

STATE OF MISSOURI

DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE 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. MO-0107328
Owner: City of Portage Des Sioux
Address: P.O. Box 118, Portage Des Sioux, MO 63373
Continuing Authority: Same as above
Address: Same as above
Facility Name: Portage Des Sioux Wastewater Treatment Facility
Facility Address: On the NE Corner of Le Claire St. and 2nd St. Intersection, Portage Des Sioux, MO 63373
Legal Description: Land Grant 0000, St. Charles County
UTM Coordinates: X = 730229, Y = 4312160
Receiving Stream: Mississippi River (P) (3700)
First Classified Stream and ID: Mississippi River (P) (3700)
USGS Basin & Sub-watershed No.: (07110009-0401)

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

FACILITY DESCRIPTION

Outfall #001 – POTW

The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator.
Lift station / bar screen / equalization basin / extended aeration / clarifier / activated sludge / UV disinfection / post aeration / sludge disposal by contract hauler.
Design population equivalent is 560.
Design flow is 56,000 gallons per day.
Actual flow is 43,700 gallons per day.
Design sludge production is 8.85 dry tons/year.

Permitted Feature INF – Influent Monitoring Location – Headworks

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

February 1, 2020
Effective Date

Edward B. Galbraith
Edward B. Galbraith, Director, Division of Environmental Quality

September 30, 2024
Expiration Date

Chris Wieberg
Chris Wieberg, Director, Water Protection Program

OUTFALL #001	TABLE A-1. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. In accordance with 10 CSR 20-7.031, the final effluent limitations outlined in Table A-2 must be achieved as soon as possible but no later than February 1, 2022 . These interim effluent limitations in Table A-1 are effective beginning February 1, 2020 and remain in effect through January 31, 2022 or as soon as possible. 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
Limit Set: M						
Flow	MGD	*		*	once/month	24 hr. total
Biochemical Oxygen Demand ₅	mg/L		24	15	once/month	composite**
Total Suspended Solids	mg/L		24	15	once/month	composite**
<i>E. coli</i> (Note 1)	#/100mL		630	126	once/month	grab
Ammonia as N (Apr 1 – Sep 30) (Oct 1 – Mar 31)	mg/L	2.0 3.0		0.7 1.5	once/month	composite**
EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units***	SU	6.5		9.0	once/month	grab
EFFLUENT PARAMETER(S)			UNITS	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand ₅ – Percent Removal (Note 2, Page 5)			%	85	once/month	calculated
Total Suspended Solids – Percent Removal (Note 2, Page 5)			%	85	once/month	calculated
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY ; THE FIRST REPORT IS DUE MARCH 28, 2020 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Limit Set: Q						
Oil & Grease	mg/L	15		10	once/quarter****	grab
EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM		MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Dissolved Oxygen	mg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY ; THE FIRST REPORT IS DUE APRIL 28, 2020 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

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

Note 1 – 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. 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).

OUTFALL #001	TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					
	The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations in Table A-2 shall become effective on February 1, 2022 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
Limit Set: Q						
Flow	MGD	*		*	once/quarter****	24 hr. total
Biochemical Oxygen Demand ₅	mg/L		24	15	once/quarter****	composite**
Total Suspended Solids	mg/L		24	15	once/quarter****	composite**
<i>E. coli</i> (Note 1)	#/100mL		630	126	once/quarter****	grab
Ammonia as N (Apr 1 – Sep 30) (Oct 1 – Mar 31)	mg/L	2.0 3.0		0.7 1.5	once/quarter****	composite**
EFFLUENT PARAMETER(S)	UNITS	MINIMUM		MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH – Units***	SU	6.5		9.0	once/quarter****	grab
EFFLUENT PARAMETER(S)			UNITS	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand ₅ – Percent Removal (Note 2, Page 5)			%	85	once/quarter****	calculated
Total Suspended Solids – Percent Removal (Note 2, Page 5)			%	85	once/quarter****	calculated
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Oil & Grease	mg/L	15		10	once/quarter****	grab
EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM		MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Dissolved Oxygen	mg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY ; THE FIRST REPORT IS DUE APRIL 28, 2022 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

* Monitoring requirement only.

** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

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

**** See table on **Page 3** for quarterly sampling requirements.

Note 1 – 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. 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).

Quarterly Minimum Sampling Requirements				
Quarter	Months	<i>E. coli</i>	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 28 th
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 28 th
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 28 th
Fourth	October	Sample once during <u>October</u>	Sample at least once during any month of the quarter	January 28 th
	November & December	Not required to sample.		

PERMITTED FEATURE <u>INF</u>	TABLE B-1. INTERIM INFLUENT MONITORING REQUIREMENTS						
	PARAMETER(S)	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
The monitoring requirements in Table B-1 shall become effective on February 1, 2020 and remain in effect through January 31, 2022 . The influent wastewater shall be monitored by the permittee as specified below:							
Limit Set: IM							
Biochemical Oxygen Demand ₅ (Note 2)	mg/L				*	once/month	composite**
Total Suspended Solids (Note 2)	mg/L				*	once/month	composite**
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY ; THE FIRST REPORT IS DUE MARCH 28, 2020 .							

* Monitoring requirement only.

** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

Note 2 – Influent sampling for BOD₅ 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. Calculate Percent Removal by using the following formula: $[(\text{Average Influent} - \text{Average Effluent}) / \text{Average Influent}] \times 100\% = \text{Percent Removal}$. 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 composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

PARAMETER(S)	UNITS	MONITORING REQUIREMENTS				
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Limit Set: IQ						
Biochemical Oxygen Demand ₅ (Note 2)	mg/L			*	once/quarter****	composite**
Total Suspended Solids (Note 2)	mg/L			*	once/quarter****	composite**

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE APRIL 28, 2022.

- * Monitoring requirement only.
- ** A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.
- **** See table **below** for quarterly sampling requirements.

Note 2 – Influent sampling for BOD₅ 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. Calculate Percent Removal by using the following formula: $[(\text{Average Influent} - \text{Average Effluent}) / \text{Average Influent}] \times 100\% = \text{Percent Removal}$. 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 composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

Quarterly Minimum Sampling Requirements			
Quarter	Months	Quarterly Effluent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated August 1, 2014, May 1, 2013, and August 1, 2019, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. Electronic Discharge Monitoring Report (eDMR) Submission System.
 - (a) Discharge Monitoring Reporting Requirements. The permittee must electronically submit compliance monitoring data via the eDMR system. In regards to Standard Conditions Part I, Section B, #7, the eDMR system is currently the only Department approved reporting method for this permit.
 - (b) Programmatic Reporting Requirements. The following reports (if required by this permit) must be electronically submitted as an attachment to the eDMR system until such a time when the current or a new system is available to allow direct input of the data:
 - (1) Collection System Maintenance Annual Reports;
 - (2) Sludge/Biosolids Annual Reports; and
 - (3) Any additional report required by the permit excluding bypass reporting.
 After such a system has been made available by the Department, required data shall be directly input into the system by the next report due date.
 - (c) Other actions. The following shall be submitted electronically after such a system has been made available by the Department:

D. SPECIAL CONDITIONS (continued)

- (1) Notices of Termination (NOTs); and
 - (2) Bypass reporting, See Special Condition #9 for 24-hr. bypass reporting requirements.
 - (d) Electronic Submissions. To access the eDMR system, use the following link in your web browser: <https://edmr.dnr.mo.gov/edmr/E2/Shared/Pages/Main/Login.aspx>.
 - (e) Waivers from Electronic Reporting. The permittee must submit compliance monitoring data and reports electronically. The Department may grant a waiver to a permittee in compliance with 40 CFR Part 127. The permittee may obtain an electronic reporting waiver by first submitting an eDMR Waiver Request Form: <http://dnr.mo.gov/forms/780-2692-f.pdf>. The Department will either approve or deny this electronic reporting waiver request within 120 calendar days. Only permittees with an approved waiver request may submit monitoring data and reports on paper to the Department for the period that the approved electronic reporting waiver is effective.
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 §644.051.16, 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) To incorporate an approved pretreatment program or modification thereto pursuant to 40 CFR 403.8(c) or 40 CFR 403.18(e), respectively.
 3. All outfalls must be clearly marked in the field.
 4. Report as no-discharge when a discharge does not occur during the report period.
 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) The permittee shall not report a sample result as “Non-Detect” without also reporting the detection limit of the test. Reporting as “Non Detect” without also including the detection limit will be considered failure to report, which is a violation of this permit.
 - (c) The permittee shall provide the “Non-Detect” sample result using the less than sign and the minimum detection limit (e.g. <10).
 - (d) Where the permit contains a Minimum 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.
 - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.
 - (f) When calculating monthly averages, use one-half of the method detection limit (MDL) instead of a zero. Where all data are below the MDL, the “<MDL” shall be reported as indicated in item (c).
 6. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).
 7. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. 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. To request a modification of the operational control testing requirements listed in 10 CSR 20-9, the permittee shall submit a permit modification application and fee to the Department requesting a deviation from the operational control monitoring requirements. Upon approval of the request, the Department will modify the permit.
 8. The permittee shall develop and implement a program for maintenance and repair of its collection system. The permittee may compare collection system performance results and other data with the benchmarks used in the Departments’ Capacity, Management, Operation, And Maintenance (CMOM) Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. Additional information regarding the Departments’ CMOM Model is available at <http://dnr.mo.gov/pubs/pub2574.htm>.

The permittee shall also submit a report via the Electronic Discharge Monitoring Report (eDMR) Submission System annually, by January 28th, for the previous calendar year. The report shall contain the following information:

D. SPECIAL CONDITIONS (continued)

- (a) A summary of the efforts to locate and eliminate specific sources of excessive infiltration and inflow into the collection system serving the facility for the previous year.
 - (b) A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
 - (c) A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.
9. 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, subsection 2. Bypasses are to be reported to the St. Louis Regional Office during normal business hours or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <https://dnr.mo.gov/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. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.
 10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
 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. An all-weather access road to the treatment facility shall be maintained.
 13. The outfall sewer shall be protected and maintained against the effects of floodwater, ice, or other hazards as to reasonably insure its structural stability, freedom from stoppage, and that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.
 14. Sludge/biosolids treatment, storage and disposal practices shall be conducted in accordance with Standard Conditions Part III.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0107328
PORTAGE DES SIOUX WASTEWATER TREATMENT FACILITY**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollutant 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 "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)(A)2.], a Factsheet 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 Missouri State Operating Permit (operating permit) listed below.

A Factsheet is not an enforceable part of an operating permit.

This Factsheet is for a Minor facility.

Part I – Facility Information

Facility Type: POTW

Facility Description: The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator. Lift station / bar screen / equalization basin / extended aeration / clarifier / activated sludge / UV disinfection / post aeration / sludge disposal by contract hauler.

Have any changes occurred at this facility or in the receiving water body that affects effluent limit derivation?

✓ No.

Application Date: 9/10/19

Expiration Date: 9/30/19

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.087	Secondary	Domestic

Facility Performance History:

This facility was last inspected on April 29, 2105. The inspection showed unsatisfactory features. The facility returned to compliance on February 1, 2019.

A review of discharge monitoring data submitted by the permittee over the last five years indicated the following final effluent exceedances:

- Ammonia as N: April 2015, May 2015, September 2015, October 2015, June 2016, March 2017, June 2018 and June 2019.
- BOD₅: March 2015 and June 2018.
- TRC: April 2015.
- TSS: April 2016 and June 2018.

Comments:

Changes in this permit include the updating of final effluent parameters due to the completion of a new WWTF, which include, updated BOD₅, TSS, and Ammonia as N final effluent limits, the removal of TRC due to the facility utilizing UV disinfection and the addition of Dissolved Oxygen monitoring. Influent monitoring of BOD₅ and TSS and an 85% removal efficiency for BOD₅ and TSS have been added to the permit per 40 CFR Part 133. Once per permit cycle Acute WET test requirements have been removed from the permit. Sampling and Reporting Frequencies have been increased for Flow, BOD₅, TSS, *E. coli*, Ammonia as N, and pH to once per month, for a duration of 2 years, due to monitoring the discharge from the new WWTF and to make operational adjustments. After two (2) years of data gathering and operational adjustments the sampling and reporting frequencies will be reduced to once per quarter. See Part VI of the Fact Sheet for further information regarding the addition, revision, and removal of effluent parameters. Special conditions were updated to include the removal of general criteria as a special condition as the permit writer evaluated each narrative statement in Part VI – Effluent Limits Determination for reasonable potential to cause or contribute to an excursion of the criteria and established numeric effluent limitations where necessary and the removal of special condition requiring gates and warning signs, but the facility must remain sufficiently secured to restrict access per special condition 10.

On October 30, 2018, the Missouri Department of Natural Resources' Water Protection Program, performed a final inspection of the facility and determined that the construction for the new facility had been completed.

Part II – Operator Certification Requirements

✓ This facility is required to have a certified operator.

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], 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, if applicable, as listed below:

Owned or operated by or for a

- Municipalities

- County

- Public Sewer District

- State agency

- Public Water Supply Districts

- Private Sewer Company regulated by the Public Service Commission

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200).

This facility currently requires a chief operator with a C Certification Level. Please see **Appendix 1 - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator's Name: Everett Jones
Certification Number: 5764
Certification Level: WW-C

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III – Operational Control Testing Requirements

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 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.

✓ As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring. These operational monitoring reports are to be submitted to the Department along with the MSOP discharge monitoring reports.

✓ The facility is a mechanical plant and is required to conduct operational control monitoring as follows:

Operational Monitoring Parameter	Frequency
Precipitation	Daily (M-F)
Flow – Influent or Effluent	Daily (M-F)
pH – Influent	Daily (M-F)
Temperature (Aeration basin)	Daily (M-F)
TSS – Influent	Weekly
TSS – Mixed Liquor	Weekly
Settleability – Mixed Liquor	Daily (M-F)
Dissolved Oxygen – Mixed Liquor	Daily (M-F)
Dissolved Oxygen – Aerobic Digester	Daily (M-F)

Part IV – Receiving Stream Information

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Mississippi River	P	3700	General Criteria AQL, WBC-A, SCR, HHP, IRR, LWW, DWS, IND	07110009-0401	0.0

*As per 10 CSR 20-7.031 Missouri Water Quality Standards, the Department defines the Clean Water Commission’s water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and 1st classified receiving stream’s beneficial water uses to be maintained are in the receiving stream table in accordance with [10 CSR 20-7.031(1)(C)].

Uses found in the receiving streams table, above:

10 CSR 20-7.031(1)(C)1.:

AQL = Protection of aquatic life (Current narrative use(s) are defined to ensure the protection and propagation of fish shellfish and wildlife, which is further subcategorized as: **WWH** = Warm Water Habitat; **CDF** = Cold-water fishery (Current narrative use is cold-water habitat.); **CLF** = Cool-water fishery (Current narrative use is cool-water habitat); **EAH** = Ephemeral Aquatic Habitat; **MAH** = Modified Aquatic Habitat; **LAH** = Limited Aquatic Habitat. This permit uses AQL effluent limitations in 10 CSR 20-7.031 Table A for all habitat designations unless otherwise specified.)

10 CSR 20-7.031(1)(C)2.: Recreation in and on the water

WBC = Whole Body Contact recreation where the entire body is capable of being submerged;

WBC-A = Whole body contact recreation that supports swimming uses and has public access;

WBC-B = Whole body contact recreation that supports swimming;

SCR = Secondary Contact Recreation (like fishing, wading, and boating).

10 CSR 20-7.031(1)(C)3. to 7.:

HHP (formerly HHF) = Human Health Protection as it relates to the consumption of fish;

IRR = Irrigation for use on crops utilized for human or livestock consumption;

LWW = Livestock and wildlife watering (Current narrative use is defined as **LWP** = Livestock and Wildlife Protection);

DWS = Drinking Water Supply;

IND = Industrial water supply

10 CSR 20-7.031(1)(C)8-11.: Wetlands (10 CSR 20-7.031 Table A currently does not have corresponding habitat use criteria for these defined uses)

WSA = Storm- and flood-water storage and attenuation; **WHP** = Habitat for resident and migratory wildlife species;

WRC = Recreational, cultural, educational, scientific, and natural aesthetic values and uses; **WHC** = Hydrologic cycle maintenance.

10 CSR 20-7.031(6): **GRW** = Groundwater

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Mississippi River	0	0	0

MIXING CONSIDERATIONS

Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].

Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Receiving Water Body's Water Quality

Currently, the Department has not conducted a stream survey for this waterbody. When a stream survey is conducted, more information may be available about the receiving stream.

Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], 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)], or is an existing facility.

ANTI-BACKSLIDING:

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(o); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

- ✓ Limitations in this operating permit for the reissuance of this permit 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) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.
 - **Acute Whole Effluent Toxicity (WET) test.** The previous permit included requirements to conduct an Acute WET test once during the permit cycle. The permit writer has conducted reasonable potential determinations for all anticipated pollutants and established numeric effluent limitations where reasonable potential exists. Also, the facility has passed previous Acute WET tests. Therefore, the permit writer has made a reasonable potential determination which concluded the facility does not have reasonable potential to exceed narrative water quality standards for acute toxicity at this time and the acute WET testing requirements have been removed from this permit. This determination will be reevaluated during the next permit renewal.
 - **Total Residual Chlorine (TRC).** The previous permit included final effluent limitations of 17 µg/L as a daily maximum and 8 µg/L as a monthly average. The facility has recently upgraded and now utilizes ultraviolet disinfection and not chlorination; therefore, the permit writer has removed final effluent limits for Total Residual Chlorine from this permit. All final effluent limitations are still protective of water quality standards and will be reevaluated upon renewal.
- ✓ The Department determines that technical mistakes or mistaken interpretations of law were made in issuing the permit under section 402(a)(1)(b).
 - **General Criteria.** The previous permit contained a special condition which described a specific set of prohibitions related to general criteria found in 10 CSR 20-7.031(4). In order to comply with 40 CFR 122.44(d)(1), the permit writer has conducted reasonable potential determinations for each general criterion and established numeric effluent limitations where reasonable potential exists. While the removal of the previous permit special condition creates the appearance of backsliding, since this permit establishes numeric limitations where reasonable potential to cause or contribute to an excursion of the general criteria exists the permit maintains sufficient effluent limitations and monitoring requirements in

order to protect water quality, this permit is equally protective as compared to the previous permit. Therefore, given this new information, and the fact that the previous permit special condition was not consistent with 40 CFR 122.44(d)(1), an error occurred in the establishment of the general criteria as a special condition of the previous permit. Please see Part VI – Effluent Limits Determination for more information regarding the reasonable potential determinations for each general criterion related to this facility.

ANTIDegradation:

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 <http://dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>

✓ This permit contains new and/or expanded discharge; please see **APPENDIX 2 - ANTIDegradation ANALYSIS**.

For stormwater discharges, the stormwater BMP chosen for the facility, through the antidegradation analysis performed by the facility, must be implemented and maintained at the facility. Failure to implement and maintain the chosen BMP alternative is a permit violation; see SWPPP.

✓ The facility does not have stormwater discharges or the stormwater outfalls onsite have no industrial exposure.

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 by submitting, as part of the application, when a higher level authority is available, must submit information 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.

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 not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

COMPLIANCE AND ENFORCEMENT:

Enforcement is the action taken by the Water Protection Program (WPP) to bring an entity into compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and conditions of an operating permit. The primary purpose of the enforcement activity in the WPP is to resolve violations and return the entity to compliance.

✓ The facility is not currently under Water Protection Program enforcement action.

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. This 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. In an effort to aid facilities in the reporting of applicable information electronically, the Department has created several new forms including operational control monitoring forms and an I&I location and reduction form. These forms are optional and found on the Department's website at the following locations:

Operational Monitoring Lagoon: <http://dnr.mo.gov/forms/780-2801-f.pdf>

Operational Monitoring Mechanical: <http://dnr.mo.gov/forms/780-2800-f.pdf>

I&I Report: <http://dnr.mo.gov/forms/780-2690-f.pdf>

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: <http://dnr.mo.gov/forms/780-2692-f.pdf>. Each facility must make a request. If a single entity owns or operates more than one facility, then the entity must submit a separate request for each facility based on its specific circumstances. An approved waiver is non-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 124.27(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.

- ✓ The permittee/facility is currently using the eDMR data reporting system.

NUMERIC LAKE NUTRIENT CRITERIA

- ✓ This facility does not discharge into a lake watershed where numeric lake nutrient criteria are applicable.

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.

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:

- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

- ✓ The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that 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 that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

- ✓ An RPA was not conducted for this facility. Please see **APPENDIX 2 – ANTIDegradation Analysis**.

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 (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

- ✓ 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.

Missouri RSMo §644.026.1.(13) 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. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) 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. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

- ✓ At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002) or the Departments' CMOM Model located at <http://dnr.mo.gov/env/wpp/permits/docs/cmom-template.doc>. For additional information regarding the Departments' CMOM Model, see the CMOM Plan Model Guidance document at <http://dnr.mo.gov/pubs/pub2574.htm>. The CMOM identifies some of the criteria used to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

SCHEDULE OF COMPLIANCE (SOC):

Per 644.051.4 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), 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.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study that may result in site-specific criteria or alternative effluent limits. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on April 9, 2015 the Department issued an updated policy on development of SOCs. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as a Cost Analysis for Compliance.

- ✓ This permit does not contain an SOC.

SEWER EXTENSION AUTHORITY SUPERVISED PROGRAM:

In accordance with [10 CSR 20-6.010(6)(A)], the Department may grant approval of a permittee's Sewer Extension Authority Supervised Program. These approved permittees regulate and approve construction of sanitary sewers and pump stations, which are tributary to this wastewater treatment facility. The permittee shall act as the continuing authority for the operation, maintenance, and modernization of the constructed collection system. See <http://dnr.mo.gov/env/wpp/permits/sewer-extension.htm>.

- ✓ The permittee does not have a Department approved Sewer Extension Authority Supervised Program.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):

In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in June 2015], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges. The purpose of a SWPPP is to comply with all applicable stormwater regulations by creating an adaptive management plan to control and mitigate stream pollution from stormwater runoff. Developing a SWPPP provides opportunities to employ appropriate BMPs to minimize the risk of pollutants being discharged during storm events. The following paragraph outlines the general steps the permittee should take to determine which BMPs will work to achieve the benchmark values or limits in the permit. This section is not intended to be all encompassing or restrict the use of any physical BMP or operational and maintenance procedure assisting in pollution control. Additional steps or revisions to the SWPPP may be required to meet the requirements of the permit.

Areas which should be included in the SWPPP are identified in 40 CFR 122.26(b)(14). Once the potential sources of stormwater pollution have been identified, a plan should be formulated to best control the amount of pollutant being released and discharged by each activity or source. This should include, but is not limited to, minimizing exposure to stormwater, good housekeeping measures, proper facility and equipment maintenance, spill prevention and response, vehicle traffic control, and proper materials handling. Once a plan has been developed the facility will employ the control measures determined to be adequate to achieve the benchmark values discussed above. The facility will conduct monitoring and inspections of the BMPs to ensure they are working properly and re-evaluate any BMP not achieving compliance with permitting requirements. For example, if sample results from an outfall show values of TSS above the benchmark value, the BMP being employed is deficient in controlling stormwater pollution. Corrective action should be taken to repair, improve, or replace the failing BMP. This internal evaluation is required at least once per month but should be continued more frequently if BMPs continue to fail. If failures do occur, continue this trial and error process until appropriate BMPs have been established.

For new, altered, or expanded stormwater discharges, the SWPPP shall identify reasonable and effective BMPs while accounting for environmental impacts of varying control methods. The antidegradation analysis must document why no discharge or no exposure options are not feasible. The selection and documentation of appropriate control measures shall serve as an alternative analysis of technology and fulfill the requirements of antidegradation [10 CSR 20-7.031(3)]. For further guidance, consult the antidegradation implementation procedure (<http://dnr.mo.gov/env/wpp/docs/AIP050212.pdf>).

Alternative Analysis (AA) evaluation of the BMPs is a structured evaluation of BMPs that are reasonable and cost effective. The AA evaluation should include practices that are designed to be: 1) non-degrading; 2) less degrading; or 3) degrading water quality. The glossary of AIP defines these three terms. The chosen BMP will be the most reasonable and effective management strategy while ensuring the highest statutory and regulatory requirements are achieved and the highest quality water attainable for the facility is discharged. The AA evaluation must demonstrate why "no discharge" or "no exposure" is not a feasible alternative at the facility. This structured analysis of BMPs serves as the antidegradation review, fulfilling the requirements of 10 CSR 20-7.031(3) Water Quality Standards and *Antidegradation Implementation Procedure (AIP)*, Section II.B.

If parameter-specific numeric exceedances continue to occur and the permittee feels there are no practicable or cost-effective BMPs which will sufficiently reduce a pollutant concentration in the discharge to the benchmark values established in the permit, the permittee can submit a request to re-evaluate the benchmark values. This request needs to include 1) a detailed explanation of why the facility is unable to comply with the permit conditions and unable to establish BMPs to achieve the benchmark values; 2) financial data of the company and documentation of cost associated with BMPs for review and 3) the SWPPP, which should contain adequate documentation of BMPs employed, failed BMPs, corrective actions, and all other required information. This will allow the Department to conduct a cost analysis on control measures and actions taken by the facility to determine cost-effectiveness of BMPs. The request shall be submitted in the form of an operating permit modification; the application is found at: <http://dnr.mo.gov/forms/index.html>.

✓ At this time, the permittee is not required to develop and implement a SWPPP.

VARIANCE:

As per the Missouri Clean Water Law § 644.061.4, 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.

- ✓ This operating 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:

$$C_e = \frac{(Q_e + Q_s)C - (Q_s \times C_s)}{(Q_e)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where C = downstream concentration C_e = effluent concentration
Cs = upstream concentration Q_e = effluent flow
Q_s = 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.

WHOLE EFFLUENT TOXICITY (WET) 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 stream water.

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A) and the Water Quality Standards 10 CSR 20-7.031(4)(D),(F),(G),(J)2.A & B are being met. Under [10 CSR 20-6.010(8)(B)], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

- Facility is a designated Major.
- Facility continuously or routinely exceeds its design flow.
- Facility that exceeds its design population equivalent (PE) for BOD₅ whether or not its design flow is being exceeded.
- Facility (whether primarily domestic or industrial) that alters its production process throughout the year.
- Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
- Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH₃)
- Facility is a municipality with a Design Flow \geq 22,500 gpd.
- Other – please justify.

- ✓ At this time, the permittee is not required to conduct WET test for this facility. The permit writer has conducted reasonable potential determinations for all anticipated pollutants and established numeric effluent limitations where reasonable potential exists. Therefore, the permit writer has made a reasonable potential determination which concluded the facility does not have reasonable potential to exceed narrative water quality standards for acute toxicity at this time and the acute WET testing requirements have been removed from this permit. This determination will be reevaluated during the next permit renewal.

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(1)(6) and per Missouri’s Standard Conditions I, Section B, part 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.

303(d) LIST & TOTAL MAXIMUM DAILY LOAD (TMDL):

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are 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 (such as swimming), 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 that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that 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 that shall include the TMDL calculation

- ✓ This facility does not discharge to a 303(d) listed stream.

Part VI – Effluent Limits Determination

CATEGORIES OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed 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 Limits section.

- | | |
|--|---|
| <input checked="" type="checkbox"/> Missouri or Mississippi River [10 CSR 20-7.015(2)] | <input type="checkbox"/> Special Streams [10 CSR 20-7.015(6)] |
| <input type="checkbox"/> Lakes or Reservoirs [10 CSR 20-7.015(3)] | <input type="checkbox"/> Subsurface Waters [10 CSR 20-7.015(7)] |
| <input type="checkbox"/> Losing Streams [10 CSR 20-7.015(4)] | <input checked="" type="checkbox"/> All Other Waters [10 CSR 20-7.015(8)] |
| <input type="checkbox"/> Metropolitan No-Discharge Streams [10 CSR 20-7.015(5)] | |

OUTFALL #001 – MAIN FACILITY OUTFALL

Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

FINAL EFFLUENT LIMITATIONS TABLE:

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	T
BOD ₅	mg/L	1		24	15	45/30	1/quarter	quarterly	C
TSS	mg/L	1		24	15	45/30	1/quarter	quarterly	C
<i>Escherichia coli</i> **	#/100mL	1, 3		630	126	630/126	1/quarter	quarterly	G
Ammonia as N (Apr 1 – Sep 30)	mg/L	2, 3	2.0		0.7	5.0/1.3	1/quarter	quarterly	C
Ammonia as N (Oct 1 – Mar 31)	mg/L	2, 3	3.0		1.5	9.4/2.8	1/quarter	quarterly	C
Oil & Grease	mg/L	1, 3	15		10	15/10	1/quarter	quarterly	G
PARAMETER	Unit	Basis for Limits	Minimum		Maximum	Previous Permit Limit	Sampling Frequency	Reporting Frequency	Sample Type
pH	SU	1	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	3, 7	*		*	***	1/quarter	quarterly	G
BOD ₅ Percent Removal	%	1			85	***	1/quarter	quarterly	M
TSS Percent Removal	%	1			85	***	1/quarter	quarterly	M

* - Monitoring requirement only.

** - #/100mL; the Monthly Average for *E. coli* is a geometric mean.

*** - Parameter not previously established in previous state operating permit.

**** - C = 24-hour composite

G = Grab

T = 24-hr. total

E = 24-hr. estimate

M = Measured/calculated

Basis for Limitations Codes:

- | | | |
|--|-----------------------------------|---|
| 1. State or Federal Regulation/Law | 5. Antidegradation Policy | 9. WET Test Policy |
| 2. Water Quality Standard (includes RPA) | 6. Water Quality Model | 10. Multiple Discharger Variance |
| 3. Water Quality Based Effluent Limits | 7. Best Professional Judgment | 11. Nutrient Criteria Implementation Plan |
| 4. Antidegradation Review | 8. TMDL or Permit in lieu of TMDL | |

OUTFALL #001 – 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.
- Biochemical Oxygen Demand (BOD₅).** This permit established new limits for BOD₅ 24 mg/L as a Weekly Average and 15 mg/L as a Monthly Average. The facility has upgraded from an activated sludge plant to an extended aeration treatment plant. Please see **APPENDIX 2 – ANTIDegradation ANALYSIS**.
- Total Suspended Solids (TSS).** This permit established new limits for BOD₅. 24 mg/L as a Weekly Average and 15 mg/L as a Monthly Average. The facility has upgraded from an activated sludge plant to an extended aeration treatment plant. Please see **APPENDIX 2 – ANTIDegradation ANALYSIS**.
- Escherichia coli (E. coli)*.** Monthly average of 126 per 100 mL as a geometric mean and Weekly Average of 630 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), 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). An effluent limit for both monthly average and weekly average 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.
- Total Ammonia Nitrogen.** Final effluent limits have been established based on the Antidegradation Review dated March 8, 2016 for the new facility that was completed October 30, 2018. Please see **APPENDIX 2 – ANTIDegradation ANALYSIS**.
- Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **pH.** 6.5-9.0 SU. 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.
- **Dissolved Oxygen.** Monitoring only. The facility discharges to a slough that discharges to the Mississippi River (P) (3700). Monitoring for DO has been added to protect the water quality of the receiving stream. Please see the **APPENDIX 2 – ANTIDegradation Analysis**.
- **Biochemical Oxygen Demand (BOD₅) 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 BOD₅ and TSS for Publicly Owned Treatment Works (POTWs)/municipals. This facility is required to meet 85% removal efficiency for BOD₅.
- **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 BOD₅ and TSS for Publicly Owned Treatment Works (POTWs)/municipals. This facility is required to meet 85% removal efficiency for TSS.

Parameters Removed.

- **Acute Whole Effluent Toxicity (WET) test.** The previous permit included requirements to conduct an Acute WET test once during the permit cycle. The permit writer has conducted reasonable potential determinations for all anticipated pollutants and established numeric effluent limitations where reasonable potential exists. Also, the facility has passed previous Acute WET tests. Therefore, the permit writer has made a reasonable potential determination which concluded the facility does not have reasonable potential to exceed narrative water quality standards for acute toxicity at this time and the acute WET testing requirements have been removed from this permit. This determination will be reevaluated during the next permit renewal.
- **Total Residual Chlorine (TRC).** The previous permit included final effluent limitations of 17 µg/L as a daily maximum and 8 µg/L as a monthly average. The facility has recently upgraded and now utilizes ultraviolet disinfection and not chlorination; therefore, the permit writer has removed final effluent limits for Total Residual Chlorine from this permit. All final effluent limitations are still protective of water quality standards and will be reevaluated upon renewal.

Sampling Frequency Justification: Sampling and Reporting Frequency has been increased to once per month for the duration of two (2) years to collect data and analyze operations of the facility. This facility is a new facility and monthly sampling and reporting is required to determine if the facility will be in compliance with the operating permit in accordance with Appendix U of Missouri's Water Pollution Control Permit Manual. Once the interim of two (2) years has lapsed sampling and reporting will continue at once per quarter. Dissolved Oxygen and Oil & Grease will be once per quarter sampling as the facility has low flow. Sampling for *E. coli* is set at monthly per 10 CSR 20-7.015(9)(D)7.C.

Sampling Type Justification: As per 10 CSR 20-7.015, samples collected for mechanical plants shall be a 24 hour modified composite sample. Grab samples, however, must be collected for pH, *E. coli*, Oil & Grease and Dissolved Oxygen in accordance with recommended analytical methods. For further information on sampling and testing methods please review 10 CSR 20-7.015(9)(D) 2.

OUTFALL #001 – GENERAL CRITERIA CONSIDERATIONS:

In accordance with 40 CFR 122.44(d)(1), effluent limitations shall be placed into the permit for those pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above any State water quality standard, including State narrative criteria for water quality. The rule further states that pollutants which have been determined to cause, have the reasonable potential to cause, or contribute to an excursion above a narrative criterion within an applicable State water quality standard, the permit shall contain a numeric effluent limitation to protect that narrative criterion. In order to comply with this regulation, the permit writer will complete reasonable potential determinations on whether the discharge will violate any of the general criteria listed in 10 CSR 20-7.031(4). These specific requirements are listed below followed by derivation and discussion (the lettering matches that of the rule itself, under 10 CSR 20-7.031(4)). It should also be noted that Section 644.076.1, RSMo as well as Section D – Administrative Requirements of Standard Conditions Part I of this permit states that it shall be unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri that is 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.

- (A) **Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses.** The discharge from this facility is made up of treated domestic wastewater. Based upon review of the Report of Compliance Inspection for the inspection conducted on April 29, 2015, no evidence of an excursion of this criterion has been observed by the Department in the past and the facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, this facility utilizes secondary treatment technology and is currently in compliance with effluent limitations that are more stringent than secondary treatment technology based effluent limits established in 40 CFR 133 and there has been no indication to the Department that the stream has had issues maintaining

beneficial uses as a result of this discharge. Based on the information reviewed during the drafting of this permit, these final effluent limitations appear to have protected against the excursion of this criterion in the past. Therefore, the discharge does not have the reasonable potential to cause or contribute to an excursion of this criterion.

- (B) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (C) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses. Please see (A) above as justification is the same.
- (D) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life. This permit contains final effluent limitations which are protective of both acute and chronic toxicity for various pollutants that are either expected to be discharged by domestic wastewater facilities or that were disclosed by this facility on the application for permit coverage. Based on the information reviewed during the drafting of this permit, it has been determined if the facility meets final effluent limitations established in this permit, there is no reasonable potential for the discharge to cause an excursion of this criterion.
- (E) Waters shall provide for the attainment and maintenance of water quality standards downstream including waters of another state. Please see (D) above as justification is the same.
- (F) There shall be no significant human health hazard from incidental contact with the water. Please see (D) above as justification is the same.
- (G) There shall be no acute toxicity to livestock or wildlife watering. Please see (D) above as justification is the same.
- (H) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community. Please see (A) above as justification is the same.
- (I) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247. The discharge from this facility is made up of treated domestic wastewater. No evidence of an excursion of this criterion has been observed by the Department in the past and the facility has not disclosed any other information related to the characteristics of the discharge on their permit application which has the potential to cause or contribute to an excursion of this narrative criterion. Additionally, any solid wastes received or produced at this facility are wholly contained in appropriate storage facilities, are not discharged, and are disposed of offsite. This discharge is subject to Standard Conditions Part III, which contains requirements for the management and disposal of sludge to prevent its discharge. Therefore, this discharge does not have reasonable potential to cause or contribute to an excursion of this criterion.

Part VII – Cost Analysis for Compliance

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

- ✓ The Department is required to determine “findings of affordability” because the permit applies to a combined or separate sanitary sewer system for a publicly-owned treatment works.

Cost Analysis for Compliance - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of Department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3.

The following table summarizes the results of the cost analysis. See **Appendix 4 – Cost Analysis for Compliance** for detailed information.

Summary Table. Cost Analysis for Compliance Summary for the City of Portage Des Sioux

New Permit Requirements			
Increased final effluent sampling from quarterly to monthly for BOD ₅ , TSS, <i>E. coli</i> , Ammonia as N, and pH. Added monthly sampling for Influent BOD ₅ and TSS and quarterly sampling for effluent Dissolved Oxygen.			
Estimated Annual Cost	Annual Median Household Income (MHI)	Estimated Monthly User Rate	User Rate as a Percent of MHI
\$1,644	\$52,502	\$64.86	1.48%

Part VIII – Administrative Requirements

On the basis of preliminary staff review and the application of 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 operating permit. The proposed determinations are tentative pending public comment.

WATER QUALITY STANDARD REVISION:

In accordance with section 644.058, RSMo, the Department is required to utilize an evaluation of the environmental and economic impacts of modifications to water quality standards of twenty-five percent or more when making individual site-specific permit decisions.

- ✓ This operating permit does not contain requirements for a water quality standard that has changed twenty-five percent or more since the previous operating permit.

PERMIT SYNCHRONIZATION:

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit. With permit synchronization, this permit will expire in the 3rd Quarter of calendar year 2024.

PUBLIC NOTICE:

The Department shall give public notice that 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 in and 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 permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- ✓ The Public Notice period for this operating permit was from November 27, 2019 through December 30, 2019. No responses received.

DATE OF FACT SHEET: OCTOBER 9, 2019

COMPLETED BY:

**DANIELLE SKOUBY, ENVIRONMENTAL SPECIALIST
 MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
 OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
 (573) 526-1503
 Danielle.Skouby@dnr.mo.gov**

Appendices

APPENDIX 1 - CLASSIFICATION WORKSHEET:

Item	Points Possible	Points Assigned
Maximum Population Equivalent (P.E.) served , peak day	1 pt./10,000 PE or major fraction thereof. (Max 10 pts.)	
Design Flow (avg. day) or peak month's flow (avg. day) whichever is larger	1 pt. / MGD or major fraction thereof. (Max 10 pts.)	
Effluent Discharge		
Missouri or Mississippi River	0	-
All other stream discharges except to losing streams and stream reaches supporting whole body contact recreation	1	1
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	-
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	-
Direct reuse or recycle of effluent	6	-
Land Application/Irrigation		
Drip Irrigation	3	-
Land application/irrigation	5	-
Overland flow	4	-
Variation in Raw Wastes (highest level only)		
Variations do not exceed those normally or typically expected	0	-
Reoccurring deviations or excessive variations of 100 to 200 percent in strength and/or flow	2	2
Reoccurring deviations or excessive variations of more than 200 percent in strength and/or flow	4	-
Department-approved pretreatment program	6	-
Preliminary Treatment		
STEP systems (operated by the permittee)	3	-
Screening and/or comminution	3	3
Grit removal	3	-
Plant pumping of main flow	3	3
Flow equalization	5	5
Primary Treatment		
Primary clarifiers	5	-
Chemical addition (except chlorine, enzymes)	4	-
Secondary Treatment		
Trickling filter and other fixed film media with or without secondary clarifiers	10	-
Activated sludge (including aeration, oxidation ditches, sequencing batch reactors, membrane bioreactors, and contact stabilization)	15	15
Stabilization ponds without aeration	5	-
Aerated lagoon	8	-
Advanced Lagoon Treatment – Aerobic cells, anaerobic cells, covers, or fixed film	10	-
Biological, physical, or chemical	12	-
Carbon regeneration	4	-
Total from page ONE (1)	----	29

APPENDIX 1 - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Solids Handling		
Sludge Holding	5	-
Anaerobic digestion	10	-
Aerobic digestion	6	6
Evaporative sludge drying	2	-
Mechanical dewatering	8	-
Solids reduction (incineration, wet oxidation)	12	-
Land application	6	-
Disinfection		
Chlorination or comparable	5	-
On-site generation of disinfectant (except UV light)	5	-
Dechlorination	2	-
UV light	4	4
Required Laboratory Control Performed by Plant Personnel (highest level only)		
Lab work done outside the plant	0	-
Push – button or visual methods for simple test such as pH, settleable solids	3	3
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	-
More advanced determinations, such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	-
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	-
Total from page TWO (2)	----	13
Total from page ONE (1)	---	29
Grand Total	---	42

- A: 71 points and greater
- B: 51 points – 70 points
- C: 26 points – 50 points
- D: 0 points – 25 points

Water Quality and Antidegradation Review

*For the Protection of Water Quality
and Determination of Effluent Limits for Discharge to
Mississippi River*

*Portage Des Sioux
Wastewater Treatment Facility*



March, 2016

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1. FACILITY INFORMATION

FACILITY NAME: Portage Des Sioux Wastewater Treatment Facility (WWTF) NPDES #: MO-0107328

FACILITY TYPE/DESCRIPTION:

FACILITY TYPE: POTW — SIC #4952

FACILITY DESCRIPTION: The current permitted design flow is 0.030 MGD. Actual flow is 0.028 MGD. The current Portage Des Sioux WWTF is a contact stabilization plant with chlorination. The proposed facility is a new mechanical activated sludge, extended aeration plant with UV disinfection. In addition, an 18,500-gallon flow equalization basin to mitigate peak flow to a factor of 8.0 and an 11,000-gallon final clarifier are proposed. The proposed design flow will be 0.056 MGD. MOCWIS Descriptions: Bar Screen/Equalization Basin/Extended aeration/activated sludge/Pre-anoxic zone/Post-anoxic zone/clarification/Post Aeration/

The Outfall #1 UTM coordinate in the effective permit were incorrect based on this submittal. Outfall coordinates below are for a discharge to the east side of the access road to the marina and the same side of the road as the waste water treatment facility.

COUNTY:	<u>St. Charles</u>	UTM COORDINATES:	<u>X= 730229, Y= 4312160</u>
12- DIGIT HUC:	<u>07110009-0401</u>	LEGAL DESCRIPTION:	<u>Survey 154</u>
EDU*:	<u>Plains/MS Tribs between Des Moines and MO Rivers/Des Moines Drainage</u>	ECOREGION:	<u>Big Rivers</u>

* - Ecological Drainage Unit

2. WATER QUALITY INFORMATION

In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(3)] and federal antidegradation policy at Title 40 Code of Federal Regulation (CFR) Section 131.12 (a), the Missouri Department of Natural Resources (MDNR) developed a statewide antidegradation policy and corresponding procedures to implement the policy. A proposed discharge to a water body will be required to undergo a level of Antidegradation Review which documents that the use of a water body’s available assimilative capacity is justified. Effective August 30, 2008, and revised May 2, 2012, a facility is required to use *Missouri’s Antidegradation Implementation Procedure (AIP)* for new and expanded wastewater discharges.

2.1. WATER QUALITY HISTORY:

The facility is not currently under Water Protection Program enforcement action. The Mississippi River has an EPA-approved TMDL for PCBs and Chlordane in fish tissue. No action will be required in the permitting process as this facility is not considered to be a source of the above listed pollutants. This facility was last inspected on April 29, 2015. The inspection showed the following unsatisfactory features; failure to apply for renewal and failure to meet monitoring requirements.

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	RECEIVING WATERBODY	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.087	Secondary	Mississippi River	0.0

Note:
 10 CSR 20-7.031 (1)(F) Class—All waters listed in the Missouri Use Designation Dataset and in Table G and Table H of this rule shall have a hydrologic class. During normal flow periods, some rivers back water into tributaries which do not otherwise have a hydrologic class. These permanent backwater areas are considered to have the same hydrologic class as the water body into which the tributary flows.

The backwater area and the main channel of the Mississippi River have the same hydrologic class and thus the same designated uses but not necessarily the same flow. This cove to which the outfall discharges is likely shallow, and likely flows would be near 0.1 CFS. We would normally assume the default flow values shown in Section 3 table below; however, we cannot assume flow of 0.1 CFS for Class P Streams without a study to show flow. The mixing zone regulation at 10 CSR 20-7.031(5)4.B.(I) indicate that flows less than 0.1 CFS receive no mixing zone (see Mixing Zone Section for discussion).

3. RECEIVING WATERBODY INFORMATION

WATERBODY NAME	CLASS	WBID	LOW-FLOW VALUES (CFS)			DESIGNATED USES**
			1Q10	7Q10	30Q10	
Mississippi River	P	3700	0.1	0.1	1.0	WWH, DWS, HHP, IND, IRR, LWW, SCR, WBC-A General Criteria

** Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Habitat (WWH), Human Health Protection (HHP), Cool Water Fishery (CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation – Category A (WBC-A), Whole Body Contact Recreation – Category B (WBC-B), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).

RECEIVING WATER BODY SEGMENT #1: Mississippi River

Upper end segment* UTM coordinates: X= 730229 / Y= 4312160 (Outfall)

Lower end segment* UTM coordinates: X= 731140 / Y= 4312101 (0.5 miles from outfall near main channel)

*Segment is the portion of the stream where discharge occurs. Segment is used to track changes in assimilative capacity and is bound at a minimum by existing sources and confluences with other significant water bodies.

4. GENERAL COMMENTS

MECO Engineering Company, Inc., LLC prepared, on behalf of City of Portage Des Sioux, the *Antidegradation Review* dated February 5, 2016. Applicant elected to determine that discharge of all pollutants of concern (POC) is non-degrading or insignificant to the receiving waters. This analysis was conducted to fulfill the requirements of the AIP. Information that was provided by the applicant in the summary forms in Appendix B was used to develop this review document.

A Geohydrological Evaluation was not submitted for this facility upgrade. The stream is gaining for discharge purposes (Appendix A: Map). MECO Engineering sent a request to the Missouri Geologic Survey for this review.

Missouri Department of Conservation Natural Heritage Review Report was obtained by the applicant; and no records of state- or federally-listed endangered species were found in the project area, but the Mississippi River (as well as the tributary mouths) is home to the federally listed Pallid Sturgeon, several mussel species, in pooled reaches upstream of the Missouri confluence and the state-listed Lake sturgeon.

According to the Financial Assistance Center, MODNR, land application of wastewater was considered in the 2011 Preliminary Engineering Report. A letter dated September 2013 in the Water and Wastewater Review Committee file indicated that the applicant needed to redraw the land application proposed due to lack of available land.

5. ANTIDEGRADATION REVIEW INFORMATION

The following is a review of the City of Portage Des Sioux *Antidegradation Review* dated February 5, 2016.

5.1. TIER DETERMINATION

Below is a list of pollutants of concern reasonably expected to be in the discharge (see Appendix B: Attachment B). Pollutants of concern are defined as those pollutants “proposed for discharge that affects beneficial use(s) in waters of the state. POCs include pollutants that create conditions unfavorable to beneficial uses in the water body receiving the discharge or proposed to receive the discharge.” (AIP, Page 7). Tier 2 is assumed for all POCs; however, tier determinations were not necessary with maintenance or reduction of mass loading determinations (see Appendix B).

Table 1. Pollutants of Concern and Tier Determination

POLLUTANTS OF CONCERN	TIER*	DEGRADATION	COMMENT
BOD5/DO	*	Insignificant	
Total Suspended Solids (TSS)	**	Insignificant	
Ammonia as N	*	Insignificant	
pH	***	Insignificant	Permit limits applied
Oil & Grease (mg/L)	*	Insignificant	
Bacteria/ <i>Escherichia coli</i> (<i>E. coli</i>)	*	Insignificant	Permit limits applied

*Tier determination not needed with the demonstration of mass loading maintenance. Tier determination not possible: ** No in-stream standards for these parameters. *** Standards for these parameters are ranges.

The following Antidegradation Review Summary attachments in Appendix B were used by the applicant:

Attachment B, Tier 2 with minimal degradation – Demonstration of Insignificance.

5.2. EXISTING WATER QUALITY

No existing water quality data was submitted.

5.3. NO DISCHARGE EVALUATION

According to 10 CSR 20-6.010 (4)(D), reports for the purpose of constructing a waste water treatment facility shall consider the feasibility of constructing and operating a no discharge facility. Missouri’s antidegradation implementation procedures specifies that if the proposed activity does not result in significant degradation then a demonstration of necessity (i.e., alternatives analysis) and a determination of social and economic importance are not required. For this reason, the no discharge evaluation should be completed during the submittal of engineering report for the purpose of obtaining a construction permit.

5.4. LOSING STREAM ALTERATIVE DISCHARGE LOCATION

Under 10 CSR 20-7.015(4) (A), *discharges to losing stream shall be permitted only after other alternatives including land application, discharge to gaining stream and connection to a regional facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.* The proposed project does not discharge to a losing stream segment and will not discharge with 2 miles of a losing stream segment.

5.5. DEMONSTRATION OF INSIGNIFICANCE

In Section II.A of the *Missouri’s Antidegradation Rule and Implementation Procedure*, a demonstration of insignificance of the discharge requires the applicant to show a reduction, or maintenance of loading, i.e., no change in ambient water quality concentrations in the receiving waters. As demonstrated in the City of Portage Des Sioux *Antidegradation Review* dated February 5, 2016, Table 2 below summarizes the results of current loading based on the expected 2016 operating permit limitations and proposed loadings.

Table 2. Net Change in Loadings Based upon Expected 2016 Operating Permit * and Proposed Permit Limits**

Pollutants of Concern	Current* Weekly Average or Maximum Daily Limit (mg/L)	Proposed Weekly Average or Maximum Daily Limit (mg/L)	Current Total Loading (lb/day)	Proposed Loading (lb/day)	Net change (lb/day)
BOD ₅ (AWL)	45	24	11.3	11.2	-0.1
TSS (AWL)	45	24	11.3	11.2	-0.1
Ammonia summer	5	2	1.3	0.9	-0.3
Ammonia winter	9.4	3	2.4	1.4	-1.0
Pollutants of Concern	Current* Monthly Average (mg/L)	Proposed Monthly Average (mg/L)	Current Total Loading (lb/day)	Proposed Loading (lbs/day)	Net change (lb/day)
BOD ₅	30	15	7.5	7.0	-0.5
TSS	30	15	7.5	7.0	-0.5
Ammonia summer	1.3	0.7	0.33	0.33	0.0
Ammonia winter	3.1	1.5	0.78	0.70	-0.1
Design Flows (MGD)					
Current DF	0.03	proposed was 0.8 mg/L			
New proposed DF	0.056				

* The submittal from the applicant contained the expired permit limitations as basis for the calculation of no degradation limitations. The 2016 Renewal of the permit will be issued and must be used for limit determination.

**See Derivation and Discussion of Limits, Section 10. AWL = average weekly limit.

Current design flow (Qd) = 0.030 MGD

Mass conversion -- 1 mg/L = 8.34 lbs/million gallons

Wasteload Allocation (WLA) = maximum daily or weekly average

Existing Load (lbs/day) = Mass conversion * WLA * Qd

Example: 8.34 (lbs/MG)/(mg/L) * 1 mg/L * 0.056 MGD = 0.25lbs/day

5.6. DEMONSTRATION OF NECESSITY AND SOCIAL AND ECONOMIC IMPORTANCE

Missouri's antidegradation implementation procedures specify that if the proposed activity does not result in significant degradation then a demonstration of necessity (i.e., alternatives analysis) and a determination of social and economic importance are not required. Thus, the Tier 2 Review is not required.

6. GENERAL ASSUMPTIONS OF THE WATER QUALITY AND ANTIDEGRADATION REVIEW

1. A Water Quality and Antidegradation Review (WQAR) assumes that [10 CSR 20-6.010(3) Continuing Authorities and 10 CSR 20-6.010(4) (D), consideration for no discharge] has been or will be addressed in a Missouri State Operating Permit or Construction Permit Application.
2. A WQAR does not indicate approval or disapproval of alternative analysis as per [10 CSR 20-7.015(4) Losing Streams], and/or any section of the effluent regulations.
3. Changes to Federal and State Regulations made after the drafting of this WQAR may alter Water Quality Based Effluent Limits (WQBEL).
4. Effluent limitations derived from Federal or Missouri State Regulations (FSR) may be WQBEL or Effluent Limit Guidelines (ELG).
5. WQBEL supersede ELG only when they are more stringent. Mass limits derived from technology based limits are still appropriate.
6. A WQAR does not allow discharges to waters of the state, and shall not be construed as a National Pollution Discharge Elimination System or Missouri State Operating Permit to discharge or a permit to construct, modify, or upgrade.

7. Limitations and other requirements in a WQAR may change as Water Quality Standards, Methodology, and Implementation procedures change.
8. Nothing in this WQAR removes any obligations to comply with county or other local ordinances or restrictions.
9. If the proposed treatment technology is not covered in 10 CSR 20-8 Design Guides, the treatment process may be considered a new technology. As a new technology, the permittee will need to work with the review engineer to ensure equipment is sized properly. The operating permit may contain additional requirements to evaluate the effectiveness of the technology once the facility is in operation. This Antidegradation Review is based on the information provided by the facility and is not a comprehensive review of the proposed treatment technology. If the review engineer determines the proposed technology will not consistently meet proposed effluent limits, the permittee will be required to revise their Antidegradation Report.

7. MIXING CONSIDERATIONS

Mixing Zone (MZ): Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)]. See explanation below.

Zone of Initial Dilution (ZID): Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)]

This facility discharges to slough/backwater area of the Mississippi River. The hydrologic classification is Class P for reasons described in Section 2.1 above. Our policy is to assign Class P streams the default low flow value shown in the table below in the absence of stream gauging data. Given the lack of flow information in this backwater area of the Mississippi River, these are the default values that would be used in the event applicable; however, CSR 20-7.031 (5) (D) mentions the other factors to consider in applying mixing zones. The size of the river, velocities, hydrologic and physiographic characteristics can prohibit or further limit mixing considerations.

Likely mixing will be poor in the cove or slough as the volume of the discharge is small, and the mixing zone volume due to physical constraints of the cove will prohibit true mixing. In addition, backflow from the main channel will likely prevent discharge water from mixing over a distance. Finally, WPP staff are concerned that slough is too shallow with minimal flow and giving higher limitations for POCs such as ammonia could impair that section of the slough. Because non-degrading limits are being applied mixing is not a necessary part of the evaluation.

	Flow (cfs)	MZ (cfs)	ZID (cfs)
7Q10	0.1	0.025	0.0025
1Q10	0.1	0.025	0.0025
30Q10	1.0	0.25	NA

8. PERMIT LIMITS AND MONITORING INFORMATION

WASTELOAD ALLOCATION STUDY CONDUCTED (Y OR N): N USE ATTAINABILITY ANALYSIS CONDUCTED (Y OR N): N WHOLE BODY CONTACT USE RETAINED (Y OR N): Y
 UAA WAS NOT CONDUCTED, THUS WBCR (B) IS RETAINED.

$$AEC\% = \left(\frac{100}{DilutionRatio + 1} \right)$$

OUTFALL #001

WET TEST (Y OR N): Y FREQUENCY: ONCE/PERMIT CYCLE AEC: 100% METHOD: MULTIPLE

TABLE 3. EFFLUENT LIMITS FOR OUTFALL #001

PARAMETER	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	BASIS FOR LIMIT (NOTE 2)	MONITORING FREQUENCY
FLOW	MGD	*		*		ONCE/DAY
BOD ₅ (MG/L)***	MG/L		24	15	NDEL	ONCE/MONTH
TSS (MG/L)	MG/L		24	15	NDEL	ONCE/MONTH
DISSOLVED OXYGEN (MG/L)	MG/L	*		*	FSR	ONCE/QUARTER
PH (S.U.)	SU	6.5 – 9.0		6.5 – 9.0	FSR	ONCE/MONTH
AMMONIA AS N (MG/L) (APRIL 1 – SEPT 30)	MG/L	2		0.7	WQBEL/ NDEL	ONCE/MONTH
AMMONIA AS N (MG/L) (OCT 1 – MAR 31)	MG/L	3		1.5	WQBEL/ NDEL	ONCE/MONTH
OIL & GREASE (MG/L)	MG/L	15		10	FSR	ONCE/MONTH
<i>ESCHERICHIA COLIFORM (E. COLI)</i>	NOTE 1		630**	126**	FSR	ONCE/MONTH
WET TESTING	TU	*		*	FSR	ONCE/MONTH

NOTE 1 – COLONIES/100 mL

NOTE 2– WATER QUALITY-BASED EFFLUENT LIMITATION – WQBEL; OR MINIMALLY DEGRADING EFFLUENT LIMIT –MDEL; OR PREFERRED ALTERNATIVE EFFLUENT LIMIT – PEL; OR TECHNOLOGY-BASED EFFLUENT LIMIT – TBEL; OR NO DEGRADATION EFFLUENT LIMIT – NDEL; OR FEDERAL/STATE REGULATION – FSR; OR NOT APPLICABLE – N/A. ALSO, PLEASE SEE THE **GENERAL ASSUMPTIONS OF THE WQAR #4 & #5.**

* Monitoring requirements only.

** The Monthly and Weekly Average for *E. coli* shall be reported as a Geometric Mean. 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).

*** This facility is required to meet a removal efficiency of 85% or more for BOD₅ and TSS. Influent BOD₅ and TSS data should be reported to ensure removal efficiency requirements are met.

9. RECEIVING WATER MONITORING REQUIREMENTS

No receiving water monitoring requirements recommended at this time.

10. DERIVATION AND DISCUSSION OF LIMITS

Wasteload allocations and limits were calculated using two methods:

1) Water quality-based – Using water quality criteria or water quality model results and the dilution equation below:

$$C = \frac{(C_s \times Q_s) + (C_e \times Q_e)}{(Q_e + Q_s)} \quad (\text{EPA/505/2-90-001, Section 4.5.5})$$

Where: C = downstream concentration

C_s = upstream concentration

Q_s = upstream flow

C_e = effluent concentration

Q_e = effluent 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).

Chronic wasteload allocations (WLA_c) were determined using applicable chronic water quality criteria (CCC: criteria continuous concentration) and upstream stream flow without mixing considerations. Acute wasteload allocations are only determined in the absence of applicable chronic criteria.

10.1. OUTFALL #001 – MAIN FACILITY OUTFALL

10.2. LIMIT DERIVATION

- **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.
- **Biochemical Oxygen Demand (BOD₅).** BOD₅ limits of 15 mg/L monthly average, 24 mg/L average weekly. The technology-based secondary limitations at 10 CSR 20-7.015 (8) of 30 mg/L monthly and 45 mg/L average weekly are less protective of water quality standards than the no degradation expansion limitations. **Table 2** above shows that the expanded loading will be reduced as compared to the 2016 renewed permit loading. This demonstration of insignificance satisfies the requirements of the AIP. These limitations are non-degrading and protective of existing water quality.

Using the Streeter Phelps DO Model, Appendix B. shows a graphic estimate of dissolved oxygen concentration with distance from the outfall. This assumes an instream dissolved oxygen of 5 mg/L, instream depth of 2 feet, upstream flow of 0.1 CFS (7Q10), and an effluent dissolved oxygen of 4 mg/l. Because of the sag and potential for dissolved oxygen standards to be compromised, we are including dissolved oxygen monitoring.

There is a demonstrated reduction in loading in the Table 2 above; therefore, no further dissolved oxygen analysis is needed to show that the proposed expanded loading is insignificant because existing water quality should improve with the proposed discharge. Therefore, staff considers the effluent limitations of 24 mg/L as the average weekly and 15 mg/L as the monthly average protective of aquatic life. Therefore the effluent limits 24 mg/L as average weekly and 15 mg/L as the average monthly will be applied.

Influent monitoring may be required for this facility in its Missouri State Operating Permit.

- **Total Suspended Solids (TSS).** 15 mg/L monthly average, 24 mg/L average weekly limit. Table 2 above shows that the expanded loading will be reduced as compared to the current permitted loading. This demonstration of insignificance satisfies the requirements of the AIP. These limitations are non-degrading and protective of existing water quality.

Technology-based secondary limitations at 10 CSR 20-7.015 (8) of 30 mg/L monthly and 45 mg/L average weekly are less protective of water quality standards than the no degradation expansion limitations in Table 2 above. Therefore, the no degradation limitations must be applied.

The influent monitoring may be required for this facility in its Missouri State Operating Permit.

- **Dissolved Oxygen (DO).** Monitoring only. To protect water quality standard in the slough we are requiring that the facility monitor for DO prior to discharge. The facility is proposing post-aeration so no additional treatment will be required.
- **pH.** – 6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed because of the location of the discharge, therefore the water quality standard must be met at the outfall.
- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(B)7.C. & Table B3]. Background total ammonia nitrogen = 0.01 mg/L

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

Summer: April 1 – September 30, Winter: October 1 – March 31.

The department calculated the following water quality-based limitations (WQBEL) to be protective of water quality standards for the current discharge design flow (0.0465 CFS) in the expected 2016 operating permit. The submittal from the applicant contained the expired permit limitations as basis for the calculation of no degradation limitations for ammonia. The table below shows the maximum daily and average monthly limitations for winter and summer from the 2016 NPDES Permit renewal. The coefficients of variation (CV) used in the calculations below are for the current facility and do not apply to the future facility.

Summer: April 1 – September 30

Chronic WLA: $C_e = ((0.0465 + 0.0)1.5 - (0.25 * 0.01))/0.0465$
 $C_e = 1.5 \text{ mg/L}$

Acute WLA: $C_e = ((0.0465 + 0.0)12.1 - (0.0 * 0.01))/0.0465$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L} (0.660) = 0.99 \text{ mg/L}$ [CV = 1.03, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.199) = 2.41 \text{ mg/L}$ [CV = 1.03, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

AML = $0.99 \text{ mg/L} (1.33) = 1.3 \text{ mg/L}$ [CV = 1.03, 95th Percentile, n =30]
 MDL = $0.99 \text{ mg/L} (5.02) = 5.0 \text{ mg/L}$ [CV = 1.03, 99th Percentile]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.0465 + 0.0)3.1 - (0.0 * 0.01))/0.0465$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((0.0465 + 0.0)12.1 - (0.0 * 0.01))/0.0465$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L} (0.701) = 2.42 \text{ mg/L}$ [CV = 0.87, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.231) = 3.89 \text{ mg/L}$ [CV = 0.87, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

AML = $2.42 \text{ mg/L} (1.28) = 3.1 \text{ mg/L}$ [CV = 0.87, 95th Percentile, n =30]
 MDL = $2.42 \text{ mg/L} (4.33) = 9.4 \text{ mg/L}$ [CV = 0.87, 99th Percentile]

No degradation Limitation Calculations

Table 2 above calculates loading for the facility with recently renewed ammonia limitations as provided above. These loadings are different than the applicant-provided antidegradation review loading calculations (Appendix C). The table below shows the no degradation limitations for this discharge.

Season	MDL (mg/L)	AML (mg/L)
Summer	2	0.7
Winter	3	1.5

Notice to Permittee: On August 22, 2013, the Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, *Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013*, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA's published ammonia criteria into their water quality standards that protect aquatic life in water.

The Water Protection Program (WPP) is providing this notice to inform permittees that EPA's published ammonia criteria for aquatic life protection is lower than the current Missouri criteria. The Department has begun discussions about how these new criteria will be implemented. WPP is suggesting that all permittees consider the lower ammonia criteria and adjust proposed alternative's treatment design, if they so choose. Consideration of the future ammonia criteria at this time could avoid a near-future upgrade. More information about the new ammonia criteria for aquatic life protection may be found at: <http://dnr.mo.gov/pubs/pub2481.htm> .

- **Escherichia coli (E. coli)**. Monthly average of 126 per 100 mL as a geometric mean and Weekly Average of 630 per 100 mL during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(5)(C). An effluent limit for both monthly average and daily maximum is required by 40 CFR 122.45(d).

For facilities less than 100,000 gpd: Per the effluent regulations the *E. coli* sampling/monitoring frequency shall be set to match the monitoring frequency of wastewater and sludge sampling program for the receiving water category in 7.015(1)(B)3. during the recreational season (April 1 – October 31), with compliance to be determined by calculating the geometric mean of all samples collected during the reporting period (samples collected during the calendar week for the weekly average, and samples collected during the calendar month for the monthly average). The weekly average requirement is consistent with EPA federal regulation 40 CFR 122.45(d). Please see **GENERAL ASSUMPTIONS OF THE WQAR #7**

- **Oil & Grease**. Conventional pollutant, [10 CSR 20-7.031, Table A]. Effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

Whole Effluent Toxicity

- **Acute Whole Effluent Toxicity**. Monitoring requirement only. Monitoring is required to determine if reasonable potential exists for this facility's discharge to exceed water quality standards. Where no mixing is allowed, the acute criterion must be met at the end of the pipe. However, when using an LC50 as the test endpoint, the acute toxicity test has an upper sensitivity level of 100% effluent, or 1.0 TUa. If less than 50% of the test organisms die at 100% effluent, the true LC50 value for the effluent cannot be measured, effectively acting as a detection limit. Therefore, when the allowable effluent concentration is 100% a limit of 1.0 TUa will apply. If more than 50% of the organisms survive at 100% effluent, the permittee should report TUa <1.

$$\text{Acute WLA: } C_e = ((0.087 + 0.0)0.3 - (0.0 * 0.0))/0.087$$
$$C_e = 0.3 \text{ TUa}$$

$$\text{LTA}_a = 0.3\text{TUa} (0.321) = 0.0963 \text{ TUa} \quad [\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$

$$\text{MDL} = 0.0963 \text{ TUa} (3.11) = 0.3 \text{ TUa} \quad [\text{CV} = 0.6, 99^{\text{th}} \text{ Percentile}]$$

Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to Waters of the State lacking designated uses, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(5)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Classified P with other than default Mixing Considerations, the AEC% is determined as follows:.

$$\text{Acute AEC\%} = \{[(\text{design flow}_{\text{cfs}} + \text{ZID}_{7\text{Q}10}) / \text{design flow}_{\text{cfs}}]^{-1}\} \times 100 = 100\%$$

Note: Future reasonable potential analysis should use the above limitation as comparison to the receiving water concentration rather than water quality standards. This process prevents further degradation of a Tier 2 water body.

11. ANTIDegradation REVIEW PRELIMINARY DETERMINATION

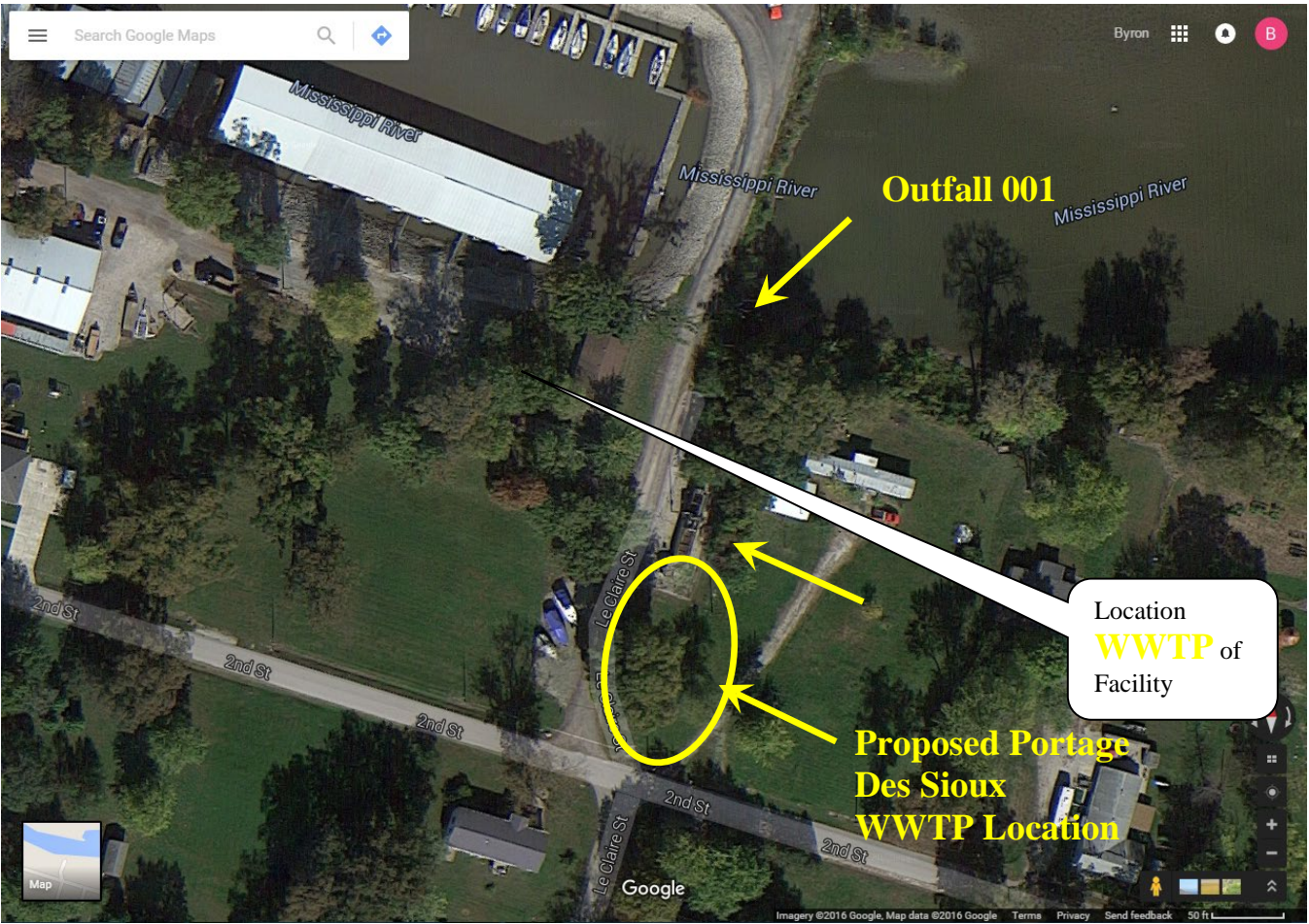
The proposed activated sludge mechanical plant discharge will result in no degradation of the segment identified in the Mississippi River. Per the requirements of the AIP, the effluent limits in this review were developed to be protective of beneficial uses and to retain the remaining assimilative capacity. MDNR has determined that the submitted review is sufficient and meets the requirements of the AIP. No further analysis is needed for this discharge.

Reviewer: Todd J. Blanc

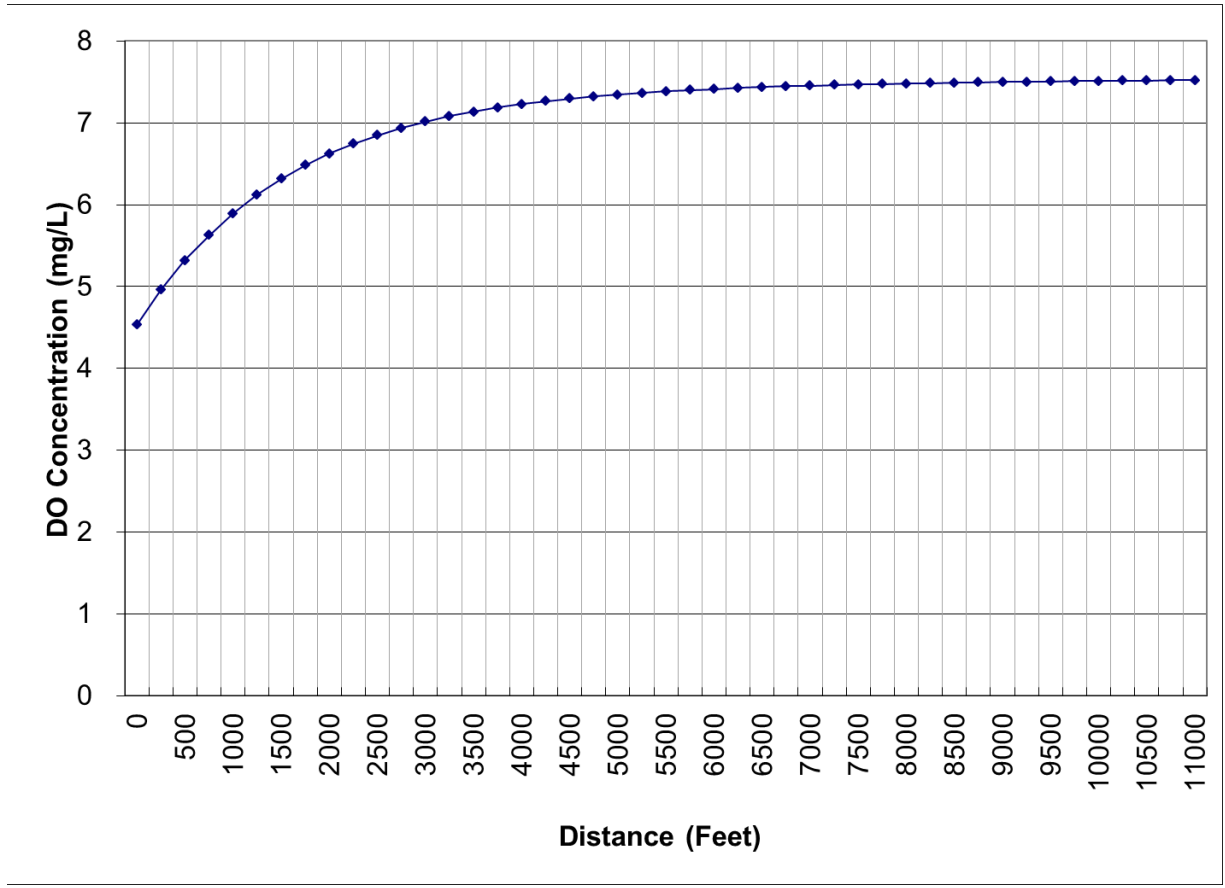
Date: March 8, 2016

Unit Chief: John Rustige, P.E.

Appendix A: Map of Discharge Location Outfall #001 for Portage Des Sioux



Appendix B: Streeter Phelps Model Estimated Effluent Dissolved Oxygen Concentration with Distance



Appendix C: Antidegradation Review Summary Attachments

The attachments that follow contain summary information provided by the applicant. MDNR staff determined that changes must be made to the information contained within these attachments. The following were modified and can be found within the MDNR WQAR:

- 1) Attachment B: Recalculation of no degradation loading demonstration in Section 10 below was necessary due to the renewal of the state operating permit. In addition, the summer average monthly limitations for ammonia are lower than the applicant's proposed limitations due to the change in renewal limitations and Section 10 loading recalculation.

ACT # 156
RECEIVED

FEB 10 2016

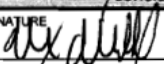
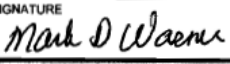
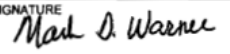
Water Protection Program



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
ANTIDEGRADATION REVIEW SUMMARY FOR PUBLIC NOTICE
ATTACHMENT B: TIER 2 – MINIMAL DEGRADATION

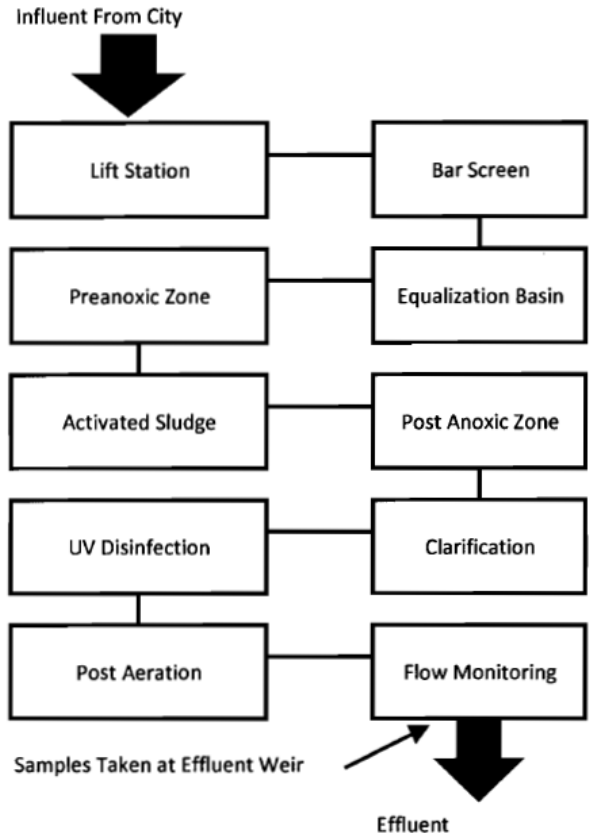
1. FACILITY			
NAME Portage Des Sioux Wastewater Treatment Plant		TELEPHONE NUMBER WITH AREA CODE (636) 753-2235	
ADDRESS (PHYSICAL) NE Corner of 2nd Street and LeClair Street	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373
2. OWNER			
NAME AND OFFICIAL TITLES Mark D. Warner, Mayor			
ADDRESS PO Box 118	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373
TELEPHONE NUMBER WITH AREA CODE (636) 753-2235	E-MAIL ADDRESS mwsparky@sbcglobal.net		
3. CONTINUING AUTHORITY			
The regulatory requirement regarding continuing authority is found in 10 CSR 20-6.010(3) available at www.sos.mo.gov/adrules/csr/current/10csr/10c20-6a.pdf .			
NAME AND OFFICIAL TITLES City of Portage Des Sioux			
ADDRESS PO Box 118	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373
TELEPHONE NUMBER WITH AREA CODE (636) 753-2235	E-MAIL ADDRESS mwsparky@sbcglobal.net		
4. RECEIVING WATER BODY SEGMENT #1			
NAME Mississippi River			
4.1 UPPER END OF SEGMENT (Location of discharge) UTM _____ OR Lat <u>38.9</u> , Long <u>-90.3</u>			
4.2 LOWER END OF SEGMENT UTM _____ OR Lat <u>38.9</u> , Long <u>-90.3</u>			
Per the Missouri Antidegradation Rule and Implementation Procedure, or AIP, the definition of a segment, "a segment is a section of water that is bound, at a minimum, by significant existing sources and confluences with other significant water bodies."			
5. WATER BODY SEGMENT #2 (IF APPLICABLE, Use another form if a third segment is needed)			
NAME			
5.1 Upper end of segment UTM _____ OR Lat _____, Long _____			
5.2 Lower end of segment UTM _____ OR Lat _____, Long _____			
6. WET WEATHER ANTICIPATIONS			
If an applicant anticipates excessive inflow or infiltration and pursues approval from the department to bypass secondary treatment, a feasibility analysis is required. The feasibility analysis must comply with the criteria of all applicable state and federal regulations including 40 CFR 122.41(m)(4). Attach the feasibility analysis to this report.			
What is the Wet Weather Flow Peaking Factor in relation to design flow? <u>2.6</u>			
Wet Weather Design Summary: Wet Weather Peak Design Flow is 144,000 gpd. Flow Equalization Basin will handle wet weather flows over Average of 56,000 gpd.			
7. OIL AND GREASE			
Is this a publicly owned treatment works, or POTW, restaurant, school or other domestic wastewater treatment facility with oil and grease as a pollutant of concern? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
In accordance with 10 CSR 20-7.031(3)(B), waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses. In accordance with 10 CSR 20-7.031 Table A, oil and grease has a chronic toxicity of 10 mg/L for protection of aquatic life. This facility will meet the effluent limits (MDL and AML of 15 mg/L and 10 mg/L, respectively).			

8. DECHLORINATION			
If chlorination and dechlorination is the existing or proposed method of disinfection treatment, will the effluent discharged be equal to or less than the Water Quality Standards for Total Residual Chlorine stated in Table A of 10 CSR 20-7.031? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Based on the disinfection treatment system being designed for total removal of Total Residual Chlorine, minimal degradation for Total Residual Chlorine is assumed and the facility will be required to meet the water quality based effluent limits. These compliance limits for Total Residual Chlorine are much less than the method detection limit of 0.13 mg/L.			
9. EXISTING WATER QUALITY DATA OR MODEL SUMMARY			
Obtaining existing water quality is possible by three methods according to the Antidegradation Implementation Procedure, Section II.A.1: (1) Using previously collected data with an appropriate Quality Assurance Project Plan, or QAPP (2) Collecting water quality data approved by the Missouri Department of Natural Resources methodology or (3) Using an appropriate water quality model. QAPPs must be submitted to the department for approval in advance (six months) of the proposed activity. Provide all corresponding data and reports that were approved by the department's Water Protection Program.			
Date that existing water quality data was provided by the Water Protection Program: Tier Analysis submitted with antidegradation review report (see AIP Section II 1.d., Page 21): Approval date of the QAPP by the Water Protection Program: Approval date of the project sampling plan by the Water Protection Program: Approval date of the data collected for all appropriate pollutants of concern by the Water Protection Program:			
Comments/Discussion:			
10. ASSIMILATIVE CAPACITY / LOAD REDUCTION TABLE			
Determining the facility assimilative capacity, or FAC, and the segment assimilative capacity, or SAC for each pollutant of concern is explained in detail in the Antidegradation Implementation Procedure, Section II.A.3, and Appendix 3. POCs to be considered include those pollutants reasonably expected to be present in the discharge per the Antidegradation Implementation Procedure, Section II.A. Provide all calculations in the Antidegradation Review Report.			
Pollutant of Concern	Facility Assimilative Capacity OR Current Load (lbs/day)	New Load (lbs/day)	Percent of Facility Assimilative Capacity OR Percent Load Reduction (%)
BOD5	11.3	11.2	0.8
TSS	11.3	11.2	0.8
Ammonia as N Summer	0.9	0.9	0.0
Ammonia as N Winter	1.9	1.4	26.3
Pollutant of Concern	Water Body Segment #1 SAC (Use another form if a second segment is needed)	Cumulative Net Increase in Load	Cumulative % of Water Body Segment #1 SAC
Assimilative capacity/loading reduction summary The new WWTP will decrease the overall loadings of POC or keep them the same.			
Is degradation considered minimal for all pollutants of concern? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No			
Degradation is considered minimal if the new or proposed loading is less than 10 percent of the FAC and the cumulative degradation is less than 10 percent of the SAC according to the Antidegradation Implementation Procedure, Section II.A.3. If yes, an alternatives analysis and a social and economic importance analysis are not required.			
Comments/Discussion			

11. SUMMARY OF THE PROPOSED ANTIDegradation REVIEW EFFLUENT LIMITS				
What are the proposed pollutants of concern and their respective effluent limits that the selected treatment option will comply with:				
Pollutants of Concern*	Units	Wasteload Allocation	Average Monthly Limit	Daily Maximum Limit
BOD5	mg/L		15.0	24.0
TSS	mg/L		15.0	24.0
Ammonia as N Summer	mg/L		0.8	2.0
Ammonia as N Winter	mg/L		1.5	3.0
Oil and Grease	mg/L		10	15
These proposed limits must not violate water quality standards, be protective of beneficial uses and achieve the highest statutory and regulatory requirements.				
*A Tier Analysis must be submitted to demonstrate that the POCs are Tier 2 with minimal degradation.				
12. PROPOSED PROJECT SUMMARY				
Construction of a new mechanical activated sludge extended aeration treatment plant. There will be a flow equalization basin to mitigate peak flows. The activated sludge will flow from the aeration basin to the final clarifiers, then to UV, and post aeration.				
Attach the Antidegradation Review Report and all supporting documentation, including minimal degradation calculations.				
CONSULTANT: I have prepared or reviewed this form and all attached reports and documentation. The conclusion proposed is consistent with the Antidegradation Implementation Procedure and current state and federal regulations.				
SIGNATURE 			DATE 2-5-16	
NAME AND OFFICIAL TITLES / LICENSE # Max F. Middendorf, Vice President; PE-026008		COMPANY NAME MECO Engineering Company, Inc., LLC		
ADDRESS 3120 Palmyra Road		CITY Hannibal	STATE MO	ZIP CODE 63401
TELEPHONE NUMBER WITH AREA CODE (573) 221-4048		E-MAIL ADDRESS bmartin@mecoengineering.com		
OWNER: I have read and reviewed the prepared documents and agree with this submittal.				
SIGNATURE 			DATE 02-05-2016	
CONTINUING AUTHORITY: I have read and reviewed the prepared documents and agree with this submittal.				
SIGNATURE 			DATE 02-05-2016	

City of Portage Des Sioux
Wastewater Treatment Facility
Process Flow Diagram

366-004



The Facility Description:

The flow from the City is pumped into the activated sludge treatment plant where a manual bar screen removes large debris and the flow is held in an equalization basin. The flow is then treated by activated sludge with aeration and clarification then disinfection using UV light prior to discharge

APPENDIX 3 – FACILITY OUTFALL #001



APPENDIX 4– COST ANALYSIS FOR COMPLIANCE:

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

**Portage Des Sioux WWTF, Permit Renewal
 City of Portage Des Sioux
 Missouri State Operating Permit #MO-0107328**

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

New Permit Requirements

The permit requires compliance with new monitoring requirements of: increased final effluent sampling from monthly to quarterly for BOD₅, TSS, *E. coli*, Ammonia as N, and pH. Added monthly sampling for Influent BOD₅ and TSS and quarterly sampling for effluent Dissolved Oxygen.

Connections

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

Connection Type	Number
Residential	138
Commercial	3
Industrial	0
Total	141

Data Collection for this Analysis

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

Eight Criteria of 644.145 RSMo

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

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

Criterion 1 Table. Current Financial Information for the City of Portage Des Sioux	
Current Monthly User Rates per 5,000 gallons*	\$63.89
Median Household Income (MHI) ¹	\$52,502
Current Annual Operating Costs (excludes depreciation)	\$113,614

*User Rates were reported by the permittee on the Financial Questionnaire.

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

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

Criterion 2A Table. Estimated Cost Breakdown of New Permit Requirements			
New Requirement	Frequency	Estimated Cost	Estimated Annual Cost
BOD ₅ – Effluent	Monthly	\$41	\$328
TSS – Effluent	Monthly	\$16	\$128
<i>E. coli</i> – Effluent	Monthly	\$29	\$232
Ammonia – Effluent	Monthly	\$20	\$160
pH – Effluent	Monthly	\$8	\$64
BOD ₅ – Influent	Monthly	\$41	\$492
TSS – Influent	Monthly	\$16	\$192
Dissolved Oxygen – Effluent	Quarterly	\$12	\$48
Total Estimated Annual Cost of New Permit Requirements			\$1,644

Criterion 2B Table. Estimated Costs for New Permit Requirements		
(1)	Estimated Annual Cost	\$1,644
(2)	Estimated Monthly User Cost for New Requirements ²	\$0.97
	Estimated Monthly User Cost for New Requirements as a Percent of MHI ³	0.022%
(3)	Total Monthly User Cost*	\$64.86
	Total Monthly User Cost as a Percent of MHI ⁴	1.48%

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

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

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

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

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

The community reported that their outstanding debt for their current wastewater collection and treatment systems is \$900,000. The community reported that each user pays \$63.89 monthly, of which, \$44.72 is used toward payments on the current outstanding debt.

As shown in Criterion 2, the projected user rate plus the amount of the current user rate used toward payments on outstanding debt is \$64.86 for the added sampling requirements.

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

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

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

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

No.	Administrative Unit	Portage Des Sioux City	Missouri State	United States
1	Population (2017)	352	6,075,300	321,004,416
2	Percent Change in Population (2000-2017)	0.3%	8.6%	14.1%
3	2017 Median Household Income (in 2018 Dollars)	\$52,502	\$52,801	\$59,060
4	Percent Change in Median Household Income (2000-2017)	-9.1%	-7.7%	-6.7%
5	Median Age (2017)	42.2	38.4	37.8
6	Change in Median Age in Years (2000-2017)	3.0	2.3	2.5
7	Unemployment Rate (2017)	6.4%	5.8%	6.6%
8	Percent of Population Below Poverty Level (2017)	11.8%	14.6%	14.6%
9	Percent of Household Received Food Stamps (2017)	12.4%	12.2%	12.6%
10	(Primary) County Where the Community Is Located	St. Charles County		

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

The community did not report any other investments relating to environmental improvements.

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

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

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

The community did not report any other relevant local economic conditions.

Conclusion and Finding

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

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

References

1. (A) 2017 MHI in 2017 Dollar: United States Census Bureau. United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Table B19013: Median Household Income in the Past 12 Months (in 2017 Inflation-Adjusted Dollars).
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B19013&prodType=table.
(B) 2000 MHI in 1999 Dollar: (1) For United States, United States Census Bureau (2003) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-1 Part 1. United States Summary, Table 5. Work Status and Income in 1999: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-2-1-pt1.pdf>. (2) For Missouri State, United States Census Bureau (2003) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-2-27, Missouri, Table 10. Work Status and Income in 1999: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
(C) 2018 CPI, 2017 CPI and 1999 CPI: U.S. Department of Labor Bureau of Labor Statistics (2018) Consumer Price Index - All Urban Consumers, U.S. City Average. All Items. 1982-84=100. http://data.bls.gov/timeseries/CUUR0000SA0?data_tool=Xgtable.
(D) 2017 MHI in 2018 Dollar = 2017 MHI in 2017 Dollar x 2018 CPI / 2017 CPI; 2000 MHI in 2018 Dollar = 2000 MHI in 1999 Dollar x 2018 CPI / 1999 CPI.
(E) Percent Change in Median Household Income (2000-2017) = (2017 MHI in 2018 Dollar - 2000 MHI in 2018 Dollar) / (2000 MHI in 2018 Dollar).
2. $(\$1,644,141) / 12 = \0.97 (Estimated Monthly User Cost for New Requirements)
3. $(\$0.97 / (\$52,502 / 12)) 100\% = 0.022\%$ (New Sampling Only)
4. $(\$64.86 / (\$52,502 / 12)) 100\% = 1.48\%$ (Total User Cost)
5. (A) Total Population in 2017: United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Table B01003: Total Population - Universe: Total Population.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B01003&prodType=table. (B) Total Population in 2000: (1) For United States, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>. (2) For Missouri State, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Age and Sex: 2000, Washington, DC. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
(C) Percent Change in Population (2000-2017) = (Total Population in 2017 - Total Population in 2000) / (Total Population in 2000).
6. (A) Median Age in 2017: United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Table B01002: Median Age by Sex - Universe: Total population.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B01002&prodType=table.
(B) Median Age in 2000: (1) For United States, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Social, Economic, and Housing Characteristics, PHC-1-1 Part 1. United States Summary, Table 1. Age and Sex: 2000, Washington, DC., Page 2. <https://www.census.gov/prod/cen2000/phc-1-1-pt1.pdf>. (2) For Missouri State, United States Census Bureau (2002) 2000 Census of Population and Housing, Summary Population and Housing Characteristics, PHC-1-27, Missouri, Table 2. Age and Sex: 2000, Washington, DC., Pages 64-92. <http://www.census.gov/prod/cen2000/phc-2-27-pt1.pdf>.
(C) Change in Median Age in Years (2000-2017) = (Median Age in 2017 - Median Age in 2000).
7. United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, B23025: Employment Status for the Population 16 Years and Over - Universe: Population 16 years and Over.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B23025&prodType=table.
8. United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Table S1701: Poverty Status in the Past 12 Months.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_S1701&prodType=table.
9. United States Census Bureau. 2013-2017 American Community Survey 5-Year Estimates, Table B22003: Receipt of Food Stamps/SNAP in the Past 12 Months by Poverty Status in the Past 12 Months for Households - Universe: Households.
http://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_17_5YR_B22003&prodType=table



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are 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 minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 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 that 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. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42;
 - iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Non-compliance Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
 4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
 5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
 6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
 7. **Discharge Monitoring Reports.**
 - a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.
- b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit 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. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
 - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



STANDARD CONDITIONS FOR NPDES PERMITS
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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 limited 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 pollutant 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.
- 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.
 - Apply biosolids only at the agronomic rate of nitrogen needed (see 5.c. of this section).
 - 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 factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization 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 outstanding state 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 methods or technology reflective 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 include the use of methods or technology reflective 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 factor¹).
¹ Volatilization factor is 0.7 for surface application and 1 for subsurface application. Alternative volatilization 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 $\geq 70\%$ 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 $\geq 70\%$ 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

¹Calculate 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.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
JETPAY CONFIRMATION NUMBER	

READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

An operating permit for a new or unpermitted facility. Construction Permit # _____
 (Include completed antidegradation review or request for antidegradation review, see instructions)

A new site-specific operating permit formerly general permit #MOG _____

A site-specific operating permit renewal: Permit #MO- 00107328 Expiration Date 09/30/2019

A site-specific operating permit modification: Permit #MO- _____ Reason: _____

General permit (NON-POTWs) (MOGD –discharging < 50,000 GPD or MOG823 – Land Application of Domestic Wastewater):
 Permit #MO- _____ Expiration Date _____

1.1 Is the appropriate fee included with the application (see instructions for appropriate fee)? YES NO

2. FACILITY

NAME City of Portage Des Sioux Wastewater Treatment Plant		TELEPHONE NUMBER WITH AREA CODE 636-899-0640	
ADDRESS (PHYSICAL) NE corner of Second and LeClair Streets	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373
2.1 Legal description: Sec. _____, T _____, R _____	County St. Charles		
2.2 UTM Coordinates Easting (X): 864.409.351 Northing (Y): 1,126,570.759 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: Mississippi River			
2.4 Number of outfalls: 1	Wastewater outfalls:	Stormwater outfalls:	Instream monitoring sites:

3. OWNER: 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.

NAME City of Portage Des Sioux		EMAIL ADDRESS mwsparky@sbcglobal.net	TELEPHONE NUMBER WITH AREA CODE 636.899.0640
ADDRESS P.O. Box 118	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373
3.1 Request review of draft permit prior to public notice?	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO		
3.2 Are you a publicly owned treatment works? If yes, please attach the Financial Questionnaire.	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO See: https://dnr.mo.gov/forms/780-2511-f.pdf		
3.3 Are you a privately owned treatment works?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
3.4 Are you a privately owned treatment facility regulated by the Public Service Commission?	<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		

4. CONTINUING AUTHORITY: Permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME City of Portage Des Sioux		EMAIL ADDRESS mwsparky@sbcglobal.net	TELEPHONE NUMBER WITH AREA CODE 636-899-0640
ADDRESS P.O. Box 118	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373

If the continuing authority is different than the owner, include a copy of the contract agreement between the two parties and a description of the responsibilities of both parties within the agreement.

5. OPERATOR

NAME Everett Jones	TITLE Operator	CERTIFICATE NUMBER 5764
EMAIL ADDRESS Everette@joneswater.com		TELEPHONE NUMBER WITH AREA CODE 314-486-4606

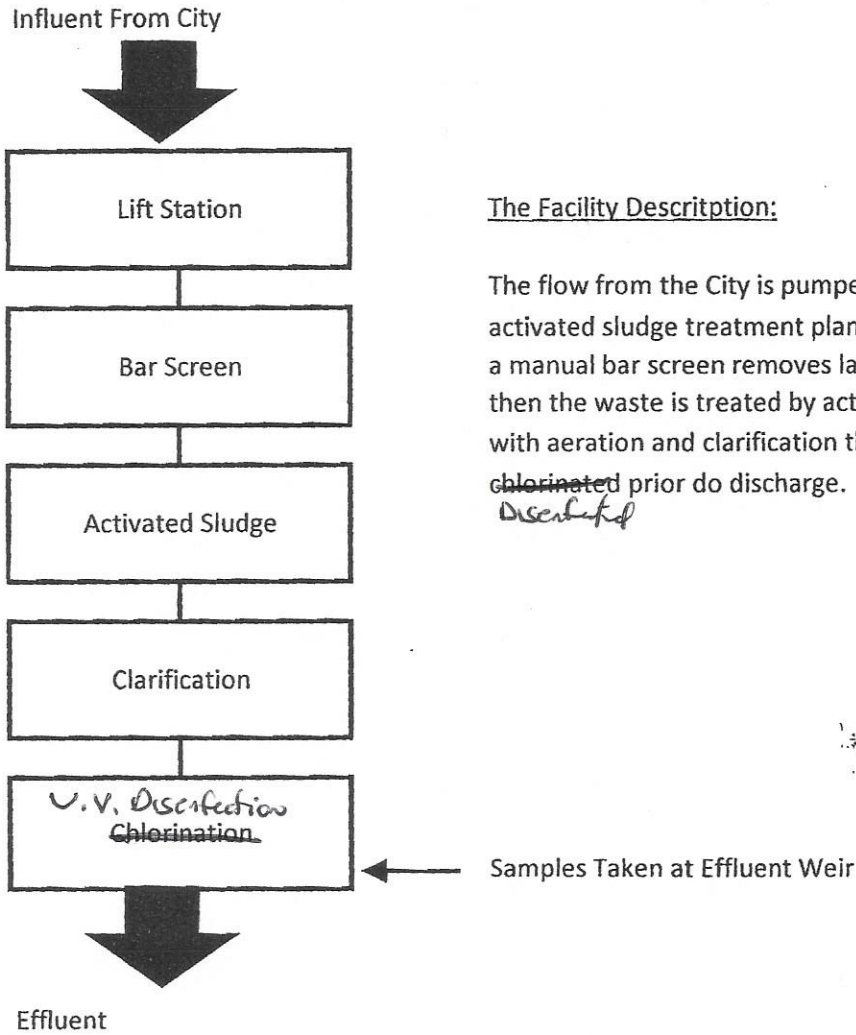
6. FACILITY CONTACT

NAME Mark D. Warner		TITLE Mayor	
EMAIL ADDRESS mwsparky@sbcglobal.net		TELEPHONE NUMBER WITH AREA CODE 636-899-0640	
ADDRESS 1255 Commonfield Street	CITY Portage Des Sioux	STATE MO	ZIP CODE 63373

7. DESCRIPTION OF FACILITY

7.1 Process Flow Diagram or Schematic: Provide a diagram showing the processes of the treatment plant. Show all of the treatment units, including disinfection (e.g. – chlorination and dechlorination), influents, and outfalls. Specify where samples are taken. Indicate any treatment process changes in the routing of wastewater during dry weather and peak wet weather. Include a brief narrative description of the diagram.

Attach sheets as necessary.

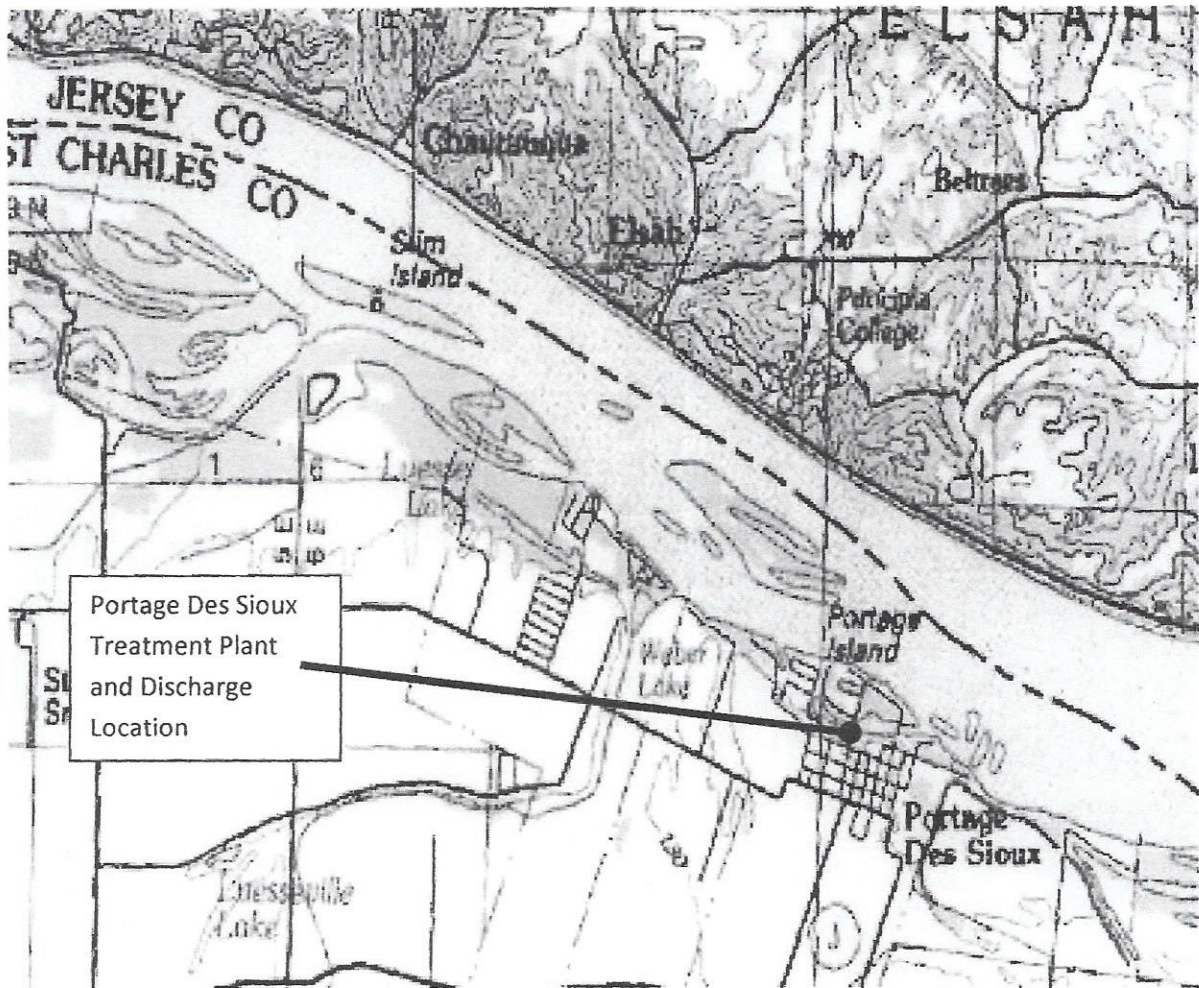


The Facility Description:

The flow from the City is pumped into the activated sludge treatment plant where a manual bar screen removes large debris then the waste is treated by activated sludge with aeration and clarification then chlorinated prior to discharge.
Disinfect

7.2 Attach an aerial photograph or USGS topographic map showing the location of the facility and outfall.

7.2 – Portage Des Sioux Facility and Discharge Location Map



8. ADDITIONAL FACILITY INFORMATION		
8.1	Facility SIC code: <u>4952</u> Discharge SIC code: <u>4952</u>	
8.2	Number of people presently connected or population equivalent (P.E.) <u>328</u>	Design P.E. <u>354</u>
8.3	Connections to the facility: Number of units presently connected: Residential: <u>138</u> Commercial: <u>3</u> Industrial: <u>0</u>	
8.4	Design flow: <u>30000</u>	Actual flow: <u>15000</u>
8.5	Will discharge be continuous through the year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Discharge will occur during the following months: _____ How many days of the week will discharge occur? <u>7</u>	
8.6	Is industrial wastewater discharged to the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach a list of the industries that discharge to your facility	
8.7	Does the facility accept or process leachate from landfills? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8.8	Is wastewater land applied? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach Form I. See: https://dnr.mo.gov/forms/780-1686-f.pdf	
8.9	Does the facility discharge to a losing stream or sinkhole? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
8.10	Has a wasteload allocation study been completed for this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No	
9. LABORATORY CONTROL INFORMATION		
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL		
Lab work conducted outside of plant. <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
Push-button or visual methods for simple test such as pH, settleable solids. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
More advanced determinations such as BOD seeding procedures, fecal coliform/ <i>E. coli</i> , nutrients (including Ammonia), Oil & Grease, \ total oils, phenols, etc. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph. <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
10. COLLECTION SYSTEM		
10.1 Are there any municipal satellite collection systems connected to this facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, please list all connected to this facility, contact phone number and length of each collection system		
FACILITY NAME	CONTACT PHONE NUMBER	LENGTH OF SYSTEM (FEET OR MILES)
10.2 Length of pipe in the sewer collection system? (If available, include totals from satellite collection systems) _____ Feet, or <u>2.5</u> Miles (either unit is appropriate)		
10.3 Does significant infiltration occur in the collection system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:		

11. BYPASSING			
Does any bypassing occur in the collection system or at the treatment facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
If yes, explain:			
12. SLUDGE HANDLING, USE AND DISPOSAL			
12.1 Is the sludge a hazardous waste as defined by 10 CSR 25? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
12.2 Sludge production, including sludge received from others: <u>17.0</u> Design dry tons/year <u>8.85</u> Actual dry tons/year			
12.3 Capacity of sludge holding structures: Sludge storage provided: _____ cubic feet; _____ days of storage; _____ average percent solids of sludge; <input type="checkbox"/> No sludge storage is provided. <input type="checkbox"/> Sludge is stored in lagoon.			
12.4 Type of Storage: <input type="checkbox"/> Holding tank <input type="checkbox"/> Building <input type="checkbox"/> Basin <input type="checkbox"/> Lagoon <input type="checkbox"/> Concrete Pad <input type="checkbox"/> Other (Describe) _____			
12.5 Sludge Treatment: <input type="checkbox"/> Anaerobic Digester <input type="checkbox"/> Lagoon <input type="checkbox"/> Composting <input checked="" type="checkbox"/> Storage Tank <input type="checkbox"/> Aerobic Digester <input type="checkbox"/> Other (Attach description) <input type="checkbox"/> Lime Stabilization <input type="checkbox"/> Air or Heat Drying			
12.6 Sludge Use or Disposal: <input type="checkbox"/> Land Application <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years) <input checked="" type="checkbox"/> Contract Hauler <input type="checkbox"/> Hauled to Another treatment facility <input type="checkbox"/> Incineration <input type="checkbox"/> Sludge Retained in Wastewater treatment lagoon <input type="checkbox"/> Solid waste landfill			
12.7 Person responsible for hauling sludge to disposal facility: <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (complete below)			
NAME Commercial Pumping Systems		EMAIL ADDRESS	
ADDRESS 2508 Bethmen Road	CITY St Charles	STATE MO	ZIP CODE 63302
CONTACT PERSON Lisa Highfill	TELEPHONE NUMBER WITH AREA CODE 636-255-0009	PERMIT NO. MO-	
12.8 Sludge use or disposal facility <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (Complete below.)			
NAME Merrell Brothers		EMAIL ADDRESS	
ADDRESS 6400 McKissoch Ave	CITY St. Louis	STATE MO	ZIP CODE 63147
CONTACT PERSON Ty Thomas	TELEPHONE NUMBER WITH AREA CODE 574-699-7782	PERMIT NO. MO- 1043376500-2.1	
12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)			

13. 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 complete the eDMR Registration by clicking on the following link: <https://dnr.mo.gov/forms/780-2204-f.pdf>.

- 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.

14. JETPAY

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

New Site Specific Permit: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/591/>


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

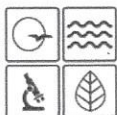
Modification Fee: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/596/>

New General Domestic WW: <https://magic.collectorsolutions.com/magic-ui/payments/mo-natural-resources/772/>

15. 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
Mark D. Warner	Mayor	636-899-0640
SIGNATURE	DATE SIGNED	
	09/10/2019	



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
FINANCIAL QUESTIONNAIRE

NOTE ►	FINANCIAL INFORMATION THAT IS NOT PROVIDED THROUGH THIS FORM WILL BE OBTAINED BY THE DEPARTMENT FROM READILY AVAILABLE SOURCES.	
1. GENERAL INFORMATION		
FACILITY NAME City of Portage Des Sioux WWTP	PERMIT NUMBER #MO- 0107328	
CITY Portage Des Sioux	COUNTY St. Charles	
2. GENERAL FINANCIAL INFORMATION (ALL FACILITIES)		
2.1	Number of connections to the facility: Residential <u>138</u> Commercial <u>3</u> Industrial <u>0</u>	
2.2	Current sewer user rate (Based on a 5,000 gallon per month usage):	63.89 Per Month
2.3	Current annual operating costs for the facility (excludes depreciation):	113,614.39
2.4	Bond rating (if applicable):	
2.5	Bonding capacity:	
2.6	Current outstanding debt relating to wastewater collection and treatment:	900,000.00
2.7	Amount within the current user rate used toward payments on outstanding debt related to the current wastewater infrastructure:	70%
2.8	Attach any relevant financial statements.	
3. FINANCIAL INFORMATION REQUIRED FROM MUNICIPALITIES		
3.1	Municipality's Full Market Property Value:	4,870,972
3.2	Municipality's Overall Net Debt:	900,000.00
3.3	Municipality's Property Tax Revenues (levied) [A]:	44,920.11
3.4	Municipality's Property Tax Revenues (collected) [B]:	44,920.11
3.5	Municipality's Property Tax Collection Rate ([B]/[A]):	0.6900
4. FINANCIAL INFORMATION REQUIRED FROM SEWER DISTRICTS		
4.1	Total connections to the sewer district: Residential _____ Commercial _____ Industrial _____	
4.2	When facilities require upgrades, how are the costs divided? Will the homes connected to the upgraded facility bear the costs? Will the costs be divided across the sewer district?	
5. ADDITIONAL CONSIDERATIONS (ALL FACILITIES)		
5.1	Provide a list of major infrastructure or other investments in environmental projects. Include project timing and costs and indicate any possible overlap or complications (attach sheets as necessary): None	
5.2	Provide a list of any other relevant local community economic conditions that may impact the ability to afford new permit requirements (attach sheets as necessary): None	

6. CERTIFICATION		
FINANCIAL CONTACT Suzie Cissell	OFFICIAL TITLE Clerk	
EMAIL ADDRESS cissell51@prodigity.net	TELEPHONE NUMBER WITH AREA CODE 636.899.1544	
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.		
OWNER OR AUTHORIZED REPRESENTATIVE Mark D. Warner	OFFICIAL TITLE Mayor	
SIGNATURE 	DATE SIGNED 09/10/2019	
<p>INSTRUCTIONS FOR COMPLETING THE FINANCIAL QUESTIONNAIRE</p> <p>The Financial Questionnaire is to be completed by municipalities, sewer districts, and water supply districts when filing for renewal of their Missouri State Operating Permit. The Financial Questionnaire is to be submitted as an attachment to <i>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</i> and <i>FORM B2: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY</i>.</p>		
<ol style="list-style-type: none"> 1. GENERAL INFORMATION – Provide the name by which the facility is locally known, the Missouri State Operating Permit number, and the city and county where the facility is located. 2. GENERAL FINANCIAL INFORMATION (ALL FACILITIES) – Municipalities, sewer districts, and water supply districts are to complete. <ol style="list-style-type: none"> 2.1 Self-explanatory. 2.2 Provide the rate that a household would be charged for sewer service if they use 5,000 gallons per month. 2.3 Provide the cost to operate and maintain the wastewater facility annually. 2.4 Bond ratings can be found here: https://emma.msrb.org/IssuerHomePage/HomepagesForC6?cusip6=795169. 2.5 General obligation bond capacity allowed by constitution: Cities = up to 20% of taxable tangible property; Sewer districts = up to 5% of taxable tangible property. 2.6 Provide the amount of debt owed on wastewater collection and treatment. Debt information is typically available from your community's annual financial statements 2.7 Provide the amount of a user's monthly sewer bill that is used toward debt owed on wastewater collection and treatment. This may be a percentage or dollar amount. 2.8 Self-explanatory. 3. FINANCIAL INFORMATION REQUIRED FROM MUNICIPALITIES – Municipalities are to complete. <ol style="list-style-type: none"> 3.1 Full Market Property Value is typically available through your community or state assessor's office. 3.2 Debt information is typically available from your community's annual financial statements. 3.3 Property tax revenues are typically available from your community's annual financial statements. Property tax rates for Missouri communities can be found in the annual auditor's report: https://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?id=31. 3.4 Property Taxes Levied = (Real Property Assessed Value) * (Property Tax Rate). This information is typically available through your community or state assessor's office and your community's annual financial statements. Property tax rates for Missouri communities can be found in the annual auditor's report: https://app.auditor.mo.gov/AuditReports/AudRpt2.aspx?id=31. 3.5 Property tax collection rate = (Property Tax Revenues) ÷ (Property Taxes Levied). 4. FINANCIAL INFORMATION REQUIRED FROM SEWER DISTRICTS – Sewer Districts and Water Supply Districts are to complete. <ol style="list-style-type: none"> 4.1-4.2 Self-explanatory. 5. ADDITIONAL CONSIDERATIONS (ALL FACILITIES) – Municipalities, sewer districts, and water supply districts are to complete. <ol style="list-style-type: none"> 5.1-5.2 Self-explanatory. 6. CERTIFICATION – Provide the name and contact information for the individual who can respond to financial information requests for your community. This form must be signed by your community's "owner" or "authorized representative". The owner for a municipality is either the principal executive officer or ranking elected official. 		
<p>If there are any questions concerning this form or your Missouri State Operating Permit, contact the Department of Natural Resources, Water Protection Program, Operating Permits Section at 800-361-4827 or 573-751-6825.</p>		