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-0049913
Owner:	Boone County Regional Sewer District (BCSD)
Address:	1314 North 7th Street, Columbia, MO 65201
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	BCSD Sun Valley Estates
Address:	Route HH, 1/10 mile SW Pinerest & Woodland Cove intersection, Columbia, MO 65201
Legal Description:	SW ¼, NW ¼, NE ¼, Sec. 14, T49N, R12W, Boone County
Latitude/Longitude:	+3901583/-09214061
Receiving Stream:	Unnamed tributary to Hinkson Creek (U)
First Classified Stream and ID:	Hinkson Creek (C) (01008)
USGS Basin & Sub-watershed No.:	(10300102-120001)

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 - SIC #4952
Two cell aerated lagoon/sludge is retained in lagoon.
Design population equivalent is 300.
Design flow is 30,000 gallons per day.
Actual flow is 18,000 gallons per day.
Design sludge production is 4.5 dry tons/year.
Actual sludge production is 2.7 dry tons/year.

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 644.051.6 of the Law.

February 29, 2008
Effective Date

Doyle Childers, Director, Department of Natural Resources
Executive Secretary, Clean Water Commission

February 28, 2013
Expiration Date

Irene Crawford, Director, Northeast Regional Office

MO 780-0041 (10-93)

A. 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. The interim effluent limitations shall become effective upon issuance and remain in effect until four (4) years and 364-days from the issuance of this permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/weekday***	24 hr. estimate
Biochemical Oxygen Demand$_5$*****	mg/L		65	45	once/quarter**	grab
Total Suspended Solids*****	mg/L		120	80	once/quarter**	grab
pH – Units	SU	****		****	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Fecal Coliform (Notes 1 & 2)	#/100mL	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY 28, 2008 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** Sample once per quarter in the months of March, June, September, and December.
*** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
**** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
***** This facility is required to meet a removal efficiency of 65% or more.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - The Monthly Average Limit for Fecal Coliform is a geometric mean.

A. 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 shall become effective one (1) day before the date of expiration of this permit and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	once/weekday***	24 hr. estimate
Biochemical Oxygen Demand$_5$*****	mg/L		65	45	once/quarter**	grab
Total Suspended Solids*****	mg/L		120	80	once/quarter**	grab
pH – Units	SU	****		****	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
Temperature	°C	*		*	once/quarter**	grab
Fecal Coliform (Notes 1 & 2)	#/100mL	1000		400	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE JULY 28, 2008. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

B. STANDARD CONDITIONS

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I, II, & III STANDARD CONDITIONS DATED October 1, 1980 and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitoring requirement only.
** Sample once per quarter in the months of March, June, September, and December.
*** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
**** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units.
***** This facility is required to meet a removal efficiency of 65% or more.

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

Note 2 - The Monthly Average Limit for Fecal Coliform is a geometric mean.

C. INFLUENT MONITORING REQUIREMENTS

The facility is required to meet a removal efficiency of 65% or more. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Influent			
Biochemical Oxygen Demand$_5$	mg/L	Once/Year	grab
Total Suspended Solids	mg/L	Once/Year	grab

MONITORING REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE OCTOBER 28, 2008 .

MO 780-0010 (8/91)

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
   (a) 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 Clean Water Act, 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) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
   (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.

4. Changes in Discharges of Toxic Substances

   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established in Part A of the permit by the Director.
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

5. Report as no-discharge when a discharge does not occur during the report period.

D. SPECIAL CONDITIONS (continued)

6. Water Quality Standards
   (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
   (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
      (1) 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;
      (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
      (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
      (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
      (5) There shall be no significant human health hazard from incidental contact with the water;
      (6) There shall be no acute toxicity to livestock or wildlife watering;
      (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
      (8) 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.

7. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities
   (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
   (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 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. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

9. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report semi-annually in April and October with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the collection system serving the facility.

E. SCHEDULE OF COMPLIANCE

The final limits shall become effective in accordance with the one of the conditions below, or on December 31, 2013, whichever comes first.

1. By two years from the issuance of the permit, the permittee shall be in compliance with the final bacteria limits set forth in the permit, if it is believed that disinfection equipment is not necessary to meet such limits. The permittee shall submit an interim report within a year to the Department regarding the facility's compliance with the bacterial standards. The report should include A or B of the following:

   A. An evaluation or data set to the permitting authority that demonstrate effluent limits can be met without disinfection equipment or;
   B. An alternative water quality based effluent limit or a demonstration that such limits are not required and will not violate the Water Quality standard for *E. coli*. A permit modification request may be submitted with the report.
   C. Within Three months of the interim monitoring report, the Department may determine that disinfection will be necessary to meet effluent limits.

E. SCHEDULE OF COMPLIANCE (continued)

2. Within 180 days from the issuance of the Department's notice to disinfect but no later than 30 months from permit issuance, the permittee shall submit a construction permit application and an activity schedule toward meeting disinfection requirement.

   A. The Permittee shall submit an interim progress report within 12 months from commencement of construction if the construction completion and operation of the disinfection equipment will be more than 1 year.
   B. If the permittee will fail to meet any of the interim dates above, the permittee shall notify the Department in writing of the reason for non compliance no later than 14 days following each interim date.
   C. Facility shall be in compliance upon with disinfection specified in the Department agreed on activity schedule but no later the expiration date of the permit.
   D. Upon completion of construction, the permittee shall submit an application to modify the permit and a Statement of Work complete, signed by the owner and licensed professional engineer in the state of Missouri, prior to expiration of this permit.

Missouri Department of Natural Resources
Statement of Basis
BCSD Sun Valley Estates
NPDES #: MO-0049913
Boone County

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rational for the development of the NPDES Missouri State Operating Permit (operating permit). This Statement includes Wasteload Allocations, Water Quality Based Effluent Limitations, and Reasonable Potential Analysis calculations as well as any other calculations that effect the effluent limitations of this operating permit. This Statement does not pertain to operating permits that include sewage sludge land application plans and variance procedures, and does not include the public comment process for this operating permit.

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

Facility Information

Facility Type: POTW
Facility SIC Code(s): 4952

Facility Description: Two cell aerated lagoon/sludge is retained in lagoon.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (GPD)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	30,000	Equivalent to Secondary	Domestic	~.14

Water Quality History:

Comments: There has not been a Low Flow Study on this facility. No Stream Survey has been conducted for this facility. The last inspection on the facility was conducted on September 27, 2007. At this time the facility was determined to be in non-compliance. Samples collected contained exceeded levels of Biochemical Oxygen Demand. There was also a white deposit and sulfur smell under the outfall. The facility returned to compliance November, 28, 2007. Review of Discharge Monitoring Reports revealed one non-submittal on January, 2004.

Receiving Stream Information

APPLICABLE DESIGNATIONS 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 list 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.
Please mark the correct designated waters of the state categories of the receiving stream.

Missouri or Mississippi River [10 CSR 20-7.015(2)]: Yes ☐; No ☒
Lake or Reservoir [10 CSR 20-7.015(3)]: Yes ☐; No ☒
Losing [10 CSR 20-7.015(4)]: Yes ☐; No ☒
Metropolitan No-Discharge [10 CSR 20-7.015(5)]: Yes ☐; No ☒
Special Stream [10 CSR 20-7.015(6)]: Yes ☐; No ☒
Subsurface Water [10 CSR 20-7.015(7)]: Yes ☐; No ☒
All Other Waters [10 CSR 20-7.015(8)]: Yes ☒; No ☐

10 CSR 20-7.031 Missouri Water Quality Standards, the department defines the Clean Water Commission water quality objectives in terms of "water uses to be maintained and the criteria to protect those uses." The receiving stream and/or 1st classified receiving stream's beneficial water uses to be maintained are located in the Receiving Stream Table located below in accordance with [10 CSR 20-7.031(3)].

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed tributary to Hinkson Creek	U	NA	General Criteria	10300102	Ozark/ Moreau/ Loutre
Hinkson Creek	C	01008	LWW, AQL, WBC***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND).
** - Ecological Drainage Unit
*** - UAA conducted on June 13, 2005 and approved on September 7, 2005

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.

Applicable ☐;
If applicable, then please explain

Not Applicable ☒;
The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

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

☒ - All limits in this statement are at least as protective as those previously established; therefore, backsliding does not apply.

☐ - Backsliding proposed in this statement 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.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)], the department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - Renewal no degradation proposed and no further review necessary.

☐ - New and/or expanded discharge, please see **APPENDIX B – ANTIDEGRADATION ANALYSIS.**

☐ - General Permit's Antidegradation Review is conducted during template development.

APPLICABLE PERMIT PARAMETERS:
Effluent parameters for conventional, non-conventional, and toxic pollutants have been obtained from the previous NPDES operating permit for this facility, technology based effluent limits, water quality based effluent limits, and from appropriate sections of the renewal application.

COMPLIANCE AND ENFORCEMENT:
Action taken by the department to resolve violations of the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

Applicable ☐;
The permittee/facility is currently under enforcement action.

Not Applicable ☒;
The permittee/facility is not under enforcement action and is considered to be in compliance with the Missouri Clean Water Law, its implementing regulations, and/or any terms and condition of an operating permit.

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

Applicable ☐;
Permittee shall implement and enforce its approved pretreatment program in accordance with the requirements of [40 CFR Part 403]. The approved pretreatment program is hereby incorporated by reference. Permittee shall submit to the department on or before March 31st of each year a report briefly describing its pretreatment activities during the previous calendar year.

Not Applicable ☒;
At this time, the permittee is not required to implement and enforce a Pretreatment Program.

REASONABLE POTENTIAL ANALYSIS (RPA):
Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Applicable ☐;
A RPA was conducted for this facility for (parameters) and determined that this facility has the potential to cause or contribute to violations of Water Quality. Please see **APPENDIX C – RPA RESULTS.**

Not Applicable ☒;
A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

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

Applicable ☒;
Equivalent to Secondary Treatment is 65% removal [40 CFR Part 105(a)(3) & (b)(3)].

Applicable ☐;
This wastewater treatment facility is not a POTW; however, influent monitoring is being required to determine percent removal.

Not Applicable ☐;
This wastewater treatment facility is not a POTW. Influent monitoring is not being required to determine percent removal.

SANITARY SEWER OVERFLOWS (SSOS), AND INFLOW & INFILTRATION (I&I):
Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

Applicable ☒;
The permittee is required to develop or implement a program for maintenance and repair of the collection system and shall be required in this operating permit by either means of a Special Condition or Schedule of Compliance.

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

SCHEDULE OF COMPLIANCE (SOC):
A schedule of remedial measures included in a permit, including 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.

Applicable ☒;
The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations where established in accordance with [10 CSR 20-7.031(10)].

Not Applicable ☐;
This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Applicable ☐;
A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.

Not Applicable ☒;
At this time, the permittee is not required to develop and implement a SWPPP.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the department to release into a given stream after the department has determined to total amount of pollutant that may be discharged into that stream without endangering its water quality.

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

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

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

Not Applicable ☒;
Wasteload allocations were not calculated.

WLA MODELING:
Applicable ☐;
A WLA study including model was submitted to the department by _____. The WLA study determined that the (parameter) for (NEEDS MORE).

Not Applicable ☒;
A WLA study was either not submitted or determined not applicable by department staff.

WHOLE EFFLUENT TOXICITY (WET) TEST:
As per [10 CSR 20-7.031(1)(CC)], a toxicity test conducted under specified laboratory conditions on specific indicator organism; and as per [40 CFR Part 122.2], the aggregate toxic effect of an effluent measured directly by a toxicity test.

Applicable ☐;
Effective July 15, 2005, upon revision, renewal, modification, or issuance, all Missouri State Operating Permits under the NPDES will incorporate use of the following guidelines for determining the applicability and requirements for WET testing. WET testing requirements are established by the WET Test Policy, Section 308 of the Federal Water Pollution Control Act, and [40 CFR Part 136]. Please check WET tests applicability for this facility:

- All major discharge facilities ☐;
- Facilities that are exceeding or routinely exceed their design flow ☐;
- Most municipals, domestic sewage dischargers ☐;
- Industrial dischargers or other dischargers that may alter their production processes throughout the year ☐;
- Facilities that may handle large quantities of toxic substances, or substances that are toxic in large amounts ☐; and
- Facilities that have been granted seasonal relief of numeric limitations ☐.

Not Applicable ☒;
At this time, the permittee is not required to conduct WET test for this facility.

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

Applicable ☐;
(Receiving water body's name) or (1st classified water body's name) is listed on the (YEAR) Missouri 303(d) List for (pollutant).

☐ – This facility is not considered to be a source of the above listed pollutant(s) or considered to contributed to the impairment of (stream name).

☐ – This facility is considered to be a source of or has the potential to contribute to the above listed pollutant(s).

Not Applicable ☒;
This facility does not discharge to a 303(d) listed stream.

Outfall #001 – Main Facility Outfall

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	S
BOD_5	mg/L	1		65	45	NO	S
TSS	mg/L	1		120	80	NO	S
pH (S.U.)	SU	1	6 – 9		6 – 9	NO	S
TEMPERATURE (°C)	°C	1/5/8	*		*	YES	****
AMMONIA AS N	mg/L	2/3/5	*		*	YES	****
FECAL COLIFORM	***	1/2	1000		400	YES	****
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

* - Monitoring requirement only

*** - # of colonies/100mL; the Monthly Average for Fecal Coliform is a geometric mean.

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

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. Antidegradation Policy
7. Water Quality Model
8. Best Professional Judgment
9. TMDL or Permit in lieu of TMDL
10. WET test Policy

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Biochemical Oxygen Demand (BOD_5).** Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**

- **Total Suspended Solids (TSS).** Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**

- **pH**. Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**

- **Temperature.** Monitoring requirement due to the toxicity of Ammonia varies by temperature.

- **Total Ammonia Nitrogen.** Monitoring requirement only. Monitoring for temperature and ammonia are included to determine whether "reasonable potential" to exceed water quality standards exists after the discharge begins.

- **Fecal Coliform**. Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL during the recreational season (April 1 – October 31), please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.** Future renewals of the facility operating permit will contain effluent limitations for E. coli, which will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards.

- **Minimum Sampling and Reporting Frequency Requirements**.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	ONCE/WEEKDAY	ONCE/QUARTER
BOD_5	ONCE/QUARTER	ONCE/QUARTER
TSS	ONCE/QUARTER	ONCE/QUARTER
pH (S.U.)	ONCE/QUARTER	ONCE/QUARTER
TEMPERATURE (^oC)	ONCE/QUARTER	ONCE/QUARTER
AMMONIA AS N	ONCE/QUARTER	ONCE/QUARTER
FECAL COLIFORM (NOTE 1)	ONCE/QUARTER	ONCE/QUARTER

Note 1 - Final limitations and monitoring requirements for Fecal Coliform are applicable only during the recreational season from April 1 through October 31.

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.

Date of Factsheet: December 17, 2007
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Submitted by

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