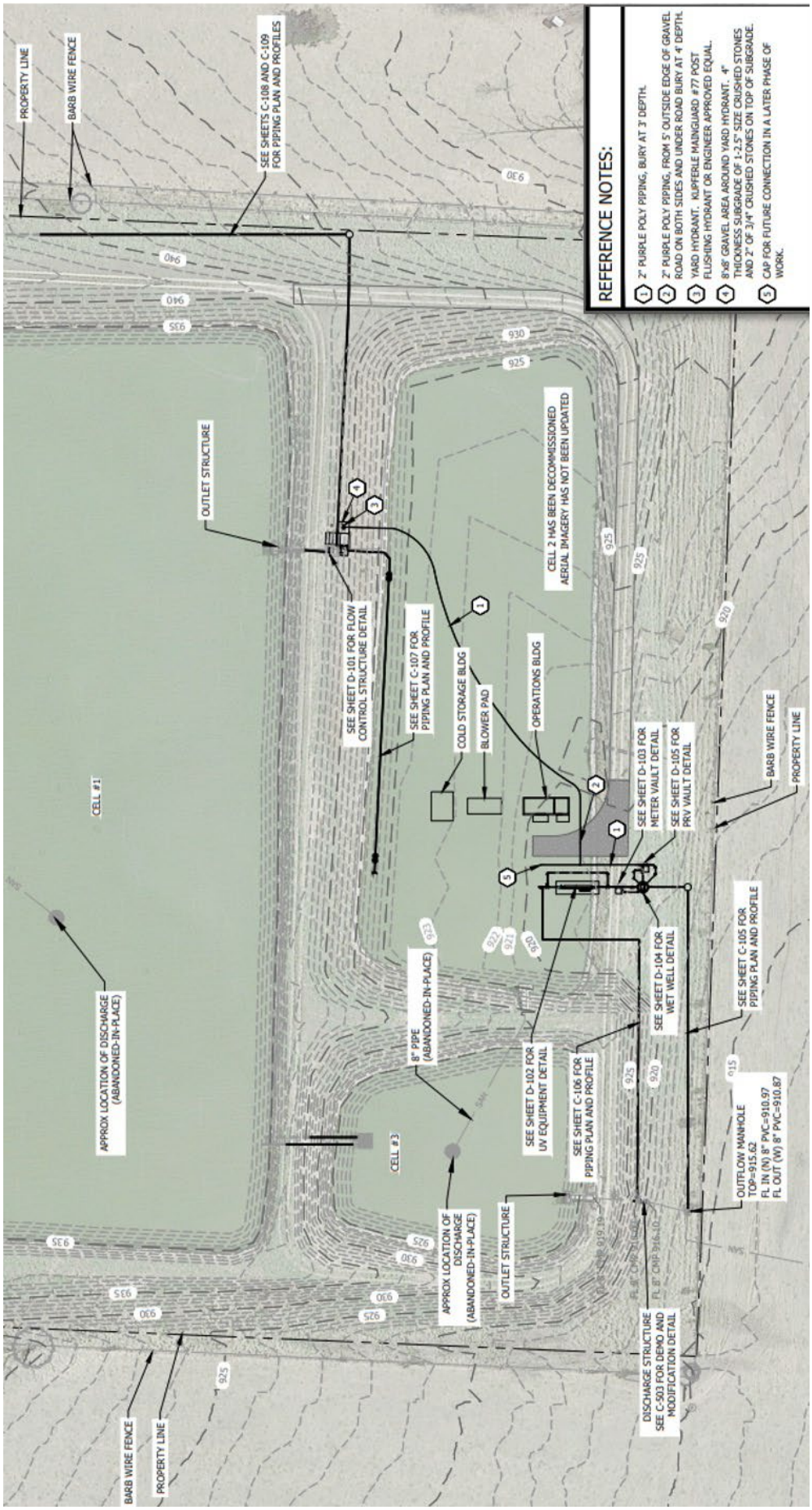
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered, 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:

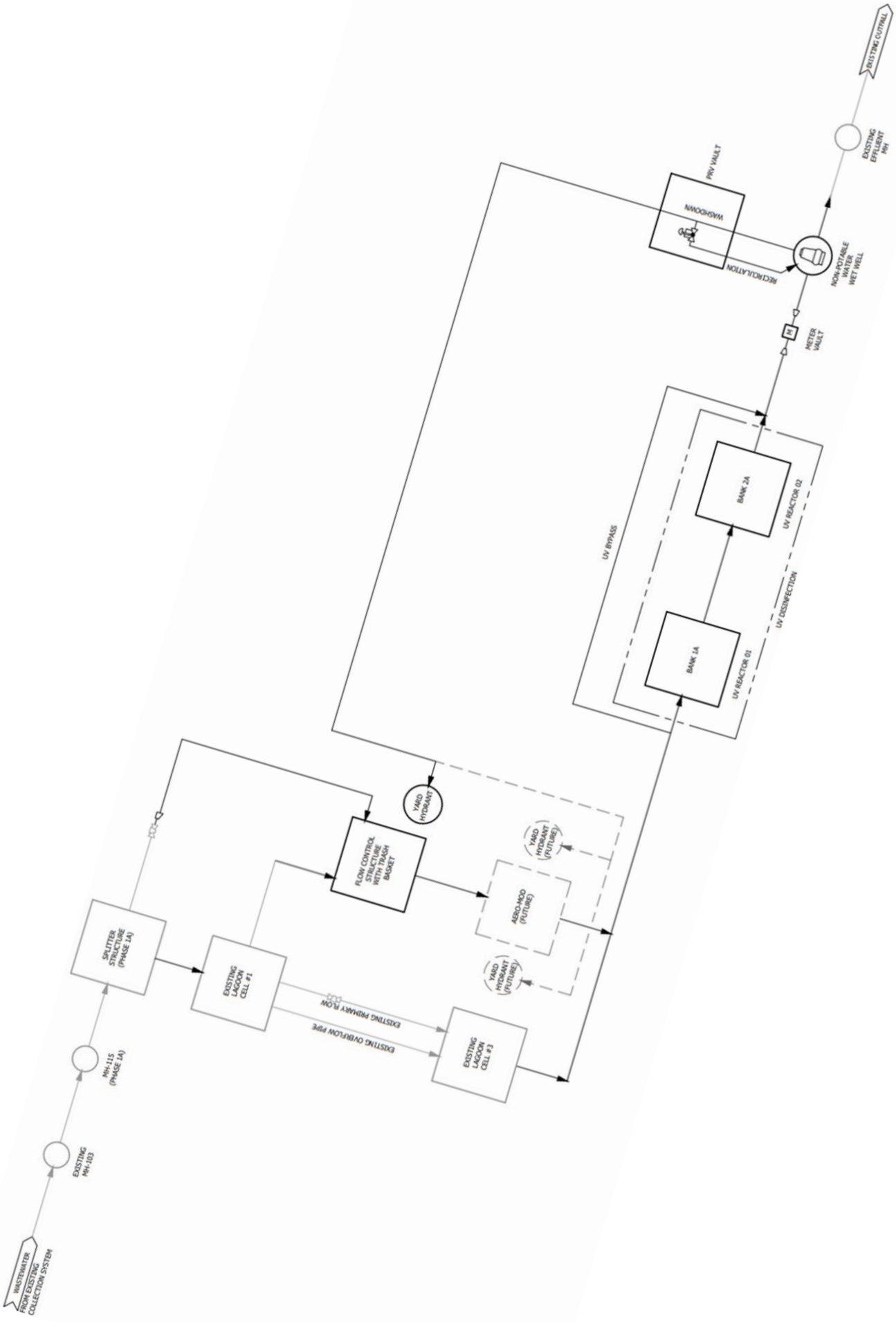
Administrative Hearing Commission
U.S. Post Office Building, Third Floor
131 West High Street, P.O. Box 1557
Jefferson City, MO 65102-1557
Phone: 573-751-2422
Fax: 573-751-5018
Website: https://ahc.mo.gov

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

APPENDICES

- **Site Map**
- **Process Flow Diagram**


REFERENCE NOTES:
1 2" PURPLE POLY PIPING, BURY AT 3' DEPTH.
2 2" PURPLE POLY PIPING, FROM 5' OUTSIDE EDGE OF GRAVEL ROAD ON BOTH SIDES AND UNDER ROAD BURY AT 4' DEPTH.
3 YARD HYDRANT. KUPFERLE MAINGUARD #77 POST FLUSHING HYDRANT OR ENGINEER APPROVED EQUAL.
4 8'x8' GRAVEL AREA AROUND YARD HYDRANT. 4" THICKNESS SUBGRADE OF 1-2.5" SIZE CRUSHED STONES AND 2" OF 3/4" CRUSHED STONES ON TOP OF SUBGRADE.
5 CAP FOR FUTURE CONNECTION IN A LATER PHASE OF WORK.
PROPERTY LINE
BARB WIRE FENCE
SEE SHEETS C-108 AND C-109 FOR PIPING PLAN AND PROFILES
OUTLET STRUCTURE
SEE SHEET D-101 FOR FLOW CONTROL STRUCTURE DETAIL
SEE SHEET C-107 FOR PIPING PLAN AND PROFILE
CELL 2 HAS BEEN DECOMMISSIONED AERIAL IMAGERY HAS NOT BEEN UPDATED
COLD STORAGE BLDG
BLOWER PAD
OPERATIONS BLDG
SEE SHEET D-103 FOR METER VAULT DETAIL
SEE SHEET D-105 FOR PRV VAULT DETAIL
CELL #1
APPROX LOCATION OF DISCHARGE (ABANDONED-IN-PLACE)
8" PIPE (ABANDONED-IN-PLACE)
SEE SHEET D-102 FOR UV EQUIPMENT DETAIL
SEE SHEET C-106 FOR PIPING PLAN AND PROFILE
SEE SHEET D-104 FOR WET WELL DETAIL
SEE SHEET C-105 FOR PIPING PLAN AND PROFILE
CELL #3
APPROX LOCATION OF DISCHARGE (ABANDONED-IN-PLACE)
OUTLET STRUCTURE
OUTFLOW MANHOLE
TOP=915.62
FL IN (N) 8" PVC=910.97
FL OUT (W) 8" PVC=910.87
DISCHARGE STRUCTURE
SEE C-503 FOR DEMO AND MODIFICATION DETAIL
BARB WIRE FENCE
PROPERTY LINE


WASTEWATER FROM EXISTING COLLECTION SYSTEM
EXISTING MH-103
MH-115 (PHASE 1A)
SPLITTER STRUCTURE (PHASE 1A)
EXISTING LAGOON CELL #1
EXISTING PRIMARY FLOW
EXISTING OVERFLOW PIPE
EXISTING LAGOON CELL #3
FLOW CONTROL STRUCTURE WITH TRASH BASKET
YARD HYDRANT
YARD HYDRANT (FUTURE)
AERO-MOD (FUTURE)
YARD HYDRANT (FUTURE)
UV BYPASS
BANK 1A
UV REACTOR 01
BANK 2A
UV REACTOR 02
UV DISINFECTION
METER VAULT
NON-POTABLE WATER WET WELL
RECIRCULATION
WASHDOWN
PRV VAULT
EXISTING EFFLUENT MH
EXISTING OUTFALL

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: MO-DNR Project #: DNR-WW-2DE7FDBE7475

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: 6-21-23 ☐ 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: 9/1/2019
☐ 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
21059.009 Fair Play Wastewater Treatment Facility Improvements

2.2 ESTIMATED PROJECT CONSTRUCTION COST
$ $2,666,260

2.3 PROJECT DESCRIPTION
The purpose of this project is to provide services to assist the City of Fair Play, Missouri with completing wastewater treatment system upgrades required to meet upcoming NPDES permit limits. The project consists of treatment improvements by adding a manual bar screen, lagoon aeration for BOD removal, MBBR equipment for ammonia treatment, and UV equipment for e. Coli treatment.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
Sludge will be reduced in existing lagoon cells 1, 2, and 3 through the process of introducing non-pathogenic bacteria into each lagoon cell as opposed to traditional physical removal. Due to this, no disposal of sludge will be needed. See plans and specifications for additional information.

2.5 DESIGN INFORMATION
A. Current population: 422 ; Design population: 499

B. Actual Flow: 56,365 gpd; Design Average Flow: 86,000 gpd;
Actual Peak Daily Flow: 84,547 gpd; Design Maximum Daily Flow: 129,000 gpd; Design Wet Weather Event: 1,224,000 gpd

2.6 ADDITIONAL INFORMATION
A. Is a topographic map attached? ☑ YES ☐ NO
B. Is a process flow diagram attached? ☑ YES ☐ NO

See attached plan sets.

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: _____ (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 _____ Total Acres _____ 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) _____
☐ Nutrient Management Plan (N&P) If N&P is selected, is the plan included? ☐ YES ☐ NO

3.0 WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
City of Fair Play, MO	417-955-3078	fppublicworks@fairplaymo.com

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
1.25 mi SE of int of MO-32 and S 26th Rd	Fair Play	MO	65649	Polk

Wastewater Treatment Facility: Mo- 0113514 (Outfall 001 Of POTW)

3.1 Legal Description: NE ¼, NE ¼, SE ¼, Sec. 08, T 33N, R 24W
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 448827 Northing (Y): 4162761
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Bear Creek

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
City of Fair Play, MO	417-955-3078	fppublicworks@fairplaymo.com

ADDRESS	CITY	STATE	ZIP CODE
1.25 mi SE of int of MO-32 and S 26th Rd	Fair Play	MO	65649

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	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
City of Fair Play, MO	417-955-3078	fppublicworks@fairplaymo.com

ADDRESS	CITY	STATE	ZIP CODE
1.25 mi SE of int of MO-32 and S 26th Rd	Fair Play	MO	65649

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	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Dane Drysdale / Bartlett & West	417-860-6469	dane.drysdale@bartwest.com

ADDRESS	CITY	STATE	ZIP CODE
1824 S Lone Pine Ave Suite F	Springfield	MO	65804

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: Ethan Grotheer — DATE: 8-7-24

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Alderman	417-399-3265	EthanGrotheer@gmail.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.