

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION



CONSTRUCTION PERMIT

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

Randall Baker
City Clerk
City of Campbell
302 West Grand Avenue
Campbell, MO 63933

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.

October 25, 2021
Effective Date

October 12, 2023
Modification Date

October 24, 2024
Expiration Date

A handwritten signature in black ink, appearing to read 'John Hoke'.

John Hoke, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

This project will convert an existing 3 cell lagoon into a Sequencing Batch Reactor (SBR) designed to serve the same design flow. A new mechanical fine screening structure will be placed at the headworks.

The first cell will be converted to a peak flow holding basin. The second cell will be converted to an aerobic sludge digestion basin. The third cell will be lined with a HDPE liner and split into two equal basins with a concrete wall and used as the SBR reactors. A new earthen cell also lined with a HDPE liner will be constructed to serve as a final flow equalization basin following the SBR reactors so flow will enter the existing UV system at a consistent and acceptable rate.

Wet weather peak flows exceeding 1.0 MGD will be directed to the peak flow holding basin and returned to the headworks when influent flow rates subside. The SBR reactors are designed to treat a normal average daily flow of 270,000 gpd and a peak wet-weather flow of 1.0 MGD.

A sludge disposal plan will need to be submitted to the Southeast Regional Office for review and approval prior to closure activities.

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. The existing UV system and existing outfall will remain in use. The design flow of 270,000 gpd will remain unchanged. Discharge is to a tributary to Main Ditch in Section 2, T21N, R9E, Dunklin County.

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 **APPENDIX – COST ANALYSIS FOR COMPLIANCE**.

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 Richard E. Cochran, Jr., P.E. with Waters Engineering, 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 Southeast 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 <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.

8. 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.
9. In accordance with 10 CSR 20-6.010(12), a full closure plan shall be submitted to the Department's Southeast 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-0022861. Closure shall not commence until the submitted closure plan is approved by the Department.
10. All construction must adhere to applicable 10 CSR 20-8 (Chapter 8) requirements listed below.

10 CSR 20-8.140 Wastewater Treatment Facilities

- Flood protection shall apply to new construction and to existing facilities undergoing major modification. The wastewater facility structures, electrical equipment, and mechanical equipment shall be protected from physical damage by not less than the 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.
- 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)

10 CSR 20-8.150 Preliminary Treatment.

- 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)

10 CSR 20-8.180 Biological Treatment.

- The minimum total Sequencing Batch Reactor (SBR) basin volume shall be equal to the design daily influent flow volume and either upstream in-line or off-line storage is necessary to minimize influent flow during settling and decanting. 10 CSR 20-8.180 (6) (A)
- A minimum of two (2) Sequencing Batch Reactor (SBR) basins shall be installed. 10 CSR 20-8.180 (6) (B)

11. Upon completion of construction:

- A. Submit an electronic copy of the as built's if the project was not constructed in accordance with previously submitted plans and specifications; and
- B. Submit the enclosed form Statement of Work Completed to the Department in accordance with 10 CSR 20-6.010(5)(N).

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

Replace existing treatment facility in order to meet ammonia limits contained in State Operating Permit.

2. FACILITY DESCRIPTION

The City of Campbell WWTF is a 3 cell aerated lagoon with UV disinfection. The design flow is 270,000 gpd.

This project will add a fine screening facility and convert the 3 cell lagoon. Cell #1 will be converted to a peak flow wet-weather flow equalization basin. Cell #2 will be converted to aerobic sludge digestion. Cell #3 will be converted to a Sequencing Batch Reactor (SBR). A flow equalization basin will be installed after the SBR. The existing UV disinfection and outfall will continue to be used.

The facility is located 0.1 miles north of Bailey Street and Highway 53 intersection, in the City of Campbell, Dunklin County, Missouri. The design flow will remain at 270,000 gpd, and the design organic population equivalent will remain at 2,700. The Design Sludge Production is changed to 75.6 dry tons/year based on the new process, it is calculated assuming 0.028 tons of dry sludge/year/PE.

3. COMPLIANCE PARAMETERS

The existing facility does not consistently meet the ammonia limits as established in Operating Permit MO-0022861. The proposed project is required to meet final effluent limits contained in the modified Operating Permit placed on Public Notice September 17, 2021.

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	mg/L	
January		3.1
February		3.1
March		3.1
April		3.1
May		2.3
June		1.8
July		1.5
August		1.6
September		1.9
October		2.8
November		3.1
December		3.1
pH	SU	6.5-9.0
Total Residual Chlorine	µg/L	8 (130 ML)
<i>E. coli</i>	#/100mL	206
Oil & Grease	mg/l	10

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The design flow of the existing facility is 270,000 gpd, with a design population equivalent of 2,700. The design flow and PE of the new facility will remain the same. Project converts the 3 cell lagoon treatment to a Sequencing Batch Reactor. The reactor will have the ability to treat a peak wet-weather flow of 1.0 MGD. Flows in excess of 1.0 MGD will be temporarily stored in the peak flow basin. The peak flow basin is converted from cell #1 and has a storage capacity of approximately 1.8 million gallons. A new mechanical fine screen will be placed at the entrance to the facility. The peak flow basin is located after the screen. Following the SBR is a final flow equalization basin to enable flow to enter the existing UV system at a consistent and acceptable rate. The existing UV system and the existing outfall will be used and will remain in the same location.

New Facilities

- Mechanical Screen – Installation of screening devices removes nuisance inorganic materials from raw wastewater. One mechanically cleaned screen with a perforated rotary basket with 6 mm openings. The screening device is capable of treating a flow rate of 2.0 MGD. A washer/compactor and screenings conveyor will mitigate the screenings captured by washing, dewatering, and compacting the screenings prior to disposal. A removable plastic bagging device mounted to compaction section discharge.
- Peak wet-weather flow equalization. Basin converted from cell #1 of the lagoon with a dimensions of approximately 350 feet by 260 feet, and depth of 14 feet. Effective equalization volume of approximately 1.8 million gallons between the elevations of 294 ft. and 297 ft. Located after the mechanical screen; flows in excess of 1.0 MGD will flow into the basin. Wastewater will be returned to the treatment path piping when treatment capacity is available. An additional volume of approximately 3.8 million gallons could be available for storage between the elevations of 286 and 294 ft. if the water level is pumped down.
- Sequencing Batch Reactor (SBR) – two sequencing batch reactors with a hydraulic retention time of 2.7 days. The average design flow of the two basins is 270,000 GPD with a maximum (peak) design flow of 1.0 MGD. The basins are designed with 2.4 feet of freeboard, a minimum water depth of 7.5 ft, and a maximum water depth of 8.6 ft. At design flow, basins will operate on 3.6 cycles per day per basin, with each cycle duration being 6.67 hours. The volume of each basin is approximately 382,000 gallons at maximum water level; the volume between minimum and maximum water levels is approximately 66,000 gallons. Aeration is provided by two 15 HP floating aerators in each basin with one aerator providing up to 575 lb. O₂/day per basin (based on aerating for 320 min/cycle and a transfer rate of 2 lb. of O₂/HP/hr.). The oxygen requirements at design flow are approximately 450 lbs O₂/day per basin. Two 3 HP mechanical mixers are also provided in each basin. The decant duration is 20 minutes with 7.2 decants per day (3.6 decants per basin per day) at the normal design flow rate. The decant system flow rate

is 1,875 gpm. At flow rates higher than average design flow the cycle time is automatically adjusted. The two reactor basins are constructed using cell #3 of the lagoon. A concrete wall divides the cell into two equal basins. All sludge is removed and a HDPE or Polypropylene liner installed.

- The post SBR equalization basin is a new earthen basin with a HDPE liner. The basin has an overall depth of 4 feet; the normal maximum water depth of 1.17 ft provides an effective volume of 38,800 gallons. At a 2 foot depth the volume is approximately 69,900 gallons; this provides sufficient buffering at maximum peak flow rates. The equalization basin releases water at a controlled rate of approximately 695 gpm through a gravity system. The release rate is appropriate for the existing UV disinfection system
- Cell #2 of the lagoon is converted to an aerobic sludge digestion basin. The basin has dimensions of approximately 350 feet by 200 feet and a depth of 14 feet. Effective volume of approximately 3.7 million gallons between the bottom (elevation 283 ft.) and elevation of 293.5 ft. Existing aeration provided by shore mounted blowers and diffusers. Project includes rehabbing the aeration system and installing new EPDM rubber membrane diffusers. The aeration rehabilitation also applies to cell #1 converted to a peak flow holding basin.
- Sludge Disposal. All sludge in cell #3 will be removed and disposed. Sludge removal must be done under the approval of a sludge disposal plan approved by the Southeast Regional Office. All sludge will be handled in accordance with Standard Conditions Part III.

5. OPERATING PERMIT

Operating permit MO-0022861 will require a modification to reflect the construction activities. The modified Campbell WWTF, MO-0022861, was successfully public noticed from September 17, 2021 to October 18, 2021, 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.

6. 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 October 24, 2024.

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>

Andrew Appelbaum, P.E.
Engineering Section
andy.appelbaum@dnr.mo.gov

APPENDIX

- **Affordability**

**Missouri Department of Natural Resources
Water Protection Program
Cost Analysis for Compliance
(In accordance with RSMo 644.145)**

**Campbell WWTF, Permit Modification due to Construction
City of Campbell
Missouri State Operating Permit #MO-0022861**

Section 644.145 RSMo requires the Department of Natural Resources (Department) to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system for publicly-owned treatment works.” This cost analysis does not dictate how the permittee will comply with new permit requirements.

New Permit Requirements

Permit modification increases monitoring frequency for BOD and TSS from quarterly to monthly for both effluent and influent.

Connections

The number of connections was reported by the permittee on the Financial Questionnaire.

Connection Type	Number
Residential	733
Commercial	75
Total	808

Data Collection for this Analysis

This cost analysis is based on data available to the Department as provided by the permittee and data obtained from readily available sources. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the City’s financial and socioeconomic situation. The financial questionnaire available to permittees on the Department’s website (<http://dnr.mo.gov/forms/780-2511-f.pdf>) is a required attachment to the permit renewal application. If the financial questionnaire is not submitted with the renewal application, the Department sends a request to complete the form with the welcome correspondence. If certain data was not provided by the permittee to the Department and the data is not obtainable through readily available sources, this analysis will state that the information is “unknown”.

Eight Criteria of 644.145 RSMo

The Department must consider the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with new permit requirements.

(1) A community’s financial capability and ability to raise or secure necessary funding;

Criterion 1 Table. Current Financial Information for the City of Campbell	
Current Monthly User Rates per 5,000 gallons*	\$32.50
Median Household Income (MHI) ¹	\$32,926

Current Annual Operating Costs (excludes depreciation)	\$266,000
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*User Rates were reported by the permittee on the Financial Questionnaire. A user rate of \$32.55 was used in the calculation in order to reflect analysis performed with permit renewal.

(2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;

The following tables outline the estimated costs of the new permit requirements:

Criterion 2A Table. Estimated Cost Breakdown of New Permit Requirements			
New Requirement	Frequency	Estimated Cost	Estimated Annual Cost
BOD (Effluent)	Monthly (from Quarterly)	\$41	\$328
Total Suspended Solids (Effluent)	Monthly (from Quarterly)	\$16	\$128
BOD (Influent)	Monthly (from Quarterly)	\$41	\$328
Total Suspended Solids (Influent)	Monthly (from Quarterly)	\$16	\$128
Total Estimated Annual Cost of New Permit Requirements			\$912

Criterion 2B Table. Estimated Costs for New Permit Requirements		
(1)	Estimated Annual Cost	\$912
(2)	Estimated Monthly User Cost for New Requirements ²	\$0.09
	Estimated Monthly User Cost for New Requirements as a Percent of MHI ³	0.003%
(3)	Total Monthly User Cost*	\$32.64
	Total Monthly User Cost as a Percent of MHI ⁴	1.19%

* Current User Rate + Estimated Monthly Costs of New Sampling Requirements

Due to the minimal cost associated with new permit requirements, the Department anticipates an extremely low to no rate increase will be necessary, which could impact individuals or households of this community.

(3) An evaluation of the overall costs and environmental benefits of the control technologies;

This analysis is being conducted based on new requirements in the permit, which will not require the addition of new control technologies at the facility. However, the new sampling requirements are being established in order to provide data regarding the health of the receiving stream's aquatic life and to ensure that the existing permit limits are providing adequate protection of aquatic life. Improved wastewater provides benefits such as avoided health costs due to water-related illness, enhanced environmental ecosystem quality, and improved natural resources. The preservation of natural resources has been proven to increase the economic value and sustainability of the surrounding communities. Maintaining Missouri's water quality standards fulfills the goal of restoring and maintaining the chemical, physical, and biological integrity of the receiving stream; and, where attainable, it achieves a level of water quality that provides for the protection and propagation of fish, shellfish, wildlife, and recreation in and on the water.

(4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates:

The community reported that their outstanding debt for their current wastewater collection and treatment systems is \$597,000. The community reported that each user pays \$32.50 monthly, of which, \$2.81 is used toward payments on the current outstanding debt.

(5) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:

- (a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations.
- (b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained.

The following table characterizes the current overall socioeconomic condition of the community as compared to the overall socioeconomic condition of Missouri. The following information was compiled using the latest U.S. Census data.

Criterion 5 Table. Socioeconomic Data ^{1, 5-9} for the City of Campbell

No.	Administrative Unit	Campbell City	Missouri State	United States
1	Population (2019)	1,851	6,104,910	324,697,795
2	Percent Change in Population (2000-2019)	-1.7%	9.1%	15.4%
3	2019 Median Household Income (in 2020 Dollars)	\$32,926	\$56,145	\$63,618
4	Percent Change in Median Household Income (2000-2019)	-2.9%	-4.7%	-2.5%
5	Median Age (2019)	43.1	38.6	38.1
6	Change in Median Age in Years (2000-2019)	5.5	2.5	2.8
7	Unemployment Rate (2019)	8.3%	4.6%	5.3%
8	Percent of Population Below Poverty Level (2019)	31.7%	13.7%	13.4%
9	Percent of Household Received Food Stamps (2019)	32.1%	11.1%	11.7%
10	(Primary) County Where the Community Is Located	Dunklin County		

(6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;

The City of Campbell reported completion of a major water system upgrading utilizing the Department of Natural Resources State Revolving Fund program; roadway and drainage improvements completed as well as design of a new fire station currently underway.

(7) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;

The new requirements associated with this permit will not impose a financial burden on the community, nor will they require the City of Campbell to seek funding from an outside source.

(8) An assessment of any other relevant local community economic conditions.

The community reported the income per capita is less than half of the United States average, over thirty percent (30%) of the households in the City of Campbell earn less than \$15,000 per year and thirty-two percent (32%) of workers are in service occupations.

The Department contracted with Wichita State University to complete an assessment tool that would allow for predictions on rural Missouri community populations and future sustainability. The purpose of the study is to use a statistical modeling analysis in order to determine factors associated with each rural Missouri community that would predict the future population changes that could occur in each community. A stepwise regression model was applied

to 19 factors which were determined as predictors of rural population change in Missouri. The model established a hierarchy of the predicting factors which allowed the model to place a weighted value on each of the factors. A total of 745 rural towns and villages in Missouri received a weighted value for each of the predicting factors. The weighted values for each town / village were then added together to determine an overall decision score. The overall decision scores were then divided into five categories and each town was assigned to a different categorical group based on the overall decision score. The categorical groups were developed from the range of overall scores across all rural towns and villages within Missouri.

Based on the assessment tool, the City of Campbell has been determined to be a category 5 community. This means that the City of Campbell is predicted to be stable over time.

Conclusion and Finding

As a result of having a new treatment process, the Department is proposing modifications to the current operating permit that may require the permittee to increase monitoring. The Department has considered the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with the new permit requirements.

This analysis examined whether the new sampling requirements affect the ability of an individual customer or household to pay a utility bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household. After reviewing the above criteria, the Department finds that the new sampling requirements may result in a low burden with regard to the community's overall financial capability and a low financial impact for most individual customers/households; therefore, the new permit requirements are affordable.

References

1. 2019 MHI in 2019 Dollar: United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars). <https://data.census.gov/cedsci/table?q=B19013&g=0400000US29.160000&tid=ACSDT5Y2019.B19013&hidePreview=false>.
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(C) 2020 CPI, 2019 CPI and 1999 CPI: U.S. Department of Labor Bureau of Labor Statistics (2020) Consumer Price Index - All Urban Consumers, U.S. City Average. All Items. 1982-84=100. <https://data.bls.gov/pdq/SurveyOutputServlet>.
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(B) Total Population in 2000: (1) For United States, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>.
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(C) Percent Change in Population (2000-2019) = (Total Population in 2019 - Total Population in 2000) / (Total Population in 2000).
6. Median Age in 2019: United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table B01002: Median Age by Sex - Universe: Total population. <https://data.census.gov/cedsci/table?q=B01002&g=0400000US29.160000&tid=ACSDT5Y2019.B01002&hidePreview=false>.
(B) Median Age in 2000: (1) For United States, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC., Page 2. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>.

- (2) For Missouri State, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Place of Birth, Residence in 1995, and Language: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
- (C) Change in Median Age in Years (2000-2019) = (Median Age in 2019 - Median Age in 2000).
7. United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, B23025: Employment Status for the Population 16 Years and Over - Universe: Population 16 years and Over. <https://data.census.gov/cedsci/table?q=B23025&g=0400000US29.160000&tid=ACSDT5Y2019.B23025&hidePreview=false>.
 8. United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months. <https://data.census.gov/cedsci/table?q=S1701&g=0400000US29.160000&tid=ACSST5Y2019.S1701&hidePreview=false>.
 9. United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table B2201: Food Stamps/Supplemental Nutrition Assistance Program (SNAP) - Universe: Households. <https://data.census.gov/cedsci/table?q=Receipt%20of%20Food%20Stamps&g=0400000US29.050000,29.160000&tid=ACSST5Y2019.S2201&hidePreview=true>

Criterion 5 Table. Socioeconomic Data ^{1, 5-9} for the City of Campbell

No.	Administrative Unit	Campbell City	Missouri State	United States
1	Population (2019)	1,851	6,104,910	324,697,795
2	Percent Change in Population (2000-2019)	-1.7%	9.1%	15.4%
3	2019 Median Household Income (in 2020 Dollars)	\$32,926	\$56,145	\$63,618
4	Percent Change in Median Household Income (2000-2019)	-2.9%	-4.7%	-2.5%
5	Median Age (2019)	43.1	38.6	38.1
6	Change in Median Age in Years (2000-2019)	5.5	2.5	2.8
7	Unemployment Rate (2019)	8.3%	4.6%	5.3%
8	Percent of Population Below Poverty Level (2019)	31.7%	13.7%	13.4%
9	Percent of Household Received Food Stamps (2019)	32.1%	11.1%	11.7%
10	(Primary) County Where the Community Is Located	Dunklin County		

(9) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;

The City of Campbell reported completion of a major water system upgrading utilizing the Department of Natural Resources State Revolving Fund program; roadway and drainage improvements completed as well as design of a new fire station currently underway.

(10) An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;

The new requirements associated with this permit will not impose a financial burden on the community, nor will they require the City of Campbell to seek funding from an outside source.

(11) An assessment of any other relevant local community economic conditions.

The community reported the income per capita is less than half of the United States average, over thirty percent (30%) of the households in the City of Campbell earn less than \$15,000 per year and thirty-two percent (32%) of workers are in service occupations.

The Department contracted with Wichita State University to complete an assessment tool that would allow for predictions on rural Missouri community populations and future sustainability. The purpose of the study is to use a statistical modeling analysis in order to determine factors associated with each rural Missouri community that would predict the future population changes that could occur in each community. A stepwise regression model was applied to 19 factors which were determined as predictors of rural population change in Missouri. The model established a hierarchy of the predicting factors which allowed the model to place a weighted value on each of the factors. A total of 745 rural towns and villages in Missouri received a weighted value for each of the predicting factors. The weighted values for each town / village were then added together to determine an overall decision score. The overall decision scores were then divided into five categories and each town was assigned to a different categorical group based on the overall decision score. The categorical groups were developed from the range of overall scores across all rural towns and villages within Missouri.

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Conclusion and Finding

As a result of having a new treatment process, the Department is proposing modifications to the current operating permit that may require the permittee to increase monitoring. The Department has considered the eight (8) criteria presented in subsection 644.145 RSMo to evaluate the cost associated with the new permit requirements.

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References

10. 2019 MHI in 2019 Dollar: United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2019 Inflation-Adjusted Dollars). <https://data.census.gov/cedsci/table?q=B19013&g=0400000US29.160000&tid=ACSDT5Y2019.B19013&hidePreview=false>.
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<https://data.census.gov/cedsci/table?q=B23025&g=0400000US29.160000&tid=ACSDT5Y2019.B23025&hidePreview=false>.
17. United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months.
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18. United States Census Bureau. 2015-2019 American Community Survey 5-Year Estimates, Table B2201: Food Stamps/Supplemental Nutrition Assistance Program (SNAP) - Universe: Households.
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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: USDA/CDBG Project #: _____
- 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: 11/15/2 NO (If No, complete No. 1.4.) Approved under EPG-47-14 on 11/15/2016
- 1.4 [Complete only if answered No on No. 1.3.] Is a copy of the facility plan* for wastewater treatment facilities included with this application?
 YES NO Exempt because _____
- 1.5 Is a copy of the appropriate plans* and specifications* included with this application?
 YES Denote which form is submitted: Hard copy Electronic copy (See instructions.) NO
- 1.6 Is a summary of design* included with this application? YES NO
- 1.7 Has the appropriate operating permit application (A, B, or B2) been submitted to the department?
 YES Date of submittal: _____
 Enclosed is the appropriate operating permit application and fee submittal. Denote which form: A B B2
 N/A: However, in the event the department believes that my operating permit requires revision to permit limitation such as changing equivalent to secondary limits to secondary limits or adding total residual chlorine limits, please share a draft copy prior to public notice? YES NO
- 1.8 Is the facility currently under enforcement with the department or the Environmental Protection Agency? YES NO
- 1.9 Is the appropriate fee or JetPay confirmation included with this application? YES NO
 See Section 7.0

* Must be affixed with a Missouri registered professional engineer's seal, signature and date.

2.0 PROJECT INFORMATION

2.1 NAME OF PROJECT Campbell Wastewater Improvements	2.2 ESTIMATED PROJECT CONSTRUCTION COST \$ 1,832,000
2.3 PROJECT DESCRIPTION Conversion of existing 3 cell aerated lagoon into earthen basin SBR with batch processing and flow equalization facilities.	
2.4 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION WAS to be discharged to aerated digestion basin for treatment and future removal with land application	
2.5 DESIGN INFORMATION A. Current population: <u>1992</u> ; Design population: <u>2700</u> B. Actual Flow: <u>0.24</u> gpd; Design Average Flow: <u>0.27</u> gpd; Actual Peak Daily Flow: <u>2.3</u> gpd; Design Maximum Daily Flow: <u>1.0</u> gpd; Design Wet Weather Event: <u>1.0</u>	
2.6 ADDITIONAL INFORMATION A. Is a topographic map attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO B. Is a process flow diagram attached? <input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	

3.0 WASTEWATER TREATMENT FACILITY			
NAME Campbell Wastewater Treatment Facility		TELEPHONE NUMBER WITH AREA CODE 573-246-2541	E-MAIL ADDRESS rbaker@sheltonbbs.com
ADDRESS (PHYSICAL) 0.1 miles north of Bailey Street & Hwy 53 int	CITY Campbell	STATE MO	ZIP CODE 63933 COUNTY Dunklin
Wastewater Treatment Facility: Mo- 0022861 (Outfall 1 Of 1)			
3.1 Legal Description: _____ ¼, SE _____ ¼, SW _____ ¼, Sec. 2 _____, T 21N _____, R 9E _____ (Use additional pages if construction of more than one outfall is proposed.)			
3.2 UTM Coordinates Easting (X): 763562 Northing (Y): 4041729 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
3.3 Name of receiving streams: Tributary to Main Ditch			
4.0 PROJECT OWNER			
NAME City of Campbell		TELEPHONE NUMBER WITH AREA CODE 573-246-2541	E-MAIL ADDRESS rbaker@sheltonbbs.com
ADDRESS 302 W Grand Ave	CITY Campbell	STATE MO	ZIP CODE 63933
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 Same as above		TELEPHONE NUMBER WITH AREA CODE	E-MAIL ADDRESS
ADDRESS	CITY	STATE	ZIP CODE
5.1 A letter from the continuing authority, if different than the owner, is included with this application. <input type="checkbox"/> YES <input type="checkbox"/> NO <input checked="" type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO			
D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? <input type="checkbox"/> YES <input type="checkbox"/> NO			
6.0 ENGINEER			
ENGINEER NAME / COMPANY NAME Richard Cochran, Jr./Waters Engineering, Inc.		TELEPHONE NUMBER WITH AREA CODE 573-471-5680	E-MAIL ADDRESS rcochran@waterseng.com
ADDRESS P.O. Box 567	CITY Sikeston	STATE MO	ZIP CODE 63801
7.0 APPLICATION FEE			
<input checked="" type="checkbox"/> CHECK NUMBER		<input type="checkbox"/> JETPAY CONFIRMATION NUMBER	
8.0 PROJECT OWNER: I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.			
PROJECT OWNER SIGNATURE 			
PRINTED NAME Randall Baker		DATE 4/19/2021	
TITLE OR CORPORATE POSITION City Clerk		TELEPHONE NUMBER WITH AREA CODE 573-246-2541	E-MAIL ADDRESS rbaker@sheltonbbs.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) and 10 CSR 20-8.110(8). The department has developed a fact sheet to aid in the development of an acceptable summary of design. This document is available online at dnr.mo.gov/pubs/pub2417.htm.
- 1.7 Check the appropriate box if an operating permit modification is needed. Include the applicable operating permit application. New outfalls, discharges, projects converting to land application, or a lagoon upgrade require an operating permit modification application. Contact the Department for clarification. Projects that may not need an operating permit modification check the N/A box and indicate whether you want to review the draft prior to public notice should the Department determine a modification is required. The Department can modify your operating permit without an application for projects that are adding chlorine disinfection, constructing to meet current operating permit limits, or constructing to meet limits in a schedule of compliance.
 - Form A is available online at dnr.mo.gov/forms/780-1479-f.pdf.
 - Form B is available online at dnr.mo.gov/forms/780-1512-f.pdf.
 - Form B2 is available online at dnr.mo.gov/forms/780-1805-f.pdf.
- 1.8 Check the appropriate box. More information about the Compliance and Enforcement Water Protection Program is available online at dnr.mo.gov/env/wpp/enf/index.html.

- 1.9 Check the appropriate box. Include payment or payment confirmation for the fee with your application. See 10 CSR 20-6.011(2) and Wastewater Treatment Facility Permit Fees -- PUB2564.
- Note:** The department returns incomplete construction permit applications and related engineering documents and the application forfeits the fees. See 10 CSR 20-6.011(5)(A). The applicant forfeits the fees when the applicant withdraws construction applications. See 10 CSR 20-6.011(5)(B).
- 2.1 Provide the name of the proposed construction project.
- 2.2 Provide the estimated project construction cost. The estimated and final project construction cost will be useful to the department in conducting affordability analyses.
- 2.3 Briefly describe the construction project by providing the number and capacity of each new unit.
- 2.4 Briefly describe the method of sludge handling, use and disposal at the treatment facility.
- 2.5 Provide the project design information and when required in the units specified.
- A. Provide the current population and the design population to be served by the wastewater treatment facility.
- B. Provide the estimated design flow information in accordance with 10 CSR 20-8.110(3).
- 2.6 Provide the additional project information in accordance with 10 CSR 20-8.110(5).
- A. Attach a topographic map of the area extending at least one mile beyond the facility property boundaries. This map must show the outline of the facility and the following information. A topographic map is available online at dnr.mo.gov/internetmapviewer or from the Department of Natural Resources' Missouri Geological Survey in Rolla, Mo., at 573-368-2125. (Submittals of more than one map may be necessary to show the entire area.)
1. The area surrounding the wastewater treatment facility, including all unit processes.
 2. The major pipes or other structures through which wastewater enters the treatment facility and the pipes or other structures through which treated wastewater is discharged from the treatment facility. Include outfalls from bypass piping, if applicable.
 3. The actual point of discharge.
 4. Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment facility and 2) listed in public record or otherwise known to the applicant.
 5. Any areas where biosolids produced by the treatment facility are treated, stored, or disposed.
 6. If the treatment facility receives waste classified as hazardous under the Resource Conservation and Recovery Act, or RCRA, by truck, rail, or special pipe, show on the map where hazardous waste enters the treatment works and where it is treated, stored or disposed.
 7. Outline any wastewater land application sites.
- B. Provide a process flow diagram with the influent and effluent design average flow and peak flow capabilities. Also, depict all of the treatment facility components and the corresponding hydraulic capacities of each component. In addition, include all recycle flows in the diagram. If land application is used, depict all irrigation equipment and application sites.
- 3.0 Complete the Wastewater Treatment Facility information. Include the Missouri State Operation Permit number, outfall number, physical location, and other appropriate contact information.
- 3.1 Provide the project legal description. The department's mapping system is available online at dnr.mo.gov/internetmapviewer.
- 3.2 A Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates.
- 3.3 Provide the name of the receiving stream(s) to which the discharge is directed and any subsequent tributary until a continuous flowing stream is reached.
- 4.0 Complete Project Owner information. Include the legal name, address, phone number with area code and email address.
- 5.0 Complete Continuing Authority contact information. If same as the Project Owner, write "Same as above". A continuing authority is a company, business, entity or person(s) that will be operating the facility and/or ensuring compliance with the permit requirements. A continuing authority is not, however, an entity or individual that is contractually hired by the permittee to sample or operate and maintain the system for a defined time period, such as a certified operator or analytical laboratory. To access the regulatory requirement regarding continuing authority, 10 CSR 20-6.010(2), please visit <https://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf>. A continuing authority's name must be listed exactly as it appears on the Missouri Secretary of State's (SoS's) webpage: <https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0>, unless the continuing

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

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

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

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

Part B – Land Application

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

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

Mail the completed form and applicable fee to the department.

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