

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Elsberry WWTF
100 Hatfield Road
Elsberry, MO 63343

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.

August 14, 2020
Effective Date

June 16, 2022
Modification Date

September 1, 2024
Expiration Date

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

The City of Elsberry is constructing a new wastewater treatment facility and modifying the existing lagoon system to provide wet weather flow equalization. Elsberry will be installing a spiral screen, flow equalization, aeration basin for nitrification, post aeration, ultraviolet disinfection system, along with a sludge holding tank, loading system, and lab building. The outfall will be relocated approximately 0.15 miles from its current location. Design average flow will increase to 336,000 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 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 **APPENDIX B – COST ANALYSIS FOR COMPLIANCE** for additional sampling costs.

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 MECO Engineering Company, 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 St. Louis Regional Office per 10 CSR 20-7.015(9)(G).
5. The wastewater treatment facility shall be located above the twenty-five (25)-year flood level.
6. 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). The minimum distance between wastewater treatment facilities and all potable water sources shall be at least three hundred feet (300') per 10 CSR 20-8.140(2)(C)1.
7. 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/env/wpp/epermit/help.htm. See dnr.mo.gov/env/wpp/stormwater/sw-land-disturb-permits.htm for more information.
8. A United States (U.S.) Army Corps of Engineers (COE) permit (404) and a Water Quality Certification (401) issued by the Department or permit waiver may be required for the activities described in this permit. This permit is not valid until these requirements are satisfied. If construction activity will disturb any land below the ordinary high water mark of jurisdictional waters of the U.S. then a 404/401 will be required. Since the COE makes determinations on what is jurisdictional, you must contact the COE to determine permitting requirements. You may call the Department's Water Protection Program at 573-751-1300 for more information. See dnr.mo.gov/env/wpp/401/ for more information.
9. In accordance with 10 CSR 20-6.010(12), a full closure plan shall be submitted to the Department's St. Louis Regional Office for review and approval of any permitted

wastewater treatment system being replaced. The closure plan must meet the requirements outlined in Standard Conditions Part III of the Missouri State Operating Permit No. MO- 0054691. Closure shall not commence until the submitted closure plan is approved by the Department. Form J – *Request for Termination of a State Operating Permit*, shall be submitted to the Water Protection Program for termination of any existing Missouri state operating permit, once closure is completed in accordance with the approved closure plan.

10. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.
- Leakage tests shall be specified for gravity sewers except polyvinyl chloride (PVC) pipe with a diameter of twenty-seven inches (27") or less. 10 CSR 20-8.120 (3) (C) 2.
 - The leakage exfiltration or infiltration for gravity sewers shall not exceed one hundred (100) gallons per inch of pipe diameter per mile per day for any section between manholes of the system. An exfiltration or infiltration test shall be performed with a minimum positive head of two feet (2'). The exfiltration or infiltration test shall conform to the test procedure described in ASTM C969 – 17 *Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines*, as approved and published April 1, 2017, for precast concrete pipe. 10 CSR 20-8.120 (3) (C) 2. A.
 - The air test for sewers shall, conform to the test procedure described in ASTM C1103 – 14 *Standard Practice for Joint Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines*, as approved and published November 1, 2014, for concrete pipe twenty-seven inches (27") or greater in diameter, and ASTM F1417 – 11a(2015) *Standard Practice for Installation Acceptance of Plastic Non-pressure Sewer Lines Using Low-Pressure Air*, as approved and published August 1, 2015, for plastic, composite, and ductile iron pipe. 10 CSR 20-8.120 (3) (C) 2. B.
 - Vacuum testing, if specified for concrete sewer manholes, shall conform to the test procedures in ASTM C1244 – 11(2017) *Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test Prior to Backfill*, as approved and published April 1, 2017, or the manufacturer's recommendation. 10 CSR 20-8.120 (4) (F) 1.
 - Exfiltration testing, if specified for concrete sewer manholes, shall conform to the test procedures in ASTM C969 – 17 *Standard Practice for Infiltration and Exfiltration Acceptance Testing of Installed Precast Concrete Pipe Sewer Lines*, as approved and published April 1, 2017. 10 CSR 20-8.120 (4) (F) 2.
 - There shall be no physical connections between a public or private potable water supply system and a sewer or appurtenance that would permit the passage of any wastewater or polluted water into the potable supply. 10 CSR 20-8.120 (5) (A)
 - Sewers shall be laid at least fifty feet (50') in a horizontal direction from any existing or proposed public water supply well or other water supply sources or structures. Sewers must also comply with 10 CSR 23-3.010. 10 CSR 20-8.120 (5) (B)

- Facilities shall be readily accessible by authorized personnel from a public right-of-way at all times. 10 CSR 20-8.140 (2) (D). 10 CSR 20-8.130 (2) (B)
- Dry wells, including their superstructure, shall be completely separated from the wet well with gas tight common walls. 10 CSR 20-8.130 (3) (A) 1.
- Suitable and safe means of access to dry wells and to wet wells shall be provided to persons wearing self-contained breathing apparatus. 10 CSR 20-8.130 (3) (A) 2.
- Multiple pumps shall be provided except for design average flows of less than fifteen hundred (1,500) gallons per day. 10 CSR 20-8.130 (3) (B) 1.
- Electrical equipment. Electrical equipment shall be provided with the following requirements:
 - 10 CSR 20-8.130 (3) (B) 2. A. Electrical equipment must comply with 10 CSR 20-8.140(7)(B);
 - Utilize corrosive resistant equipment located in the wet well; 10 CSR 20-8.130 (3) (B) 2. B.
 - Provide a watertight seal and separate strain relief for all flexible cable; 10 CSR 20-8.130 (3) (B) 2. C.
 - Install a fused disconnect switch located above ground for the main power feed for all pumping stations. 10 CSR 20-8.130 (3) (B) 2. D.
 - When such equipment is exposed to weather, it shall comply with the requirements of weather proof equipment; enclosure NEMA 4; NEMA 4X where necessary; and *NEMA Standard 250-2014*, published December 15, 2014. 10 CSR 20-8.130 (3) (B) 2. E.
 - Install lightning and surge protection systems; 10 CSR 20-8.130 (3) (B) 2. F.
 - Install a one hundred ten volt (110 V) power receptacle inside the control panel located outdoors to facilitate maintenance; 10 CSR 20-8.130 (3) (B) 2. G.
 - Provide Ground Fault Circuit Interruption (GFCI) protection for all outdoor receptacles. 10 CSR 20-8.130 (3) (B) 2. H.
- Water level controls must be accessible without entering the wet well. 10 CSR 20-8.130 (3) (C)
- Valves shall not be located in the wet well unless integral to a pump or its housing. 10 CSR 20-8.130 (3) (D)
- Covered wet wells shall have provisions for air displacement to the atmosphere, such as an inverted and screened “j” tube or other means. 10 CSR 20-8.130 (3) (E)
- Interconnection between the wet well and dry well ventilation systems is not acceptable. 10 CSR 20-8.130 (3) (F)
- Submersible pump stations shall meet the applicable requirements under section (3) of this rule, except as modified in this section. 10 CSR 20-8.130 (5)
 - Pump Removal. Submersible pumps shall be readily removable and replaceable without personnel entering, dewatering, or disconnecting any piping in the wet well. 10 CSR 20-8.130 (5) (A)
 - 10 CSR 20-8.130 (5) (B) Valve Chamber and Valves. Valves required under subsection (3)(D) of this rule shall be located in a separate valve chamber.

- A minimum access hatch dimensions of twenty-four inches by thirty-six inches (24" x 36") shall be provided. 10 CSR 20-8.130 (5) (B) 1.
- A portable pump connection on the discharge line with rapid connection capabilities shall be provided. 10 CSR 20-8.130 (5) (B) 2.
- Alarm systems with an uninterrupted power source shall be provided for pumping stations. 10 CSR 20-8.130 (6)
- Where independent substations are used for emergency power, each separate substation and its associated distribution lines shall be capable of starting and operating the pump station at its rated capacity. 10 CSR 20-8.130 (7) (B)
- 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)
- Enclose the pump and haul facility site with a fence designed to discourage the entrance of unauthorized persons and animals; 10 CSR 20-8.140 (4) (A) 2
- The alarm shall be activated in cases of high water levels. Follow the provisions in subsection (7)(C) of this rule for alarm systems. 10 CSR 20-8.140 (4) (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.
- 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:
 - 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:
 - Isolate all pumping stations and wastewater treatment components installed in a building where other equipment or offices are located from the rest of the building by an air-tight partition, provide

- separate outside entrances, and provide separate and independent fresh air supply; 10 CSR 20-8.140 (8) (J) 1.
- 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.
 - Dampers are not to be used on exhaust or fresh air ducts. Avoid the use of fine screens or other obstructions on exhaust or fresh air ducts to prevent clogging; 10 CSR 20-8.140 (8) (J) 3.
 - Where continuous ventilation is needed (e.g., housed facilities), provide at least twelve (12) complete air changes per hour. Where continuous ventilation would cause excessive heat loss, provide intermittent ventilation of at least thirty (30) complete air changes per hour when facility personnel enter the area. Base air change demands on one hundred percent (100%) fresh air; 10 CSR 20-8.140 (8) (J) 4.
 - Electrical controls. Mark and conveniently locate switches for operation of ventilation equipment outside of the wet well or building. Interconnect all intermittently operated ventilation equipment with the respective wet well, dry well, or building lighting system. The manual lighting/ventilation switch is expected to override the automatic controls. For a two (2) speed ventilation system with automatic switch over where gas detection equipment is installed, increase the ventilation rate automatically in response to the detection of hazardous concentrations of gases or vapors; 10 CSR 20-8.140 (8) (J) 5.
 - Fabricate the fan wheel from non-sparking material. Provide automatic heating and dehumidification equipment in all dry wells and buildings. 10 CSR 20-8.140 (8) (J) 6.
 - 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.
- Piping, labeling, and coupling guard locations. 10 CSR 20-8.140 (9) (A) 4.
- 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 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.
 - Construct the chemical storage room of fire and corrosion resistant material; 10 CSR 20-8.140 (9) (B) 2.
 - Equip doors with panic hardware. To prevent unauthorized access, doors lock but do not need a key to exit the locked room using the panic hardware; 10 CSR 20-8.140 (9) (B) 3.
 - 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 Material Safety Data Sheets (MSDS). 10 CSR 20-8.140 (9) (B) 12.
- Control humidity as necessary when storing dry chemicals; 10 CSR 20-8.140 (9) (B) 13.
- Design the storage area with designated areas for "full" and "empty" chemical containers; 10 CSR 20-8.140 (9) (B) 14.
- Provide storage rooms housing flammable chemicals with an automatic sprinkler system designed for four tenths gallons per minute per square foot (0.4 gpm/ft²) and a minimum duration of twenty (20) minutes; 10 CSR 20-8.140 (9) (B) 15.
- 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.
 - Dry chemical feed system shall—
 - Be equipped with a dissolver capable of providing a minimum retention period of five (5) minutes at the maximum feed rate; 10 CSR 20-8.140 (9) (C) 7. A.
 - Be equipped with two (2) solution vessels and transfer piping for polyelectrolyte feed installations; 10 CSR 20-8.140 (9) (C) 7. B.
 - Have an eductor funnel or other appropriate arrangement for wetting the polymer during the preparation of the stock feed solution on the makeup tanks; 10 CSR 20-8.140 (9) (C) 7. C.
 - Provide adequate mixing by means of a large diameter, low-speed mixer; 10 CSR 20-8.140 (9) (C) 7. D.

- Make provisions to measure the dry chemical volumetrically or gravimetrically; 10 CSR 20-8.140 (9) (C) 7. E.
 - 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.
 - Provide a minimum of two (2) flocculation tanks or channels having a combined detention period of twenty to thirty (20 – 30) minutes. Provide independent controls for each tank or channel; 10 CSR 20-8.140 (9) (C) 11.
 - Insulate pipelines carrying soda ash at concentrations greater than twenty percent (20%) solution to prevent crystallization; 10 CSR 20-8.140 (9) (C) 12.
 - Prohibit bagging soda ash in a damp or humid place. 10 CSR 20-8.140 (9) (C) 13.
- 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.
 - Eye wash fountains and safety showers utilizing potable water shall be provided in the laboratory and on each level or work location involving hazardous or corrosive chemical storage, mixing (or slaking), pumping, metering, or transportation unloading. The design of eye wash fountains and safety showers shall include the following:
 - Eye wash fountains with water of moderate temperature, fifty degrees to ninety degrees Fahrenheit (50°–90°F), suitable to provide fifteen to thirty (15–30) minutes of continuous irrigation of the eyes; 10 CSR 20-8.140 (9) (D) 2. A.
 - Emergency showers capable of discharging twenty gallons per minute (20 gpm) of water of moderate temperature, fifty degrees to ninety degrees Fahrenheit (50°–90°F), and at pressures of thirty to fifty pounds per square inch (30–50 psi); 10 CSR 20-8.140 (9) (D) 2. B.
 - Eye wash fountains and emergency showers located no more than twenty-five feet (25') from points of hazardous chemical exposure; CSR 20-8.140 (9) (D) 2. C.
 - Eye wash fountains and showers that are to be fully operable during all weather conditions; 10 CSR 20-8.140 (9) (D) 2. D.
 - Warning signs requiring use of goggles shall be located near chemical stations, pumps, and other points of frequent hazard. 10 CSR 20-8.140 (9) (D) 3.

- 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.
- Manually cleaned screen channels shall be protected by guard railings and deck gratings with adequate provisions for removal or opening to facilitate raking. 10 CSR 20-8.150 (4) (A) 3. A. (I)
- 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)
- 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)
- Overflow weirs shall be readily adjustable over the life of the structure to correct for differential settlement of the tank. 10 CSR 20-8.160 (3) (C) 1.
- Walls of settling tanks shall extend at least six inches (6") above the surrounding ground surface and shall provide not less than twelve inches (12") of freeboard. 10 CSR 20-8.160 (3) (E)
- Safety features shall appropriately include machinery covers, life lines, handrails on all stairways and walkways, and slip resistant surfaces. For additional safety follow the provisions listed in 10 CSR 20-8.140(8). 10 CSR 20-8.160 (5) (A)
- The design shall provide for convenient and safe access to routine maintenance items such as gear boxes, scum removal mechanism, baffles, weirs, inlet stilling baffle areas, and effluent channels. 10 CSR 20-8.160 (5) (B)
- For electrical equipment, fixtures, and controls in enclosed settling basins and scum tanks, where hazardous concentrations of flammable gases or vapors may accumulate, follow the provisions in 10 CSR 20-8.140(7)(B). The fixtures and

- controls shall be conveniently located and safely accessible for operation and maintenance. 10 CSR 20-8.160 (5) (C)
- For solids pumping systems, audio-visual alarms shall be provided in accordance with 10 CSR 20-8.140(7)(C) for:
 - Pump failure; 10 CSR 20-8.170 (6) (A)
 - Pressure loss; 10 CSR 20-8.170 (6) (B) and
 - High pressure. 10 CSR 20-8.170 (6) (C)
 - Alarm systems shall be provided for sludge dewatering processes to notify the operator(s) of conditions that could result in process equipment failure or damage, threaten operator safety, or a solids spill or overflow condition. 10 CSR 20-8.170 (7) (B)
 - 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.
 - If no flow equalization is provided for a batch discharger, the UV dosage shall be based on the peak batch flow. 10 CSR 20-8.190 (5) (A) 2.
 - 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.
 - 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.
 - The minimum berm width shall be eight feet (8') to permit access of maintenance vehicles. 10 CSR 20-8.200 (4) (A) 2.
 - Minimum freeboard shall be two feet (2'). 10 CSR 20-8.200 (4) (A) 3.

11. Upon completion of construction:

- A. The City of Elsberry will become the continuing authority for operation and maintenance of these facilities;
- B. Submit an electronic copy of the as built if the project was not constructed in accordance with previously submitted plans and specifications; and

- C. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N) with a request for the operating permit modification to be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Construction of a new treatment plant will be to handle the increased flow to 336,000 gpd as a result of the Antidegradation Review. The facility will be installing the capabilities for some nutrient removal. This construction also is to meet the final effluent limits for ammonia that become effective July 1, 2022.

2. FACILITY DESCRIPTION

The Elsberry WWTF is located at 100 Hatfield Road, Elsberry, in Lincoln County, Missouri. Currently the facility has a design average flow of 236,000 gpd and serves a population equivalent of approximately 2,166 people.

As a result of construction, the facility will have a design average flow of 336,000 gpd with a wet weather detention basin, spiral screening, flow equalization, in treatment plant pump station, flow splitter, preanoxic tank, aeration tanks, post anoxic tank, clarifier, UV disinfection with post aeration. There will be a sludge holding tank with the biosolids land applied.

3. COMPLIANCE PARAMETERS

The proposed project is required to meet final effluent limits established in the Antidegradation review dated April 30, 2019. The Antidegradation Review was triggered by the increase in design average flow to 336,000 gpd and by the outfall relocation by 0.15 miles. The limits following the completion of construction will be applicable to the facility:

Parameter	Units	Monthly average limit
Biochemical Oxygen Demand ₅	mg/L	30
Total Suspended Solids	mg/L	30
Ammonia as N-summer	mg/L	0.6
Ammonia as N-winter	mg/L	1.2
Oil and Grease	mg/L	10
Total Nitrogen	mg/L	*
Total Phosphorus	mg/L	*
pH	SU	6.5-9.0
<i>E. Coli</i>	#/100mL	206

4. ANTIDegradation

The Department has reviewed the antidegradation report for this facility and issued the Water Quality and Antidegradation Review dated April 30, 2019, due to the facility expansion and outfall relocation to 336,000 gpd. See effluent limits listed above and the **ADDENDUM APPENDIX B- ANTIDegradation** in the operating permit modification.

5. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

Construction will cover the following items:

- Components are designed for a Population Equivalent of 3,360 with a hydraulic loading of 336,000 gpd and based on organic loading of 672.94 lbs of BOD₅ per day.
- Influent to the new treatment plant will enter through a new 8 inch SDR 21 forcemain.
- Wet Weather Basin- The berm will be removed from the existing lagoon cells to form approximately 14 acre wet weather basin, providing approximately 120 days of storage at a design flow of 336,000 gpd.
 - 33.17 lf of 12 inch DIP will be installed for plant overflow between the equalization basin and the retention basin.
 - Excess flow return pumps- 2-1 phase, 0.4 hp pumps
- Screening – Installation of screening devices removes nuisance inorganic materials from raw wastewater.
 - Spiral Screen-stainless steel inclined screw conveyor with basket strainer with two lift points and rise water supplied at 40 gpm at 60 psi.
 - Manual Coarse Bar Screen – The manual coarse bar screen will have clear bar spacings of 1 3/8-inch and be positioned at an angle of 50 degrees from the horizontal to allow for manual raking of the screen. There will be 8 bars.
 - 12 inch influent pipe to the equalization tank.
- Equalization Tank-Installation of a 11,232 gallon tank requiring 297.4 cfm of air , which will be provided by the equalization tank blower. Each blower shall provide the required air (297 cfm) for plant operation at 6 psi.
 - There will be 2-3 phase submersible pumps, operating at 125 gpm at 25 TDH. With both pumps running, that is 250 gpm. It will discharge into the flow control box.
- Sludge Holding Tank-- installation of a 46.5 ft by 12.5 ft by 12 ft tank with the volume of 52,173 gallons.
 - Air will be supplied to the sludge storage tank by the aeration tank blowers for the required 209 CFM.
 - 2 sludge holding tank pumps with 3 phase power, 0.75 hp that have capacity to operate at 15 ft TDH at 70 gpm.
 - Sludge will be pumped out and transported through a 4 inch DIP forcemain to the sludge loading tank. Construction of a 44 inch by

58 inch by 45 inch inner dimension flip top fiberglass enclosure with the final disposal being land application.

- Pre-Anoxic Tank-Construction of 2 tanks, one for each treatment train to help with the reduction of nitrogen. Flows from the post anoxic tank will be pumped into the pre-anoxic tank. Both tanks will have a 3 phase, 6.5 hp mixer. Flows from the pre-anoxic tank will flow to the aeration tanks.
- Aeration Tank- Construction of two aeration trains, each with a volume of 178,816 gallons for a total capacity of 357,633 gallons.
 - The aeration tank shall have 1.5 ft of freeboard.
 - The hydraulic retention time is 25.5 hrs at design flow of 0.336 MGD.
 - Actual oxygen demand for BOD, endogenous respiration of sludge and nitrification is 1727.2 lbs O₂ per day, which when converted to standard oxygen demand, is 137.46 lbs O₂/hr.
 - Aeration is provided by coarse air bubble diffusers providing up to 822.35 scfm per basin (1644.7 scfm for aeration both basins).
 - Process design calculations were provided for an organic load is 15 lbs BOD per 1,000 cf.
 - To get the nitrification required, the design mean cell residence time is 27 days and the sludge wasted is 673 lbs/day.
- Post Anoxic Tank-Construction of two tanks, one for each treatment train with two pumps per tank to return flow to the pre-anoxic zone to help reduce nitrogen levels. Each tank will be mixed with a 3 phase, 6.5 hp mixer.
 - Anoxic return pumps will be 3 phase, 2 hp operating at 100 gpm with a TDH of 37 ft.
- Clarifier- Two secondary clarifiers will be constructed, each with
 - A diameter of 26 ft
 - A sidewater depth of 12 ft with 18 inches of freeboard
 - A surface area of 530.92 ft² and
 - A volume of 47,594 gallons.
 - With the 2 clarifiers,
 - The surface overflow rate is 316.4 gpd at peak hourly.
 - The detention time at design flow is 6.8 hours.
 - The weir loading rate is 1,115 gpd/lf which meets the requirements of 10 CSR 20-8.160(3)(C)2 of being less than 20,000 gpd/sf.
 - The solids loading rate is 18.42 lbs/day/sf which meets the requirements of 10 CSR 20-8.160(4)(B)3 of less than 35 lbs/day/sf.
 - Clarifier freeboard will have a minimum of 18 inches.
 - A 3 inch surface scum airlift will return scum to the aeration tank.
 - A 6 inch return sludge airlift will be take sludge to the sludge holding tank.
- Disinfection – Disinfection is the process of removal, deactivation, or killing or pathogenic microorganisms.
 - Non-Contact Ultraviolet (UV) – A closed channel, gravity flow, low pressure high intensity UV non-contact disinfection system capable of treating a peak flow of 750,000 gpd while delivering a minimum UV intensity of 40 mJ/cm² with an expected ultraviolet transmissivity of 50% or greater. The enclosed

UV system consists of 2 banks, with 8 lamps per rack, with 5 racks for a total of 40 lamps. The system will be arranged in a U-pass shape.

- Post Aeration- The post aeration tank is designed for a minimum of 2.5 hour retention time at the design average flow of 336,000 gpd. The post aeration tank will be 12 ft by 8.5 ft by 46. 833 ft providing 35,0000 gallons of capacity and providing approx.. 153 minutes of detention time, just over the minimum 150 minutes design.
 - Using a design criteria of 10 cfm per 1,000 cubic feet, the air required is 48 cfm. Air will be provided from the aeration blowers.
- Effluent Flow Meter
 - The facility will have the ability to collect composite samples.
- Installation of approximately 490 lf of 12 inch ductile iron gravity pipe to connect treatment plant to the outfall structure with 2 manholes.
- Relocated Outfall – The new outfall structure will have a 12 inch pipe with an 18 inch diameter opening to a 10 ft by 10 ft by 2 ft thick rip-rap blanket. A trash screen will be installed on the outfall structure. The new location is approximately 0.15 miles upstream from the current outfall location.
- Emergency Power – A 60 kW standby natural gas generator and automatic transfer switch will be provided to operate the treatment facility in event of power failure.
- The facility will also be constructing a lab building to run samples.

6. OPERATING PERMIT

Operating permit MO-0054691 will require a modification to reflect the construction activities. The modified Elsberry WWTF, MO-0054691, was successfully public noticed from June 5, 2020 to July 6, 2020 with no comments received. 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.

7. CONSTRUCTION PERMIT MODIFICATION

This construction permit is being modified upon the request of the facility owner to extend the construction permit schedule. The construction permit will now expire on September 1, 2024.

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. A renewal application must be filed before July 3, 2023.

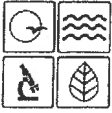
V. NOTICE OF RIGHT TO APPEAL

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

Cindy LePage, P.E.
Engineering Section
cindy.lepage@dnr.mo.gov



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

RECEIVED

MAR 18 2020

Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED \$1000.00	CHECK NO. 1024
DATE RECEIVED 3-18-20	

APPLICATION OVERVIEW

The Application for Construction Permit – Wastewater Facility form is for construction pertaining to domestic wastewater treatment facilities, agrichemical facilities, and components thereof. This 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: USDA Project #: _____
- 1.2 Is this an application for an agrichemical? YES (See instructions.) N/A
- 1.3 Has the Missouri Department of Natural Resources approved the proposed project's antidegradation review?
 YES Date of Approval: April 2019
- 1.4 Has the department approved the proposed project's facility plan*?
 YES Date of Approval: _____ NO N/A (If Not Applicable, complete No. 1.5.)
- 1.5 [Complete only if answered Not Applicable on No. 1.4] Is a copy of the engineering report* for wastewater treatment facilities with a design flow less than 22,500 gpd included with this application?
 YES NO
- 1.6 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
- 1.7 Is a summary of design* included with this application? YES NO
- 1.8 Is a general operating permit applicable?
 YES Submit the appropriate operating permit application to the Regional Office at least 60 days prior to operation.
 NO Enclose the appropriate operating permit application and fee submittal. Denote which form: B B2
- 1.9 Is the facility currently under enforcement with the department or the Environmental Protection Agency? YES NO
- 1.10 Is the appropriate fee included with this application? YES NO (See instructions for appropriate fee.)

* 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 Elsberry Wastewater Treatment Facilities

2.2 PROJECT DESCRIPTION

Construction of a mechanical treatment system. The project consists of the construction of a new 366,000 gpd activated sludge extended aeration treatment plant followed by UV disinfection, There will also be an overflow lagoon for high flows. The system will also be brought up above the 100 year flood elevation. The new system will be designed for an average flow of 366,000 gpd.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION

Sludge will be hauled and dumped by a certified waste hauler and land applied.

2.4 DESIGN INFORMATION

- A. Current population: 2,166; Design population: 3,660
- B. Actual Flow: 175,000 gpd; Design Average Flow: 366,000 gpd;
 Actual Peak Daily Flow: 200,000 gpd; Design Maximum Daily Flow: 720,000 gpd;
 Design Wet Weather Event: 100 yr

2.5 ADDITIONAL INFORMATION

- A. Is a topographic map attached? YES NO
- B. Is a process flow diagram attached? YES NO

2.6 ESTIMATED PROJECT CONSTRUCTION COST

\$ 3,600,000.00

3.0 WASTEWATER TREATMENT FACILITY

NAME City of Elsberry Wastewater Treatment facility	TELEPHONE NUMBER WITH AREA CODE (573) 898-5588	EMAIL ADDRESS
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ADDRESS (PHYSICAL) 100 Hatfield FRoad	CITY Elsberry	STATE MO	ZIP CODE 63343	COUNTY Lincoln
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Wastewater Treatment Facility: Mo- (Outfall Of)

3.1 Legal Description: ¼, ¼, ¼, Sec. , T 51N , R 2E
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 692099 Northing (Y): 4336982
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Lost Creek

4.0 PROJECT OWNER

NAME City of Elsberry	TELEPHONE NUMBER WITH AREA CODE (573) 898-5588	EMAIL ADDRESS
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ADDRESS 201 Broadway	CITY Elsberry	STATE MO	ZIP CODE 63343
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5.0 CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the wastewater collection system.

NAME Same as above	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
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ADDRESS	CITY	STATE	ZIP CODE
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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 James D. Bensman	TELEPHONE NUMBER WITH AREA CODE (573) 221-4048	EMAIL ADDRESS jbensman@mecoengineering.com
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ADDRESS 3120 Plamyra Road	CITY Hannibal	STATE MO	ZIP CODE 63401
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7.0 PROJECT OWNER: I hereby certify that I am familiar with the information contained in this application and to the best of my knowledge and belief such information is true, complete, and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders, and decisions, subject to any legitimate appeal available to applicant under Missouri Clean Water Law. I also understand the issuance of the construction permit does not guarantee the proposed wastewater treatment will meet the required effluent limitations of the issued Missouri State Operating Permit for this facility.

PROJECT OWNER SIGNATURE


PRINTED NAME Steve Wilch	DATE
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TITLE OR CORPORATE POSITION Mayor	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
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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.**