MISSOURI
DEPARTMENT OF
NATURAL RESOURCES

Mike Kehoe
Governor

Kurt U. Schaefer
Director

July 1, 2025

Jennifer Falloon
LOZ MM25 WWTP
480 Fall Crown Lane
Fenton, MO 63026

Dear Permittee:

Missouri State Operating Permit number MO-GD00015 issued on July 1, 2024, is hereby modified as per the enclosed. This modification is to transfer ownership and continuing authority from Lee and Jodi Wulfekuhle to Jennifer Falloon, and to change the name of the facility to LOZ MM25 WWTP. There are no other changes to the permit. The enclosed permit is for your official record.

Please read your permit and enclosed Standard Conditions. They contain important information on monitoring requirements, effluent limitations, sampling frequencies and reporting requirements.

This permit may include requirements with which you may not be familiar. If you would like the Missouri Department of Natural Resources to meet with you to discuss how to satisfy the permit requirements, an appointment can be set up by contacting your local regional office. These visits are called Compliance Assistance Visits and focus on explaining the requirements to the permit holder.

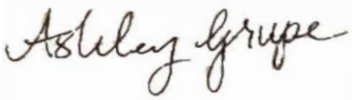
This permit is both your Federal National Pollutant Discharge Elimination System Permit and your new Missouri State Operating Permit and replaces all previous State Operating Permits issued for this facility under this permit number. In all future correspondence regarding this facility, please refer to your State Operating Permit number and facility name as shown on Page 1 of the permit.

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. Contact information for the AHC is: Administrative Hearing Commission, United States Post Office Building, Third Floor, 131 West High Street, P.O. Box 1557, Jefferson City, MO 65102, phone: 573-751-2422, fax: 573-751-5018, and website: http://ahc.mo.gov.

If you have any questions concerning this permit, please do not hesitate to contact Brant Farris by phone at 660-385-8019 by email at brant.farris@dnr.mo.gov, or by mail at Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176. Thank you.

Sincerely,

WATER PROTECTION PROGRAM



Ashley Grupe, Chief
Operating Permits Section

AG:bfv

Enclosure

c: Central Field Operations Office

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION

# MISSOURI STATE OPERATING PERMIT

**General Operating Permit**

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

| | |
|---|---|
| Permit No | MOGD00015 |
| Owner:<br>Address: | Jennifer Falloon<br>480 Fall Crown Ln<br>Fenton, MO 63026 |
| Continuing Authority: | Jennifer Falloon<br>480 Fall Crown Ln<br>Fenton, MO 63026 |
| Facility Name:<br>Facility Address: | LOZ MM25 WWTP<br>0.2 miles southeast of Riviera Ln and Kinchlow Drive intersection<br>Sunrise Beach, MO 65079 |
| Legal Description: | See Page 2 |
| UTM Coordinates: | See Page 2 |
| Receiving Stream: | See Page 2 |
| First Classified Stream - ID#: | See Page 2 |
| USGS# and Sub Watershed#: | See Page 2 |

is authorized to discharge from the facility described herein, in accordance with the effluent limitations, benchmarks, and monitoring requirements as set forth herein.

## FACILITY DESCRIPTION

All Outfalls SIC #4952

All Outfalls - Domestic Treatment Works Discharges less than 50,000gpd to lakes and reservoirs

This permit authorizes activities pursuant to the terms and conditions of this permit in the Missouri Clean Water Law and/or the National Pollutant Discharge Elimination System; it does not apply to other regulated activities.

July 01, 2025
Issue Date

John Hoke, Director
Water Protection Program

June 30, 2029
Expiration Date

| | |
|---|---|
| Outfall Number: | 002 |
| Legal Description: | Sec. 11, T39N, R17W, Camden County |
| UTM Coordinates: | 521538.376/4220633.876 |
| Receiving Stream: | Lake of the Ozarks (L2) |
| First Classified Stream - ID#: | Lake of the Ozarks (L2) 303(d) 7205.00 |
| USGS# and Sub Watershed#: | 10290109 - 0401 |

| | |
|---|---|
| Outfall Number: | 003 |
| Legal Description: | Sec. 11, T39N, R17W, Camden County |
| UTM Coordinates: | 521538.576/4220633.326 |
| Receiving Stream: | Lake of the Ozarks (L2) |
| First Classified Stream - ID#: | Lake of the Ozarks (L2) 303(d) 7205.00 |
| USGS# and Sub Watershed#: | 10290109 - 0401 |

## PART I. APPLICABILITY

1. This Missouri State Operating Permit (permit) authorizes the discharge of treated domestic wastewater from domestic wastewater treatment facilities with no industrial contributions to waters of the state of Missouri. Domestic wastewater, as defined at 10 CSR 20-6.010(26), originates from sanitary conveniences of residences, commercial buildings, factories, and institutions, including any stormwater which may have infiltrated into the sewers. This includes multiple industries, including, but not limited to, facilities with the primary Standard Industrial Classification (SIC) Codes below or facilities the Missouri Department of Natural Resources (department) determines are fundamentally similar to facilities that are under the below SIC Codes:

| SIC Code | Activity |
|---|---|
| 4952 | Sewerage Systems |
| 6515 | Residential Mobile Home Parks |
| 8641 | Home Owners Associations |

2. Some publicly owned treatment works (POTWs), including, but not limited to, schools, nursing homes, airports, ports, training centers, correctional centers, government owned facilities, and other institutional facilities may be eligible for coverage under this permit if they do not finance upgrades, operation, or maintenance of their domestic wastewater treatment facility based on residential sewer rates.
   (a) Applicants will need to waive the finding of affordability requirement pursuant to Section 644.145, RSMo. Applicants may waive the finding of affordability requirement on Form B: Application for Operating Permit for Facilities that Receive Primarily Domestic Waste and Have a Design Flow Less Than or Equal to 100,000 Gallons Per Day.

3. The following facilities are excluded from this permit:
   (a) POTWs which finance upgrades, operation, or maintenance of their domestic wastewater treatment facility based on residential sewer rates, including, but not limited to, municipalities, public sewer districts, public water supply districts, and political subdivisions;
   (b) Facilities discharging domestic wastewater with industrial wastewater contributions;
   (c) Facilities which land apply wastewater to the surface or subsurface;
   (d) Facilities with a design average flow greater than 50,000 gpd of domestic wastewater;
   (e) Facilities which do not discharge within one-half (1/2) stream mile before the stream enters a lake as measured to its conservation pool [10 CSR 20-7.015(1)(B)2.];
   (f) Facilities employing direct reuse of treated wastewater; and
   (g) Facilities that have completed and received department approval of a Water Quality and Antidegradation Review that assigned limits more stringent than those in Table 4 of the department's Alternatives Analysis, which corresponds to Table C of this permit. The Alternatives Analysis may be viewed here: https://dnr.mo.gov/document-search/water-quality-antidegradation-review-departments-alternatives-analysis-domestic-wastewater-facilities-design-flow-less-50000-gallons-day.

4. This permit does not authorize discharges:
   (a) To the watershed of a Metropolitan No-Discharge Stream per 10 CSR 20-7.015(5)(A) and 10 CSR 20-7.031(7);
   (b) To systems which irrigate or inject wastewater directly to a subsurface water;
   (c) Within the watershed of or directly to Outstanding National Resource Waters (ONRW), which includes the Ozark National Riverways and the National Wild and Scenic Rivers System. ONRW are protected against any degradation in quality as defined in 10 CSR 20-7.015(6)(A), 7.031(3)(C), and 7.031(8);
   (d) Which cause the current water quality of Outstanding State Resource Waters to be lowered per 10 CSR 20-7.015(6)(B), 7.031(3)(C), and 7.031(9);
   (e) Into watersheds above lakes and reservoirs designated as L1 in 10 CSR 20-7.031, per 10 CSR 20-7.015(3)(C), unless the discharge was permitted prior to the effective date of the rule and is in compliance with the terms and conditions of their permit;
   (f) Directly into a designated cold water habitat as listed in 10 CSR 20-7.031; or
   (g) Of stormwater, animal waste, process waste, or other similar waste.

5. Facilities located within the watershed of an impaired water as designated in the 303(d) List must be evaluated on a case-by-case basis for inclusion under this permit. Facilities found to be discharging the listed pollutant(s) of concern for any impaired water may be required to obtain a site-specific permit.

6. Proposed new facilities shall not obtain coverage under Tables A or B of this permit unless all effluent limitations as listed in an antidegradation review approved by the department match a corresponding table in this general permit. New facilities may be required to obtain a site-specific permit for the first permit cycle to ensure proper operations and treatment efficiency.

7. The department may require any facility authorized by a general permit to apply for a site-specific permit [10 CSR 20-6.010(13)(C)]. Cases where a site-specific permit may be required include, but are not limited to, the following:
   (a) The discharge(s) is a significant contributor of a pollutant(s) which impairs the designated uses of the receiving stream;
   (b) The discharger is not in compliance with the conditions of the general permit;
   (c) A Total Maximum Daily Load (TMDL) containing requirements applicable to the discharge(s) is approved.

8. If a facility covered under a current general permit desires to apply for a site-specific permit, the facility may do so by contacting the department for application requirements and procedures.

9. Facilities covered under a current site-specific permit who desire to apply for inclusion under this general permit may contact the department for application requirements and procedures.

10. This operating permit does not affect, remove, or replace any requirement of the National Environmental Policy Act; the Endangered Species Act; the National Historic Preservation Act; the Comprehensive Environmental Response, Compensation and Liability Act; the Resource Conservation and Recovery Act; or any other relevant acts. Determination of applicability to the above mentioned acts is the responsibility of the permittee. Additionally, this permit does not establish terms and conditions for runoff resulting from silvicultural activities listed in Section 402(l)(3)(a) of the Clean Water Act.

11. Any discharges not expressly authorized in this permit and not clearly disclosed in the permit application cannot become authorized or shielded from liability under CWA section 402(k) or Section 644.051.19, RSMo, by disclosure to EPA, state, or local authorities after issuance of this permit via any means, including any other permit applications, funding applications, discharge monitoring reporting, or during an inspection. Discharges at the facility not expressly authorized by this permit must be covered by another permit, be exempt from permitting, or be authorized through some other method.

## PART II. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

**Table A. Applicability:**

(a) Facilities with design flow ≤ 50,000 gpd which discharge directly to a Class L2 or L3 lake or reservoir.
OR
(b) Facilities which do not discharge directly to a Class L2 or L3 lake or reservoir, but such a waterbody is the first water of the state the effluent reaches.

| ALL OUTFALLS | TABLE A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS |
|---|---|

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations in **Table A** shall become effective on **July 1, 2025** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| EFFLUENT PARAMETER(S) | UNITS | FINAL EFFLUENT LIMITATIONS | | | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| **eDMR Limit Set: TA** | | | | | | |
| Flow | MGD | * | | * | once/quarter† | 24 hr. estimate |
| Biochemical Oxygen Demand$_5$ | mg/L | | 30 | 20 | once/quarter† | grab |
| Total Suspended Solids | mg/L | | 30 | 20 | once/quarter† | grab |
| Ammonia as N (Jan 1 – Mar 31) | mg/L | 12.1 | | 3.1 | once/quarter† | grab |
| Ammonia as N (Apr 1 – Jun 30) | mg/L | 12.1 | | 1.6 | once/quarter† | grab |
| Ammonia as N (Jul 1 – Sep 30) | mg/L | 12.1 | | 1.3 | once/quarter† | grab |
| Ammonia as N (Oct 1 – Dec 31) | mg/L | 12.1 | | 2.5 | once/quarter† | grab |
| Total Residual Chlorine (**Note 2, Page 8**) | µg/L | < 130 | | < 130 | once/quarter† | grab |
| E. coli (**eDMR Limit Set WA, PA, WB, or PB**) | | | | | | |
| WBC-A (**Note 1, Page 8**) **OR** | #/100mL | 630*** | | 126 | once/quarter† | grab |
| WBC-B (**Note 1, Page 8**) | #/100mL | 1,030*** | | 206 | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | **UNITS** | **MINIMUM** | | **MAXIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| pH – Units** | SU | 6.5 | | 9.0 | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | **UNITS** | **DAILY MINIMUM** | | **MONTHLY AVERAGE MINIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| Dissolved Oxygen (**Note 2, Page 8**) | mg/L | * | | * | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | | | **UNITS** | **MONTHLY AVERAGE MINIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| Percent Removal (**eDMR Limit Set PR**) | | | | | | |
| Biochemical Oxygen Demand$_5$ – Percent Removal (**Note 4, Page 9**) | | | % | 85 | once/quarter† | calculated |
| Total Suspended Solids – Percent Removal (**Note 4, Page 9**) | | | % | 85 | once/quarter† | calculated |

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE NEXT REPORT IS DUE OCTOBER 28, 2025.

* Monitoring requirement only.
** pH is measured in pH units and is not to be averaged.
*** Publicly owned treatment works will receive a weekly average *E. coli* limit (**eDMR Limit Set PB or PA**) and privately owned facilities will receive a daily maximum *E. coli* limit (**eDMR Limit Set WB or WA**).
† Quarterly sampling is required. If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table A. Report as "No Discharge" when a discharge does not occur during the reporting period. If the facility serves part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. See Table F on Page 8 for quarterly sampling schedule.

**Table B. Applicability:** Facilities with design flow ≤ 50,000 gpd which discharge within ½ mile upstream of a Class L2 or L3 lake or reservoir, and effluent reaches a water of the state prior to the lake.

| ALL OUTFALLS | TABLE B. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS |
|---|---|

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations in **Table B** shall become effective on **Effective Date** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| EFFLUENT PARAMETER(S) | UNITS | FINAL EFFLUENT LIMITATIONS | | | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| **eDMR Limit Set: TB** | | | | | | |
| Flow | MGD | * | | * | once/quarter† | 24 hr. estimate |
| Biochemical Oxygen Demand$_5$ | mg/L | | 30 | 20 | once/quarter† | grab |
| Total Suspended Solids | mg/L | | 30 | 20 | once/quarter† | grab |
| Ammonia as N (Jan 1 – Mar 31) | mg/L | 8.4 | | 2.4 | once/quarter† | grab |
| Ammonia as N (Apr 1 – Jun 30) | mg/L | 8.4 | | 1.4 | once/quarter† | grab |
| Ammonia as N (Jul 1 – Sep 30) | mg/L | 6.9 | | 0.9 | once/quarter† | grab |
| Ammonia as N (Oct 1 – Dec 31) | mg/L | 8.4 | | 2.2 | once/quarter† | grab |
| Total Residual Chlorine (**Note 2, Page 8**) | µg/L | < 130 | | < 130 | once/quarter† | grab |
| E. coli (**eDMR Limit Set WA, PA, WB, or PB**) | | | | | | |
| WBC-A (**Note 1, Page 8**) **OR** | #/100mL | 630*** | | 126 | once/quarter† | grab |
| WBC-B (**Note 1, Page 8**) | #/100mL | 1,030*** | | 206 | once/quarter† | grab |

| EFFLUENT PARAMETER(S) | UNITS | MINIMUM | | MAXIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|---|---|
| pH – Units** | SU | 6.5 | | 9.0 | once/quarter† | grab |

| EFFLUENT PARAMETER(S) | UNITS | DAILY MINIMUM | | MONTHLY AVERAGE MINIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|---|---|
| Dissolved Oxygen (**Note 2, Page 8**) | mg/L | * | | * | once/quarter† | grab |

| EFFLUENT PARAMETER(S) | UNITS | MONTHLY AVERAGE MINIMUM | MEASUREMENT FREQUENCY | SAMPLE TYPE |
|---|---|---|---|---|
| Percent Removal (**Limit Set PR**) | | | | |
| Biochemical Oxygen Demand$_5$ – Percent Removal (**Note 4, Page 9**) | % | 85 | once/quarter† | calculated |
| Total Suspended Solids – Percent Removal (**Note 4, Page 9**) | % | 85 | once/quarter† | calculated |

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE MONTH 28, 20XX.

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged.

*** Publicly owned treatment works will receive a weekly average *E. coli* limit (**eDMR Limit Set PB or PA**) and privately owned facilities will receive a daily maximum *E. coli* limit (**eDMR Limit Set WB or WA**).

† Quarterly sampling is required. If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table B. Report as "No Discharge" when a discharge does not occur during the reporting period. If the facility serves part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. See Table F on Page 8 for quarterly sampling schedule.

**Table C. Applicability:** Facilities with design flow ≤ 50,000 gpd that have applied for and were approved to use the department's Alternatives Analysis which discharge to a Class L2 or L3 lake or reservoir.

| ALL OUTFALLS | TABLE C. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS |
|---|---|

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations in **Table C** shall become effective on **Effective Date** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

| EFFLUENT PARAMETER(S) | UNITS | FINAL EFFLUENT LIMITATIONS | | | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| **eDMR Limit Set: E** | | | | | | |
| Flow | MGD | * | | * | once/quarter† | 24 hr. estimate |
| Biochemical Oxygen Demand$_5$ | mg/L | | 15 | 10 | once/quarter† | grab |
| Total Suspended Solids | mg/L | | 20 | 15 | once/quarter† | grab |
| Ammonia as N<br>(Apr 1 – Sep 30)<br>(Oct 1 – Mar 31) | mg/L | 3.6<br>7.5 | | 1.4<br>2.9 | once/quarter† | grab |
| Total Residual Chlorine (**Note 2, Page 8**) | µg/L | < 130 | | < 130 | once/quarter† | grab |
| E. coli (**eDMR Limit Set PA or WA**) | | | | | | |
| Alternatives Analysis (**Note 1, Page 8**) | #/100mL | 630*** | | 126 | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | **UNITS** | **MINIMUM** | | **MAXIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| pH – Units** | SU | 6.5 | | 9.0 | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | **UNITS** | **DAILY MINIMUM** | | **MONTHLY AVERAGE MINIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| Dissolved Oxygen (**Note 2, Page 8**) | mg/L | * | | * | once/quarter† | grab |
| **EFFLUENT PARAMETER(S)** | | | **UNITS** | **MONTHLY AVERAGE MINIMUM** | **MEASUREMENT FREQUENCY** | **SAMPLE TYPE** |
| Percent Removal (**Limit Set PR**) | | | | | | |
| Biochemical Oxygen Demand$_5$ – Percent Removal (**Note 4, Page 9**) | | | % | 85 | once/quarter† | calculated |
| Total Suspended Solids – Percent Removal (**Note 4, Page 9**) | | | % | 85 | once/quarter† | calculated |

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE MONTH 28, 20XX.

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged.

*** Publicly owned treatment works will receive a weekly average *E. coli* limit (**eDMR Limit Set PA**) and privately owned facilities will receive a daily maximum *E. coli* limit (**eDMR Limit Set WA**).

† Quarterly sampling is required. If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table C. Report as "No Discharge" when a discharge does not occur during the reporting period. If the facility serves part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. See Table F on Page 8 for quarterly sampling schedule.

**Table D. Applicability:**

a. Facilities that qualify for Table C Applicability which discharge to a lake or a watershed of a lake that is a water of the state and has an area of at least ten acres during normal pool conditions.
OR
b. Facilities discharging within the White River Basin Watershed (USGS basin numbers 11010001, 11010002, 11010003).

| ALL OUTFALLS | TABLE D. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS |
|---|---|

The facility is authorized to discharge from outfall(s) as specified. The final effluent limitations in **Table D** shall become effective on **Effective Date** and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below

| EFFLUENT PARAMETER(S) | UNITS | FINAL EFFLUENT LIMITATIONS | | | MONITORING REQUIREMENTS | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| **eDMR Limit Set: PL** | | | | | | |
| Total Phosphorus‡ | mg/L | * | | 0.5 | once/quarter† | grab |
| Aluminum, Total Recoverable (**Note 3, Page 9**) | µg/L | 750 | | 373.8 | once/quarter† | grab |
| Iron, Total Recoverable (**Note 3, Page 9**) | µg/L | 1,642.7 | | 818.8 | once/quarter† | grab |
| **eDMR Limit Set: PM** | | | | | | |
| Total Phosphorus§ | mg/L | * | | * | once/quarter† | grab |

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE MONTH 28, 20XX.

* Monitoring requirement only.

** pH is measured in pH units and is not to be averaged.

† Quarterly sampling is required. If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table D. Report as "No Discharge" when a discharge does not occur during the reporting period. If the facility serves part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. See Table F on Page 8 for quarterly sampling schedule.

‡ A Phosphorus limit of 0.5 mg/L is required for the following:
- Facilities discharging to Lake Taneycomo (HUC 11010003) and its tributaries between Table Rock Dam and Power Site Dam; and
- Facilities discharging within the Table Rock Lake watershed (HUC 11010001 and 11010002).

§ Phosphorus monitoring is required for the following:
- Facilities discharging to the White River Basin (HUC 11010001, 11010002, and 11010003) that are not otherwise required to have phosphorus limits; and
- Facilities discharging to Lake Taneycomo (HUC 11010003) and its tributaries between Table Rock Dam and Power Site Dam permitted prior to May 9, 1994 which have a design flow of less than 22,500 gpd; and
- Facilities discharging to the Table Rock Lake watershed (HUC 11010001 and 11010002) permitted prior to November 30, 1999 which have a design flow of less than 22,500 gpd.

**Table E. Applicability:** All Publicly Owned Treatment Works (POTWs).

| PERMITTED FEATURE INF | TABLE E. INFLUENT MONITORING REQUIREMENTS |
|---|---|

The monitoring requirements in **Table E** shall become effective on **Effective Date** and remain in effect until expiration of the permit. The influent wastewater shall be monitored by the permittee as specified below:

| PARAMETER(S) | UNITS | MONITORING REQUIREMENTS | | | | |
|---|---|---|---|---|---|---|
| | | DAILY MAXIMUM | WEEKLY AVERAGE | MONTHLY AVERAGE | MEASUREMENT FREQUENCY | SAMPLE TYPE |
| **eDMR Limit Set: IN** | | | | | | |
| Influent Monitoring | | | | | | |
| Biochemical Oxygen Demand$_5$ (**Note 4, Page 9**) | mg/L | | | * | once/quarter† | grab |
| Total Suspended Solids (**Note 4, Page 9**) | mg/L | | | * | once/quarter† | grab |

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE MONTH 28, 20XX.

* Monitoring requirement only.

† Quarterly sampling is required. If a discharge occurs during the reporting period, samples shall be collected and tested for the parameters listed in Table E. Report as "No Discharge" when a discharge does not occur during the reporting period. If the facility serves part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. If multiple samples are collected and analyzed during the sampling period, the multiple samples are not to be averaged at intervals exceeding one calendar month. See Table F on Page 8 for quarterly sampling schedule.

**QUARTERLY SAMPLING SCHEDULE**: All facilities.

| TABLE F: MINIMUM QUARTERLY SAMPLING REQUIREMENTS | | | | |
|---|---|---|---|---|
| QUARTER | MONTHS | *E. COLI*, TOTAL RESIDUAL CHLORINE (TRC), AND DISSOLVED OXYGEN | ALL OTHER PARAMETERS | REPORT IS DUE |
| First | January, February, March | Not required to sample. | Sample at least once during any month of the quarter | April 28th |
| Second | April, May, June | Sample at least once during any month of the quarter | Sample at least once during any month of the quarter | July 28th |
| Third | July, August, September | Sample at least once during any month of the quarter | Sample at least once during any month of the quarter | October 28th |
| Fourth | October | Sample once during October | Sample at least once during any month of the quarter | January 28th |
| | November, December | No sample required | | |

**Note 1** – Facilities are subject to effluent limitations for *E. coli* based on the most stringent recreational designated use within two miles downstream of the discharge. Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. For POTWs, the Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

**Note 2** – Disinfection

(a) Facilities using exclusively UV disinfection are not required to sample for Total Residual Chlorine (TRC) or Dissolved Oxygen (DO). Simply report as "AG – Conditional Monitoring Not Required This Period" for TRC and DO in the eDMR system.

(b) Total Residual Chlorine (TRC) and Dissolved Oxygen (DO).

(1) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be **18 µg/L** (daily maximum limit) and **9 µg/L** (monthly average limit). These limits are below the Minimum Quantification Level (ML) of the most common and practical U.S. Environmental Protection Agency (EPA) approved CLTRC methods. The department has determined the current acceptable ML for TRC to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G, from Standard Methods for the Examination of Waters and Wastewater. The facility will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the ML of 130 µg/L will be considered violations of the permit and values less than

the ML of 130 µg/L will be considered to be in compliance with the permit limitation. The ML does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
(2) Do not chlorinate or chemically dechlorinate if it is not needed to meet the limits in your permit. Facilities required to comply with recreation based *E. coli* limits are not required to disinfect during non-recreational months; do not chlorinate during non-recreational months.
(3) If no chlorine was used in a given sampling period, an actual analysis for TRC and DO is not necessary. Simply report as "AG – Conditional Monitoring Not Required This Period" for TRC and DO in the eDMR system.

**Note 3** – If no Aluminum or Iron was used in a given sampling period, an actual analysis is not necessary. Simply report as "AG – Conditional Monitoring Not Required this Period".

**Note 4** – Percent removal and influent monitoring
(a) Privately owned treatment works are not required to report percent removal nor conduct influent monitoring.
(b) Percent removal applies to all publicly owned treatment works. Influent sampling for $BOD_5$ and TSS is not required when the facility does not discharge effluent during the reporting period. Samples are to be collected prior to any treatment process and shall be collected on the same day effluent samples are collected. Calculate Percent Removal by using the following formula: [(Average Influent –Average Effluent) / Average Influent] x 100% = Percent Removal. Influent and effluent samples are to be taken during the same month. The Average Influent and Average Effluent values are to be calculated by adding the respective values together and dividing by the number of samples taken during the month. Influent samples are to be collected as a grab sample.

## PART III. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Standard Conditions Part I and Standard Conditions Part III dated August 01, 2014 and August 1, 2019, and hereby incorporated as though fully set forth herein.
https://dnr.mo.gov/document-search/standard-conditions-npdes-permits-aug-1-2014-part-i
https://dnr.mo.gov/document-search/standard-conditions-npdes-permits-part-iii-aug-1-2019

## PART IV. PERMIT REQUIREMENTS

1. Electronic Discharge Monitoring Report (eDMR) Submission System. Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent monitoring data and any report required by the permit (unless specifically directed otherwise by the permit), shall be submitted via an electronic system to ensure timely, complete, accurate, and nationally consistent set of data for the NPDES program. The eDMR system is currently the only department-approved reporting method for this permit unless specified elsewhere in this permit, or a waiver is granted by the department. The facility must register with the department's eDMR system through the Missouri Gateway for Environmental Management (MoGEM) before the first report is due. Registration and other information regarding MoGEM can be found at https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem. Information about the eDMR system can be found at https://dnr.mo.gov/water/business-industry-other-entities/reporting/electronic-discharge-monitoring-reporting-system-edmr. If you experience difficulties with using the eDMR system you may contact edmr@dnr.mo.gov or call 855-789-3889 or 573-526-2082 for assistance.

2. The full implementation of this operating permit, which includes implementation of any applicable schedules of compliance, shall constitute compliance with all applicable federal and state statutes and regulations in accordance with Section 644.051.19, RSMo, and the Clean Water Act (CWA) section 402(k); however, this permit may be reopened and modified, or alternatively revoked and reissued:
   (a) To comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a)(2) of the CWA, if the effluent standard or limitation so issued or approved:
      (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
      (2) controls any pollutant not limited in the permit.
   (b) The filing of a request by the permittee for a permit modification, termination, notice of planned changes, or anticipated non-compliance does not stay any permit condition.

3. Outfalls must be:
   (a) Clearly marked in the field per 10 CSR 20-8.140(6)(C).
   (b) Made accessible for sampling and site inspection purposes;
   (c) Maintained so a sample of the discharge can be obtained at a point after the final treatment process and before the discharge mixes with receiving waters;
   (d) Protected and maintained against the effects of floodwater, ice, or other hazards as to reasonably ensure its structural stability and freedom from stoppage [10 CSR 20-8.140(6)].

4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(2)(B) within the timeframe allotted by the continuing authority with its notice of its availability. The permittee shall obtain department approval for closure according to section 10 CSR 20-6.010(12) or alternate use of these facilities.

5. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) See sufficiently sensitive test method requirements in Standard Conditions Part I, Section A.4 regarding proper testing and method minimum levels used for sample analysis.
   (c) The permittee shall not report a sample result as "Non-Detect" without also reporting the method minimum level of the test. Reporting as "Non Detect" without also including the method minimum level, will be considered failure to report, which is a violation of this permit.
   (d) The permittee shall provide the "Non-Detect" sample result using the less than symbol and the method minimum level (e.g., <50 µg/L, if the method minimum level for the parameter is 50 µg/L).
   (e) Where the permit contains a department determined Minimum Quantification Level (ML) and the permittee is granted authority in the permit to report zero in lieu of the < ML for a specified parameter (conventional, priority pollutants, metals, etc.), then zero (0) is to be reported for that parameter.
   (f) For the daily maximum, the facility shall report the highest value. If the highest value was a non-detect, use the less than "<" symbol and the laboratory's highest method minimum level.
   (g) For reporting an average based on all non-detected values, remove the "<" sign from the values, average the values, and then add the "<" symbol back to the resulting average.
   (h) For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of "0" for all non-detects for that reporting period and report the average of all the results.
   (i) When *E. coli* is not detected above the method minimum level, the permittee must report the data qualifier signifying less than detection limit for that parameter (e.g., <1 #/100mL, if the method minimum level is 1 #/100mL). For reporting a geometric mean based on a mix of detected and non-detected values, use one-half of the detection limit (instead of zero) for non-detects when calculating geometric means.
   (j) See the Fact Sheet Appendix - Non-Detect Example Calculations for further guidance.

6. POTWs and facilities regulated by the Public Service Commission with design population equivalent greater than 200 shall comply with any applicable requirements listed in 10 CSR 20-9 for operator certification and operational monitoring. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9.010(5). Operational monitoring reports must be submitted via eDMR along with discharge monitoring reports per 10 CSR 20-9.010(2). If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the facility shall submit a written request to the Water Protection Program, Water Pollution Control Branch, Operating Permits Section, for review.

7. Bypasses and Other Unauthorized Discharges.
   (a) Any spill, overflow, or other discharge(s) not specifically authorized in the permit above are unauthorized discharges.
   (b) Should an unauthorized discharge cause or permit any contaminants to discharge or enter waters of the state, the unauthorized discharge must be reported to the regional office as soon as practicable but no more than 24 hours after the discovery of the discharge. If the spill or overflow needs to be reported after normal business hours or on the weekend, the facility must call the department's 24 hour spill line at 573-634-2436.
   (c) Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3), and with Standard Condition Part I, Section B.2. Bypasses are to be reported to the appropriate regional office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: https://dnr.mo.gov/data-e-services/missouri-gateway-environmental-management-mogem or the Environmental Emergency Response spill-line at 573-634-2436 outside of normal business hours. Once an electronic reporting system compliant with 40 CFR Part 127, the National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, is available all bypasses must be reported electronically via the new system.

8. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.

9. An all-weather access road to the treatment facility shall be maintained.

10. Facilities with media filter beds shall keep the filter beds properly maintained to prevent surface pooling, vegetative growth, and accumulation of leaf litter.

11. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.

12. The permittee shall give notice to the department as soon as possible of any planned physical alterations or additions to the permitted facility when:
    (a) The alteration or addition could significantly change the nature or increase the quantity of pollutants in the discharge. This notification applies to pollutants subject to the effluent limitations of this permit as well as new pollutants different from pollutants listed in this permit; or
    (b) The alteration or addition results in a significant change in discharge practices and may justify the application of permit conditions different from or absent in the current permit.

    Physical alterations or additions to the existing treatment system may be subject to construction permit requirements per 10 CSR 20-6.010(5). Facilities currently covered by this general permit, or interesting in being covered by this general permit, are required to obtain an Antidegradation Review, even if an existing facility conducts an expansion which results in a design flow of less than or equal to 50,000 gpd.

13. Compliance with all requirements in this permit does not supersede nor remove liability for compliance with county or other local ordinances.

14. The laboratory results of all samples from a discharge collected and analyzed must be retained with monitoring records for a minimum of three years and made available to the department upon request.

15. The permittee shall furnish to the department, upon request and within 48 hours unless explicitly granted more time in writing, copies of records required to be kept according to the terms and conditions of this permit. All records required by this permit may be maintained electronically per Section 432.255, RSMo. These records should be maintained in a searchable format.

16. This permit authorizes sludge handling via any of the methods contained in the attached Standard Conditions Part III, for which the facility has received previous approval from the Missouri Department of Natural Resources (Department). If a facility would like approval for another method of sludge disposal not previously approved, the facility shall submit a plan to the appropriate Department regional office. The plan must demonstrate compliance with the requirements of Standard Conditions Part III. A map of the Department regional offices and contact information is located on the Department's website at https://dnr.mo.gov/about-us/division-environmental-quality/regional-office.

## PART V. PERMIT RENEWAL

1. Unless terminated, the permittee shall submit an application for the renewal of this permit by submitting *Form B: Application for Operating Permit for Facilities that Receive Primarily Domestic Waste and Have A Design Flow Less Than or Equal to 100,000 Gallons Per Day* https://dnr.mo.gov/document-search/form-b-application-operating-permit-facilities-receive-primarily-domestic-waste-have-design-flow-less-or-equal-100000-gallons-day-mo-780-1512 no later than thirty (30) days prior to the permit's expiration date.

2. When a facility submits a timely and complete application in accordance with 10 CSR 20-6.010(10)(C)1, and the department is unable through no fault of the permittee to issue a renewed permit prior to expiration of the previous permit, the terms and conditions of the expired permit are administratively continued and will remain fully effective and enforceable until such time when a permit action is taken. Failure to submit a renewal application is a violation of the Missouri Clean Water Law. Failure to apply for renewal of a permit may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

## PART VI. PERMIT TRANSFER

1. This permit may not be transferred to a new owner in any fashion except by submitting an *Application for Transfer of Operating Permit* https://dnr.mo.gov/sites/dnr/files/vfc/2018/10/main/780-1517-f.pdf along with the appropriate modification fee. In some cases, revocation and reissuance may be necessary. Standard Condition Part 1, Section D.7 applies.

2. Facilities that undergo transfers of ownership without notice to the department are considered to be operating without a permit.

## PART VII. PERMIT TERMINATION

1. The permittee shall apply for permit termination when activities covered by this permit have ceased and proper closure procedures have been conducted as required by 10 CSR 20-6.010(12).

2. Proper closure of any effluent storage structure is required prior to permit termination. See https://dnr.mo.gov/document-search/wastewater-treatment-plant-closure-pub2568/pub2568 for more information on closure.

3. Permits do not terminate automatically upon expiration. In order to terminate this permit, the permittee shall notify the department's appropriate regional office by completing and submitting *Request for Termination of Operating Permit* https://dnr.mo.gov/document-search/request-termination-operating-permit-mo-780-2814. The department may require inspection of the premises prior to granting termination of a permit.

## PART VIII. NOTICE OF RIGHT TO APPEAL

If you were adversely affected by this decision, you may be entitled to pursue an appeal before the administrative hearing commission (AHC) pursuant to Sections 621.250 and 644.051.9, RSMo. To appeal, you must file a petition with the AHC within thirty 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

# MISSOURI DEPARTMENT OF NATURAL RESOURCES
# FACT SHEET FOR MASTER GENERAL PERMIT
# MO-GD00000

The Federal Water Pollution Control Act [Clean Water Act (CWA)] Section 402 of Public Law 92-500 (as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States and the release of stormwater from certain point sources. All such discharges are unlawful without a permit (Section 301 of the CWA). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (permit) are issued by the Missouri Department of Natural Resources (department) under an approved program operated in accordance with federal and state laws (Federal CWA and Missouri Clean Water Law Section 644 as amended). Permits are issued for a period of five (5) years unless otherwise specified.

Per 40 CFR 124.56, 40 CFR 124.8, and 10 CSR 20-6.020(1)(A)2, a Fact Sheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the permit. A Fact Sheet is not an enforceable part of an MSOP.

## Part I – Facility Information

Facility Type: Domestic Treatment Works – no industrial contributions
Facility SIC Code(s): 4952, 6515, 8641

This permit establishes a requirement for quarterly monitoring and reporting for pollutants of concern from this type of facility or for all facilities covered under this permit. Effluent parameters established in this permit are common constituents of domestic wastewater or are required by state or federal law. Local conditions are not considered when developing conditions for a general permit. A facility may apply for a site-specific permit if they desire a review of site-specific conditions.

**CLARIFICATION:**
Effluent limits for Total Residual Chlorine (TRC) were updated to reflect a change in the water quality standard chronic criteria since previous permit issuance. Compliance with TRC remains that of actual analytical values below 130 µg/L, the Minimum Quantification Level of the most common approved testing method.

Total Phosphorus requirements are applicable to all facilities within the White River basin which includes the watersheds for Lake Taneycomo and Table Rock Lake. The previous permit did not account for this requirement for facilities which did not fall under tables for direct discharges to lakes. Facilities which are required by 10 CSR 20-7.015 to sample and report Total Phosphorus, but were erroneously omitted from this requirement in the previous general permit, shall meet these requirements in this renewal. If facilities have not had this requirement in a previous permit, general or site specific, the facility should contact the department.

Per 10 CSR 20-7.031(5)(N), Lake Numeric Nutrient Criteria (NNC) for lakes is applicable statewide. NNC is assessed during antidegradation review. Facilities that have applied for and were approved to use the department's Alternatives Analysis shall meet a Total Phosphorus effluent limit, including facilities discharging within lake watersheds outside of the White River Basin. Such facilities are subject to Tables C and D of this master general permit.

**CHANGES TO THE RENEWAL OF THIS PERMIT INCLUDE:**

- Discharges to lakes and streams have been separated into respective general permits.
- Updated language throughout the permit to current permit language used by the department.
- POTWs which do not operate on a budget based on user rates have been included in this permit. This inclusion is reflected by the addition of requirements specific to POTWs: percent removal, influent monitoring, and weekly average limits instead of daily maximum, where appropriate.
- Added applicability statements which prohibit new discharges from being covered under Tables A or B of this permit unless allowed by antidegradation review, clarification this permit does not affect, remove, or replace other relevant environmental regulations, and addition of a permit shield which prohibits discharges not expressly authorized by this permit.
- Revised ammonia effluent limits for Tables A and B for direct and indirect lake dischargers, respectively.
- The table allowing monitoring only for ammonia for facilities with flows less than 1,500 gpd and discharging to a Class L2 or L3 lake or reservoir was removed as the discharge from these facilities has shown reasonable potential to violate water quality standards under the mixing assumptions of that table.

- Permit requirements under Part IV include the following changes:
  - Revised:
    - eDMR reporting.
    - Requirement 2(b) added.
    - Outfall accessibility.
    - Reporting of non-detects and addition of appendix with examples.
    - 10 CSR 20 Chapter 9 requirements to include applicable POTWs.
    - Reporting bypassing and unauthorized discharges.
    - Sludge treatment, storage, and disposal methods regarding department approval.
  - Removed:
    - The requirement to maintain a gate and fence at the facility. Fencing and gates are assumed as part of the requirement to be sufficiently secured, so this redundancy was removed.
  - Added:
    - The addition of an Operation and Maintenance Manual.
    - The requirement for maintaining media filter beds.
    - Requirement to notify the department of planned changes.
    - Clarification regarding county or other local ordinances.
    - Keeping laboratory records on site.
    - Supplying records upon request and within 24 hours.

## Part II – Receiving Stream Information

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**
Per Missouri Effluent Regulations (10 CSR 20-7.015), the waters of the state are divided into seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Effluent Limitations section. This permit applies to facilities discharging to the following water body categories:

☐ Missouri or Mississippi River [10 CSR 20-7.015(2)]
☒ Lakes or Reservoirs [10 CSR 20-7.015(3)]
☐ Losing Streams [10 CSR 20-7.015(4)]
☐ Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)]
☒ Special Streams [10 CSR 20-7.015(6)]
☐ Subsurface Waters [10 CSR 20-7.015(7)]
☒ All Other Waters [10 CSR 20-7.015(8)]

Missouri Water Quality Standards (10 CSR 20-7.031) defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The permit contains terms and conditions to ensure that all designed water uses are maintained in accordance with 10 CSR 20-7.031(4). A general permit does not take into consideration site-specific conditions.

**MIXING CONSIDERATIONS:**
This permit applies to receiving streams/lakes of varying low-flow conditions. Therefore, the effluent limitations must be based on the smallest low-flow condition considered, which includes waters without designated uses. As such, no mixing is allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)]. No Zone of Initial Dilution is allowed. [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

**RECEIVING STREAM MONITORING REQUIREMENTS:**
There are no receiving water monitoring requirements recommended at this time.

## Part III – Rationale and Derivation of Effluent Limitations & Permit Conditions

**305(B) REPORT, 303(d) LIST, & TOTAL MAXIMUM DAILY LOAD (TMDL):**
Section 305(b) of the Federal CWA requires each state identify waters not meeting Water Quality Standards and for which adequate water pollution controls have not been required. Water Quality Standards protect such beneficial uses of water as whole body contact, maintaining fish and other aquatic life, and providing drinking water for people, livestock, and wildlife. The 303(d) list helps state and federal agencies keep track of waters which are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed which shall include the TMDL calculation. For facilities with an existing general permit before a TMDL is written on their receiving stream, the department will evaluate the permit and may require any facility authorized by this general permit to apply for and obtain a site-specific operating permit. Requests for coverage of a new facility under this general permit will be evaluated on a case-by-case basis for facilities located within the watershed of an impaired water as designated on the 305(b) Report.

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**
As per [10 CSR 20-7.015(4)(F)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream, and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

✓ The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(40)] & [10 CSR 20-7.031(1)(O)].

**ANTI-BACKSLIDING:**
A provision in the Federal Regulations [CWA Section 303(d)(4); CWA Section 402(c); 40 CFR Part 122.44(l)] requires a reissued permit to be as stringent as the previous permit with some exceptions.

✓ Applicable: Limitations in this operating permit for the reissuance conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

✓ Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) which would have justified the application of a less stringent effluent limitation.

- **Total Residual Chlorine (TRC) Tables B and C**. The previous permit contained a Water Quality Standard for chlorine which is outdated. When the previous permit was issued, the chronic criteria utilized for warm water habitats was 10 µg/L. The current Water Quality Standard for Total Residual Chlorine in warm water habitats is 11 µg/L for chronic criteria. The acute criteria remains unchanged at 19 µg/L. The previous permit included final effluent limitations of 17 µg/L as a daily maximum and 8 µg/L as a monthly average. Effluent limits were recalculated using current criteria, resulting in final effluent limitations of 18 µg/L as a daily maximum and 9 µg/L as a monthly average. This backsliding is justified as there is information available which was not available at the time of the previous permit issuance (new Water Quality Standards). This new information justifies the revision of the effluent limits at the time of permit issuance. Also, the revision of the effluent limits also meets the requirements of the safety clause, as the removal will not result in a violation of a water quality standard.

- ***E. coli* (losing streams).** The previous permit contained effluent limits for *E. coli* for discharges to losing streams. This permit does not authorize discharges to losing streams, therefore the requirement was removed. Discharges to losing streams shall be permitted by the general permit for stream discharges (MOGDS-0000) or site-specific permit.

- **Removal of previous permit Table B**. The previous permit contained a table which was applicable to facilities with design flow ≤ 1,500 gpd or actual flow that does not exceed 1,500 gpd and discharges to a Class L2 or L3 lake or reservoir with a mixing volume to design flow ratio of 10:1 or greater. This table was removed as the facilities permitted under it have exceeded 1,500 gpd and ammonia data shows reasonable potential to violate water quality under the given mixing considerations. Facilities eligible for this general permit under the previous Table B which desire to be included in this permit shall be evaluated for applicability of this permit's Table A. This backsliding is justified as there is information available which was not available at the time of the previous permit issuance (new DMR data). This new information justifies the removal of the table at the time of permit issuance. Also, the removal of the table meets the requirements of the safety clause, as the removal will not result in a violation of a water quality standard. The removal of the table is to be protective of water quality.

- **Discharges to streams not qualifying as discharges to lakes**. The previous permit contained tables (A, C, E, F) allowing discharges to streams not qualifying as lake discharges. These facilities are covered under a separate general permit (MOGDS-00000). Discharges to streams may only be covered under this permit if the discharge occurs within ½ stream mile upstream of a lake as measured to its conservation pool. This backsliding is justified as there is information available which was not available at the time of the previous permit issuance (separate general permit for domestic discharges to streams). This new information justifies the removal tables for stream discharges at the time of permit issuance. Also, the removal of the tables meets the requirements of the safety clause, as the removal will not result in a violation of a water quality standard.

- ✓ The department determined technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
  - The previous permit indicated "There Shall Be No Discharge of Floating Solids or Visible Foam in Other Than Trace Amounts" under prior tables A, B, C, D, E, and F. The statement was not evaluated against actual site conditions and there was no determination as to whether the discharges have reasonable potential to cause or contribute to excursion of those general water quality criteria in the previous permit, therefore, this general criteria was re-assessed. This permit assesses the general criteria found at 10 CSR 20-7.031(4)(B). Federal regulation 40 CFR 122.44(d)(1)(iii) requires instances where reasonable potential (RP) to cause or contribute to an exceedance of a water quality standard exists, a numeric limitation must be included in the permit. Rather than conducting the appropriate RP determination, the previous permit simply placed the prohibitive language in the permit tables. This language was removed from the permit. Specific effluent limitations were not included for the general criteria of 10 CSR 20-7.031(4)(B) as it was determined that this facility does not discharge solids or foam in amounts which would indicate reasonable potential, therefore the statement was removed. Facilities shall adhere to final effluent limitations and Standard Conditions established in this permit, therefore there is no reasonable potential for the discharge to cause an excursion of this criterion. Removal of the prohibitions does not reduce the protections of the permit or allow for impairment of the receiving stream. The permit maintains sufficient effluent limitations, monitoring requirements, and best management practices to protect water quality while maintaining permit conditions applicable to permittee disclosures and in accordance with 10 CSR 20-7.031(4) where no water contaminant by itself or in combination with other substances shall prevent the water of the state from meeting the following conditions:
    - Waters shall be free from oil, scum, and floating debris in sufficient amounts to be unsightly or prevent full maintenance of designated uses.
      - ✓ For all outfalls, there is no RP for scum and floating debris in sufficient amounts to be unsightly preventing full maintenance of designated uses because nothing in the research the permit writer did on the domestic wastewater indicates scum and floating debris will be present in sufficient amounts to impair beneficial uses.
  - The previous permit contained a requirement for the facility to maintain a gate to provide access to the facility and prevent unauthorized access. The permit writer has determined this condition was not required by current provisions in 10 CSR 20-8.140. The previous permit also specified the need for a fence, but as requirement 9 of this permit requires sufficient security, a separate requirement for a gate and fence is redundant, therefore the condition was removed.

**ANTIDEGRADATION:**
Antidegradation policies ensure protection of water quality for a particular water body on a pollutant-by-pollutant basis to ensure Water Quality Standards are maintained to support beneficial uses such as fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as an Outstanding National Resource Water or Outstanding State Resource Water [10 CSR 20-7.031(3)(C)]. Antidegradation policies are adopted to minimize adverse effects on water.

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], for domestic wastewater discharge with new, altered, or expanding discharges, the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. In accordance with Missouri's water quality regulations for antidegradation [10 CSR 20-7.031(3)], degradation may be justified by documenting the socio-economic importance of a discharge after determining the necessity of the discharge. Facilities must submit the antidegradation review request to the department prior to establishing, altering, or expanding discharges. See https://dnr.mo.gov/document-search/antidegradation-implementation-procedure.

- ✓ Not Applicable; Antidegradation reviews are performed at the time of construction. No degradation is proposed, and no further review is necessary.

**AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**
As per [10 CSR 20-6.010(2)(C)], an applicant may utilize a lower preference continuing authority when a higher level authority is available by submitting information as part of the application to the department for review and approval, provided it does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the department.

**CONTINUING AUTHORITY:**
Each application for an operating permit shall identify the person, as that term is defined in Section 644.016.15, RSMo that is the owner of, operator of, or area-wide management authority for a water contaminant source, point source, wastewater treatment facility, or sewer collection system. This person shall be designated as the continuing authority and shall sign the application. By doing so, the person designated as the continuing authority acknowledges responsibility for compliance with all permit conditions.

10 CSR 20-6.010(2) establishes preferential levels for continuing authorities: Levels 1 through 5 (with Level 1 as the highest level), and generally requires permits to be issued to a higher preference continuing authority if available. A Level 3, 4, or 5 applicant may constitute a continuing authority by showing that Level 1 and Level 2 authorities are not available; do not have jurisdiction; are forbidden by state statute or local ordinance from providing service to the person; or that the Level 3, 4, or 5 applicant has met one of the requirements listed in paragraphs (2)(C)1.–7. of 10 CSR 20-6.010(2). The seven options in paragraphs (2)(C)1.–7. for a lower-level authority to demonstrate that it is the valid continuing authority are:

1. A waiver from the existing higher authority declining the offer to accept management of the additional wastewater or stormwater;
2. A written statement or a demonstration of non-response from the higher authority;
3. A to-scale map showing all parts of the legal boundary of the facility's property are beyond 2000 feet from the collection (sewer) system operated by the higher preference authority;
4. A proposed connection or adoption charge by the higher authority that would equal or exceed what is economically feasible for the applicant, which may be in the range of one hundred twenty percent (120%) of the applicant's cost for constructing or operating a wastewater treatment system;
5. A proposed service fee on the users of the system by the higher authority that is above what is affordable for existing homeowners in that area;
6. Terms for connection or adoption by the higher authority that would require more than two (2) years to achieve full sewer service; or
7. A demonstration that the terms for connection or adoption by the higher authority are not viable or feasible to homeowners in the area.

Permit applicants that are Levels 3, 4, and 5 must, as part of their application, identify their method of compliance with this regulation. The following are the methods to comply.

- o No higher level authorities are available to the facility;
- o No higher level authorities have jurisdiction;
- o Higher level authorities are forbidden by state statute or local ordinance from providing service to the person;
- o The existing higher level authority is available to the facility, however the facility has proposed the use of a lower preference continuing authority, has met one of the requirements listed in paragraphs (2)(C)1.–7. of 10 CSR 20-6.010(2), and issuance of this permit does not conflict with any area-wide management plan approved under section 208 of the Clean Water Act or by the Missouri Clean Water Commission.

**BIOSOLIDS & SEWAGE SLUDGE:**
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

- ✓ Permittee is authorized to treat and dispose of sludge via any of the methods contained in Standard Conditions Part III for which the facility has received previous approval from the department. Sludge/biosolids may be removed by contract hauler, incinerated, composted, stored in a lagoon, or land applied, provided the facility has approval for such disposal methods. If removal and disposal (landfill, land apply, haul to another permitted treatment facility, etc.) of sludge/biosolids is needed and the facility does not currently have approval for the desired method of disposal, the permittee shall contact the appropriate department regional office. For time sensitive situations, the permittee may contact the department to see about approval for a one-time removal and disposal of sludge/biosolids that are not currently approved.

**ELECTRONIC DISCHARGE MONITORING REPORT (EDMR) SUBMISSION SYSTEM:**
The U.S. Environmental Protection Agency (EPA) promulgated a final rule on October 22, 2015, to modernize Clean Water Act reporting for municipalities, industries, and other facilities by converting to an electronic data reporting system. The final rule requires regulated entities and state and federal regulators to use information technology to electronically report data required by the National Pollutant Discharge Elimination System (NPDES) permit program instead of filing paper reports. To comply with the federal rule, the department is requiring all permittees to begin submitting discharge monitoring data and reports online.

Per 40 CFR 127.15 and 127.24, permitted facilities may request a temporary waiver for up to 5 years or a permanent waiver from electronic reporting from the department. To obtain an electronic reporting waiver, a permittee must first submit an eDMR Waiver Request Form: https://dnr.mo.gov/document-search/electronic-discharge-monitoring-report-waiver-request-form-mo-780-2692. A request must be made for each facility. If more than one facility is owned or operated by a single entity, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is not transferable.

The department must review and notify the facility within 120 calendar days of receipt if the waiver request has been approved or rejected [40 CFR 127.24(a)]. During the department review period, as well as after a waiver is granted, the facility must continue submitting a hard-copy of any reports required by their permit. The department will enter data submitted in hard-copy from those facilities allowed to do so and electronically submit the data to the EPA on behalf of the facility.

To assist the facility in entering data into the eDMR system, the permit describes limit sets in each table in Part A of the permit. The data entry personnel should use these identifiers to ensure data entry is being completed appropriately.

**FEES:**
It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

**GENERAL CRITERIA CONSIDERATIONS:**
In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into permits for pollutants determined to cause, have reasonable potential to cause, or to contribute to, an excursion above any water quality standard, including narrative water quality criteria. In order to comply with this regulation, the permit writer has completed a reasonable potential determination on whether discharges have reasonable potential to cause, or contribute to an excursion of the general criteria listed in 10 CSR 20-7.031(4). In instances where reasonable potential exists, the permit includes limitations within the permit to address the reasonable potential. In discharges where reasonable potential does not exist, the permit may include monitoring to later determine the discharge's potential to impact the narrative criteria. Additionally, Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit state it shall be unlawful for any person to cause or allow any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of Sections 644.006 to 644.141 of the Missouri Clean Water Law or any standard, rule, or regulation promulgated by the commission.

**LAND APPLICATION:**
Requirements for these types of operations are found in 10 CSR 20-6.015; authority to regulate these activities is from Section 644.026, RSMo.

✓ Not applicable; this permit does not authorize operation of a surficial land application system to disperse wastewater or sludge.

**NUTRIENT MONITORING:**
Nutrient monitoring is required for facilities characteristically or expected to discharge nutrients (nitrogenous compounds and/or phosphorus) when the design flow is equal to or greater than 0.1 MGD per 10 CSR 20-7.015(9)(D)8.

✓ Not applicable; this permit does not cover discharge exceeding 50,000 gallons per day.

**NUMERIC LAKE NUTRIENT CRITERIA:**
Regulations established in 10 CSR 20-7.015 as well as the department's lake nutrient criteria implementation plan do not require nutrient monitoring for facilities with design flows less than or equal to 0.1 MGD. Should a lake be identified as impaired due to nutrient loading, the department will conduct watershed modeling to determine if applicable facilities have reasonable potential to cause or contribute to the impairment. Consequently, monitoring or effluent limitations may be established at a later date based on the modeling results. This may require facilities under this permit within such watersheds to receive a site specific permit. For more information, please see the department's Nutrient Criteria Implementation Plan at: https://dnr.mo.gov/document-search/nutrient-criteria-implementation-plan-july-27-2018.

**OPERATOR CERTIFICATION REQUIREMENTS:**
As per 10 CSR 20-6.010(8), the permittee shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators at regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 20-9.020(2) and any other applicable state law or regulation. As per 10 CSR 20-9.020(2)(A), requirements for operation by certified personnel shall apply to all wastewater treatment systems with population equivalents greater than 200 and are owned or operated by or for municipalities, public sewer districts, counties, public water supply districts, private sewer companies regulated by the Public Service Commission and state or federal agencies.

- ✓ Applicable to facilities under this permit which are owned or operated by a public entity or Public Service Commission regulated entity and having a design population equivalent greater than 200.

**OPERATIONAL CONTROL TESTING:**
Missouri Clean Water Commission regulation 10 CSR 20-9.010 requires certain publicly owned treatment works and privately owned facilities regulated by the Public Service Commission to conduct internal operational control monitoring to further ensure proper operation of the facility and to be a safeguard or early warning for potential plant upsets that could affect effluent quality. This requirement is only applicable if the publicly owned treatment works and privately owned facilities regulated by the Public Service Commission has a calculated Population Equivalent greater than two hundred (200).

10 CSR 20-9.010(3) allows the department to modify the monitoring frequency required in the rule based upon the department's judgement of monitoring needs for process control at the specified facility.

- ✓ Applicable to facilities under this permit which are owned or operated by a public entity or Public Service Commission regulated entity and having a design population equivalent greater than 200. These operational monitoring reports are to be submitted to the department along with the MSOP discharge monitoring reports.

**PERMIT SHIELD:**
The permit shield provision of the Clean Water Act (Section 402(k)) and Missouri Clean Water Law (644.051.19 RSMo) provides that when a permit holder is in compliance with its NPDES permit or MSOP, they are effectively in compliance with certain sections of the Clean Water Act and equivalent sections of the Missouri Clean Water Law. In general, the permit shield is a legal defense against certain enforcement actions, but it is only available when the facility is in compliance with its permit and satisfies other specific conditions, including having completely disclosed all discharges and all facility processes and activities to the department at time of application. It is the facility's responsibility to ensure that all potential pollutants, waste streams, discharges, and activities, as well as wastewater land application, storage, and treatment areas, are all fully disclosed to the department at the time of application or during the draft permit review process. Subsequent requests for authorization to discharge additional pollutants or expanded or newly disclosed flows, or for authorization for previously unpermitted and undisclosed activities or discharges, will likely require permit modification or may require the facility be covered under a site specific permit.

**PRETREATMENT PROGRAM:**
The reduction of the amount of pollutants, the elimination of pollutants, or the alteration of the nature of pollutant properties in wastewater prior to or in lieu of discharging or otherwise introducing such pollutants into a Publicly Owned Treatment Works [40 CFR Part 403.3(q)].

Pretreatment programs are required at any POTW (or combination of POTW operated by the same authority) and/or municipality with a total design flow greater than 5.0 MGD and receiving industrial wastes that interfere with or pass through the treatment works or are otherwise subject to the pretreatment standards. Pretreatment programs can also be required at POTWs/municipals with a design flow less than 5.0 MGD if needed to prevent interference with operations or pass through.

- ✓ Not Applicable; the facilities covered under this permit are not allowed to accept industrial contributions, so pretreatment is not required.

**REASONABLE POTENTIAL ANALYSIS (RPA):**
Federal regulation 40 CFR Part 122.44(d)(1)(i) requires effluent limitations for all pollutants which are or may be discharged at a level which will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard. In accordance with 40 CFR Part 122.44(d)(1)(iii) if the permit writer determines any given pollutant has the reasonable potential to cause or contribute to an in-stream excursion above the water quality standard, the permit must contain effluent limits for the pollutant.

- ✓ Conservative assumption; a traditional statistical Reasonable Potential Analysis has not been conducted for this master general permit; instead the department has made a reasonable potential determination based on sources of pollutants related to water quality standards. The permit writer reviewed available DMR data, available past inspections, and other documents and research to evaluate general and narrative water quality reasonable potential for this permit. Activities performed by facilities covered under this master general permit were evaluated as to whether discharges have reasonable potential to cause or contribute to

excursions of general criteria listed in 10 CSR 20-7.031(4). A reasonable potential to violate water quality standards is assumed for the pollutants of concern due to the nature of the activities carried out under this permit, resulting in the effluent limits contained in the permit.

**REMOVAL EFFICIENCY:**
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day ($BOD_5$) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

✓ Applicable to POTWs; Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

**SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):**
Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(12)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Section 644.026.1(13), RSMo mandates that the department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by Sections 644.006 to 644.141, RSMo. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Section 644.026.1(15), RSMo instructs the department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur.

✓ This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

**SCHEDULE OF COMPLIANCE (SOC):**
Per Section 644.051.7, RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit may include interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1), 10 CSR 20-7.031(11), and 10 CSR 20-7.015(9)(C), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

✓ Not Applicable: This permit does not contain a SOC.

**SPILL REPORTING**:
Any emergency involving a hazardous substance must be reported to the department's 24 hour Environmental Emergency Response hotline at (573) 634-2436 at the earliest practicable moment after discovery. The department may require the submittal of a written report detailing measures taken to clean up a spill. These reporting requirements apply when the spill results in chemicals or materials leaving the permitted property or reaching waters of the state. This requirement is in addition to the noncompliance reporting requirement found in Standard Conditions Part I. https://revisor.mo.gov/main/OneSection.aspx?section=260.500&bid=13989&hl

Underground and above ground storage devices for petroleum products, vegetable oils, and animal fats may be subject to control under Spill Prevention, Control, and Countermeasure (SPCC) and are expected to be managed under those provisions, if applicable. Substances regulated by federal law under the Resource Conservation and Recovery Act (RCRA) or the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) which are transported, stored, or used for maintenance, cleaning or repair shall be managed according to the provisions of RCRA and CERCLA.

**STANDARD CONDITIONS:**
The Standard Conditions Part I attached to this permit incorporate all sections of 40 CFR 122.41(a) through (n) by reference as required by law. These conditions, in addition to the conditions enumerated within the standard conditions should be reviewed by the permittee to ascertain compliance with this permit, state regulations, state statutes, federal regulations, and the Clean Water Act. Standard Conditions Part III, if attached to this permit, incorporate requirements for domestic wastewater, sludge, and land application.

**VARIANCE:**
As per Section 644.061.3, RSMo, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

✓ Not Applicable: This permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**
As per [10 CSR 20-2.010(86)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined total amount of pollutant that may be discharged into that stream without endangering its water quality.

✓ Wasteload allocations were calculated where applicable using water quality criteria or water quality model results and the dilution equation below:

$$Ce = \frac{(Qe + Qs)C - (Qs \times Cs)}{(Qe)}$$ (EPA/505/2-90-001, Section 4.5.5)

Where C = downstream concentration Ce = effluent concentration
Cs = upstream concentration Qe = effluent flow
Qs = upstream flow

Chronic wasteload allocations were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and stream volume of flow at the edge of the mixing zone (MZ). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow at the edge of the zone of initial dilution (ZID).

Water quality based maximum daily and average monthly effluent limitations were calculated using methods and procedures outlined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Number of Samples "n":
Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

**WLA MODELING:**
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

✓ A WLA study was either not submitted or determined not applicable by department staff.

**WATER QUALITY STANDARDS:**
Per 10 CSR 20-7.031(4), General Criteria shall be applicable to all waters of the state at all times, including mixing zones. Additionally, 40 CFR 122.44(d)(1) directs the department to include in each NPDES permit conditions to achieve water quality established under Section 303 of the CWA, including state narrative criteria for water quality.
**WHOLE EFFLUENT TOXICITY (WET) TEST:**
Per 10 CSR 20-7.031(1)(GG), a toxicity test conducted under specified laboratory conditions on specific indicator organism; and per 40 CFR 122.2, the aggregate toxic effect of an effluent measured directly by a toxicity test. A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with, or through synergistic responses when mixed with receiving water.

✓ Not Applicable: At this time, permittees are not required to conduct a WET test. The permit writer conducted a reasonable potential determination for all anticipated pollutants and established numeric effluent limitations where reasonable potential exists. The permit writer determined facilities authorized to discharge under this general permit do not have reasonable potential to exceed narrative water quality standards for acute toxicity at this time.

**40 CFR 122.41(M) - BYPASSES:**
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B.2(b). Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

✓ This facility does not anticipate bypassing.

## Part IV – Effluent Limitations Determination

Any flow through the outfall(s) is considered a discharge and must be sampled and reported as provided below. Future permit action due to permit modification may contain new operating permit terms and conditions which supersede the terms and conditions, including effluent limitations, of this operating permit. Daily maximums and monthly averages are required per 40 CFR 122.45(d)(1) for continuous discharges (not from a POTW). Average weekly and average monthly discharge limitations are required for POTWs per 40 CFR 122.45(d)(2).

**EFFLUENT LIMITATIONS FOR TABLE A:** Discharges directly to a Class L2 or L3 lake or reservoir or such a waterbody is the first water of the state the effluent reaches.

| PARAMETER | Unit | Basis for Limits | Daily Maximum | Weekly Average | Monthly Average | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| Flow | MGD | 1 | * | | * | */* | 1/quarter | quarterly | E |
| $BOD_5$ | mg/L | 1 | | 30 | 20 | 30/20 | 1/quarter | quarterly | G |
| TSS | mg/L | 1 | | 30 | 20 | 30/20 | 1/quarter | quarterly | G |
| Ammonia as N (Jan – Mar) | mg/L | 2 | 12.1 | | 3.1 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Apr – Jun) | mg/L | 2 | 12.1 | | 1.6 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Jul – Sep) | mg/L | 2 | 12.1 | | 1.3 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Oct – Dec) | mg/L | 2 | 12.1 | | 2.5 | 12.1/4.6 | 1/quarter | quarterly | G |
| Chlorine, Total Residual | µg/L | 1, 2 | < 130 | | < 130 | <130/<130 | 1/quarter | quarterly | G |
| *Escherichia coli**** (WBC-A) | #/100mL | 1, 2 | 630**** | | 126 | 630/126 | 1/quarter | quarterly | G |
| *Escherichia coli**** (WBC-B) | #/100mL | 1, 2 | 1,030**** | | 206 | 1,030/206 | 1/quarter | quarterly | G |

| PARAMETER | Unit | Basis for Limits | Minimum | | Maximum | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| pH** | SU | 1, 2 | 6.5 | | 9.0 | 6.0/9.0 | 1/quarter | quarterly | G |

| PARAMETER | Unit | Basis for Limits | Daily Minimum | | Monthly Avg. Min | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| Dissolved Oxygen (DO) | mg/L | 2, 5 | * | | * | */* | 1/quarter | quarterly | G |
| $BOD_5$ Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |
| TSS Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |

**EFFLUENT LIMITATIONS FOR TABLE B:** Discharges within ½ mile upstream of a Class L2 or L3 lake or reservoir, and effluent reaches a water of the state prior to the lake.

| PARAMETER | Unit | Basis for Limits | Daily Maximum | Weekly Average | Monthly Average | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| Flow | MGD | 1 | * | | * | */* | 1/quarter | quarterly | E |
| $BOD_5$ | mg/L | 1 | | 30 | 20 | 30/20 | 1/quarter | quarterly | G |
| TSS | mg/L | 1 | | 30 | 20 | 30/20 | 1/quarter | quarterly | G |
| Ammonia as N (Jan – Mar) | mg/L | 2 | 8.4 | | 2.4 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Apr – Jun) | mg/L | 2 | 8.4 | | 1.4 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Jul – Sep) | mg/L | 2 | 6.9 | | 0.9 | 12.1/4.6 | 1/quarter | quarterly | G |
| Ammonia as N (Oct – Dec) | mg/L | 2 | 8.4 | | 2.2 | 12.1/4.6 | 1/quarter | quarterly | G |
| Chlorine, Total Residual | µg/L | 1, 2 | < 130 | | < 130 | <130/<130 | 1/quarter | quarterly | G |
| *Escherichia coli**** (WBC-A) | #/100mL | 1, 2 | 630**** | | 126 | 630/126 | 1/quarter | quarterly | G |
| *Escherichia coli**** (WBC-B) | #/100mL | 1, 2 | 1,030**** | | 206 | 1,030/206 | 1/quarter | quarterly | G |
| PARAMETER | Unit | Basis for Limits | Minimum | | Maximum | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
| pH** | SU | 1, 2 | 6.5 | | 9.0 | 6.0/9.0 | 1/quarter | quarterly | G |
| PARAMETER | Unit | Basis for Limits | Daily Minimum | | Monthly Avg. Min | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
| Dissolved Oxygen (DO) | mg/L | 2, 5 | * | | * | */* | 1/quarter | quarterly | G |
| $BOD_5$ Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |
| TSS Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |

**EFFLUENT LIMITATIONS FOR TABLE C:** Discharge to Class L2 or L3 lakes or reservoirs approved under the department's Alternatives Analysis.

| PARAMETER | Unit | Basis for Limits | Daily Maximum | Weekly Average | Monthly Average | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| Flow | MGD | 1, 3, 4 | * | | * | */* | 1/quarter | quarterly | E |
| $BOD_5$ | mg/L | 3, 4 | | 15 | 10 | 15/10 | 1/quarter | quarterly | G |
| TSS | mg/L | 3, 4 | | 20 | 15 | 20/15 | 1/quarter | quarterly | G |
| Ammonia as N (Apr 1 – Sep 30) | mg/L | 2, 3, 4 | 3.6 | | 1.4 | 3.6/1.4 | 1/quarter | quarterly | G |
| Ammonia as N (Oct 1– Mar 31) | mg/L | 2, 3, 4 | 7.5 | | 2.9 | 7.5/2.9 | 1/quarter | quarterly | G |
| Chlorine, Total Residual | µg/L | 1, 2 | < 130 | | < 130 | <130/<130 | 1/quarter | quarterly | G |
| *Escherichia coli**** (WBC-A) | #/100mL | 1, 2 | 630**** | | 126 | 630/126 | 1/quarter | quarterly | G |
| PARAMETER | Unit | Basis for Limits | Minimum | | Maximum | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
| pH** | SU | 1, 2, 3 | 6.5 | | 9.0 | 6.5/9.0 | 1/quarter | quarterly | G |
| PARAMETER | Unit | Basis for Limits | Daily Minimum | | Monthly Avg. Min | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
| Dissolved Oxygen (DO) | mg/L | 2, 5 | * | | * | */* | 1/quarter | quarterly | G |
| $BOD_5$ Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |
| TSS Percent Removal | % | 1 | | | 85 | NEW | 1/quarter | quarterly | M |

**EFFLUENT LIMITATIONS FOR TABLE D:** Facilities that qualify for Table C Applicability which discharge to a lake or a watershed of a lake that is a water of the state and has an area of at least ten acres during normal pool conditions. OR Facilities discharging within the White River Basin Watershed (USGS basin numbers 11010001, 11010002, 11010003).

| PARAMETER | Unit | Basis for Limits | Daily Maximum | Weekly Average | Monthly Average | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| Total Phosphorus♦ | mg/L | 1, 2, 3 | * | | 0.5 | */0.5 | 1/quarter | quarterly | G |
| Aluminum, Total Recoverable♦ | µg/L | 1, 2 | 750 | | 373.8 | 750/373.8 | 1/quarter | quarterly | G |
| Iron, Total Recoverable♦ | µg/L | 1, 2 | 1,642.7 | | 818.8 | 1,642.7/818.8 | 1/quarter | quarterly | G |
| Total Phosphorus♦ | mg/L | 1, 2 | * | | * | */* | 1/quarter | quarterly | G |

**INFLUENT LIMITATIONS FOR TABLE F:** Influent monitoring required for POTWs with design population equivalent greater than 200.

| PARAMETER | Unit | Basis for Limits | Daily Maximum | Weekly Average | Monthly Average | Previous Permit Limit | Sampling Frequency | Reporting Frequency | Sample Type ◊ |
|---|---|---|---|---|---|---|---|---|---|
| $BOD_5$ Percent Removal | % | 1 | | | * | NEW | 1/quarter | quarterly | G |
| TSS Percent Removal | % | 1 | | | * | NEW | 1/quarter | quarterly | G |

* Monitoring and reporting requirement only
** Report the minimum and maximum pH values; pH is not to be averaged
*** # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
**** Publicly owned treatment works will receive a weekly average *E. coli* limit and privately owned facilities will receive a daily maximum *E. coli* limit.
NEW Parameter not established in previous state operating permit
◊ E = 24-hr. estimate, G = Grab, M = Measured/calculated
♦ Discharges within the White River Basin Watershed are required to meet limits for Total Phosphorus unless exempt as described below.

- If discharging to Lake Taneycomo and its tributaries between Table Rock Dam and Power Site Dam (HUC 11010003), discharges meeting both the following conditions shall be exempt from a Total Phosphorus limit of 0.5 mg/L:
  1. Those permitted prior to May 9, 1994; and
  2. Those with design flows of less than 22,500 gpd
- If discharging to the Table Rock Lake watershed (HUC 11010001 and 11010002), discharges meeting both of the following conditions are exempt from a Total Phosphorus limit of 0.5 mg/L.
  1. Those permitted prior to November 30, 1999; and
  2. Those with design flows less than 22,500 gpd.

Facilities exempt from Total Phosphorus limits for Lake Taneycomo and Table Rock Lake shall still conduct monitoring.
Facilities discharging to the White River Basin (HUC 11010001, 11010002, and 11010003) that are not otherwise required to have phosphorus limits shall conduct phosphorus monitoring per 10 CSR 20-7.015(3)(G).

**Basis for Limitations Codes**:
1. State or Federal Regulation/Law
2. Water Quality Based Effluent Limits
3. Antidegradation Review
4. Antidegradation Policy
5. Best Professional Judgment

**DERIVATION AND DISCUSSION OF LIMITS:**

**Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)], the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification. The facility will report flow in millions of gallons per day (MGD).

**Biochemical Oxygen Demand - 5 Day ($BOD_5$)**

- **Tables A and B:** Operating permit retains 30 mg/L as a Weekly Average and 20 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with 10 CSR 20-7.015(3) for discharges to Lakes or Reservoirs.

- **Table C:** Operating permit retains 15 mg/L as a Weekly Average and 10 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with the department's Alternatives Analysis, https://dnr.mo.gov/document-search/water-quality-antidegradation-review-departments-alternatives-analysis-domestic-wastewater-facilities-design-flow-less-50000-gallons-day.

**Total Suspended Solids (TSS)**

- **Tables A and B:** Operating permit retains 30 mg/L as a Weekly Average and 20 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with 10 CSR 20-7.015(3) for discharges to Lakes or Reservoirs.

- **Table C:** Operating permit retains 20 mg/L as a Weekly Average and 15 mg/L as a Monthly Average from the previous permit. Effluent limits were established in accordance with the department's Alternatives Analysis, https://dnr.mo.gov/document-search/water-quality-antidegradation-review-departments-alternatives-analysis-domestic-wastewater-facilities-design-flow-less-50000-gallons-day.

**Ammonia, Total as Nitrogen**

- **Table A:** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(B)7.C. & Table B3]. Salmonids absent based on WWH and CLH designation of receiving waterbody, permit does not allow for direct discharge to cold water habitats (CLD). Background total ammonia nitrogen = 0.01 mg/L. No mixing considerations allowed; therefore, WLA = appropriate criterion.

  The department previously followed the 2007 Ammonia Guidance method for derivation of ammonia limits. However, the EPA's Technical Support Document for Water Quality-based Toxic Controls (TSD) establishes other alternatives to limit derivation. The department has determined that the approach established in Section 5.4.2 of the TSD, which allows for direct application of both the acute and chronic wasteload allocations (WLA) as permit limits for toxic pollutants, is more appropriate limit derivation approach. Using this method for a discharge to a waterbody where mixing is not allowed, the criterion continuous concentration (CCC) and the criterion maximum concentration (CMC) will equal the chronic and acute WLA respectively. The WLAs are then applied as effluent limits, per Section 5.4.2 of the TSD, where the CMC is the Daily Maximum and the CCC is the Monthly Average. The direct application of both acute and chronic criteria as WLA is also applicable for facilities that discharge into receiving waterbodies with mixing considerations. The CCC and CMC will need to be calculated into WLA with mixing considerations using the mass-balance equation:

$$Ce = \frac{(Qe + Qs)C - (Qs \times Cs)}{(Qe)}$$

  Where C = downstream concentration  Ce = effluent concentration
  Cs = upstream concentration  Qe = effluent flow
  Qs = upstream flow

  In the event that mixing considerations derive an AML less stringent than the MDL, the AML and MDL will be equal and based on the MDL.

| Quarter | Temp (°C)* | pH (SU)* | Total Ammonia Nitrogen CCC (mg/L) | Total Ammonia Nitrogen CMC (mg/L) |
|---|---|---|---|---|
| 1st | 9.0 | 7.8 | 3.1 | 12.1 |
| 2nd | 25.0 | 7.8 | 1.6 | 12.1 |
| 3rd | 28.0 | 7.8 | 1.3 | 12.1 |
| 4th | 18.0 | 7.8 | 2.5 | 12.1 |

* Statewide data for lakes

1st Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)3.1 – (0.0 * 0.01))/0.08 = 3.1 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)12.1 – (0.0 * 0.01))/0.08 = 12.1 mg/L

Chronic WLA = AML = 3.1 mg/L
Acute WLA = MDL = 12.1 mg/L

2nd Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)1.6 – (0.0 * 0.01))/0.08 = 1.6 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)12.1 – (0.0 * 0.01))/0.08 = 12.1 mg/L

Chronic WLA = AML = 1.6 mg/L
Acute WLA = MDL = 12.1 mg/L

3rd Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)1.3 – (0.0 * 0.01))/0.08 = 1.3 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)12.1 – (0.0 * 0.01))/0.08 = 12.1 mg/L

Chronic WLA = AML = 1.3 mg/L
Acute WLA = MDL = 12.1 mg/L

4th Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)2.5 – (0.0 * 0.01))/0.08 = 2.5 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)12.1 – (0.0 * 0.01))/0.08 = 12.1 mg/L

Chronic WLA = AML = 2.5 mg/L
Acute WLA = MDL = 12.1 mg/L

- **Table B:** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(B)7.C. & Table B3]. Salmonids absent based on WWH and CLH designation of receiving waterbody, permit does not allow for direct discharge to cold water habitats (CLD). Background total ammonia nitrogen = 0.01 mg/L. No mixing considerations allowed; therefore, WLA = appropriate criterion.

  The department previously followed the 2007 Ammonia Guidance method for derivation of ammonia limits. However, the EPA's Technical Support Document for Water Quality-based Toxic Controls (TSD) establishes other alternatives to limit derivation. The department has determined that the approach established in Section 5.4.2 of the TSD, which allows for direct application of both the acute and chronic wasteload allocations (WLA) as permit limits for toxic pollutants, is more appropriate limit derivation approach. Using this method for a discharge to a waterbody where mixing is not allowed, the criterion continuous concentration (CCC) and the criterion maximum concentration (CMC) will equal the chronic and acute WLA respectively. The WLAs are then applied as effluent limits, per Section 5.4.2 of the TSD, where the CMC is the Daily Maximum and the CCC is the Monthly Average. The direct application of both acute and chronic criteria as WLA is also applicable for facilities that discharge into receiving waterbodies with mixing considerations. The CCC and CMC will need to be calculated into WLA with mixing considerations using the mass-balance equation:

$$Ce = \frac{(Qe + Qs)C - (Qs \times Cs)}{(Qe)}$$

  Where C = downstream concentration Ce = effluent concentration
  Cs = upstream concentration Qe = effluent flow
  Qs = upstream flow

  In the event that mixing considerations derive an AML less stringent than the MDL, the AML and MDL will be equal and based on the MDL.

Additionally, the department's current method for derivation of ammonia limits for streams utilizes pH and temperature data by ecoregion. As this general permit covers facilities across the state in all six ecoregions, the most stringent CCC and CMC are utilized to be protective of water quality in all locations.

| Ecoregion | Quarter 1 | | Quarter 2 | | Quarter 3 | | Quarter 4 | |
|---|---|---|---|---|---|---|---|---|
| | CCC | CMC | CCC | CMC | CCC | CMC | CCC | CMC |
| Central Irregular Plains | 2.7 | 10.1 | 1.8 | 12.1 | 1.3 | 12.1 | 3.1 | 12.1 |
| Interior River Valleys and Hills | 3.1 | 12.1 | 1.5 | 10.1 | 1.0 | 8.4 | 2.2 | 8.4 |
| Mississippi Alluvial Plain | 3.9 | 17.0 | 2.2 | 17.0 | 1.4 | 14.4 | 3.4 | 14.4 |
| Ozark Highlands | 3.1 | 12.1 | 2.0 | 12.1 | 1.5 | 12.1 | 2.9 | 12.1 |
| Western Corn Belt Plains | 2.4 | 8.4 | 1.4 | 8.4 | 0.9 | 6.9 | 2.4 | 8.4 |
| Mississippi Valley Loess Plains | 3.1 | 12.1 | 1.8 | 12.1 | 1.5 | 12.1 | 2.8 | 12.1 |

| Quarter | Temp (˚C)* | pH (SU)* | Total Ammonia Nitrogen CCC (mg/L) | Total Ammonia Nitrogen CMC (mg/L) |
|---|---|---|---|---|
| 1st | 6.6 | 8.0 | 2.4 | 8.4 |
| 2nd | 22.5 | 8.0 | 1.4 | 8.4 |
| 3rd | 27.7 | 8.1 | 0.9 | 6.9 |
| 4th | 15.9 | 8.0 | 2.2 | 8.4 |

* Ecoregion Data (Western Corn Belt Plains for Quarters 1, 2 &3, Interior River Valleys and Hills for Quarter 4)

1st Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)2.4 – (0.0 * 0.01))/0.08 = 2.4 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)8.4 – (0.0 * 0.01))/0.08 = 8.4 mg/L

Chronic WLA = AML = 2.4 mg/L
Acute WLA = MDL = 8.4 mg/L

2nd Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)1.4 – (0.0 * 0.01))/0.08 = 1.4 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)8.4 – (0.0 * 0.01))/0.08 = 8.4 mg/L

Chronic WLA = AML = 1.4 mg/L
Acute WLA = MDL = 8.4 mg/L

3rd Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)0.9 – (0.0 * 0.01))/0.08 = 0.9 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)6.9 – (0.0 * 0.01))/0.08 = 6.9 mg/L

Chronic WLA = AML = 0.9 mg/L
Acute WLA = MDL = 6.9 mg/L

4th Quarter
Chronic WLA:
$C_e$ = ((0.08 + 0.0)2.2 – (0.0 * 0.01))/0.08 = 2.2 mg/L

Acute WLA:
$C_e$ = ((0.08 + 0.0)8.4 – (0.0 * 0.01))/0.08 = 8.4 mg/L

Chronic WLA = AML = 2.2 mg/L
Acute WLA = MDL = 8.4 mg/L

- **Table C:** Operating permit retains 3.6 mg/L as a Daily Maximum and 1.4 mg/L as a Monthly Average for the months of April through September and 7.5 mg/L as a Daily Maximum and 2.9 mg/L as a Monthly Average for the months of October through March, from the previous permit. Effluent limits were established in accordance with the department's Alternatives Analysis, https://dnr.mo.gov/document-search/water-quality-antidegradation-review-departments-alternatives-analysis-domestic-wastewater-facilities-design-flow-less-50000-gallons-day.

  Per the Alternatives Analysis, page 16, the department has determined that the alternatives analysis-based technology limits of 1.4 mg/L monthly average and 3.6 mg/L daily maximum in summer, and 2.9 mg/L monthly average and 7.5 mg/L daily maximum in winter are achievable by some treatment technologies. Because these limits are more protective than the water quality-based limits calculated below for a lake with mixing considerations, the technology-based limits were used.

Water Quality-Based Effluent Limits (WQBEL):
Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(B)7.C. & Table B1]. Background total ammonia nitrogen = 0.01 mg/L

| Season | Temp | pH (SU) | Total Ammonia Nitrogen CCC (mg/L) | Total Ammonia Nitrogen CMC (mg/L) |
|---|---|---|---|---|
| Summer | 26 | 7.8 | 1.5 | 12.1 |
| Winter | 6 | 7.8 | 3.1 | 12.1 |

Ce=(((Qe+Qs)*C) -(Qs*Cs))/Qe

Acute WLA:
Ce= ((Qe+ 0)12.1 –(0 * 0.01))/Qe
Ce= 12.1 mg/L

LTAa= 12.1 mg/L (0.321) = 3.88 mg/L [CV = 0.6, 99thPercentile]
MDL = 3.88 mg/L (3.11) = 12.1 mg/L [CV = 0.6, 99thPercentile]
AML = 3.88 mg/L (1.19) = 4.6 mg/L [CV = 0.6, 95thPercentile, n = 30]

| | Maximum Daily Limit (mg/L) | | Average Monthly Limit (mg/L) | |
|---|---|---|---|---|
| | Summer | Winter | Summer | Winter |
| WQBEL | 12.1 | 12.1 | 4.6 | 4.6 |
| Alternatives Analysis Limit | 3.6 | 7.5 | 1.4 | 2.9 |

**Chlorine, Total Residual (TRC)**. Applicable to facilities which utilize chlorination chemicals in order to reduce the amount pathogens in the effluent. Warm-water Protection of Aquatic Life CCC = 11 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L. Standard compliance language for TRC, including the minimum level (ML), is described in the permit, see Note 3 on page 9 of permit. No mixing considerations allowed.

Chronic WLA: $C_e$ = ((0.08 + 0.0)11 – (0.0 * 0.0))/0.08 = 11 µg/L
Acute WLA: $C_e$ = ((0.08 + 0.0)19 – (0.0 * 0.0))/0.08 = 19 µg/L

$LTA_c$ = 11 (0.527) = 5.8 µg/L [CV = 0.6, 99th Percentile]
$LTA_a$ = 19 (0.321) = 6.1 µg/L [CV = 0.6, 99th Percentile]

Use most protective number of $LTA_c$ or $LTA_a$.

MDL = 5.8 (3.11) = **18** µg/L [CV = 0.6, 99th Percentile]
AML = 5.8 (1.55) = **9** µg/L [CV = 0.6, 95th Percentile, n = 4]

***Escherichia coli (E. coli)***

- **WBC-A:** Whole body contact "A" as defined in 10 CSR 20-7.031(1)(F)2.A.(I).
  - Monthly average for all facilities of 126 colony forming units per 100 mL as a geometric mean [10 CSR 20-7.015(9)(B)1.D]. Weekly Average for POTWs or Daily Maximum for privately owned facilities of 630 per 100 mL as a geometric mean [10 CSR 20-7.015(9)(B)1.E]. Effluent limitations applicable during the recreational season (April 1 – October 31) per 10 CSR 20-7.031(5)(C) for discharges within two miles upstream of segments or lakes with Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.015(9)(B)1.C. An effluent limit for both monthly average and weekly average (POTWs) or daily maximum (privately owned) is required by 40 CFR 122.45(d). The geometric mean is calculated by multiplying all of the data points and then taking the nth root of this product, where n = # of samples collected. For example: Five *E. coli* samples were collected with results of 1, 4, 6, 10, and 5 (#/100mL). Geometric Mean = 5th root of (1)(4)(6)(10)(5) = 5th root of 1,200 = 4.1 #/100mL.

- **WBC-B:** Whole body contact "B" (WBC-B) as defined in 10 CSR 20-7.031(1)(F)2.A.(II).
  - Monthly average for all facilities of 206 colony forming units per 100 mL as a geometric mean [10 CSR 20-7.015(9)(B)1.D]. Weekly Average for POTWs or Daily Maximum for privately owned facilities of 1,030 per 100 mL as a geometric mean [10 CSR 20-7.015(9)(B)1.E]. Effluent limitations applicable during the recreational season (April 1 – October 31) per 10 CSR 20-7.031(5)(C) for discharges within two miles upstream of segments or lakes with Whole Body Contact Recreation (B) designated use of the receiving stream, as per 10 CSR 20-7.015(9)(B)1.C. An effluent limit for both monthly average and weekly average (POTWs) or daily maximum (privately owned) is required by 40 CFR 122.45(d). The geometric mean is calculated by multiplying all of the data points and then taking the nth root of this

product, where n = # of samples collected. For example: Five *E. coli* samples were collected with results of 1, 4, 6, 10, and 5 (#/100mL). Geometric Mean = $5^{th}$ root of (1)(4)(6)(10)(5) = $5^{th}$ root of 1,200 = 4.1 #/100mL.

**pH**. 6.5 to 9.0 SU – instantaneous grab sample. pH limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the in-stream Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. Water quality limits [10 CSR 20-7.031(5)(E)] are applicable to all outfalls.

**Dissolved Oxygen**. Applicable to facilities which utilize dechlorination chemicals in order to reduce the amount of total residual chlorine that is discharged in the effluent. Monitoring requirement only; monitoring for dissolved oxygen is included to determine whether reasonable potential exists to exceed water quality standards. [10 CSR 20-7.031 Table A1]. Dechlorination chemicals are known to exhibit an oxygen demand on the effluent and if not properly managed the effects on the effluent DO concentrations can be significant. Therefore reasonable potential to cause or contribute to an excursion of either the general or specific criteria exists. Monitoring only requirements have been included in this permit in order to determine if a future effluent limitation is necessary to protect water quality.

**Biochemical Oxygen Demand ($BOD_5$) Percent Removal**. In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to $BOD_5$ and TSS for Publicly Owned Treatment Works (POTWs). POTWs covered under this permit are required to meet 85% removal efficiency for $BOD_5$.

**Total Suspended Solids (TSS) Percent Removal**. In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to $BOD_5$ and TSS for Publicly Owned Treatment Works (POTWs). POTWs covered under this permit are required to meet 85% removal efficiency for TSS.

**Phosphorous, Total P (TP)**

- **Limit:** 0.5 mg/L Monthly Average. Discharges to Lake Taneycomo and its tributaries between Table Rock Dam and Power Site Dam [10 CSR 20-7.015(3)(E)] and Table Rock watershed [10 CSR 20-7.015(3)(F)] shall meet a Total Phosphorus of 0.5 mg/L unless the facility meets all exemption requirements. If exemption from limits is applicable, monitoring applies.

  Facilities permitted under Table C shall meet a Total Phosphorus effluent limit of 0.5 mg/L if the facility discharges to a lake or watershed of a lake that is a water of the state and has an area of at least ten acres during normal pool conditions. Per 10 CSR 20-7.031(5)(N), Lake Numeric Nutrient Criteria (NNC) for lakes is applicable statewide. NNC is assessed during antidegradation review. Effluent limits were established in accordance with the department's Alternatives Analysis, https://dnr.mo.gov/document-search/water-quality-antidegradation-review-departments-alternatives-analysis-domestic-wastewater-facilities-design-flow-less-50000-gallons-day.

- **Monitoring Only:** Discharges within the Lake Taneycomo, Table Rock Lake, and White River watersheds shall conduct monitoring of Total Phosphorus as described below.

  Discharges to Lake Taneycomo and its tributaries between Table Rock Dam and Power Site Dam [10 CSR 20-7.015(3)(E)] meeting both of the following requirements are exempt from Total Phosphorus limits but shall still conduct monitoring.
  1. Those permitted prior to May 9, 1994; and
  2. Those with design flows of less than 22,500 gpd

  Discharges to the Table Rock Lake watershed [10 CSR 20-7.015(3)(F)] meeting both of the following requirements are exempt from Total Phosphorus limits but shall still conduct monitoring.
  1. Those permitted prior to November 30, 1999; and
  2. Those with design flows less than 22,500 gpd.

  Discharges within the White River basin outside of the areas identified in 10 CSR 20-7.015(3)(E) and (F) shall conduct monitoring for Total Phosphorus per 10 CSR 20-7.015(3)(G).

**Aluminum, Total Recoverable**. Applicable to facilities utilizing chemical addition to facilitate phosphorus removal. Protection of Aquatic Life Acute Criteria = 750µg/L.

| | | |
|---|---|---|
| Acute WLA: | $C_e$ = ((0.08 + 0.0)*750 – (0.0 * 0.0)) ÷ 0.08 = 750 µg/L | |
| $LTA_a$: | 750 (0.321) = 240.8 µg/L | [CV = 0.6, 99th Percentile] |
| MDL: | 240.8 (3.11) = 750 µg/L | [CV = 0.6, 99th Percentile] |
| AML: | 240.8 (1.55) = 373.8 µg/L | [CV = 0.6, 95th Percentile, n = 4] |

**Iron, Total Recoverable**. Applicable to facilities utilizing chemical addition to facilitate phosphorus removal. Protection of Aquatic Life Chronic Criteria = 1,000 µg/L.

| | | |
|---|---|---|
| Chronic WLA: | $C_e$ = ((0.08 + 0.0)*1,000 – (0.0 * 0.0)) ÷ 0.08 = 1,000 µg/L | |
| $LTA_c$: | 1,000 (0.527) = 527.4 µg/L | [CV = 0.6, 99th Percentile] |
| MDL: | 527.4 (3.11) = 1,642.7 µg/L | [CV = 0.6, 99th Percentile] |
| AML: | 527.4 (1.55) = 818.8 µg/L | [CV = 0.6, 95th Percentile, n = 4] |

**OTHER:**

- **Influent Monitoring of Biochemical Oxygen Demand ($BOD_5$) & Total Suspended Solids (TSS)**. Applicable to POTWs only. An influent sample is required to determine the removal efficiency. In accordance with 40 CFR Part 133, removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to $BOD_5$ and TSS for Publicly Owned Treatment Works (POTWs)/municipals.

## Part V– Sampling and Reporting Requirements

**SAMPLING FREQUENCY:**
For pollutants expressed in a daily maximum or weekly average based on facility ownership (private or POTW) and as a monthly average, only quarterly monitoring is required for these pollutants. Results from one quarterly sample may be submitted as both the daily maximum and the monthly average result. If the facility collects multiple samples during any month, the permit requires the facility to submit a monthly average.

**SAMPLING TYPE JUSTIFICATION:**
Sampling type was continued from the previous permit. The sampling types are representative of the discharges and are protective of water quality. Discharges with altering effluent should have composite sampling; discharges with uniform effluent can have grab samples. Parameters which must have grab sampling are: pH, *E. coli*, total residual chlorine, and dissolved oxygen.

**SUFFICIENTLY SENSITIVE ANALYTICAL METHODS:**
Please review Standard Conditions Part 1, Section A.4. The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 and/or 40 CFR 136 unless alternates are approved by the department and incorporated within this permit. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method quantifies the pollutant below the level of the applicable water quality criterion 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough the method detects and quantifies the level of pollutant in the discharge; or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015 and/or 40 CFR 136. These methods are also required for parameters listed as monitoring only, as the data collected may be used to determine if numeric limitations need to be established. A permittee is responsible for working with their contractors to ensure the analysis performed is sufficiently sensitive.

## Part VI – Administrative Requirements

On the basis of preliminary staff review and applicable standards and regulations, the department, as administrative agent for the Missouri Clean Water Commission, proposes to issue a permit(s) subject to certain effluent limitations, schedules, and special conditions contained herein and within the permit. The proposed determinations are tentative pending public comment.

**PUBLIC MEETING:**
A public meeting is not required for general permits with fewer than 50 General Permit Covered Facilities (GPCFs). MO-GD00000 covers over 500 GPCFs. The public meeting was held on November 2, 2023.

**PUBLIC NOTICE:**
The department shall give public notice when a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest or because of water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and facility must be notified of the denial in writing.

The department must give public notice of a pending permit or of a new or reissued Missouri State Operating Permit. The public comment period is a length of time not less than thirty (30) days following the date of the public notice, during which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed permit, please refer to the Public Notice page located at the front of this draft permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this permit was March 22, 2024 through April 22, 2024. No responses were received.

**DATE OF FACT SHEET**: FEBRUARY 29, 2024

**COMPLETED BY:**

**ASHLEY KNEEMUELLER**
**ENVIRONMENTAL PROGRAM ANALYST**
**MISSOURI DEPARTMENT OF NATURAL RESOURCES**
**WATER PROTECTION PROGRAM**
**OPERATING PERMITS SECTION – DOMESTIC WASTEWATER UNIT**
**(573) 526-1503**
dnr.generalpermits@dnr.mo.gov

# Appendices

**APPENDIX – Non-Detect Example Calculations**:

**Example**: Permittee has four samples for Pollutant X which has a method minimum level of 5 mg/L and is to report a Daily Maximum and Monthly Average.

Week 1 = 11.4 mg/L
Week 2 = Non-Detect or <5.0 mg/L
Week 3 = 7.1 mg/L
Week 4 = Non-Detect or <5.0 mg/L

For this example, use subpart (h) - For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of "0" for all non-detects for that reporting period and report the average of all the results.

11.4 + 0 + 7.1 + 0 = 18.5 ÷ 4 (number of samples) = 4.63 mg/L.

The Permittee reports a Monthly Average of 4.63 mg/L and a Daily maximum of 11.4 mg/L (Note the < symbol was dropped in the answers).

**Example**: Permittee has five samples for Pollutant Y that has a method minimum level of 9 µg/L and is to report a Daily Maximum and Monthly Average.

Day 1 = Non-Detect or <9.0 µg/L
Day 2 = Non-Detect or <9.0 µg/L
Day 3 = Non-Detect or <9.0 µg/L
Day 4 = Non-Detect or <9.0 µg/L
Day 5 = Non-Detect or <9.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the "<" sign from the values, average the values, and then add the "<" symbol back to the resulting average.

(9 +9 +9 +9 +9) ÷ 5 (number of samples) = <9 µg/L.

The Permittee reports a Monthly Average of <9.0 µg/L (retain the 'less than' symbol) and a Daily Maximum of <9.0 µg/L.

**Example**: Permittee has four samples for Pollutant Z where the first two tests were conducted using a method with a method minimum level of 4 µg/L and the remaining two tests were conducted using a different method that has a method minimum level of <6 µg/L and is to report a Monthly Average and a Weekly Average.

Week 1 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <4.0 µg/L
Week 3 = Non-Detect or <6.0 µg/L
Week 4 = Non-Detect or <6.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the "<" sign from the values, average the values, and then add the "<" symbol back to the resulting average.

(4 + 4 + 6 + 6) ÷ 4 (number of samples) = <5 µg/L. (Monthly)

The facility reports a Monthly Average of <5.0 µg/L and a Weekly Average of <6.0 µg/L.

**APPENDIX – Non-Detect Example Calculations (Continued)**:

**Example**: Permittee has five samples for Pollutant Z where the first two tests were conducted using a method with a method minimum level of 4 µg/L and the remaining three tests were conducted using a different method that has a method minimum level of <6 µg/L and is to report a Monthly Average and a Weekly Average.

Week 1 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <4.0 µg/L
Week 2 = Non-Detect or <6.0 µg/L
Week 3 = Non-Detect or <6.0 µg/L
Week 4 = Non-Detect or <6.0 µg/L

For this example, use subpart (g) - For reporting an average based on all non-detected values, remove the "<" sign from the values, average the values, and then add the "<" symbol back to the resulting average.

(4 + 4 + 6 + 6 + 6) ÷ 5 (number of samples) = <5.2 µg/L. (Monthly)
(4 + 6) ÷ 2 (number of samples) = <5 µg/L. (Week 2)

The facility reports a Monthly Average of <5.2 µg/L and a Weekly Average of <6.0 µg/L (report highest Weekly Average value)

**Example**: Permittee has four samples for Pollutant Z where the tests were conducted using a method with a method minimum level of 10 µg/L and is to report a Monthly Average and Daily Maximum. The permit lists that Pollutant Z has a department determined Minimum Quantification Level (ML) of 130 µg/L.

Week 1 = 12 µg/L
Week 2 = 52 µg/L
Week 3 = Non-Detect or <10 µg/L
Week 4 = 133 µg/L

For this example, use subpart (h) - For reporting an average based on a mix of detected and non-detected values (not including *E. coli*), assign a value of "0" for all non-detects for that reporting period and report the average of all the results.

For this example, (12 + 52 + 0 + 133) ÷ 4 (number of samples) = 197 ÷ 4 = 49.3 µg/L.

The facility reports a Monthly Average of 49.3 µg/L and a Daily Maximum of 133 µg/L.

**Example**: Permittee has five samples for *E. coli* which has a method minimum level of 1 #/100mL and is to report a Weekly Average (seven (7) day geometric mean) and a Monthly Average (thirty (30) day geometric mean).

Week 1 = 102 #/100mL
Week 2 (Monday) = 400 #/100mL
Week 2 (Friday) = Non-Detect or <1 #/100mL
Week 3 = 15 #/100mL
Week 4 = Non-Detect or <1 #/100mL

For this example, use subpart (i) - When E. coli is not detected above the method minimum level, the permittee must report the data qualifier signifying less than detection limit for that parameter (e.g., <1 #/100mL, if the method minimum level is 1 #/100mL). For reporting a geometric mean based on a mix of detected and non-detected values, use one-half of the detection limit (instead of zero) for non-detects when calculating geometric means. The Geometric Mean is calculated by multiplying all of the data points and then taking the nth root of this product, where n = # of samples collected.

The Monthly Average (30 day Geometric Mean) = 5th root of (102)(400)(0.5)(15)(0.5) = 5th root of 153,000 = 10.9 #/100mL.
The 7 day Geometric Mean = 2nd root of (400)(0.5) = 2nd root of 200 = 14.1 #/100mL. (Week 2)

The Permittee reports a Monthly Average (30 day Geometric Mean) of 10.9 #/100mL and a Weekly Average (7 day geometric mean) of 102 #/100mL (report highest Weekly Average value)

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
MAY 1, 2013

PART II - SPECIAL CONDITIONS – PUBLICLY OWNED TREATMENT WORKS
SECTION A – INDUSTRIAL USERS

**1. Definitions**

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

**2. Identification of Industrial Discharges**

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

**3. Application Information**

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

**4. Notice to the Department**

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
   i. the quality and quantity of effluent introduced into the POTW, and
   ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources
Water Protection Program
Attn: Pretreatment Coordinator
P.O. Box 176
Jefferson City, MO 65102

# STANDARD CONDITIONS FOR NPDES PERMITS
# ISSUED BY
# THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
# MISSOURI CLEAN WATER COMMISSION
# August 1, 2019

## PART III – BIOSOLIDS AND SLUDGE FROM DOMESTIC TREATMENT FACILITIES

### SECTION A – GENERAL REQUIREMENTS

1. PART III Standard Conditions pertain to biosolids and sludge requirements under the Missouri Clean Water Law and regulations for domestic and municipal wastewater and also incorporates federal sludge disposal requirements under 40 CFR Part 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR Part 503 for domestic biosolids and sludge.
2. PART III Standard Conditions apply only to biosolids and sludge generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Biosolids and Sludge Use and Disposal Practices:
    a. The permittee is authorized to operate the biosolids and sludge generating, treatment, storage, use, and disposal facilities listed in the facility description of this permit.
    b. The permittee shall not exceed the design sludge/biosolids volume listed in the facility description and shall not use biosolids or sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
    c. For facilities operating under general operating permits that incorporate Standard Conditions PART III, the facility is authorized to operate the biosolids and sludge generating, treatment, storage, use and disposal facilities identified in the original operating permit application, subsequent renewal applications or subsequent written approval by the department.
4. Biosolids or Sludge Received from other Facilities:
    a. Permittees may accept domestic wastewater biosolids or sludge from other facilities as long as the permittee's design sludge capacity is not exceeded and the treatment facility performance is not impaired.
    b. The permittee shall obtain a signed statement from the biosolids or sludge generator or hauler that certifies the type and source of the sludge
5. Nothing in this permit precludes the initiation of legal action under local laws, except to the extent local laws are preempted by state law.
6. This permit does not preclude the enforcement of other applicable environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable biosolids or sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RSMo.
8. In addition to Standard Conditions PART III, the Department may include biosolids and sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Exceptions to Standard Conditions PART III may be authorized on a case-by-case basis by the Department, as follows:
    a. The Department may modify a site-specific permit following permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR § 124.10, and 40 CFR § 501.15(a)(2)(ix)(E).
    b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR Part 503.

## SECTION B – DEFINITIONS

1. Best Management Practices are practices to prevent or reduce the pollution of waters of the state and include agronomic loading rates (nitrogen based), soil conservation practices, spill prevention and maintenance procedures and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food, feed or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR Part 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PSRP) in accordance with 40 CFR Part 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Feed crops are crops produced primarily for consumption by animals.
8. Fiber crops are crops such as flax and cotton.
9. Food crops are crops consumed by humans which include, but is not limted to, fruits, vegetables and tobacco.
10. Industrial wastewater means any wastewater, also known as process wastewater, not defined as domestic wastewater. Per 40 CFR Part 122.2, process wastewater means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product. Land application of industrial wastewater, residuals or sludge is not authorized by Standard Conditions PART III.
11. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological contact systems, and other similar facilities. It does not include wastewater treatment lagoons or constructed wetlands for wastewater treatment.
12. Plant Available Nitrogen (PAN) is nitrogen that will be available to plants during the growing seasons after biosolids application.
13. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
14. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs), sewage sludge incinerator ash, or grit/screenings generated during preliminary treatment of domestic sewage.
15. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen or concrete lined basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
16. Septage is the sludge pumped from residential septic tanks, cesspools, portable toilets, Type III marine sanitation devices, or similar treatment works such as sludge holding structures from residential wastewater treatment facilities with design populations of less than 150 people. Septage does not include grease removed from grease traps at a restaurant or material removed from septic tanks and other similar treatment works that have received industrial wastewater. The standard for biosolids from septage is different from other sludges. See Section H for more information.

## SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Biosolids or sludge shall be routinely removed from wastewater treatment facilities and handled according to the permit facility description and the requirements of Standard Conditions PART III or in accordance with Section A.3.c., above.
2. The permittee shall operate storage and treatment facilities, as defined by Section 644.016(23), RSMo, so that there is no biosolids or sludge discharged to waters of the state. Agricultural storm water discharges are exempt under the provisions of Section 644.059, RSMo.
3. Mechanical treatment plants shall have separate biosolids or sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove biosolids or sludge from these storage compartments on the required design schedule is a violation of this permit.

## SECTION D – BIOSOLIDS OR SLUDGE DISPOSED AT OTHER TREATMENT FACILITY OR BY CONTRACT HAULER

1. Permittees that use contract haulers, under the authority of their operating permit, to dispose of biosolids or sludge, are responsible for compliance with all the terms of this permit. Contract haulers that assume the responsibility of the final disposal of biosolids or sludge, including biosolids land application, must obtain a Missouri State Operating Permit unless the hauler transports the biosolids or sludge to another permitted treatment facility.
2. Testing of biosolids or sludge, other than total solids content, is not required if biosolids or sludge are hauled to a permitted wastewater treatment facility, unless it is required by the accepting facility.

## SECTION E – INCINERATION OF SLUDGE

1. Please be aware that sludge incineration facilities may be subject to the requirements of 40 CFR Part 503 Subpart E, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or, if the ash is determined to be hazardous, with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, mass of sludge incinerated and mass of ash generated. Permittee shall also provide the name of the ash disposal facility and permit number if applicable.

## SECTION F – SURFACE DISPOSAL SITES AND BIOSOLIDS AND SLUDGE LAGOONS

1. Please be aware that surface disposal sites of biosolids or sludge from wastewater treatment facilities may be subject to other laws including the requirements in 40 CFR Part 503 Subpart C, Missouri Air Conservation Commission regulations under 10 CSR 10, and solid waste management regulations under 10 CSR 80, as applicable.
2. Biosolids or sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain biosolids or sludge storage lagoons as storage facilities, accumulated biosolids or sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of biosolids or sludge removed will be dependent on biosolids or sludge generation and accumulation in the facility. Enough biosolids or sludge must be removed to maintain adequate storage capacity in the facility.
    a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of biosolids or sludge on the bottom of the lagoon, upon prior approval of the Department; or
    b. Permittee shall close the lagoon in accordance with Section I.

## SECTION G – LAND APPLICATION OF BIOSOLIDS

1. The permittee shall not land apply biosolids unless land application is authorized in the facility description, the special conditions of the issued NPDES permit, or in accordance with Section A.3.c., above.
2. This permit only authorizes "Class A" or "Class B" biosolids derived from domestic wastewater to be land applied onto grass land, crop land, timber, or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
3. Class A Biosolids Requirements: Biosolids shall meet Class A requirements for application to public contact sites, residential lawns, home gardens or sold and/or given away in a bag or other container.
4. Class B biosolids that are land applied to agricultural and public contact sites shall comply with the following restrictions:
    a. Food crops that touch the biosolids/soil mixture and are totally above the land surface shall not be harvested for 14 months after application of biosolids.
    b. Food crops below the surface of the land shall not be harvested for 20 months after application of biosolids when the biosolids remain on the land surface for four months or longer prior to incorporation into the soil.
    c. Food crops below the surface of the land shall not be harvested for 38 months after application of biosolids when the biosolids remain on the land surface for less than four months prior to incorporation into the soil.
    d. Animal grazing shall not be allowed for 30 days after application of biosolids.
    e. Food crops, feed crops, and fiber crops shall not be harvested for 30 days after application of biosolids.
    f. Turf shall not be harvested for one year after application of biosolids if used for lawns or high public contact sites in close proximity to populated areas such as city parks or golf courses.
    g. After Class B biosolids have been land applied to public contact sites with high potential for public exposure, as defined in 40 CFR § 503.31, such as city parks or golf courses, access must be restricted for 12 months.
    h. After Class B biosolids have been land applied public contact sites with low potential for public exposure as defined in 40 CFR § 503.31, such as a rural land application or reclamation sites, access must be restricted for 30 days.

5. Pollutant limits
    a. Biosolids shall be monitored to determine the quality for regulated pollutants listed in Table 1, below. Limits for any pollutants not listed below may be established in the permit.
    b. The number of samples taken is directly related to the amount of biosolids or sludge produced by the facility (See Section J, below). Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to achieve pollutant concentration below those identified in Table 1, below.
    c. Table 1 gives the ceiling concentration for biosolids. Biosolids which exceed the concentrations in Table 1 may not be land applied.

**TABLE 1**

| Biosolids ceiling concentration | |
|---|---|
| Pollutant | Milligrams per kilogram dry weight |
| Arsenic | 75 |
| Cadmium | 85 |
| Copper | 4,300 |
| Lead | 840 |
| Mercury | 57 |
| Molybdenum | 75 |
| Nickel | 420 |
| Selenium | 100 |
| Zinc | 7,500 |

d. Table 2 below gives the low metal concentration for biosolids. Because of its higher quality, biosolids with pollutant concentrations below those listed in Table 2 can safely be applied to agricultural land, forest, public contact sites, lawns, home gardens or be given away without further analysis. Biosolids containing metals in concentrations above the low metals concentrations but below the ceiling concentration limits may be land applied but shall not exceed the annual loading rates in Table 3 and the cumulative loading rates in Table 4. The permittee is required to track polluntant loading onto application sites for parameters that have exceeded the low metal concentration limits.

**TABLE 2**

| Biosolids Low Metal Concentration | |
|---|---|
| Pollutant | Milligrams per kilogram dry weight |
| Arsenic | 41 |
| Cadmium | 39 |
| Copper | 1,500 |
| Lead | 300 |
| Mercury | 17 |
| Nickel | 420 |
| Selenium | 100 |
| Zinc | 2,800 |

e. Annual pollutant loading rate.

**Table 3**

| Biosolids Annual Loading Rate | |
|---|---|
| Pollutant | Kg/ha (lbs./ac) per year |
| Arsenic | 2.0 (1.79) |
| Cadmium | 1.9 (1.70) |
| Copper | 75 (66.94) |
| Lead | 15 (13.39) |
| Mercury | 0.85 (0.76) |
| Nickel | 21 (18.74) |
| Selenium | 5.0 (4.46) |
| Zinc | 140 (124.96) |

f. Cumulative pollutant loading rates.

**Table 4**

| Biosolids Cumulative Pollutant Loading Rate | |
|---|---|
| Pollutant | Kg/ha (lbs./ac) |
| Arsenic | 41 (37) |
| Cadmium | 39 (35) |
| Copper | 1500 (1339) |
| Lead | 300 (268) |
| Mercury | 17 (15) |
| Nickel | 420 (375) |
| Selenium | 100 (89) |
| Zinc | 2800 (2499) |

6. Best Management Practices. The permittee shall use the following best management practices during land application activities to prevent the discharge of biosolids to waters of the state.
   a. Biosolids shall not be applied to the land if it is likely to adversely affect a threatened or endangered species listed under § 4 of the Endangered Species Act or its designated critical habitat.
   b. Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
   c. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop

nitrogen removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kgTN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.

i. PAN can be determined as follows:

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization factors and mineralization rates can be utilized on a case-by-case basis.

ii. Crop nutrient production/removal to be based on crop specific nitrogen needs and realistic yield goals. **NOTE**: There are a number of reference documents on the Missouri Department of Natural Resources website that are informative to implement best management practices in the proper management of biosolids, including crop specific nitrogen needs, realistic yields on a county by county basis and other supporting references.

iii. Biosolids that are applied at agronomic rates shall not cause the annual pollutant loading rates identified in Table 3 to be exceeded.

d. Buffer zones are as follows:

i. 300 feet of a water supply well, sinkhole, water supply reservoir or water supply intake in a stream;

ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstandingstate resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;

iii. 150 feet of dwellings or public use areas;

iv. 100 feet (35 feet if biosolids application is down-gradient or the buffer zone is entirely vegetated) of lake, pond, wetlands or gaining streams (perennial or intermittent);

v. 50 feet of a property line. Buffer distances from property lines may be waived with written permission from neighboring property owner.

vi. For the application of dry, cake or liquid biosolids that are subsurface injected, buffer zones identified in 5.d.i. through 5.d.iii above, may be reduced to 100 feet. The buffer zone may be reduced to 35 feet if the buffer zone is permanently vegetated. Subsurface injection does not include methods or technology reflective of combination surface/shallow soil incorporation.

e. Slope limitation for application sites are as follows:

i. For slopes less than or equal to 6 percent, no rate limitation;

ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels;

iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.

iv. Dry, cake or liquid biosolids that are subsurface injected, may be applied on slopes not to exceed 20 percent. Subsurface injection does not include the use of methods or technology reflective of combination surface/shallow soil incorporation.

f. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.

g. Biosolids may be land applied to sites with soil that are snow covered, frozen, or saturated with liquid when site restrictions or other controls are provided to prevent pollutants from being discharged to waters of the state during snowmelt or stormwater runoff. During inclement weather or unfavorable soil conditions use the following management practices:

i. A maximum field slope of 6% and a minimum 300 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be utilized for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not include the use of mthods or technology refletive of combination surface/shallow soil incorporation;

ii. A maximum field slope of 2% and 100 feet grass buffer between the application site and waters of the state. A 35 feet grass buffer may be used for the application of dry, cake or liquid biosolids that are subsurface injected. Subsurface injection does not included the use of methods or technology refletive of combination surface/shallow soil incorporation;

iii. Other best management practices approved by the Department.

## SECTION H – SEPTAGE

1. Haulers that land apply septage must obtain a state permit. An operating permit is not required for septage haulers who transport septage to another permitted treatment facility for disposal.
2. Do not apply more than 30,000 gallons of septage per acre per year or the volume otherwise stipulated in the operating permit.
3. Septic tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to mechanical treatment facilities.
4. Septage must comply with Class B biosolids regarding pathogen and vector attraction reduction requirements before it may be applied to crops, pastures or timberland. To meet required pathogen and vector reduction requirements, mix 50 pounds of hydrated lime for every 1,000 gallons of septage and maintain a septage pH of at least 12 pH standard units for 30 minutes or more prior to application.
5. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.
6. As residential septage contains relatively low levels of metals, the testing of metals in septage is not required.

## SECTION I– CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all sludges and/or biosolids. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Biosolids or sludge that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
    a. Biosolids and sludge shall meet the monitoring and land application limits for agricultural rates as referenced in Section G, above.
    b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
    c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre. Alternative, site-specific application rates may be included in the closure plan for department consideration.
        i. PAN can be determined as follows:
        (Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).
        [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volitalization factors and mineralization rates can be utilized on a case-by-case basis
4. Domestic wastewater treatment lagoons with a design treatment capacity less than or equal to 150 persons, are "similar treatment works" under the definition of septage. Therefore the sludge within the lagoons may be treated as septage during closure activities. See Section B, above. Under the septage category, residuals may be left in place as follows:
    a. Testing for metals or fecal coliform is not required.
    b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
    c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Biosolids or sludge left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, and unless otherwise approved, the lagoon berm shall be demolished, and the site shall be graded and contain ≥70% vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion. Alternative biosolids or sludge and soil mixing ratios may be included in the closure plan for department consideration.
6. Lagoon and earthen structure closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200.
7. When closing a mechanical wastewater plant, all biosolids or sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
    a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain ≥70% vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate

surface water drainage without creating erosion.

b. Hazardous Waste shall not be land applied or disposed during mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations pursuant to 10 CSR 25.

c. After demolition of the mechanical plant, the site must only contain clean fill defined in Section 260.200.1(6) RSMo as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill, reclamation, or other beneficial use. Other solid wastes must be removed.

8. If biosolids or sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or I, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR Part 503, Subpart C.

## SECTION J – MONITORING FREQUENCY

1. At a minimum, biosolids or sludge shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

**TABLE 5**

| Biosolids or Sludge produced and disposed (Dry Tons per Year) | Monitoring Frequency (See Notes 1, and 2) | | |
|---|---|---|---|
| | Metals, Pathogens and Vectors, Total Phosphorus, Total Potassium | Nitrogen TKN, Nitrogen PAN[1] | Priority Pollutants[2] |
| 319 or less | 1/year | 1 per month | 1/year |
| 320 to 1650 | 4/year | 1 per month | 1/year |
| 1651 to 16,500 | 6/year | 1 per month | 1/year |
| 16,501+ | 12/year | 1 per month | 1/year |

[1] Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

[2] Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) are required only for permit holders that must have a pre-treatment program. Monitoring requirements may be modified and incorporated into the operating permit by the Department on a case-by-case basis.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2: Table 5 is not applicable for incineration and permit holders that landfill their sludge.

2. Permittees that operate wastewater treatment lagoons, peak flow equalization basins, combined sewer overflow basins or biosolids or sludge lagoons that are cleaned out once a year or less, may choose to sample only when the biosolids or sludge is removed or the lagoon is closed. Test one composite sample for each 319 dry tons of biosolids or sludge removed from the lagoon during the reporting year or during lagoon closure. Composite sample must represent various areas at one-foot depth.
3. Additional testing may be required in the special conditions or other sections of the permit.
4. Biosolids and sludge monitoring shall be conducted in accordance with federal regulation 40 CFR § 503.8, Sampling and analysis.

## SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in Standard Conditions PART III and any additional items in the Special Conditions section of this permit. This shall include dates when the biosolids or sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
   a. By February 19th of each year, applicable facilities shall submit an annual report for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and biosolids or sludge disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when biosolids or sludge are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Form. The annual report shall be prepared on report forms provided by the Department or equivalent forms approved by the Department.
4. Reports shall be submitted as follows:
   Major facilities, which are those serving 10,000 persons or more or with a design flow equal to or greater than 1 million gallons per day or that are required to have an approved pretreatment program, shall report to both the Department and EPA if the facility land applied, disposed of biosolids by surface disposal, or operated a sewage sludge incinerator. All other facilities shall maintain their biosolids or sludge records and keep them available to Department personnel upon request. State reports shall be submitted to the address listed as follows:

   DNR regional or other applicable office listed in the
   permit (see cover letter of permit)
   ATTN: Sludge Coordinator

Reports to EPA must be electronically submitted online via the Central Data Exchange at: https://cdx.epa.gov/ Additional information is available at: https://www.epa.gov/biosolids/compliance-and-annual-reporting-guidance-about-clean-water-act-laws

5. Annual report contents. The annual report shall include the following:
    a. Biosolids and sludge testing performed. If testing was conducted at a greater frequency than what is required by the permit, all test results must be included in the report.
    b. Biosolids or sludge quantity shall be reported as dry tons for the quantity produced and/or disposed.
    c. Gallons and % solids data used to calculate the dry ton amounts.
    d. Description of any unusual operating conditions.
    e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
        i. This must include the name and address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
        ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
    f. Contract Hauler Activities:
    If using a contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate biosolids or sludge use permit.
    g. Land Application Sites:
        i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
        ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
        iii. Report the method used for compliance with pathogen and vector attraction requirements.
        iv. Report soil test results for pH and phosphorus. If no soil was tested during the year, report the last date when tested and the results.

AP 47312

RECEIVED
APR 16 2025
Water Protection Program

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

# APPLICATION FOR TRANSFER OF OPERATING PERMIT

| FOR AGENCY USE ONLY | |
|---|---|
| CHECK NO. 103 | |
| DATE RECEIVED 4/16/25 | FEE SUBMITTED 150 |
| JETPAY CONFIRMATION NUMBER | |

**THE FOLLOWING ITEMS (1 – 4) ARE TO BE COMPLETED BY THE CURRENT OWNER.**
**SEE INSTRUCTIONS FOR APPROPRIATE FEE TO BE SUBMITTED WITH APPLICATION.**

## 1. FACILITY

| NAME | | TELEPHONE NUMBER WITH AREA CODE | |
|---|---|---|---|
| Riviera RV Resort | | 573-480-9646 | |
| ADDRESS (PHYSICAL) | CITY | STATE | ZIP |
| 20 Riviera Ln | Sunrise Beach | Mo | 65079 |
| PERMIT NUMBER | COUNTY | | |
| #MO-6000015 | Camden | | |

## 2. CURRENT OWNER

573-280-5456

| NAME | EMAIL ADDRESS | TELEPHONE NUMBER WITH AREA CODE | |
|---|---|---|---|
| Lee & Jodi Wolfekuhle | jodi@rivierarvbsfl.com | ~~573-480-9646~~ | |
| ADDRESS | CITY | STATE | ZIP |
| 20 Riviera Ln | Sunrise Beach | Mo | 65079 |

## 3. CONTINUING AUTHORITY

| NAME | EMAIL ADDRESS | TELEPHONE NUMBER WITH AREA CODE | |
|---|---|---|---|
| Lake Ozark Water & Sewer | Krystal@lwsonline.com | 573-346-2092 | |
| ADDRESS | CITY | STATE | ZIP |
| 380 West Hwy 54 Suite 101C | Camdenton, | Mo | 65020 |

## 4. CERTIFICATION

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.

| NAME (TYPE OR PRINT) | OFFICAL TITLE | TELEPHONE NUMBER WITH AREA CODE |
|---|---|---|
| Jodi Wolfekuhle | VP | 573-280-5456 |
| SIGNATURE | | DATE SIGNED |
| Jodi W | | 3/18/2025 |

**THE FOLLOWING ITEMS (5 – 10) WILL APPLY AFTER THE COMPLETION OF TRANSFER (SALE) AND ARE TO BE COMPLETED BY THE APPLICANT FOR TRANSFER OF OPERATING PERMIT (BUYER) OR AUTHORIZED AGENT.**

## 5. FACILITY (IF DIFFERENT THAN ABOVE)

| NAME | TELEPHONE NUMBER WITH AREA CODE |
|---|---|
| LO2 MM25 | 573-480-9646 |

## 6. FUTURE OWNER

| NAME | EMAIL ADDRESS | TELEPHONE NUMBER WITH AREA CODE | |
|---|---|---|---|
| Jennifer Falloon | Jen@voorsainvestments.com | 5735358643 | |
| **ADDRESS** | **CITY** | **STATE** | **ZIP** |
| 480 Fall Crown Ln | Fenton | Mo | 63026 |

Is the owner PSC regulated? ☐ Yes ☒ No If **YES**, please provide your Certificate of Convenience and Necessity.

## 7. CONTINUING AUTHORITY

| NAME | EMAIL ADDRESS | TELEPHONE NUMBER WITH AREA CODE | |
|---|---|---|---|
| Jennifer Falloon | Jen@voorsainvestments.com | 5735358643 | |
| **ADDRESS** | **CITY** | **STATE** | **ZIP** |
| 480 Fall Crown Ln | Fenton | mo | 63026 |

## 8. FACILITY CONTACT

| NAME | TITLE | | |
|---|---|---|---|
| Same as above | | | |
| **EMAIL ADDRESS** | **TELEPHONE NUMBER WITH AREA CODE** | | |
| | | | |
| **ADDRESS** | **CITY** | **STATE** | **ZIP** |
| | | | |

## 9. ADDITIONAL INFORMATION

**9.1** Anticipated effective date of transfer of ownership: 4/15/25

**9.2** Are any changes in production, in raw materials, or in the quantity of discharges from this facility planned or anticipated?
☒ Yes ☐ No If yes, explain (Attach sheets as necessary)

## 10. ELECTRONIC DISCHARGE MONITORING REPORT (eDMR) SUBMISSION SYSTEM

Per 40 CFR Part 127 National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, reporting of effluent limits and monitoring shall be submitted by the permittee via an electronic system to ensure timely, complete, accurate, and nationally-consistent set of data. **One of the following must be checked in order for this application to be considered complete.** Please visit http://dnr.mo.gov/env/wpp/edmr.htm to access the Facility Participation Package.

☒ - You have completed and submitted with this permit application the required documentation to participate in the eDMR system.

☐ - You have previously submitted the required documentation to participate in the eDMR system and/or you are currently using the eDMR system.

☐ - You have submitted a written request for a waiver from electronic reporting. See instructions for further information regarding waivers.

## 11. JETPAY

Permit fees may be payed online by credit card or eCheck through a system called JetPay. Use the URL provided to access JetPay and make an online payment.

Modification Fee: https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/

## 12. CERTIFICATION

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.

| NAME (TYPE OR PRINT) | OFFICIAL TITLE | TELEPHONE NUMBER WITH AREA CODE |
|---|---|---|
| Jennifer Falloon | Owner | 573-535-8643 |
| **SIGNATURE** | | **DATE SIGNED** |
| Jennifer Falloon | | 4/7/25 |

# INSTRUCTIONS FOR COMPLETING APPLICATION FOR TRANSFER OF OPERATING PERMIT

All blanks must be filled in when the application is submitted to the Missouri Department of Natural Resources. This includes **BOTH** required signatures.

Department of Natural Resources regulation 10 CSR 20-6.010 (11) governs the transfer of National Pollutant Discharge Elimination System (NPDES) permits. Until such time as the permit is officially transferred, the current permittee remains responsible for complying with the terms and conditions of the existing permit. The department, within thirty (30) days of receipt of this application, shall notify the new applicant of its intent to revoke and reissue or transfer the permit.

**Section 1-4.** Current permittee (present owner/seller) is to complete items 1 – 4.
**Section 5-10.** Applicant for transfer of operating permit (future owner/buyer) is to complete items 5 – 10.
**Section 2 & 6.** Owner: Provide the legal name, mailing address, phone number, and email address of the owner. The owner identified in this section and subsequently reflected on the certificate page of the operating permit, is the owner of the regulated activity/discharge being applied for and is not necessarily the owner of the real property on which the activity or discharge is occurring.
**Section 3 & 7.** 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. 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. If the continuing authority is not an individual(s), government, or otherwise required to register with the Missouri Secretary of State (SoS), then the business name must be listed exactly as it appears on the SoS's webpage: https://bsd.sos.mo.gov/BusinessEntity/BESearch.aspx?SearchType=0

**Section 10. Electronic Discharge Monitoring Report (eDMR) Submission System** – You can find the eDMR application at the following link: https://dnr.mo.gov/forms/780-2204-f.pdf
Waivers to electronic reporting may be granted by the Department per 40 CFR 127.15 under certain, special circumstances. A written request must be submitted to the Department for approval. Waivers may be granted to facilities owned or operated by:

a. members of religious communities that choose not to use certain technologies or
b. permittees located in areas with limited broadband access. The National Telecommunications and Information Administration (NTIA) in collaboration with the Federal Communications Commission (FCC) have created a broadband internet availability map: http://www.broadbandmap.gov/. Please contact the Department if you need assistance.

**Section 4. & 12. Signatures** - All applications must be signed as follows and the signatures must be **original**:

a. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
b. For a partnership or sole proprietorship, by a general partner or the proprietor.
c. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

**Section 11. JetPay**
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.
- 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, to **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 (https://dnr.mo.gov/pubs/pub2564.htm).
- Permit modifications, including transfers, are subject to the following fees; $200 for Municipals and $100 for All others

Note: Business name and address changes where owner and continuing authority remain the same are not considered transfers.

**Submittal of an incomplete application may result in the application being returned.**

This completed form and any attachments along with the applicable permit fees, should be submitted to:

Department of Natural Resources
Water Protection Program
ATTN: Operating Permits Section
P.O. Box 176
Jefferson City, MO 65102

Map of regional offices with addresses and phone numbers are available on the Web at http://dnr.mo.gov/regions/. If there are any questions concerning this form, please contact the appropriate regional office or the Department of Natural Resources, Water Protection Program, Operating Permits Section at 800-361-4827 or 573-552-4502.