STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

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

City of Republic
Republic Wastewater Treatment Facility
915 North West Avenue
Republic, MO 65738

for the construction of (described facilities):

See attached.

Permit Conditions:

See attached.

Construction of such proposed facilities shall be in accordance with the provisions of the Missouri Clean Water Law, Chapter 644, RSMo, and regulation promulgated thereunder, or this permit may be revoked by the Department of Natural Resources (Department).

As the Department does not examine structural features of design or the efficiency of mechanical equipment, the issuance of this permit does not include approval of these features.

A representative of the Department may inspect the work covered by this permit during construction. Issuance of a permit to operate by the Department will be contingent on the work substantially adhering to the approved plans and specifications.

This permit applies only to the construction of water pollution control components; it does not apply to other environmentally regulated areas.

July 18, 2023
Effective Date

July 17, 2025
Expiration Date

John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The Republic WWTF has a design average flow of 3.2 MGD and serves a hydraulic population equivalent of approximately 32,000 people. The proposed project includes upgrades and expansion of the wet weather treatment train to treat a peak flow of 4 MGD, prior to blending the flows with the secondary treatment flows, for a total flow of 7.2 MGD. Construction will start at the headworks, with 3 multi-rake mechanical bar screens with ¼ inch openings installed at a 70 degree angle, each screen capable of treating 8 MGD. The two existing 6 MGD peak flows pumps will remain. The existing peak flow clarifier will continue to be utilized with its approximate capacity of 557,328 gallons providing 3.33 hours of detention time at 4 MGD peak flow. Construction will include a new transfer pump station with 3 submersible pumps (2 duty and 1 standby), each with a design capacity of 1388 gpm (total: 5.99 MGD), with the capability of 2 pumps operating at high wet well level of maximum flow 2776 gpd (4 MGD) at 33 ft of head. Disc filter is capable of peak daily flow of 6 MGD, with a maximum hydraulic loading rate of 6.45 gpm/sq ft and a maximum solids loading rate of 7.75 lbs/day-sq ft. Installation of liquid chlorine disinfection system utilizing the existing chlorine contact tank to provide more than 15 minutes of contact time at design peak flow of 4 MGD.

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 required to determine "findings of affordability" because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of

information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See draft operating permit modification for the cost for compliance for additional monitoring requirements related to blending and using chlorine disinfection.

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 Caitlin Prim, PE, with Burns and McDonnell 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. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the one hundred- (100-) year flood elevation per 10 CSR 20-8.140(2)(B).

6. In addition to the requirements for a construction permit, 10 CSR 20-6.200 requires land disturbance activities of 1 acre or more to obtain a Missouri state operating permit to discharge stormwater. The permit requires best management practices sufficient to control runoff and sedimentation to protect waters of the state. Land disturbance permits 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. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
    - 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 one hundred- (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)
    - The outfall shall be so constructed and protected against the effects of flood water, ice, or other hazards as to reasonably ensure its structural stability and freedom from stoppage. 10 CSR 20-8.140 (6) (A)
    - All sampling points shall be designed so that a representative and discrete twenty-four (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 and dechlorination, when used, shall be provided during all power outages. 10 CSR 20-8.140 (7) (A) 2. and 10 CSR 20-8.190 (2) (A)
    - 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 potable water supply is to be used for any purpose in a wastewater treatment facility other than direct connections, a break tank, pressure pump, and pressure tank or a reduced pressure backflow preventer consistent with the department's Public Drinking Water Branch shall be provided. 10 CSR 20-8.140 (7) (D) 3. A.
- For indirect connections, a sign shall be permanently posted at every hose bib, faucet, hydrant, or sill cock located on the water system beyond the break tank or backflow preventer to indicate that the water is not safe for drinking. 10 CSR 20-8.140 (7) (D) 3. B.
- 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:
    - 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)
    - Explosion-proof electrical equipment, non-sparking tools, gas detectors, and similar devices, in work areas where hazardous conditions may exist, such as digester vaults and other locations where potentially explosive atmospheres of flammable gas or vapor with air may accumulate. 10 CSR 20-8.140 (8) (K)
    - 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)

- The materials utilized for storage, piping, valves, pumping, metering, and splash guards, etc., for chemical handling, shall be specially selected considering the physical and chemical characteristics of each hazardous or corrosive chemical. 10 CSR 20-8.140 (9) (A) 1.
- Secondary containment storage areas contain the stored volume of chemical until it can be safely transferred to alternate storage or released to the wastewater treatment plant at controlled rates that will not damage the facilities, inhibit the treatment processes, or contribute to stream pollution. Secondary containment shall be designed as follows:
  - A minimum volume of one hundred twenty-five percent (125%) of the volume of the largest storage container located within the containment area plus the space occupied by any other tanks located within the containment area when not protected from precipitation; 10 CSR 20-8.140 (9) (A) 2. A.
  - A minimum volume of one hundred ten percent (110%) of the volume of the largest storage container located within the containment area plus the space occupied by any other tanks located within the containment area when protected from precipitation; 10 CSR 20-8.140 (9) (A) 2. B.
  - Walls and floors of the secondary containment structure constructed of suitable material that is compatible with the specifications of the product being stored. 10 CSR 20-8.140 (9) (A) 2. C.
- All pumps or feeders for hazardous or corrosive chemicals shall have guards that will effectively prevent spray of chemicals into space occupied by facility personnel. 10 CSR 20-8.140 (9) (A) 3.
- All piping containing or transporting corrosive or hazardous chemicals shall be identified with labels every ten feet (10') and with at least two (2) labels in each room, closet, or pipe chase. 10 CSR 20-8.140 (9) (A) 4. A.
- All connections (flanged or other type), except those adjacent to storage or feeder areas, shall have guards that will direct any chemical leakage away from space occupied by facility personnel. 10 CSR 20-8.140 (9) (A) 4. B.
- Facilities shall be provided for automatic shutdown of pumps and sounding of alarms when failure occurs in a pressurized chemical discharge line. 10 CSR 20-8.140 (9) (A) 5.
- Dust collection equipment shall be provided to protect facility personnel from dusts injurious to the lungs or skin and to prevent polymer dust from settling on walkways that become slick when wet. 10 CSR 20-8.140 (9) (A) 6.
- The following shall be provided to fulfill the particular needs of each chemical housing facility:
  - Provide storage for a minimum of thirty (30) days' supply, unless local suppliers and conditions indicate that such storage can be reduced without limiting the supply; 10 CSR 20-8.140 (9) (B) 1.

- Provide chemical storage areas with drains, sumps, finished water plumbing, and the hose bibs and hoses necessary to clean up spills and to wash equipment; 10 CSR 20-8.140 (9) (B) 4.
- Construct chemical storage area floors and walls of material that is suitable to the chemicals being stored and that is capable of being cleaned; 10 CSR 20-8.140 (9) (B) 5.
- Install floor surfaces to be smooth, chemical resistant, slip resistant, and well drained with three inches per ten feet (3"/10') minimum slope; 10 CSR 20-8.140 (9) (B) 6.
- Provide adequate lighting; 10 CSR 20-8.140 (9) (B) 7.
- Comply with the NEC recommendation for lighting and electrical equipment based on the chemicals stored. 10 CSR 20-8.140 (9) (B) 8.
- Store chemical containers in a cool, dry, and well-ventilated area; 10 CSR 20-8.140 (9) (B) 9.
- Design vents from feeders, storage facilities, and equipment exhaust to discharge to the outside atmosphere above grade and remote from air intakes; 10 CSR 20-8.140 (9) (B) 10.
- Locate storage area for chemical containers out of direct sunlight; 10 CSR 20-8.140 (9) (B) 11.
- Maintain storage temperatures in accordance with relevant Safety Data Sheets (SDS). 10 CSR 20-8.140 (9) (B) 12.
- Control humidity as necessary when storing dry chemicals; 10 CSR 20-8.140 (9) (B) 13.
- Store incompatible chemicals separately to ensure the safety of facility personnel and the wastewater treatment system. Store any two (2) chemicals that can react to form a toxic gas in separate housing facilities; 10 CSR 20-8.140 (9) (B) 16.
- Design and isolate areas intended for storage and handling of chlorine and sulfur dioxide and other hazardous gases. 10 CSR 20-8.140 (9) (B) 17.
- Design an isolated fireproof storage area and explosion proof electrical outlets, lights, and motors for all powdered activated carbon storage and handling areas in accordance with federal, state, and local requirements; 10 CSR 20-8.140 (9) (B) 18.
- Vent acid storage tanks to the outside atmosphere, but not through vents in common with day tanks; 10 CSR 20-8.140 (9) (B) 19.
- Keep concentrated acid solutions or dry powder in closed, acid-resistant shipping containers or storage units; 10 CSR 20-8.140 (9) (B) 20.
- Pump concentrated liquid acids in undiluted form from the original container to the point of treatment or to a covered storage tank. Do not handle in open vessels. 10 CSR 20-8.140 (9) (B) 21.

- The following shall be provided, where applicable, for the design of chemical handling:
  - Make provisions for measuring quantities of chemicals used for treatment or to prepare feed solutions over the range of design application rates; 10 CSR 20-8.140 (9) (C) 1.
  - Select storage tanks, piping, and equipment for liquid chemicals specific to the chemicals; 10 CSR 20-8.140 (9) (C) 2.

- Install all liquid chemical mixing and feed installations on corrosion resistant pedestals; 10 CSR 20-8.140 (9) (C) 3.
- Provide sufficient capacity of solution storage or day tanks feeding directly for twenty-four- (24-) hour operation at design average flow; 10 CSR 20-8.140 (9) (C) 4.
- Provide a minimum of two (2) chemical feeders for continuous operability. Provide a standby unit or combination of units of sufficient capacity to replace the largest unit out-of-service; 10 CSR 20-8.140 (9) (C) 5.
- Chemical feeders shall—
  - Be designed with chemical feed equipment to meet the maximum dosage requirements for the design average flow conditions; 10 CSR 20-8.140 (9) (C) 6. A.
  - Be able to supply, at all times, the necessary amounts of chemicals at an accurate rate throughout the range of feed; 10 CSR 20-8.140 (9) (C) 6. B.
  - Provide proportioning of chemical feed to the rate of flow where the flow rate is not constant; 10 CSR 20-8.140 (9) (C) 6. C.
  - Be designed to be readily accessible for servicing, repair, and observation; 10 CSR 20-8.140 (9) (C) 6. D.
  - Protect the entire feeder system against freezing; 10 CSR 20-8.140 (9) (C) 6. E.
  - Be located adjacent to points of application to minimize length of feed lines; 10 CSR 20-8.140 (9) (C) 6. F.
  - Provide for both automatic and manual operation for chemical feed control systems; 10 CSR 20-8.140 (9) (C) 6. G.
  - Utilize automatic chemical dose or residual analyzers, and where provided, include alarms for critical values and recording charts; 10 CSR 20-8.140 (9) (C) 6. H.
  - Provide screens and valves on the chemical feed pump suction lines; 10 CSR 20-8.140 (9) (C) 6. I.
  - Provide an air break or anti-siphon device where the chemical solution enters the water stream; 10 CSR 20-8.140 (9) (C) 6. J.

- Completely enclose chemicals and prevent emission of dust; 10 CSR 20-8.140 (9) (C) 7. F.
- Provide for uniform strength of solution consistent with the nature of the chemical solution for solution tank dosing; 10 CSR 20-8.140 (9) (C) 8.
- Use solution feed pumps to feed chemical slurries that are not diaphragm or piston type positive displacement types; 10 CSR 20-8.140 (9) (C) 9.
- Provide continuous agitation to maintain slurries in suspension; 10 CSR 20-8.140 (9) (C) 10.
- The following chemical safety items shall be provided in addition to the safety provisions in section (8) of this rule:
  - Appropriate personal protective equipment (PPE). 10 CSR 20-8.140 (9) (D) 1.
- The identification and hazard warning data included on chemical shipping containers, when received, shall appear on all containers (regardless of size or type) used to store, carry, or use a hazardous substance. 10 CSR 20-8.140 (9) (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)
- All screening devices and screening storage areas shall be protected from freezing. 10 CSR 20-8.150 (4) (A) 1.
- Provisions shall be made for isolating or removing screening devices from their location for servicing. 10 CSR 20-8.150 (4) (A) 2.
- Mechanically cleaned screen channels shall be protected by guard railings and deck gratings. 10 CSR 20-8.150 (4) (A) 3. A. (II)
- Mechanical screening equipment shall have adequate removal enclosures to protect facility personnel against accidental contact with moving parts and to prevent dripping in multi-level installations. 10 CSR 20-8.150 (4) (A) 3. B. (I)
- A positive means of locking out each mechanical screening device shall be provided. 10 CSR 20-8.150 (4) (A) 3. B. (II)
- An emergency stop button with an automatic reverse function shall be located in close proximity to the mechanical screening device. 10 CSR 20-8.150 (4) (A) 3. B. (III)
- 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)
- Where two (2) or more mechanically cleaned bar screens are used, the design shall provide for taking the largest unit out-of-service without sacrificing the capability to handle the average design flow. Where only one mechanically cleaned screen is used, it shall be sized to handle the design peak instantaneous flow. 10 CSR 20-8.150 (4) (B)
- Effective flow splitting devices and control appurtenances (*e.g.* gates and splitter boxes) shall be provided to permit proper proportioning of flow and solids loading to each settling unit, throughout the expected range of flows. 10 CSR 20-8.160 (2) (B)
- Contact period for Chlorine Disinfection. A minimum contact period of fifteen (15) minutes at design peak hourly flow or maximum rate of pumpage shall be provided after thorough mixing. 10 CSR 20-8.190 (3) (A)
- Alarm System for chlorination and dechlorination systems. The applicant shall conform to 10 CSR 20-8.140(7)(C) and be responsible for specifying what the alarm requirements are necessary to assure consistent disinfection in compliance with the applicable bacteria limits and the disinfection residual limit in the effluent. 10 CSR 20-8.190 (3) (C)
- Contact time. A minimum of thirty (30) seconds for mixing and contact time of dechlorination systems shall be provided at the design peak hourly flow or maximum rate of pumpage. 10 CSR 20-8.190 (4) (B) 2.

9. Upon completion of construction:

   A. The City of Republic will become the continuing 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) (https://dnr.mo.gov/document-search/wastewater-construction-statement-work-completed-mo-780-2155); and

D. Request the operating permit modification be issued. The facility does not owe an operating permit modification fee.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Construction is to improve treatment ability and capacity through the wet weather train, provide disinfection on the wet weather train, and to install blending. This is to meet the requirements of AOC No. 2021-WPCB-1664 to eliminate discharges from the peak flow clarifier.

2. FACILITY DESCRIPTION

The Republic WWTF is located at 915 North West Avenue, Republic, in Greene County, Missouri. The facility has a design average flow of 3.2 MGD and serves a hydraulic population equivalent of approximately 32,000 people. The existing treatment plant includes: Influent pump station / peak flow basin / grinder / mechanical screening / grit removal and grease separator / selector basins (3) / oxidation ditches (3) / final clarifiers (3) / tertiary filter / UV disinfection / aerobic digesters (3) / sludge decant equalization basin / sludge retained in holding basin until disposal by land application.

During high flow events the proposed project will have peak flows directed through the wet weather train after being split at the screening. The wet weather train will include peak flow pumps, existing peak flow clarifier, transfer pump station, disc filtration, and chlorine disinfection. Following the wet weather train, flows will be blended back with secondary treated flows prior to discharge. The peak flow wet weather treatment train will have the capacity to treat up to 4 MGD. Thus providing the facility to have the capability to discharge 7.2 MGD.

This is the initial phase of a larger project that will expand and replace the existing Republic wastewater treatment facility, so treatment components are sized to work with the additional phases.

3. COMPLIANCE PARAMETERS

The proposed project is required to remove discharges through Outfall #002 which is no longer authorized in the Operating Permit MO-0022098. The facility is proposing to use chlorine disinfection for the wet weather flows prior to blending with the secondary treated flows. The facility will still have to meet all effluent limits. The parameters of concern related to this project are the following effluent limits:

Parameter	Units	Monthly average limit
Biochemical Oxygen Demand$_5$	mg/L	10
Total Suspended Solids	mg/L	15
BOD % removal	mg/L	85
TSS % removal	mg/L	85
Total Residual Chlorine	µg/L	9(130 ML)
E. coli	#/100mL	126

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

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

The existing secondary treatment plant includes grit removal and grease separator, 3 selector basins, 3 oxidation ditches, 3 final clarifiers, tertiary filtration and UV disinfection which will remain at this time. Solids handling includes 3 aerobic digesters, sludge decant equalization basin, with sludge retained in the holding basin until land applied.

Construction will cover the following items:

- Screening – Installation of screening devices removes nuisance inorganic materials from raw wastewater. Influent screening is provided upstream of the existing peak flow pump station. Three mechanical bar screens are installed in the three existing channels (2 new, 1 existing).
    - Mechanical Coarse Screen – Multi-rake mechanically cleaned coarse screen, with a maximum spacing of ¼ -inch, positioned at an angle of 70 degrees from the horizontal to allow for raking of the screen.
        - Each screening device shall be capable of treating a design average flow of 8 MGD, for a total of 24 MGD potential capacity
            - Each screening device will be in its own channel with a depth of 3.42 ft and width of 4.5 ft
            - The design screening volume rate is 15 cubic feet per million gallons.
            - Thus each unit is capable of handling the design average flow with a unit out of service per 10 CSR 20-8.150(4)(B).
        - The addition of a washer/compactor and screenings conveyor will mitigate the increased volume of screenings captured by washing, dewatering, and compacting the screenings prior to disposal.

- Screenings from the mechanical screens will be dewatered via a washer/compactor and disposed of in a dumpster adjacent to the screen channels.
- The screening structure is followed by peak flow pumps.

- Peak Flow Pumps – Two existing 6 MGD peak flows pump deliver to the peak flow clarifier. As part of this construction project, the impellers on each peak flow pump will be replaced to facilitate the ability to pump 12 MGD.
- Existing Peak Flow Clarifier – Wet weather flow equalization is utilized during wet weather events where the peak flow is greater than the design peak capacity of the treatment facility. The existing peak flow clarifier has an approximate design volume of 557,328 gallons.
    - The equalization basin is 90.33 ft x 13.77 ft sidewater depth deep, with a 83 ft weir diameter.
    - The detention time in the peak flow clarifier is approximately 3.3 hours at peak flow of 4 MGD.
    - Surface overflow rate is approximately 739 gpd/sq ft, meeting the requirements of 10 CSR 20-8.160(2)(B), Table 160-2.
    - Weir overflow rate is approximately 15,340 gal/day/ft, which meets the requirements of 10 CSR 20-8.160(2)(C)2, Table 160-4.
- Transfer Pump Station – To return flow from the wet weather peak flow clarifier to the treatment plant or on through the wet weather treatment train. Three submersible pumps, each with a design capacity of 1,388 gpm (total: 5.99 MGD). The acceptable pump is the Flygt N3171 series.
    - At low wet well level with 2 pumps operating, maximum flow is 2,776 gpm (4.0 MGD) at 40 ft of head.
    - At high wet well level with 2 pumps operating, maximum flow is 2,776 gpm at 33 ft of head.
- Cloth Disk Tertiary Filtration – Installation of one Aqua Aerobics – Aquastorm Cloth Media Filter and backwash pump.
    - Disc filter is capable of peak daily flow of 6 MGD, with a maximum hydraulic loading rate of 6.45 gpm/sq ft and a maximum solids loading rate of 7.75 lbs/day-sq ft.
    - Filter media nominal size openings of 5 microns (5 µm).
    - The disk filter unit shall be supplied with a backwash system, with a cast iron, self-priming, solids handling, centrifugal pump with integrated 20 hp, 3 phase drive motor.
    - Disk filtration shall follow clarification prior to disinfection.
- Disinfection – Disinfection is the process of removal, deactivation, or killing of pathogenic microorganisms.
    - Liquid Chlorine – Bulk storage of the sodium hypochlorite chlorine disinfection system is proposed to be in two 3,000-gallon high-density polyethylene (HDXPE) bulk tanks within concrete chemical containment.
        - Designed for 12.5% sodium hypochlorite concentration.
        - The tanks are proposed to be stored outdoors under canopy cover to protect the hypochlorite from UV light.
        - The two 3,000-gallon tanks provide approximately 30 days of storage at the peak flow of 4 MGD. This aligns with historical duration of use

of the peak flow clarifier and minimizes the potential for sodium hypochlorite degradation (hypochlorite degrades with time and in warmer temperatures).

- Two Grundfos diaphragm chemical metering pumps (one duty, one standby). All metering pumps in the system shall be the same size and capacity, capable of pumping the flows.
  - Chemical diaphragm pumps shall be of the simplex, positive displacement, reciprocating, mechanically actuated disc diaphragm style, driven by electric motors
  - Design minimum feed rate is 1.75 gallons per hour, design average feed rate of 7.0 gallons per hour, and design max feed rate is 32 gallons per hour.

- Dechlorination –1,500 gallon high density polyethylene (HDXPE) sodium bisulfite bulk tank is proposed to be stored in totes indoors to prevent chemical freezing at cool temperatures. Chemical feed skids for sodium hypochlorite and sodium bisulfite would also be located within the chemical building. Sample pumps would distribute water to chlorine analyzers within the building to facilitate flow pacing of bisulfite.
  - Two Grundfos diaphragm chemical metering pumps. All metering pumps in the system shall be the same size and capacity, capable of pumping the flows.
    - Chemical diaphragm pumps shall be of the simplex, positive displacement, reciprocating, mechanically actuated disc diaphragm style, driven by electric motors
    - Design minimum feed rate is 0.15 gallons per hour, design average feed rate of 1.75 gallons per hour, and design max feed rate is 2.6 gallons per hour.
- Chlorine Contact Tank – The existing chlorine contact basin will be rehabilitated and put back into service. The basin is bifurcated and serpentine, creating two 234-ft long by 5-foot wide channels. Each side of the basin is capable of treating at least 4 MGD of flow during peak conditions, exceeding 15 minutes of contact time for chlorination and 30 seconds of contact time for dechlorination, required per 10 CSR 20-8.190(3)(A).
- With the piping to blend the UV flows with the wet weather flows receiving chlorine disinfection, a new outfall structure will be constructed to handle the blended flows, approximately 50 feet downstream from the existing outfall structure. The new outfall structure will still discharge to Dry Branch.
  - New 24 inch and 42 inch lines will be installed to convey the water.
  - Existing outfall #002 structure will be removed as part of construction, as discharges are no longer authorized.
  - The existing Outfall #001 structure will be removed as part of construction.

5. OPERATING PERMIT

Operating permit MO-0022098 will require a modification to reflect the construction activities. The modified Republic WWTF was successfully public noticed from

December 30, 2022 to January 30, 2023 with comments received from the City of Republic. The Department responded on March 21, 2023 to the received comments.

When construction is complete, 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. No fee is required to be paid.

With your CP application, an operating permit modification was submitted for public notice to reflect the change in your operating permit. Your operating permit application for a renewal will be due before your CP is expired. The modification action does not fulfill the renewal application obligation. Operating permit MO-0022098 will be expiring on March 31, 2024. A renewal application must be filed before October 3, 2023 regardless of the status of these construction activities. If you have questions on completing the renewal application, please contact the Operating Permit Section at cleanwaterpermits@dnr.mo.gov or by phone at 573-522-4502

V. NOTICE OF RIGHT TO APPEAL

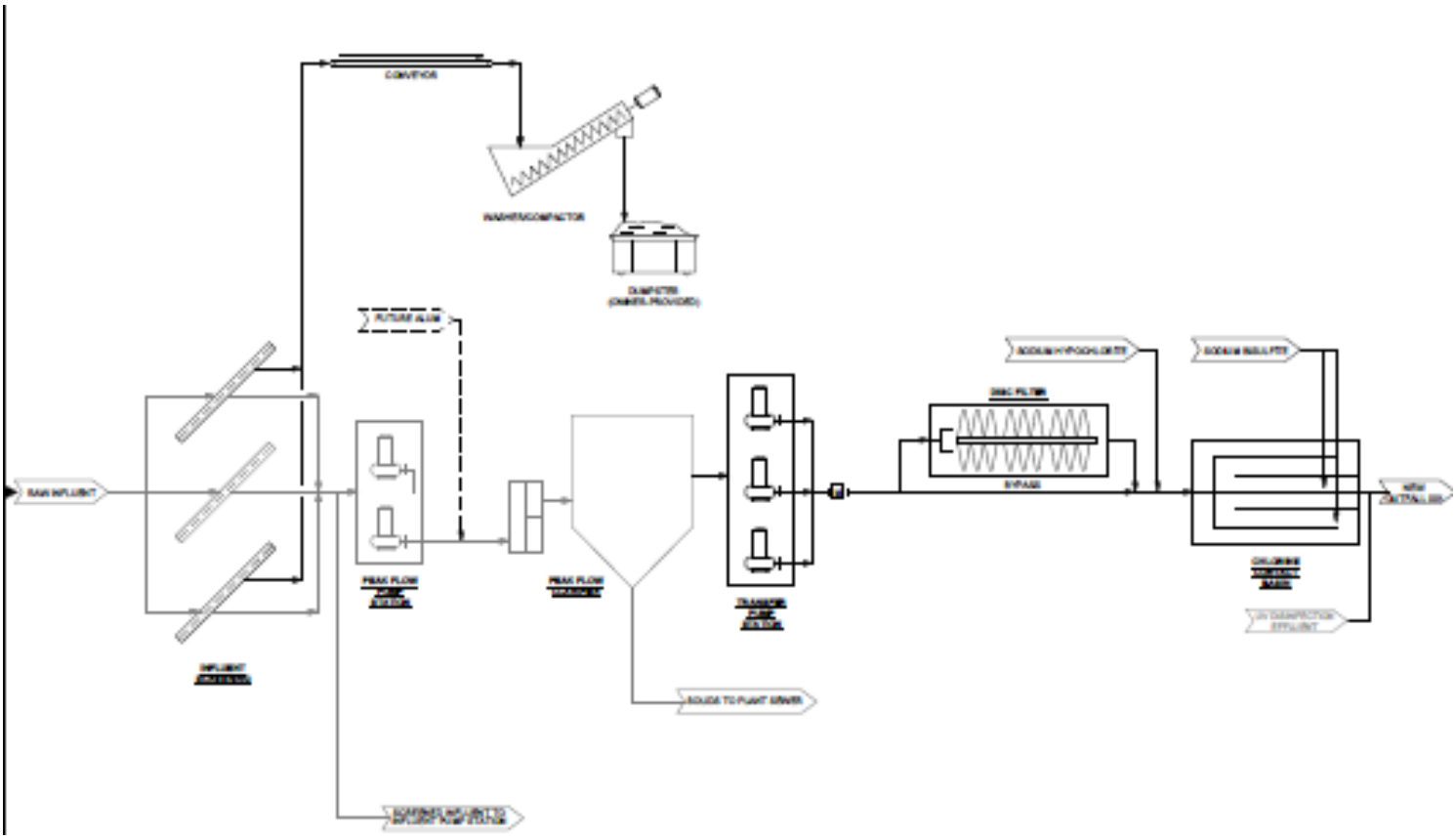
If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (AHC) pursuant to Section 621.250 RSMo. To appeal, you must file a petition with the AHC within 30 days after the date this decision was mailed or the date it was delivered,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

Leasue Meyers, EI
Engineering Section
leasue.meyers@dnr.mo.gov

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

APPENDIX A –PROCESS FLOW DIAGRAM FOR WET WEATHER TRAIN



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: DNR/ARPA Project #: DNR-LP-E5B3F40BFA16

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: 8/11/22 ☐ 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: 9/13/2022
☐ 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
City of Republic WWTF

2.2 ESTIMATED PROJECT CONSTRUCTION COST
$ 15,300,000

2.3 PROJECT DESCRIPTION
Two mechanical bar screens, a washer/compactor, transfer pumping, disc filter, and chlorine disinfection will be constructed. The improvements facilitate auxiliary wet weather treatment that will be combined with effluent from the mechanical WWTF through a new Outfall 001.

2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
Sludge handling, use, and disposal is not under the scope of this wet weather improvement project. The existing site will be updated through a separate project to use activated sludge - Modified UCT process. Sludge will be stabilized to land apply.

2.5 DESIGN INFORMATION

A. Current population: 16,000; Design population: 32,000

B. Actual Flow: 1,531,000 gpd; Design Average Flow: 3.2 Mgpd;
Actual Peak Daily Flow: 7.2 Mgpd; Design Maximum Daily Flow: 7.2 Mgpd; Design Wet Weather Event: 7.2 MGD

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	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Republic Wastewater Treatment Facility	417-732-3460	jasondavis@republicmo.com

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
915 N. West Avenue	Republic	MO	65738	Greene

Wastewater Treatment Facility: Mo- 0022098 (Outfall 001 Of 001)

3.1 Legal Description: SW ¼, NW ¼, SE ¼, Sec. 18, T 28N, R 23W
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 456660 Northing (Y): 4109522
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Dry Branch Tributary to Pickeral Creek tributary to the Sac River

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
City of Republic c/o Garrett Bricknder	417-732-3405	gbrickner@republicmo.com

ADDRESS	CITY	STATE	ZIP CODE
4221 S Wilson's Creek Blvd.	Republic	MO	65738

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 Republic c/o Andrew Nelson	417-732-3401	gbrickner@republicmo.com

ADDRESS	CITY	STATE	ZIP CODE
4221 S Wilson's Creek Blvd.	Republic	MO	65738

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
Jason Garder PE, Burns & McDonnell	816-894-8257	jlgarder@burnsmcd.com

ADDRESS	CITY	STATE	ZIP CODE
9400 Ward Pkwy	Kansas City	MO	64114

7.0 APPLICATION FEE

☐ CHECK NUMBER ☑ JETPAY CONFIRMATION NUMBER 20042893

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	DATE
Garrett Brickner	4/20/2023

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
Assistant BUILDS Administrator	(417) 732-3405	gbrickner@republicmo.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: _____ (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

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) and10 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.