STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION

CONSTRUCTION PERMIT

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

Missouri-American Water Company
Attn: Ben Teymouri, Project Manager
MAWC Maplewood Subdivision
Highway TT, Rural Rt 6
Sedalia, MO 65301

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.

May 9, 2019
Effective Date

Edward B. Galbraith, Director, Division of Environmental Quality

May 8, 2021
Expiration Date

Chris Wieberg, Director, Water Protection Program

CONSTRUCTION PERMIT

I. CONSTRUCTION DESCRIPTION

This is a **DEMONSTRATION** project and additional monitoring requirements are included in the operating permit in accordance with the Approval Process for Innovative Technology Factsheet and 10 CSR 20-6.010(5).

The facility is proposing to remove the existing grit chamber and aeration equipment; install a ¼ inch mechanically cleaned fine bar scree, MARS aeration system to lagoon cells # 1 and #2, and a Triplepoint Water Technologies, LLC NitrOx^{TM} system between the second and third cells; and move the transfer piping between the lagoon cells; reshape and riprap the existing lagoon berms; and provide an emergency generator to achieve compliance with ammonia effluent limits. The facility will maintain the design average flow at 132,000 gpd.

This project will also include general site work appropriate to the scope and purpose of the project and all necessary appurtenances to make a complete and usable wastewater treatment facility.

II. COST ANALYSIS FOR COMPLIANCE

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a "finding of affordability" on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

The Department is not required to complete a cost analysis for compliance because the facility is not a combined or separate sanitary sewer system for a publically-owned treatment works.

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 Crawford, Murphy & Tilly 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 Kansas City 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. Upon completion of construction:

   A. Missouri-American Water Company will become the continuing authority for operation and maintenance of these facilities;

   B. Submit an electronic copy of the as builts if the project was not constructed in accordance with previously submitted plans and specifications; 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 letter requesting that the modified operating permit be issued.

IV. REVIEW SUMMARY

1. CONSTRUCTION PURPOSE

The existing facility cannot meet final effluent limits for Ammonia as Nitrogen of 1.4 mg/l summer and 2.9 mg/L winter as established in Operating Permit MO-0035726. The existing system does not have adequate means for ammonia reduction and this is the primary driver for the proposed improvements.

2. FACILITY DESCRIPTION

The wastewater flows into the existing system by gravity. It enters a grit chamber, and continues through a three-cell lagoon system. The three-cell lagoon has aerators in the first two cells. Following the third cell, the flow passes through a Parshall flume flowmeter and ultraviolet disinfection.

The upgrade will be a demonstration project for the patent pending NitrOx™ Reactor System developed by Triplepoint Environmental. The facility upgrade will include installation of a mechanical influent screen, new MARS™ aeration system in cell 1 and cell 2, and NitrOx™ ammonia polishing equipment. Other work included is relocation of the lagoon transfer piping, and removal of the existing grit chamber and aeration equipment. Additionally, the existing berms are to be reshaped, regraded, and riprapped as part of this project.

The MAWC, Maplewood Subdivision WWTF is located along Highway TT, Sedalia, in Pettis County, Missouri. The facility has a design average flow of 132,000 gpd and serves an organic population equivalent of approximately 1,500 people.

3. COMPLIANCE PARAMETERS

The existing facility cannot meet final effluent limits for Ammonia as Nitrogen as required in the current operating permit. The proposed project is required to meet final effluent limits for Ammonia of 1.4 mg/l summer and 2.9 mg/L winter as established in Operating Permit MO-0035726.

The construction is to meet these effluent limits. As this is a demonstration project, for the first year of operation following construction, additional internal monitoring will be required before and after the MBBR.

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	1.4
Ammonia as N-winter	mg/L	2.9
pH	SU	6.5-9.0
E. Coli	#/100mL	206

4. REVIEW of MAJOR TREATMENT DESIGN CRITERIA

The current design guides, 10 CSR 20-8, do not contain design parameters for the innovative NitrOx™ Moving Bed Bioreactor process. As a **DEMONSTRATION** project, the data gathered with the operating permit will be used to help develop design criteria for future projects.

The facility proposed to maintain the design average flow of 132,000 gpd due to the subdivision being fully developed and no new connections or growth proposed.

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

- Lagoon Cell No. 1 – The influent gravity flows into Lagoon Cell No. 1. Lagoon Cell No. 1 is partially aerated and has a surface area of 0.6 acres and a wastewater volume of 1.9 million gallons. This cell has 1 ft of freeboard and 8 ft of operating depth. This provides approximately 14.6 days of retention at the design flow.

- Lagoon Cell No. 2 – The transfer for cell one is by gravity flow into Lagoon Cell No. 2. Lagoon Cell No. 2 is partially aerated and has a surface area of 1.1 acres and a wastewater volume of 1.6 million gallons. This cell has 1 ft of freeboard, and 7 ft of operating depth. This provides approximately 12.0 days of retention at the design flow.

- Lagoon Cell No. 3 – Lagoon Cell 3 recieves transfer flow from cell two and is aerated. Cell No. 3 has a surface area of 0.9 acres and a wastewater volume of 1.56 million gallons. This cell has 1 ft of freeboard and 5.85 ft of operating depth. This provides approximately 12 total days of retention at the design flow.

Construction will cover the following items:

- 187 linear feet of 12 inch PVC C900 pipe with three manholes

- Screening – Installation of screening devices removes nuisance inorganic materials from raw wastewater.
  - Channel Grinder – 5 hp.
  - Mechanical Coarse Screen – One mechanically cleaned 0.25-inch fine screen with a spiral lifting auger. The screening device shall be capable of treating a peak hourly flow of 0.495 MGD.

- Triplepoint MARS™ aeration and mixing equipment – Install 750T Aerators – 6 units in cell#1 and 2 units in cell #2. Aeration provided to the aerators with 2 – 15 hp positive displacement blowers – each designed for 266 scfm.

- Triplepoint Water Technologies, LLC NitrOx™ – The lagoon treated effluent will flow by gravity to the NitrOx™ system. The NitrOx™ system is capable of treating a design average flow of 132,000 gpd. The system is composed of two tanks with each approximately 12 ft x 12 ft x 17 ft with a sidewater depth of 14 ft. Total volume of the two tanks is 30,159 gallons. The average flow hydraulic

retention time is 5.5 hours and the peak flow hydraulic retention time is 1.2 hours. A floating insulating cover shall be installed in each tank. An immersion tank heater will be installed to maintain a minimum wastewater temperature of 5°C. Each tank shall be filled approximately 50% with high surface area HDPE media. Aeration by means of 2 – 10 HP positive displacement blowers each capable of supplying 180 scfm with motors. The effluent from the NitrOx^{TM} will flow by gravity to Lagoon Cell No. 3 for polishing prior to disinfection and discharge.

- Riprap and reshape/regrade existing lagoon berms.

- Remove existing aerators and grit chamber

- Emergency Power – the facility will be equipped with a emergency 80 kW diesel generator.

5. OPERATING PERMIT

Operating permit MO-0035726 will require a modification to reflect the construction activities. The modified MAWC, Maplewood Subdivision WWTF, MO-0035726, was successfully public noticed from April 5, 2019 to May 6, 2019 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.

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

CR0002053
AP 31784

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

APPLICATION FOR CONSTRUCTION PERMIT – WASTEWATER FACILITY

RECEIVED
FEB 19 2019
Water Protection Program

FOR DEPARTMENT USE ONLY	
APP NO.	CP NO.
FEE RECEIVED $1000.00	CHECK NO. 1700051758
DATE RECEIVED 2-19-19	SB

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: _____ 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: N/A

1.4 Has the department approved the proposed project's facility plan*?
☑ YES Date of Approval: 9/17/2018 ☐ 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
Maplewood WWTF Upgrades

2.2 PROJECT DESCRIPTION
Addition of new facilities for ammonia treatment to meet discharge requirements; improvements to the existing lagoon aeration and mixing equipment to enhance performance; addition of influent mechanically-cleaned screening equipment; site piping modifications to reduce short-circuiting through the lagoon cells; new remote monitoring and data collection equipment; integration of existing effluent flow measurement and UV disinfection facilities; and miscellaneous related improvements.

2.3 SLUDGE HANDLING, USE AND DISPOSAL DESCRIPTION
In-basin stabilization and degradation, periodic dredging with disposal by land application to agricultural ground.

2.4 DESIGN INFORMATION
A. Current population: 1,200 (est.); Design population: 1,500
B. Actual Flow: 107,000 gpd; Design Average Flow: 132,000 gpd;
Actual Peak Daily Flow: 400,000 gpd; Design Maximum Daily Flow: 495,000 gpd;
Design Wet Weather Event: 495,000

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
$ 1,400,000.00

3.0 WASTEWATER TREATMENT FACILITY

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Maplewood Subdivision WWTF	(660) 747-3192	David.Fiedler@amwater.com

ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE	COUNTY
Highway TT, RR6	Sedalia	MO	65301	Pettis

Wastewater Treatment Facility: Mo- 0035726 (Outfall 001 Of 1)

3.1 Legal Description: ¼, SE ¼, SE ¼, Sec. 7 , T 45N , R 20W
(Use additional pages if construction of more than one outfall is proposed.)

3.2 UTM Coordinates Easting (X): 486653 Northing (Y): 4281487
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3.3 Name of receiving streams: Tributary to Flat Creek

4.0 PROJECT OWNER

NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Missouri-American Water Company	(314) 469-6404	Timothy.Ganz@amwater.com

ADDRESS	CITY	STATE	ZIP CODE
901 Hog Hollow Road	St. Louis	MO	63141

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	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Missouri-American Water Company	(314) 469-6404	Timothy.Ganz@amwater.com

ADDRESS	CITY	STATE	ZIP CODE
901 Hog Hollow Road	St. Louis	MO	63141

5.1 A letter from the continuing authority, if different than the owner, is included with this application. ☐ YES ☐ NO ☑ N/A

5.2 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A MISSOURI PUBLIC SERVICE COMMISSION REGULATED ENTITY.

A. Is a copy of the certificate of convenience and necessity included with this application? ☐ YES ☑ NO

5.3 COMPLETE THE FOLLOWING IF THE CONTINUING AUTHORITY IS A PROPERTY OWNERS ASSOCIATION.

A. Is a copy of the as-filed restrictions and covenants included with this application? ☐ YES ☐ NO

B. Is a copy of the as-filed warranty deed, quitclaim deed or other legal instrument which transfers ownership of the land for the wastewater treatment facility to the association included with this application? ☐ YES ☐ NO

C. Is a copy of the as-filed legal instrument (typically the plat) that provides the association with valid easements for all sewers included with this application? ☐ YES ☐ NO

D. Is a copy of the Missouri Secretary of State's nonprofit corporation certificate included with this application? ☐ YES ☐ NO

6.0 ENGINEER

ENGINEER NAME / COMPANY NAME	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Kenneth S. Knight, PE / Crawford, Murphy & Tilly, Inc.	(314) 571-9057	sknight@cmtengr.com

ADDRESS	CITY	STATE	ZIP CODE
1 S. Memorial Drive, Suite 500	St. Louis	MO	63102

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	DATE
Ben Teymouri	02/14/19

TITLE OR CORPORATE POSITION	TELEPHONE NUMBER WITH AREA CODE	EMAIL ADDRESS
Project Manager	(314) 996-2335	Ben.Teymouri@amwater.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 ☐ Subsurface
☐ 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 two 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 _____

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

9.5 Design depth of sludge in storage basins.
Basin #1: _____ ft Basin #2: _____ ft

9.6 Existing sludge depth, if the basins are currently in operation.
Basin #1: _____ ft Basin #2: _____ ft

9.7 Total design sludge storage: _____ dry tons and _____ cubic feet

10.0 LAND APPLICATION SYSTEM

10.1 Type of land application: ☐ Fixed Head Sprinklers ☐ Center Pivot ☐ Traveling Gun ☐ Drip Dispersal
☐ Subsurface Low Pressure Pipe ☐ Other (describe) _____

10.2 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.)

10.3 Type of vegetation: ☐ Grass hay ☐ Pasture ☐ Timber ☐ Row crops
☐ Other (describe)

10.4 Wastewater flow (dry weather) gallons per day: Average annual _____
Seasonal _____ Off-season _____

10.5 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

10.6 Total irrigation per year (gallons): Design: _____ gal Actual: _____ gal

10.7 Actual months used for irrigation (check all that apply):
☐ Jan ☐ Feb ☐ Mar ☐ Apr ☐ May ☐ Jun ☐ Jul ☐ Aug ☐ Sep ☐ Oct ☐ Nov ☐ Dec

10.8 Land application rate is based on:
☐ Hydraulic Loading ☐ Other (describe) _____
☐ Nutrient Management Plan (N and P) If N and 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. This form is available at dnr.mo.gov/forms/780-1632-f.pdf.

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(2)(F)1. 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 any questions in this section are answered no, this application may be considered incomplete and returned to 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. Agrichemical facilities complete sections 1.6, 1.10, 2.1, 2.2, 3.1-3.3, 5.0, 6.0, and 7.0.

1.3 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.

1.4 Check the appropriate box and provide the date of department approval. Per 10 CSR 20-8.110(3)(C), facility plans must be approved by the department prior to the submittal of plans and specifications and a construction permit application. "Facility plans must be completed for projects involving wastewater treatment facility projects and projects receiving funding through the grant and loan programs under 10 CSR 20-4" in accordance with 10 CSR 20-8.110(4)(A)4. The department has developed a fact sheet to aid in the development of an approvable facility plan. This document is available online at dnr.mo.gov/pubs/pub2416.htm.

1.5 Complete only if No. 1.3 is answered Not Applicable. Check the appropriate box. For wastewater treatment facilities with a design flow under 22,500 gallons per day, or gpd, an engineering report may be required by the department in accordance with 10 CSR 20-6.010(4)(D)1 and 10 CSR 20-8.020(3). The department will require an engineering report for any new wastewater treatment facilities and for any major modifications to an existing wastewater treatment facility.

1.6 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(3)(C), 10 CSR 20-8.020(5) and 10 CSR 20-8.020(6). A Missouri registered professional engineering seal, signature and date is required on each sheet of the plans and the cover of the technical specifications.

The department will accept plans and specifications in electronic form on a CD and in the Adobe® PDF searchable format. If the plans are scanned, set the resolution to a minimum of 200 dpi at 17 by 22 inches.

Note: Additional sets of plans and specifications may be required by the department for final approval and issuance of the construction permit. See 10 CSR 20-8.110(6)(A)1.

1.7 Check the appropriate box. A summary of design shall accompany the plans and specifications when applying for a construction permit, per 10 CSR 20-8.110(5) and 10 CSR 20-8.020(7). A fact sheet to aid in the development of an acceptable summary of design is available online at dnr.mo.gov/pubs/pub2417.htm. For wastewater treatment facilities with a design flow under 22,500 gpd, a summary of design may not be required by the department.

1.8 Check the appropriate box. Include the applicable operating permit application when seeking a site-specific operating permit or modification of an existing operating permit. Facilities that qualify for a general operating permit may submit the operating permit application to the appropriate regional office at least 60 days prior to operation.

- Form B for facilities ≤ 100,000 gpd is available online at dnr.mo.gov/forms/780-1512-f.pdf.
- Form B2 for facilities > 100,000 gpd is available online at dnr.mo.gov/forms/780-1805-f.pdf.

Include the appropriate fee with your application. For more fee information, visit: http://s1.sos.mo.gov/cmsimages/adrules/csr/current/10csr/10c20-6.pdf.

$200 for modifications to a Publicly Owned Treatment Works (POTW) operating permit accompanied by the appropriate operating permit form per 10 CSR 20-6.011(2)(H), if applicable.