

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-0136719

Owner: Rocky Mount Sewer District
Address: 30772 Weller Road, Rocky Mount, MO 65072

Continuing Authority: Same as above
Address: Same as above

Facility Name: Rocky Mount WWTF
Facility Address: 3,800 ft South of Hwy Y on Red Arrow Rd, Rocky Mount, MO 65072

Legal Description: SE¼, SE ¼, Sec. 32, T41N, R16W, Morgan County
UTM Coordinates: X= 524981, Y= 4235040

Receiving Stream: Tributary to (Lick Branch) Lake of the Ozarks (U) (losing)
First Classified Stream and ID: Lake of the Ozarks (L2) (07205)
USGS Basin & Sub-watershed No.: (10290109-0407)

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

The use or operation of this facility shall be by or under the supervision of a Certified “C” Operator.

Bar screen / Grit removal / Flow equalization / Extended aeration / Tertiary filtration / Ultraviolet disinfection / Sludge disposal by contract hauler

Design population equivalent is 750.

Design flow is 75,000 gallons per day.

Design sludge production is 15.75 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 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

March 1, 2016
Effective Date


Sara Parker Pauley, Director, Department of Natural Resources

February 28, 2021
Expiration Date


John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 6
		PERMIT NUMBER MO-0136719

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 on **March 1, 2016** 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
Flow	MGD	*		*	once/weekday***	24 hr. total
Biochemical Oxygen Demand ₅	mg/L		15	10	once/month	composite**
Total Suspended Solids	mg/L		20	15	once/month	composite**
pH – Units	SU	****		****	once/month	grab
Ammonia as N (April 1 – Sept 30)	mg/L	3.7		1.4	once/month	grab
(Oct 1 – March 31)		7.5		2.9		
<i>E. coli</i> (Note 1, Page 2)	#/100 ml	126		126	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE April 28, 2016. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

Whole Effluent Toxicity (WET) test	% Survival	See Special Condition #	once/permit cycle	composite**
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WET TEST REPORTS SHALL BE SUBMITTED ONCE PER PERMIT CYCLE; THE FIRST REPORT IS DUE December 28, 2020.

- * Monitoring requirement only.
- ** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampling device.
- *** 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 limited to the range of 6.5-9.0 pH units.

Note 1 – Effluent limits of 126 cfu per 100 ml daily maximum and monthly average for *E. coli* are applicable year round due to the losing stream designation.

<p style="text-align: center;">TABLE B. INFLUENT MONITORING REQUIREMENTS</p>		PAGE NUMBER 3 of 6	
		PERMIT NUMBER MO-0136719	
<p>The facility is required to meet a removal efficiency of 85% or more as a monthly average. 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:</p>			
SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand ₅	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**
<p>MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u>; THE FIRST REPORT IS DUE <u>April 28, 2016</u>.</p>			

C. 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.

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 a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
4. Water Quality Standards
 - (a) To the extent required by law, 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;

D. SPECIAL CONDITIONS (continued)

- (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.

5. 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 by the Director in accordance with 40 CFR 122.44(f).
- (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.

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

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

8. 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. 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 submit a report annually in January to the Southwest Regional Office 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 for the previous year.

10. Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office.

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

12. A least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

13. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.

14. 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.

15. An all-weather access road shall be provided to the treatment facility.

D. SPECIAL CONDITIONS (continued)

16. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or riprapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so 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.
17. Whole Effluent Toxicity (WET) Test shall be conducted as follows: (Note to permit writers: please use the appropriate and latest version of WET testing contained in the departments T drive).

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	once/permit cycle	composite**	Any

** A 24-hour composite sample is composed of 48 aliquots (subsamples) collected at 30 minute intervals by an automatic sampler.

Dilution Series						
100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

- (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102-0176. If the effluent passes the test, do not repeat the test until the next test period.
 - (i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.
 - (ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.
 - (iii) All chemical analyses included in the Missouri Department of Natural Resources' WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
- (2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102-0176 within 14 calendar days of the availability of the results.
- (4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by the WATER PROTECTION PROGRAM on a case by case basis.
 - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (5) Follow-up tests do not negate an initial failed test.
- (6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102-0176 within 14 calendar days of the third failed test.

D. SPECIAL CONDITIONS (continued)

- (7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test the permittee should contact the WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact the WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
 - (8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by the Department for this period.
 - (9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a the Department approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
 - (10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
 - (11) Submit a concise summary in tabular format of all WET test results with the annual report.
- (b) Test Conditions
- (1) Test Type: Acute Static non-renewal
 - (2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.
 - (3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
 - (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.
 - (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the Department upon request.
 - (6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.
 - (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
 - (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.
 - (9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF NEW CONSTRUCTION
OF
MO-0136719
ROCKY MOUNT WWTF**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water 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)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 .

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:

Bar screen / Grit removal / Flow equalization / Extended aeration / Tertiary filtration / Ultraviolet disinfection / Sludge disposal by contract hauler

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

- No.

Application Date: April 4, 2013

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
001	0.116	Secondary	Domestic

Facility Performance History:

None, since this is a proposed new treatment facility.

Comments:

None.

Part II – Operator Certification Requirements

Applicable : This facility is required to have a certified operator.

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations 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:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
 - Public Sewer District:

Each of the above entities are only applicable if they have a Population Equivalent greater than two hundred (200) and/or fifty (50) or more service connections.

This facility currently requires an 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: Raymond Kline
 Certification Number: 13069
 Certification Level: 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 Monitoring

As per [10 CSR 20-9.010(4)], the facility is required to conduct operational monitoring.

Part IV – Receiving Stream Information

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: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to (Lick Branch) Lake of the Ozarks	U	N/A	General Criteria	10290109-0407	0.94
Lake of the Ozarks	L2	7205	AQL, LWW, SCR, WBC(A)		

* - 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), Groundwater (GRW).

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to (Lick Branch) Lake of the Ozarks	0	0	0

MIXING CONSIDERATIONS

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

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

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.

Applicable ; If applicable, then please explain (i.e. this facility discharges to a Losing Stream, as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], and has submitted alternative evaluation(s) in the March 7, 2013 facility plan.

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.

- New facility, backsliding does not apply.

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.

- New and/or expanded discharge, please see **APPENDIX 3 FOR ANTIDegradation ANALYSIS.**

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver 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. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler, incinerated, stored in the lagoon, etc.

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.

Not Applicable ; The permittee/facility is not currently under Water Protection Program enforcement action.

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 million gallons per day (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

Not Applicable ; 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)(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.

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

Applicable ; 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 an untreated or partially treated sewage release are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSO's have a variety of causes including blockages, line breaks, and sewer defects that allow excess storm water and ground water to (1) enter and overload the collection system, and (2) overload the treatment facility. Additionally, SSO's can be also be caused by lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations.

Additionally, Missouri RSMo §644.026.1 mandates that the Department require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities.

- 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.

Not Applicable ; This permit does not contain a SOC.

STORM WATER 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 storm water 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 February 2009], 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 Storm Water 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 storm water discharges.

Not Applicable ; 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.

Not Applicable ; 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(78)], 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.

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

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

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).

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.

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

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

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.

Applicable ; 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)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], 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 municipality or domestic discharger with a Design Flow \geq 22,500 gallons per day (GPD).

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 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

Not Applicable ; 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

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

Part VI – Effluent Limits Determination

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 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.

- Lake or Reservoir [10 CSR 20-7.015(3)]:
- Losing [10 CSR 20-7.015(4)]:
- All Other Waters [10 CSR 20-7.015(8)]:

OUTFALL #001 – MAIN FACILITY OUTFALL

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*		
BOD ₅	mg/L	1		15	10		
TSS	mg/L	1		20	15		
pH	SU	1	6.5 – 9.0		6.5 – 9.0		
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	3.7		1.4		
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	7.5		2.9		
Escherichia coli	***	1, 3	126		126		
Oil & Grease (mg/L)	mg/L	1, 3	15		10		
Whole Effluent Toxicity (WET) Test	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

* - Monitoring requirement only.
 ** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
 *** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.
 **** - Parameter not previously established in previous state 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 Review
- 7. Antidegradation Policy
- 8. Water Quality Model
- 9. Best Professional Judgment
- 10. TMDL or Permit in lieu of TMDL
- 11. WET Test Policy

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).**
 – 15 mg/L Weekly Average and 10 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015].
- **Total Suspended Solids (TSS).**
 – 20 mg/L Weekly Average and 15 mg/L Monthly Average effluent limitations, as per [10 CSR 20-7.015].
- **pH.** Effluent limitation range is 6.5 – 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.
- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU Background total ammonia nitrogen = 0.01 mg/L (Default).

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

Summer: April 1 – September 30

Chronic WLA: $C_e = ((0.116 + 0.0)1.5 - (0.0 * 0.01))/0.116$
 $C_e = 1.5 \text{ mg/L}$

Acute WLA: $C_e = ((0.116 + 0.0)12.1 - (0.0 * 0.01))/0.116$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L} (0.780) = \mathbf{1.2 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.88 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 1.2 \text{ mg/L} (3.11) = 3.7 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 1.2 \text{ mg/L} (1.19) = 1.4 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n=30]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.116 + 0.0)3.1 - (0.0 * 0.01))/0.116$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((0.116 + 0.0)12.1 - (0.0 * 0.01))/0.116$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L} (0.780) = \mathbf{2.4 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

$MDL = 2.4 \text{ mg/L} (3.11) = 7.5 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 2.4 \text{ mg/L} (1.19) = 2.9 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n=30]

- **Escherichia coli (E. coli).** Discharges to losing streams shall not exceed 126 per 100 ml as a Daily Maximum and Monthly Average at any time, as per 10 CSR 20-7.031(4)(C).
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.

- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

Acute

No less than ONCE/PERMIT CYCLE:

Municipality or domestic facility with a design flow \geq 22,500 GPD, but less than 1.0 MGD.

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

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
BOD ₅	once/month	once/month
TSS	once/month	once/month
pH	once/month	once/month
Ammonia as N	once/month	once/month
<i>E. coli</i>	once/month	once/month
Oil & Grease	once/month	once/month

Sampling Frequency Justification:

This facility is a new facility with monthly sampling in order to determine if the facility will be in compliance with the operating permit, in accordance with Appendix U of the Missouri’s Water Pollution Control Permit Manual. The Clean Water Commission has directed the Department to proceed with amending 10 CSR 20-7.015 to reduce the sampling frequency required for *E. coli* to a lesser frequency, still protective of water quality standards, for smaller facilities, including those with discharges of 100,000 GPD or less.

Sampling Type Justification

As per 10 CSR 20-7.015, BOD₅, TSS, and WET test samples collected for mechanical plants shall be a 24 hour composite sample. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and Oil & Grease. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH cannot be preserved and must be sampled in the field. As Ammonia and Oil & Grease, samples must be immediately preserved with acid, these samples are to be collected as a grab.

Part VII – Finding of Affordability

Pursuant to Section 644.145, RSMo., the Department is required to determine whether a permit or decision is affordable and makes a finding of affordability for certain permitting and enforcement decisions. This requirement applies to discharges from combined or separate sanitary sewer systems or publically-owned treatment works.

Applicable; The Department is required to determine findings of affordability because the permit applies to a **combined or separate sanitary sewer system for a publically-owned treatment works.**

Finding of affordability - The Department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **Appendix 4 – Affordability Analysis**

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.

PERMIT SYNCHRONIZATION:

The Department is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year (5) term, but to achieve synchronization many permits will need to be issued for less than the full five (5) 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.

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 April 26, 2013 to May 26, 2013. Responses to the Public Notice of this operating permit did not warrant the modification of effluent limits and/or the terms and conditions of this permit.

DATE OF FACT SHEET: APRIL 12, 2013

COMPLETED BY:

**EMILY CARPENTER, PLAN REVIEWER
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DATE OF FACT SHEET REVISION FOR ISSUANCE: JANUARY 19, 2016

COMPLETED BY:

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Appendices

APPENDIX 1 - CLASSIFICATION WORKSHEET:

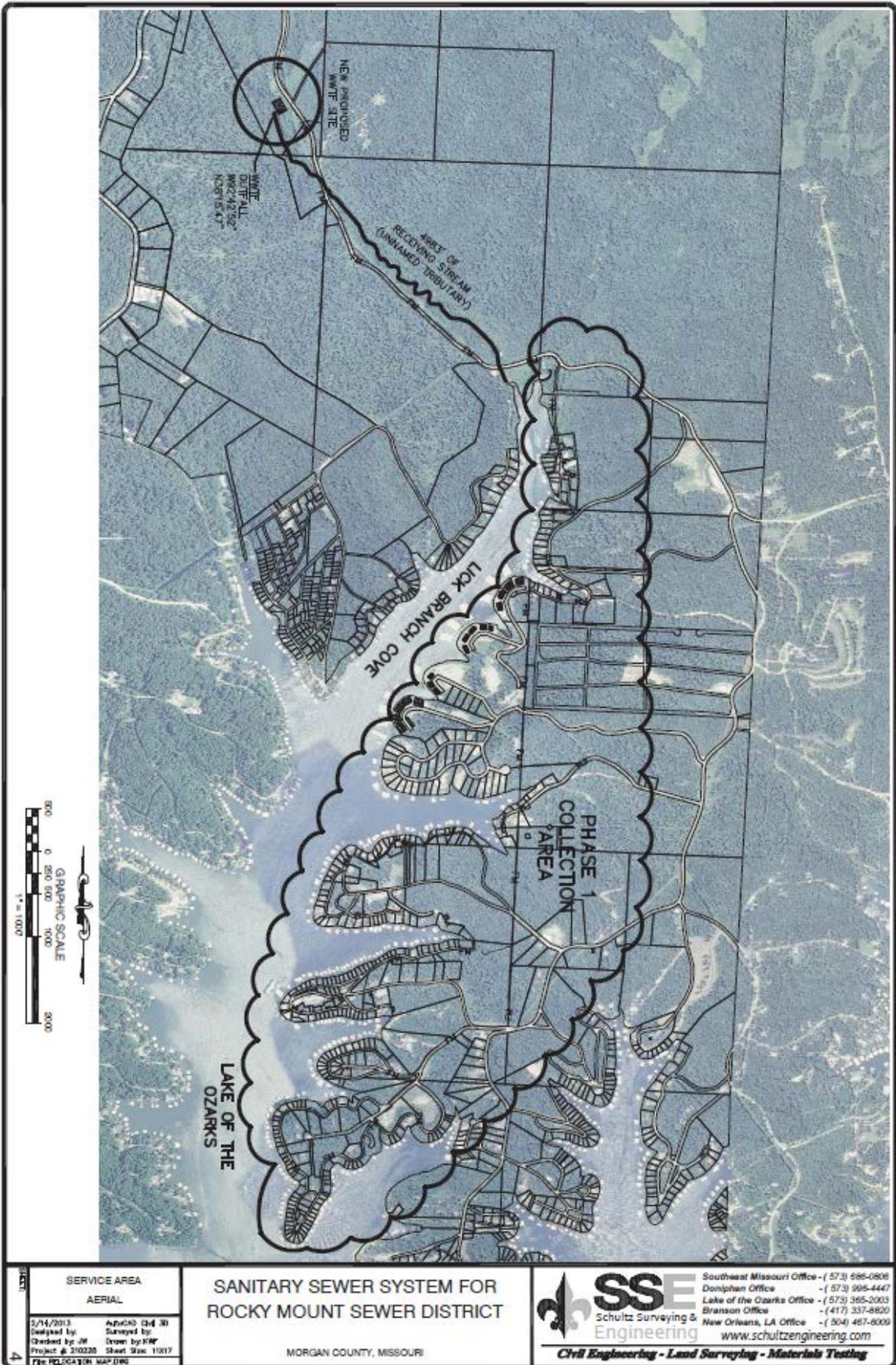
ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	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	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	3
Grit removal	3	3
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	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	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page ONE (1)	----	14

APPENDIX 1 - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	15
Stabilization ponds without aeration	5	
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	10
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	4
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	5
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	----	34
Total from page ONE (1)	---	14
Grand Total	---	48

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

APPENDIX 2 – ROCKY MOUNT LOCATION MAP:



APPENDIX 3 – ANTIDegradation ANALYSIS:

Water Quality and Antidegradation Review

*For the Protection of Water Quality
and Determination of Effluent Limits for Discharge to
Tributary to Lake of the Ozarks*

by

Rocky Mount Sewer District Wastewater Treatment Facility



September, 2012
Revised December, 2012
3rd Revision February 2013

Table of Contents

1. Facility Information	16
2. Water Quality Information.....	16
2.1. Water Quality History:.....	16
3. Receiving Waterbody Information	16
4. General Comments.....	17
5. Antidegradation Review Information	17
5.1. Tier Determination.....	17
5.2. Existing Water Quality	18
5.3. Demonstration of Necessity and Social and Economic Importance.....	18
5.3.1. Regionalization Alternative	19
5.3.2. Losing Stream Alternative Discharge Location.....	20
5.3.3. Social and Economic Importance Evaluation -- Affected Community and Relevant Social and Economic Factors.....	20
6. General Assumptions of the Water Quality and Antidegradation Review	21
7. Mixing Considerations.....	21
8. Permit Limits and Monitoring Information	22
9. Receiving Water Monitoring Requirements	22
10. Derivation and Discussion of Limits	22
10.1. Outfall #001 – Main Facility Outfall	23
10.2. Limit Derivation.....	23
11. Antidegradation Review Preliminary Determination	25
Table 1. Pollutants of Concern and Tier Determination	18
Table 2. Economic Efficiency Analysis.....	20
Table 3. Effluent Limits	22
Appendix A: Map of Discharge Location.....	26
Appendix B: Preferred Alternative -- Mechanical Plant Treatment Capacity.....	27
Appendix C: Antidegradation Review Summary Attachments	296

1. Facility Information

FACILITY NAME: Rocky Mount Sewer District (RMSD) WWTF NPDES #: NE W FACILITY

FACILITY TYPE/DESCRIPTION: RMSD WWTF will be a Publically-Owned Treatment Works (POTW). As a result of the submitted alternative analysis, the applicant's preferred alternative is the extended-aeration mechanical package plant. The design flow will be 0.075 MGD. The facility will use flow equalization for three individual flow trains with each complete with, secondary treatment, pre-and post-anoxic, fixed film pretreatment prior to the rapid sand tertiary treatment, and ultraviolet light (UV) as disinfection. According to the Antidegradation Review Report, "Phase I will consist of connections for approximately 260 homes, the Northshore Baptist Church, eight (8) small offices, the Dollar General, a lumber yard, and a treatment facility for an average daily design flow of 75,000 GPD. The plan is to utilize a small package plant and later build a facility capable of treating over 1,000,000 GPD as funds become available. When the 1,000,000 GPD facility is built, it can eliminate 15 existing permits that currently discharge to the Lake of the Ozarks. The existing systems are extended aeration or re-circulating filter systems, some with chlorination/dechlorination or UV disinfection. All homes in Phase I are on individual septic systems."

COUNTY: Morgan UTM COORDINATES: X=524981/ Y= 4235040
 12- DIGIT HUC: 102901090407 LEGAL DESCRIPTION: SW ¼, SE ¼, Section 32, T 41N, R16W
 EDU*: Ozark/Osage Ecoregion: Ozark/Highlands

* - Ecological Drainage Unit

2. Water Quality Information

In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(2)] and federal antidegradation policy at Title 40 Code of Federal Regulation (CFR) Section 131.12 (a), the Department 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, a facility is required to use *Missouri's Antidegradation Rule and Implementation Procedure (AIP)* for new and expanded wastewater discharges.

2.1. Water Quality History:

No history for this facility. No receiving water quality information.

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	RECEIVING WATERBODY	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.116	Secondary	Tributary to Lake Ozarks	0.94

3. Receiving Waterbody Information

WATERBODY NAME	CLASS	WBID	LOW-FLOW VALUES (CFS)			DESIGNATED USES **
			1Q10	7Q10	30Q10	
Trib to (Lick Branch) Lake of the Ozarks	(U) Losing	-	-	-	-	General Criteria
Lake of the Ozarks	L2	7205	-	-	-	LWW, AQL, SCR, WBC(A) General Criteria

** Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cold Water Fishery (CDF), Cool Water Fishery (CLF), Drinking Water Supply (DWS), Industrial (IND), Irrigation (IRR), Livestock & Wildlife Watering (LWW), Secondary Contact Recreation (SCR), Whole Body Contact Recreation (WBC).

RECEIVING WATER BODY SEGMENT #1: Unnamed Tributary to Lake Ozarks to Cove of Lake Ozarks

Upper end segment* UTM coordinates: X=524981/ Y= 4235040 (Outfall)

Lower end segment* UTM coordinates: X=525917 / Y=4233902 (classified -Cove of Lake)

*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

Morgan County decided to form a sewer district along a portion of the main channel of the Lake of the Ozarks to address the 2,000 +/- systems currently in-place within its vicinity. The Rocky Mount Sewer District was formed in August 2003 in accordance with Chapter 204 of the Missouri Statutes.

Lake Ozark Environmental, LLC prepared, on behalf of district, the *Antidegradation Report for the Proposed New Wastewater Treatment Facility (WWTF), Average Design flow from 150,000 GPD, Formerly Submitted for 50,000 GPD, Morgan County, Missouri* dated July 25, 2012. A request for a revised discharge location was submitted February 14, 2013, by Schultz Surveying and Engineering, Inc. At a public hearing on January 30, 2013, the RMSD and Schultz Surveying and Engineering, Inc. announced that they would be seeking a new discharge location because of area resident's concern about the discharge to Blue Spring Creek. For this revision to the water quality and antidegradation review, we will use the Tier 2 Review that was provided in July 25, 2012. The Tier 2 antidegradation review has an alternative analysis with treatment facilities that are based upon a design flow of 75,000 GPD. The proposed design flow is 75,000 GPD for 260 homes with an average of three (3) persons per house hold; however, the applicant requested this review provide limitations based upon 150,000 GPD. The facility to be installed during Phase I will be 75,000 GPD; therefore, limitations must be determined based on the design flow of the constructed facility; therefore, this facility will be permitted for 75,000 GPD.

Applicant elected to assume that all pollutants of concern (POC) are significantly degrading the receiving stream in the absence of existing water quality. An alternative analysis was conducted to fulfill the requirements of the AIP.

This review document was developed using the submitted report, summary forms in Appendix C, as well as the following information: 1) Dissolved oxygen modeling analysis was not conducted for this discharge, rather the applicant supplied manufacturer treatment specifications for 5-day BOD to demonstrate the facility's ability to meet 10 mg/L as monthly average and 15 mg/L as weekly average limit. 2) A Missouri Department of Conservation Natural Heritage Review was obtained by the applicant; and no records of endangered species were found to be near the discharge. 3) A Geohydrological Evaluation was submitted with the request and the receiving stream is losing for discharge purposes (Appendix A: Map).

5. Antidegradation Review Information

The following is a review of the *Antidegradation Report for Proposed New Wastewater Treatment Facility (WWTF), Average Design flow from 150,000 GPD, Morgan County, Missouri* dated July 25, 2012.

5.1. TIER DETERMINATION

Below is a list of pollutants of concern reasonably expected to be in the discharge (see Appendix C: Tier Determination and Effluent Limit Summary). 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 was assumed for all POCs (see Appendix C).

Table 1. Pollutants of Concern and Tier Determination

POLLUTANTS OF CONCERN	TIER*	DEGRADATION	COMMENT
BOD ₅ /DO	2	Significant	
Total Suspended Solids (TSS)	**	Significant	
Oil and Grease	2	Significant	
Ammonia	2	Significant	
pH	***	Significant	Permit limits applied
Escherichia coli (E. coli)	2	Significant	

* Tier assumed. 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 C were used by the applicant:

Tier Determination and Effluent Summary

For pollutants of concern, the attachments are:

Attachment A, Tier 2 with significant degradation.

5.2. EXISTING WATER QUALITY

No existing water quality data was submitted. All POCs were considered to be Tier 2 and significantly degraded in the absence of existing water quality.

5.3. DEMONSTRATION OF NECESSITY AND SOCIAL AND ECONOMIC IMPORTANCE

Missouri's antidegradation implementation procedures specify that if the proposed activity results in significant degradation then a demonstration of necessity (i.e., alternatives analysis) and a determination of social and economic importance are required. Using alternatives analysis to determine the necessity of the discharge, seven alternatives from non-degrading to less degrading to degrading alternatives were evaluated.

Among the non-degrading alternatives, land application with seasonal storage, subsurface irrigation, and discharge to a regional facility was evaluated. Land application was considered impracticable due to the large amount of land required and the lack of land available in the surrounding district. The antidegradation reported stated, "Based on preliminary calculations for this application, approximately 60 acres of land would be required to facilitate the lagoon storage and land application. Land availability in this area as well as the land cost makes this alternative non-practicable." Subsurface irrigation was considered impracticable due to the large amount of land required (nearly twice the surface acres because of the lack of evaporative losses found with land application), and lack of land available in the surround area. Connection to a regional facility was considered. The nearest regional sanitary sewer service would be from the city of Lake Ozark. The closest receiving sanitary sewer is located approximately 4.5 miles from this area. Also, the 4.5 miles is located outside the Lake Ozark Sewer Jurisdiction. The easement area would be located outside the district's jurisdiction and very difficult to obtain. Therefore, based on the connection cost and easement acquisition required, this alternative was determined to be impracticable.

Among the degrading to less degrading alternatives were the Recirculating sand filter, Orenco Advantex Recirculating Fabric Filter, extended-aeration mechanical package plant, and alternative discharge location potentially using one of the alternatives. These alternatives are treatment options for a proposed discharge to the Tributary to Lake of the Ozarks. The most degrading option is the mechanical package plant as the base case treatment. The practicability of the above-identified alternatives was evaluated for effectiveness and reliability. The alternative discharge location was evaluated as added cost to the proposed treatments listed above. For each treatment, "A rough estimate to accomplish this would be around \$60,000 provided it can be achieved through a gravity system and that easements are obtained at no cost to the district. If a pumping system would have to be utilized the cost would be much greater." The applicant concluded that, "During the beginning stage of this project and due to lack of funds and ability to repay funds, it is not practicable to discharge to a gaining stream."

Only those alternatives that were considered practicable were included in the economical efficiency analysis. The recirculating sand filter, Orenco Advantex Recirculating Fabric Filter, and the extended-aeration mechanical package plant were considered practicable and evaluated for economic efficiency. This analysis showed that the environmental benefits from increasing cost of treatment did not justify more expenditure beyond the extended aeration mechanical package plant alternative (see Table 2 and Appendix C, Attachment A), which was the base case treatment alternative.

Alternative one is an extended-aeration mechanical package plant that could be used to treat the wastewater to a high quality. Extended aeration systems are proven technology with a large volume of data to support their performance as shown in Table 2 for the pollutants of concern. The extended-aeration plant was the applicant's preferred alternative based on the provided analysis.

The total estimated PW costs for alternative #1 are \$1,387,000 (see Table 2). The cost is 100% as the base case alternative present worth costs; this alternative is considered economically efficient.

Alternative two consists of a Recirculating Sand filter. According to the analysis, installation of this process would reduce stream degradation. Sand filters are a proven technology with a large volume of data to support their performance as shown in Table 2 for the pollutants of concern. This alternative is more efficient at treatment of some pollutants as compared to the base case.

The total estimated PW costs for alternative #2 are \$1,647,100 (see Table 2). The cost is 119% of the base case alternative present worth costs; this alternative is considered economically efficient.

Alternative three is the Orenco Advantex Recirculating Fabric Filter Technology that could be used to treat the wastewater to a higher quality than currently produced with the base case alternative. Similar treatment to the Sand filter, however, the Advantex has less data available to confirm its performance.

The total estimated PW costs for alternative #3 are \$1,720,900 (see Table 2). The cost is 124% of the base case alternative present worth costs; this alternative is considered not economically efficient.

5.3.1. REGIONALIZATION ALTERNATIVE

Within Section II B 1. of the AIP, discussion of the potential for discharge to a regional waste water collection system is mentioned. The applicant provided discussion of this alternative. The alternative analysis mentions as the regional authority. The nearest regional/district sanitary sewer service would be from the city of Lake Ozark. The closest receiving sanitary sewer is located approximately 4.5 miles from this area. Also, the 4.5 miles is located outside both the RMSD and Lake Ozark Sewer Jurisdiction. An attempt to connect to the city of Lake Ozark was made two (2) years ago; however, the phase II portion of the district's plan will exceed the city of Lake Ozark's capacity.

NEEDS A WAIVER TO PREVENT CONFLICT WITH AREA WIDE MANAGEMENT PLAN APPROVED UNDER SECTION 208 OF THE CLEAN WATER ACT AND/OR UNDER 10 CSR 20-6.010(3) (B) 1 OR 2 CONTINUING AUTHORITIES? (YES OR NO) NO

5.3.2.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 applicant provided discussion of this alternative in the July 25, 2012, antidegradation report for Blue Spring Creek discharge. In a letter dated February 14, 2013, Schultz Surveying & Engineering explained that due to concerns of downstream landowners surrounding the discharge to the tributary to Blue Spring Creek and at the request of the Department staff, the RMSD relocated the proposed treatment facility to a new site (see Appendix A). The new site will be closer to the service area and more centralized for future collection phases. The lake watershed has many losing stream segments, making site selection for a gaining segment less likely. The selection of this site, while still a losing stream, will be more acceptable for social and economic reasons. This site eliminates the need for a costly force main.

Table 2. Economic Efficiency Analysis among Treatment Alternatives Using Present Worth Costs

Parameter	Orengo Advantex Recirculating		
	Recirculating Sand Filter	Fabric Filter	Extended Aeration Treatment Plant
BOD5 (mg/L)	15	10	10
TSS (mg/L)	10	10	15
DO (mg/L) Minimum	5	5	5
Ammonia (mg/L)	1.4/2.9	1.4/2.9	1.4/2.9
E. coli (col/100 mL)	126	126	126
Grease & Oil (mg/L)	10	10	10
Practicability	Yes	Yes	Yes
Total Present Worth*	\$ 1,647,151	\$ 1,720,882	\$ 1,386,657
Total Annual Costs	\$ 132,172	\$ 138,088	\$ 111,269
Base-to-Alternative Cost Ratio	1.19	1.24	1.00
Economic Efficiency	Economically Efficient	Not Economically Efficient	Economically Efficient

* 20 year design life and 5% interest Rate.

Present Worth Factor = 12.46

Note: Alternatives less than 120% are economically efficient

5.3.3.SOCIAL AND ECONOMIC IMPORTANCE EVALUATION -- AFFECTED COMMUNITY AND RELEVANT SOCIAL AND ECONOMIC FACTORS

The applicant first identified the community that will be affected by the proposed degradation of water quality. The affected community is likely quite large according to the report. Many recreational users frequent the lake and the district's wastewater treatment facility will improve water quality. Water quality is being impacted by the many improperly maintained wastewater systems that discharge to the lake. The applicant noted in the report that, locally, within the district's boundaries, there exist approximately 2,000 homes, 50 businesses and a permanent population of about 1,600 people; about 1,100 people are registered to vote. Assuming 2.5 persons per household, there are only 660 homes with permanent residents in the proposed service area, leaving over 1,300 homes to be occasionally occupied. Many of the homes in the district are older homes or cabins. Many are old cabins that have been upgraded to two or three bedroom homes but still utilize the old septic system.

The following are examples of social and economic factors given in the Missouri AIP: Measures of employment or income, increasing production, increasing or improving housing, increasing the community tax base, providing necessary public services, correcting a public health safety or environmental problem. A number of relevant factors were identified including 1) increasing capacity for growth through commercial and industrial development, 2) addressing employment, and 3) increasing community tax base. Within a Social and Economic Benefits section, each factor was evaluated. In addition, Appendix C, Attachment A: Tier 2 with Significant Degradation form contains a summary of this information.

Growth may be stalled if the district cannot move forward with construction of a central system. The cost of on-site systems has averaged five (5) to ten (10) thousand dollars recently with many alternative systems costing \$17,000+. Homeowners cringe at having to pay this much for an on-site disposal system knowing the district is working quickly to bring sewers to the area. The applicant noted that the new centralized waste water treatment facility will increase the opportunities for residential and commercial development. With development comes needed employment for development companies, contractors, realtors, management personnel, service providers and all of their employees. Because of the higher densities and resort/commercial style of development, the county's tax base per land area will have a higher optimization and sales taxes will increase as a result.

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(4)(A)4.B.(I)(a)].

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

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

OUTFALL #001

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

TABLE 3. EFFLUENT LIMITS

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	BASIS FOR LIMIT (NOTE 2)	MONITORING FREQUENCY
FLOW	*		*	FSR	Once/day
BOD ₅ (MG/L)***		15	10	PEL/FSR	ONCE/MONTH
TSS (MG/L)***		20	15	PEL/FSR	ONCE/MONTH
PH (S.U.)	6.5 – 9.0		6.5 – 9.0	FSR	ONCE/MONTH
AMMONIA AS N (MG/L) (APR 1 – SEPT 30)	3.7		1.4	PEL/ WQBEL	ONCE/MONTH
AMMONIA AS N (MG/L) (OCT 1 – MAR 30)	7.5		2.9	PEL/ WQBEL	ONCE/MONTH
ESCHERICHIA COLIFORM (E. COLI) (NOTE 1)	126		126**	FSR	ONCE/MONTH
OIL & GREASE (MG/L)	15		10	FSR	Once/Month
In the future, this facility may be given total phosphorus and Total nitrogen effluent limits and/or monitoring.					

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; TECHNOLOGY-BASED EFFLUENT LIMIT-TBEL; OR NO DEGRADATION EFFLUENT LIMIT--NDEL; OR FSR --FEDERAL/STATE REGULATION; OR N/A--NOT APPLICABLE. ALSO, PLEASE SEE THE **GENERAL ASSUMPTIONS OF THE WQAR #4 & #5.**

* - Monitoring requirements only.

** - The Monthly Average for E. coli shall be reported as a Geometric Mean.

*** 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). Acute wasteload allocations were determined using applicable water quality criteria (CMC: criteria maximum concentration) and stream volume of flow.

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).

2) Alternative Analysis-based – Using the preferred alternative's treatment capacity for conventional pollutants such as BOD₅ and TSS that are provided by the consultant as the WLA, the significantly-degrading effluent average monthly and average weekly limits are determined by applying the WLA as the average monthly (AML) and multiplying the AML by 1.5 to derive the average weekly limit (AWL). For toxic and nonconventional pollutant such as ammonia, the treatment capacity is applied as the significantly-degrading effluent monthly average (AML). A maximum daily can be derived by dividing the AML by 1.19 to determine the long-term average (LTA). The LTA is then multiplied by 3.11 to obtain the maximum daily limitation. This is an accepted procedure that is defined in USEPA's "Technical Support Document For Water Quality-based Toxics Control" (EPA/505/2-90-001).

Note: Significantly-degrading effluent limits have been based on the authority included in Section III. Permit Consideration of the AIP. Also under 40 CFR 133.105, permitting authorities shall require more stringent limitations than equivalent to secondary treatment limitations for 1) existing facilities if the permitting authority determines that the 30-day average and 7-day average BOD₅ and SS effluent values that could be achievable through proper operation and maintenance of the treatment works, and 2) new facilities if the permitting authority determines that the 30-day average and 7-day average BOD₅ and SS effluent values that could be achievable through proper operation and maintenance of the treatment works, considering the design capability of the treatment process.

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 10 mg/L as monthly average was proposed, thus $1.5 \times 10 = 15$ mg/L as weekly average limits. The influent monitoring may be required for this facility in its Missouri State Operating Permit.

Streeter Phelps modeling was not used for the discharge to a losing stream; the applicant provided staff with facility treatment specifications to demonstrate that the facility can meet the proposed limitations per the requirement of the *DO Modeling & BOD Effluent Limit Development Administrative Guidance*. **The Department staff considers the above mentioned effluent limits as protective of beneficial uses and existing water quality.**

- **Total Suspended Solids (TSS).** 15 mg/L as monthly average was proposed, thus 1.5×15 mg/L = 20 mg/L as weekly average limit. The influent monitoring may be required for this facility in its Missouri State Operating Permit.
- **pH.** pH shall be maintained in the range from 6.5 to nine (6.5– 9) standard units [10 CSR 20-7.015 (8)(A)2.].

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(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.

Summer

$$C_e = (((Q_e + Q_s) * C) - (Q_s * C_s)) / Q_e$$

Chronic WLA: $C_e = ((0.116 + 0.0)1.5 - (0.0 * 0.01)) / 0.116$

Acute WLA: $C_e = ((0.116 + 0.0)12.1 - (0.0 * 0.01)) / 0.116$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L (0.780)} = \mathbf{1.2 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L (0.321)} = 3.88 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

$MDL = 1.2 \text{ mg/L (3.11)} = 3.7 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 1.2 \text{ mg/L (1.19)} = 1.4 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 30]

Winter

Chronic WLA: $C_e = ((0.116 + 0.0)3.1 - (0.0 * 0.01)) / 0.116$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((0.116 + 0.0)12.1 - (0.0025 * 0.01)) / 0.116$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L (0.780)} = \mathbf{2.4 \text{ mg/L}}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L (0.321)} = 3.9 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

$MDL = 2.4 \text{ mg/L (3.11)} = 7.5 \text{ mg/L}$ [CV = 0.6, 99th Percentile]
 $AML = 2.4 \text{ mg/L (1.19)} = 2.9 \text{ mg/L}$ [CV = 0.6, 95th Percentile, n = 30]

Season	Maximum Daily Limit (mg/l)	Average Monthly Limit (mg/l)
Summer	3.7	1.4
Winter	7.5	2.9

The applicant supplied alternative analysis-based technology summer and winter limits of 1.4 and 2.9 mg/L, respectively, for preferred alternative treatment (see Appendix C). We apply this treatment capacity as the average month limit and determined the maximum daily using the method below. Because the above WQBEL average monthly limit for summer is equally as protective as the proposed technology-based limit, we are applying the water quality-based limits.

AML = 1.4 mg/L

LTA = 1.4 / 1.19 [CV = 0.6, 95th Percentile, n = 30]
 LTA = 1.2 mg/L

MDL = 1.2 (3.11) [CV = 0.6, 99th Percentile]
 MDL = 3.7 mg/L

Season	Maximum Daily Limit (mg/l)	Average Monthly Limit (mg/l)
Summer	3.7	1.4
Winter	7.5	2.9

- **E. coli.** Effluent limitations for losing streams are 126 colonies per 100 ml as the monthly average and 126 colonies per 100 ml as the maximum daily [10 CSR 20-7.015 (4)(B)4.] and [10 CSR 20-7.031(4)(C), Table A]. Monthly monitoring is required at all times with compliance to be determined by calculating the geometric mean of all samples collected during the reporting period (samples collected during the calendar month for the monthly average). The maximum daily requirement is consistent with EPA federal regulation 40 CFR 122.45(d). Further, the limit may change depending on the outcome of future state effluent regulation revision. 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.
- **Total Nitrogen.** Lake of the Ozarks is on the 2010 303(d) list for nitrogen and phosphorus impairment. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the EPA has approved the delisting of Lake of the Ozarks for nitrogen and phosphorus on the 2012 303(d) report. In the future, this facility may be given total nitrogen effluent limits and/or monitoring.
- **Total Phosphorous.** Lake of the Ozarks is on the 2010 303(d) list for nitrogen and phosphorus impairment. After the EPA's disapproval of Missouri's submitted general lake nutrient criteria on August 16, 2011, the EPA has approved the delisting of Lake of the Ozarks for nitrogen and phosphorus on the 2012 303(d) report. In the future, this facility may be given total phosphorus effluent limits and/or monitoring.

11. ANTIDegradation REVIEW PRELIMINARY DETERMINATION

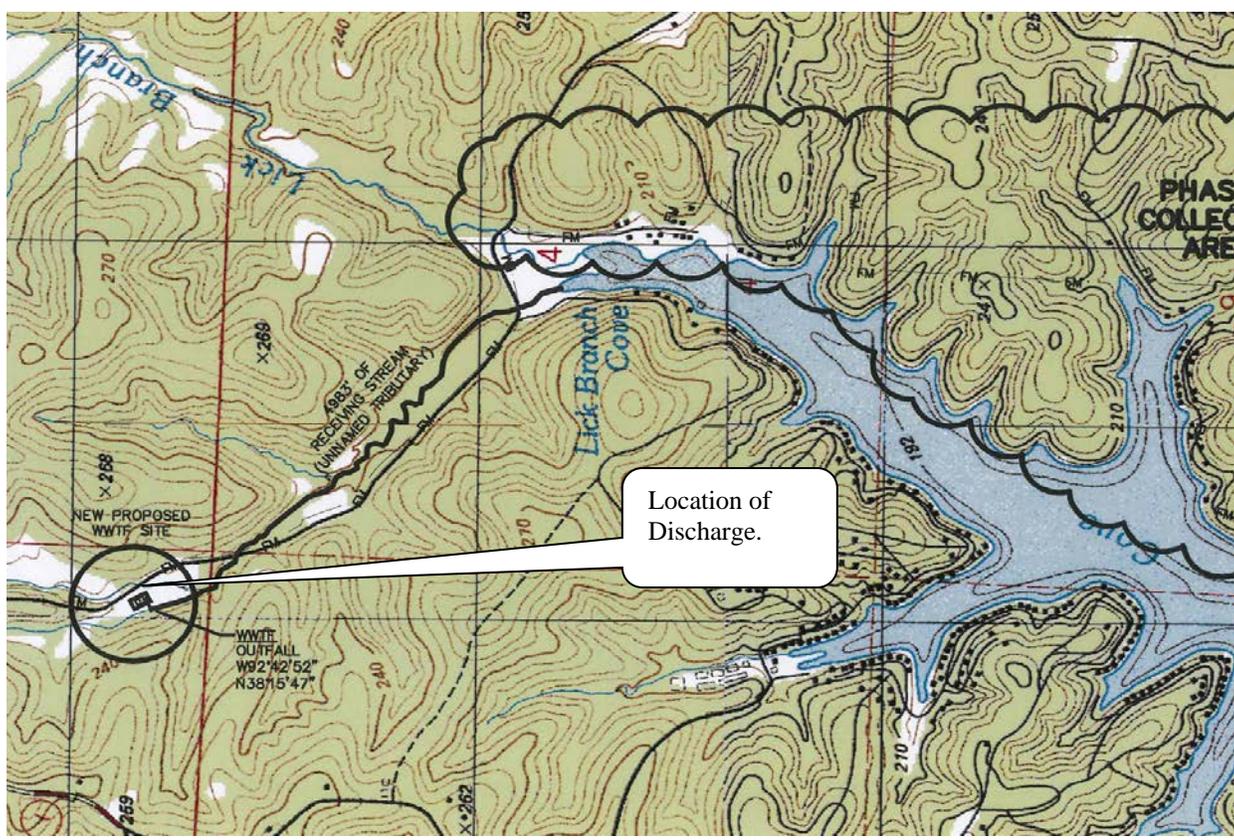
The proposed new facility discharge, Rocky Mount Sewer District WWTF, 0.075 MGD will result in significant degradation of the tributary to (Lick Branch) Lake of the Ozarks. The extended-aeration mechanical package plant was determined to be the base case technology (lowest cost alternative that meets technology and water quality based effluent limitations). The cost effectiveness of the other technologies was evaluated, and extended-aeration mechanical package plant was found to be the cost effective and the preferred alternative.

Per the requirements of the AIP, the effluent limits in this review were developed to be protective of beneficial uses and to attain the highest statutory and regulatory requirements. The Department has determined that the submitted review is sufficient and meets the requirements of the AIP. No further analysis is needed for this discharge.

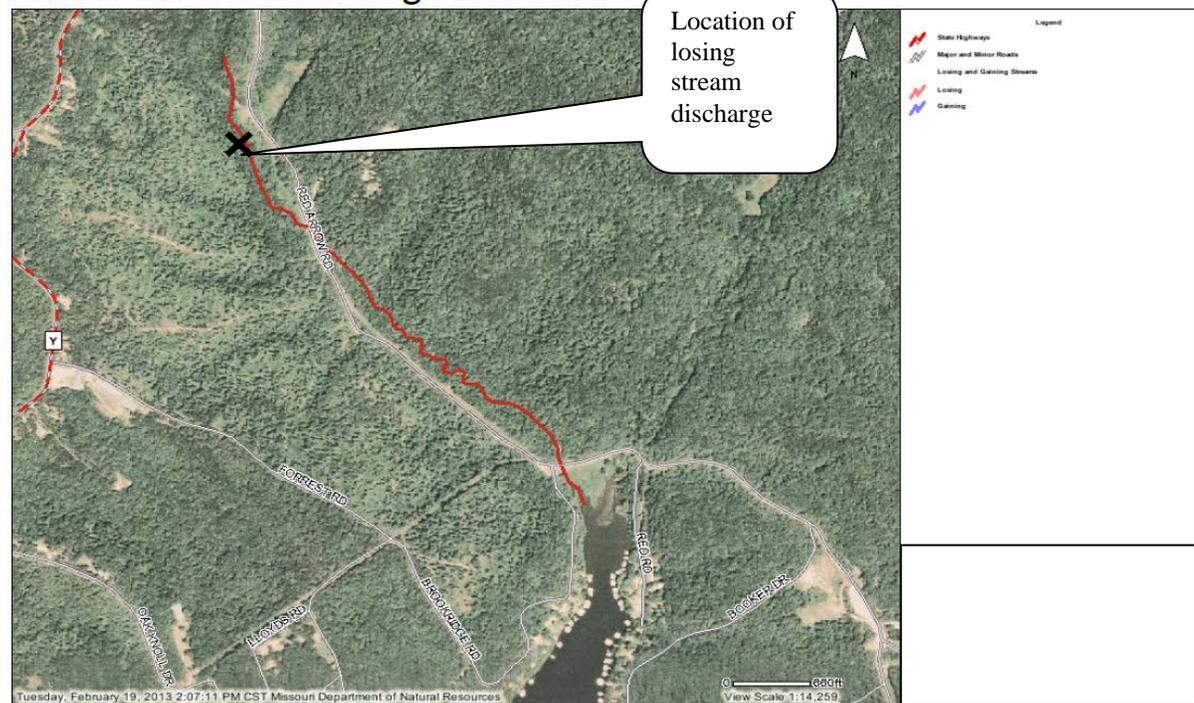
Reviewer: Todd J. Blanc
 Date: September 25, 2012
 Unit Chief: John Rustige, P.E.

Revised: December 28, 2012
 3rd Revision: February 22, 2013

Appendix A: Map of RMSD WWTF Discharge Location



RMSD WWTF Discharge Location



Appendix B: Preferred Alternative -- Mechanical Plant Treatment Capacity

Tipton Environmental International, Inc.



We clean dirty water for a better world

September 2, 2011

To: Shelly Hall, PE
LO Environmental, LLC
PO Box 2325
Lake Ozark, Missouri 65049
O. 573-964-6956
C. 573-692-0507
F. 866-365-8422
e-mail: shelly@loenvironmental.com

Subject: Wastewater Treatment System for
Rocky Mount Sewer District WWTF

Sales Agent: Mr. Dick Bowers
EnviroLine Co., Inc.
409 Sixth Street
P.O. Box 308
Osawatomie, KS 66064
Dick: cell 816-835-2555
Phone: 913-755-2161
Fax: 913-755-3018
Email: bowerslake@aol.com

Dear Shelly Hall:

Thank you for this opportunity to submit our Company's information on the TEII wastewater treatment system for which we would propose for the Rocky Mount Sewer District WWTF project. Attached we are sending a couple of photos of the Branson Airport project. The photos below are the system we supplied for the Branson Airport. It was much smaller than the one for Rocky Mount. The Branson Airport was at a design flow of:

Initial Design Flow Rate: 10,650 GPD
With Peak Flow Rates Total 45,113 GPD

please review to that data. Under separate cover we will be sending this equipment supply proposal for the wastewater treatment system at The New Rocky Mount Sewer District WWTF located at Close To The Lake Of The Mozart, MO.

We understand that the present proposed effluent discharge limits would be as follows:

- pH 6.0 – 9.0
- BOD: 10 mg/L monthly average
- TSS: 15 mg/L monthly average
- Ammonia: ~ 1.4 mg/L in summer months and ~2.9 mg/L in winter months
- Nitrate: monitoring only, but possible limit of ~8 mg/L in future **None Have Been Included**
- Oil and grease: 10 mg/L
- Fecal: 400 colonies/100 ml
- Design Flow Rate 47,500 GPD at 250 PPM BOD5 and TSS 250 PPM

The photos below are the system we supplied for the Branson Airport. It was much smaller than the one for Rocky Mount. The Branson Airport was at a design flow of:

Initial Design Flow Rate: 10,650 GPD
With Peak Flow Rates Total 45,113 GPD
Complete with Flow Equalization Tertiary With
UV Disinfection Dualized

NOTE: Pictures of plant DELETED DO TO SPACE LIMITATIONS

We are currently working on the design criteria for your project and will get it to you early next week. We just wanted you to be aware that we are working to assist you on this project.

Very truly yours,

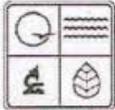
Tipton Environmental International, Inc.

Fred D. Tipton
President

Appendix C: Antidegradation Review Summary Attachments

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

- 1) Tier Determination and Effluent Limit Summary Sheet: Ammonia limitations for the preferred alternative were incorrectly reported per the full antidegradation report. Also, no dissolved oxygen limitation will be applied.
- 2) Attachment A: The Recirculating Sand Filter system should have 15 mg/L for BOD and the Mechanical Plant should have 15 mg/L for TSS. Also, the ammonia levels of treatment do not agree with the full report.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
ANTIDEGRADATION REVIEW SUMMARY
TIER DETERMINATION AND EFFLUENT LIMIT SUMMARY

1. FACILITY			
NAME RMSD WWTF		TELEPHONE NUMBER WITH AREA CODE (636) 288-3290	
ADDRESS (PHYSICAL) 27201 Highway Y		CITY Rocky Mount	STATE MO
			ZIP CODE 65072
2. RECEIVING WATER BODY SEGMENT #1			
NAME <i>Tributary to the Lake of the Ozarks</i>			
2.1	UPPER END OF SEGMENT (Location of discharge) UTM _____ OR Lat <i>38.26</i> Long <i>-92.71</i>		
2.2	LOWER END OF SEGMENT UTM _____ OR Lat <i>38.25</i> Long <i>-92.70</i>		
<small>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."</small>			
3. WATER BODY SEGMENT #2 (IF APPLICABLE)			
NAME K			
3.1	UPPER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
3.2	LOWER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
4. WATER BODY SEGMENT #3 (IF APPLICABLE)			
NAME			
4.1	UPPER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
4.2	LOWER END OF SEGMENT UTM _____ OR Lat _____ Long _____		
5. PROJECT INFORMATION			
Is the receiving water body an Outstanding National Resource Water, an Outstanding State Resource Water, or drainage thereto? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<small>In Tables D and E of 10 CSR 20-7.031, Outstanding National Resource Waters and Outstanding State Resource Water are listed. Per the Antidegradation Implementation Procedure Section 1.B.3., "any degradation of water quality is prohibited in these waters unless the discharge only results in temporary degradation." Therefore, if degradation is significant or minimal, the Antidegradation Review will be denied.</small>			
Will the proposed discharge of all pollutants of concern, or POCs, result in no net increase in the ambient water quality concentration of the receiving water after mixing? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<small>If yes, submit a summary table showing the levels of each pollutant of concern before and after the proposed discharge in the receiving water and then complete Attachment B for the first downstream classified water body segment.</small>			
Will the discharge result in temporary degradation? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<small>If yes, complete Attachment C.</small>			
Has the project been determined as non-degrading? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
<small>If yes, complete No Degradation Evaluation - Conclusion of Antidegradation Review form. Submit with the appropriate Construction Permit Application as no antidegradation review is required.</small>			
If yes to one of the above questions, skip to Section 8 - Wet Weather.			

6. 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 by approved the Missouri Department of Natural Resources methodology or (3) using an appropriate water quality model. QAPPs must be submitted to the department for approval well in advance (six months) of the proposed activity. Provide all the appropriate corresponding data and reports which were approved by the department Water Quality Monitoring and Assessment Section.

Date existing water quality data was provided by the Water Quality Monitoring and Assessment Section:

Approval date of the QAPP by the Water Quality Monitoring and Assessment Section:

Approval date of the project sampling plan by the Water Quality Monitoring and Assessment Section:

Approval date of the data collected for all appropriate pollutants of concern by the Water Quality Monitoring and Assessment Section:

Comments/Discussion:

7. POLLUTANTS OF CONCERN AND TIER DETERMINATION(S)

Pollutants of Concern to be considered include those pollutants reasonably expected to be present in the discharge per the Antidegradation Implementation Procedure Section II.S. The tier protection levels are specified and defined in rule at 10 CSR 20-7.031 (2).

Water Body Segment One Pollutants of Concern and Tier Determination(s)		
Tier 1	Tier 2 with Minimal Degradation	Tier 2 with Significant Degradation
		BODS* & TSS*
		DO*
		Ammonia as N*
		E. Coli*
		O&G*

Note: Add an asterisk to items that you only assume are Tier 2 with significant degradation.

Water Body Segment Two Pollutants of Concern and Tier Determination(s)		
Tier 1	Tier 2 with Minimal Degradation	Tier 2 with Significant Degradation

- For pollutants of concern that are Tier 2 with significant degradation, complete Attachment A.
- For pollutants of concern that are Tier 2 with minimal degradation, complete Attachment B.
- For pollutants of concern that are Tier 1, complete Attachment D. Additionally, a Tier 2 review must be conducted for each pollutant of concern on the appropriate water body segment.

8. 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?

4.0

Wet Weather Design Summary:

No Wet Weather bypass is being requested at this time

9. SUMMARY OF THE PROPOSED ANTI-DEGRADATION REVIEW EFFLUENT LIMITS

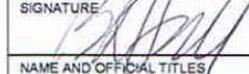
What are the proposed pollutants of concern and their respective effluent limits that the selected treatment option will comply with:

Pollutant of Concern	Units	Wasteload Allocation	Average Monthly Limit	Daily Maximum Limit
BOD5	MG/L	10	10	15
TSS	MG/L	15	15	20
Dissolved Oxygen	MG/L	6.0 Minimum	6	6
Ammonia	MG/L	5	5	8
Bacteria (E. Coli)	Colinies/100 ML	126	126	126
Ph	Units	6.5-9.0	6.5-9.0	6.5-9.0
Oil & Grease	MG/L	10	10	10

These proposed limits must not violate water quality standards, be protective of beneficial uses and achieve the highest statutory and regulatory requirements.

Attach the Antidegradation Review report and all supporting documentation.

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 regulation.

SIGNATURE:  DATE: 8-3-12

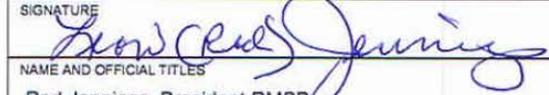
NAME AND OFFICIAL TITLES:
 Shelly Hall, PE

COMPANY NAME:
 L.O. Environmental, LLC

ADDRESS: 3827 Bagnell Dam Blvd CITY: Lake Ozark STATE: MO ZIP CODE: 65049

TELEPHONE NUMBER WITH AREA CODE: E-MAIL ADDRESS:

OWNER: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE:  DATE: 9/18/13

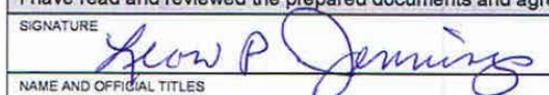
NAME AND OFFICIAL TITLES:
 Red Jennings, President RMSD

ADDRESS: 30772 Weller Road CITY: Rocky Mount STATE: MO ZIP CODE: 65072

TELEPHONE NUMBER WITH AREA CODE: 636-288-3290 E-MAIL ADDRESS:

CONTINUING AUTHORITY: Continuing Authority is the permanent organization that will be responsible for the operation, maintenance and modernization of the facility. 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.

I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE:  DATE: 9/18/13

NAME AND OFFICIAL TITLES:
 SAME AS OWNER

ADDRESS: CITY: STATE: ZIP CODE:

TELEPHONE NUMBER WITH AREA CODE: E-MAIL ADDRESS:

MO 780-2025 (06-09)



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH
ANTIDEGRADEATION REVIEW SUMMARY
ATTACHMENT A: TIER 2 – SIGNIFICANT DEGRADATION

1. FACILITY					
NAME RMSD WWTF			TELEPHONE NUMBER WITH AREA CODE (636) 288-3290		
ADDRESS (PHYSICAL) 27201 Highway Y		CITY Rocky Mount	STATE MC	ZIP CODE 65072	
2. RECEIVING WATER BODY SEGMENT #1					
NAME <i>Tributary to the Lake of the Ozarks</i>					
3. WATER BODY SEGMENT #2 (IF APPLICABLE)					
NAME					
4. IDENTIFYING ALTERNATIVES					
Supply a summary of the alternatives considered and the level of treatment attainable with regards to the alternative. "For Discharges likely to cause significant degradation, an analysis of non-degrading and less-degrading alternatives must be provided," as stated in the Antidegradation Implementation Procedure Section II.B.1. Per 10 CSR 20-6.010(4)(D)1., the feasibility of a no-discharge system must be considered. Attach all supportive documentation in the Antidegradation Review report.					
Non-degrading alternatives: Land Application, Sub-Surface Irrigation, Connection to Regional					
Alternatives ranging from less-degrading to degrading including Preferred Alternative (All must meet water quality standards):					
Alternatives	Level of Treatment Attainable for each Pollutant of Concern				
	BOD (mg/L)	TSS (mg/L)	Ammonia as N (mg/L)	Bacteria (E. Coli) (#/100mL)	
AdvanTex/UV	10	10	5	126	
Recirculating Sand filter/UV	10	10	1.6	126	
Mechanical Plant/UV	10	10	1.4	126	
Identifying Alternatives Summary: _____					
Mechanical Treatment and UV disinfection is the most cost effective. Present Worth Cost with a 20 year life cycle was used.					

MO780-2021 (01/09)

5. DETERMINATION OF THE REASONABLE ALTERNATIVE
<p>Per the Antidegradation Implementation Procedure Section II.B.2, "a reasonable alternative is one that is practicable, economically efficient and affordable." Provide basis and supporting documentation in the Antidegradation Review report.</p>
<p>Practicability Summary: "The practicability of an alternative is considered by evaluating the effectiveness, reliability, and potential environmental impacts," according to the Antidegradation Implementation Procedure Section II.B.2.a. Examples of factors to consider, including secondary environmental impacts, are given in the Antidegradation Implementation Procedure Section II.B.2.a.</p> <p>Mechanical Treatment and UV is proven technology that can effectively meet the effluent limits w/minimal risk to stream.</p>
<p>Economic Efficiency Summary: Alternatives that are deemed practicable must undergo a direct cost comparison in order to determine economic efficiency. Means to determine economic efficiency are provided in the Antidegradation Implementation Procedure Section II.B.2.b.</p> <p>All Treatments considered are capable of meeting stringent limits. Therefore the least expensive one was chosen.</p>
<p>Affordability Summary: Alternatives identified as most practicable and economically efficient are considered affordable if the applicant does not supply an affordability analysis. An affordability analysis per the Antidegradation Implementation Procedure Section II.B.2.c, "may be used to determine if the alternative is too expensive to reasonably implement."</p> <p>An affordability analysis was not performed.</p>
<p>Preferred Chosen Alternative:</p> <p>Mechanical Treatment and UV disinfection</p>
<p>Reasons for Rejecting the other Evaluated Alternatives:</p> <p>AdvanTex & the Sand Filter was rejected because of the higher initial cost.</p>
<p>Comments/Discussion: The proposed project shall include the installation of a 150,000 gallon per day Mechanical Treatment Facility. The Facility will discharge to a losing stream, Blue Springs Creek. The plant shall meet all MODNR effluent limits for pollutants of concerns as detailed in the Antidegradation Review Summary Attachment A: Tier 2. The plant will serve the first phase for the Rocky Mount Sewer District.</p>

6. SOCIAL AND ECONOMIC IMPORTANCE OF THE PREFERRED ALTERNATIVE

If the preferred alternative will result in significant degradation, then it must be demonstrated that it will allow important economic and social development in accordance to the Antidegradation Implementation Procedure Section II.E. Social and Economic Importance is defined as the social and economic benefits to the community that will occur from any activity involving a new or expanding discharge.

Identify the affected community:

The affected community is defined in 10 CSR 20-7.031(2)(B) as the community "in the geographical area in which the waters are located.: Per the Antidegradation Implementation Procedure Section II.E.1, "the affected community should include those living near the site of the proposed project as well as those in the community that are expected to directly or indirectly benefit from the project."

Property owners in the Rocky Mount Sewer District. In particular Lake front homeowners.

Identify relevant factors that characterize the social and economic conditions of the affected community:

Examples of social and economic factors are provided in the Antidegradation Implementation Procedure Section II.E.1., but specific community examples are encouraged.

Homes are difficult to sell in the District due to outdated failing sewer systems. Many homes were once cabins that now are 2 or 3 bedroom homes. Failing systems can pollute the Lake which many rely on for jobs. Systems for individual homes can cost in excess of \$17,000. Growth may very well be stymied if the District cannot move forward with construction a central system because the cost of on-site systems

Describe the important social and economic development associated with the project:

Determining benefits for the community and the environment should be site specific and in accordance with the Antidegradation Implementation Procedure Section II.E.1.

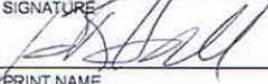
Centralized sewer in the area would encourage development. With development comes needed employment. Protection of Health.

PROPOSED PROJECT SUMMARY:

Public sewer is desperately needed in this area of the Lake. Phase I would provide sewer to a population equivalent of 1,000.

Attach the Antidegradation Review report and all supporting documentation. This is a technical document, which must be signed, sealed and dated by a registered professional engineer of Missouri.

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 9-17-12
--	-----------------

PRINT NAME Shelly Hall, PE	LICENSE #: MO 2009001084
-------------------------------	-----------------------------

TELEPHONE NUMBER WITH AREA CODE 573-692-0507	E-MAIL ADDRESS: shell@loenvironmental.com
---	--

OWNER: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE 	DATE 9/18/13
--	-----------------

CONTINUING AUTHORITY: I have read and reviewed the prepared documents and agree with this submittal.

SIGNATURE 	DATE 9/18/13
--	-----------------

APPENDIX 4 – AFFORDABILITY ANALYSIS:

**Missouri Department of Natural Resources
Water Protection Program
Affordability Determination and Finding
(In accordance with RSMo 644.145)**

**Rocky Mount WWTF
Rocky Mount Sewer District
For the purpose of construction of a new WWTF
Operating Permit MO-0136719**

Section 644.145 RSMo requires the Missouri Department of Natural Resources 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 or publicly-owned treatment works.”

Facility Description:

The proposed Rocky Mount Wastewater Treatment Facility (WWTF) will be located approximately 3,800 feet south of Highway Y on Red Arrow Road, Rocky Mount, MO in Morgan County. The proposed treatment facility shall consist of flow equalization, extended aeration mechanical package plant, tertiary filtration, ultraviolet disinfection, and sludge disposal by contract hauler. The proposed design average flow is 75,000 GPD and a peak wet weather flow of 274,948 GPD.

Receiving Stream: Tributary to (Lick Branch) Lake of the Ozarks (U) (losing)
First Classified Stream and ID: Lake of the Ozarks (L2) (07205)
USGS Basin & Sub-watershed No.: (10290109-0407)

Residential Connections:	<u>260</u>
Commercial Connections:	<u>11</u>
Total Connections ¹ :	<u>271</u>

New Permit Requirements or Requirements Now Being Enforced:

The Rocky Mount Sewer District is an unsewered area. The district desires to construct a centralized collection system and treatment facility in anticipation of economic growth for the community. The Department received a construction permit application request on April 4, 2013 for the proposed construction of a collection system and new wastewater treatment facility. The district plans on phasing the construction of the wastewater system in order to provide service to the entire district.

Range of Anticipated Costs Associated with Complying with Requirements:

According to the Rocky Mount Sewer District Facility Plan estimates the cost of constructing the treatment facility to be \$715,850 (Page 14 of the facility plan). The total project cost of phase 1 including the collection system is estimated to be \$4,224,229 (Page 20 of the facility plan).

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

The district is on the 2013 Intended Use Plan under the fundable projects list. The district has passed a \$24,000,000 bond issue on August 3, 2004. The district anticipates receiving a \$835,079 loan and \$3,000,000 grant from the Department’s State Revolving Fund (SRF) (Page 21 of the facility plan).

¹ The number of connections was obtained from the Facility Plan for the Rocky Mount Sewer District received by the Department on March 7, 2013.

Proposed User Rates (monthly flat rate): \$57.00

Municipal Bond Rating (if applicable): N/A

Bonding Capacity: Unknown
*(General Obligation Bond capacity allowed by constitution:
 cities=up to 20% of taxable tangible property
 sewer districts=up to 5% of taxable tangible property)*

Current outstanding debt: Unknown

Other indicators:
 Since the Rocky Mount Sewer District has passed a \$24,000,000 bond issue, they are capable of completing the construction of the treatment facility and phase 1 of the collection system contingent on receiving SRF financing.

(2) Affordability of pollution control options for the individuals or households of the community:

Current annual operating costs (exclude depreciation):	\$0
Current user rate:	\$0
Estimated capital cost of pollution control options ² :	\$1,224,229
Annual Cost of Additional (Operating Costs & Debt Service) ³ :	\$163,200
Estimated Resulting User Rate and/or Cost per Household ⁴ :	\$684
Median Household Income from Morgan County ⁵	\$35,911
Rate and/or Cost per Household as a Percent of Median Household Income: <i>(Rate/MHI = (684/35,911)*100 = 1.90%)</i>	1.90%

Check Appropriate Box	Financial Impact	Residential Indicator (Usage Rate as a percent of MHI = annual cost/MHI)
	Low	Less than 1% MHI
X	Medium	Between 1% and 2% MHI
	High	Greater than 2% MHI

The residential indicator was determined to have a medium financial impact based on the proposed user rate, which is approximately 1.90% of the median household income.

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

The Rocky Mount Sewer District evaluated multiple alternatives for the proposed treatment facility. The Antidegradation Report and Facility Plan completed for the district provides detailed discussions of the alternatives evaluated. Alternatives ranged from regionalization with the Lake Ozark and Osage Beach, land application, and new discharging wastewater treatment facilities. The construction of an extended aeration mechanical package plant was determined to be the most cost effective and practical option. The district elected to phase the development of the treatment facility and collection system to serve the entire community.

² Total Phase 1 Capital Cost (\$4,224,229) – DNR Grant Funds (\$3,000,000) = \$1,224,229

³ Annual O&M Costs = \$82,000 and Annual Loan Repayment Costs = \$81,200

⁴ \$57.00/month x 12 months = \$684

⁵ Financial data is from Morgan County, because the district has no financial history and the area is unincorporated.

An extended aeration treatment facility is a proven technology in the state that achieves a high quality of effluent. The facility will treat an organic load of 173 pounds of Bio-chemical Oxygen Demand (BOD₅) per day. The proposed facility is designed to meet average monthly limits of 10 milligrams per liter (mg/L) BOD₅ and 15 mg/L Total Suspended Solids (TSS).

The receiving stream is a Tributary to Lick Branch, which discharges into the Lake of the Ozarks in less than one (1) mile. The permit limits were derived to protect this losing stream and the beneficial uses of the Lake of the Ozarks. The beneficial uses of the Lake of the Ozarks are whole body contact recreation, secondary contact recreation, livestock and wildlife watering, and protection of warm water aquatic life and human health fish consumption.

(4) 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; and*
- (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.*

Potentially Distressed Populations	
Unemployment for Morgan County ⁶	8.1%
Median Household Income (MHI) in Morgan County ⁷	\$35,911
Percent Change in MHI (1990-2010)	+87.4%
Percent Population Growth/Decline (1990-2010) ⁸	+32.0%
Change in Median Age in Years (1990-2010)	+9.7 years
Percent of Households in Poverty ⁹	23.6%
Percent of Households Relying on Food Stamps	13.1%

⁶ Unemployment data was obtained from American Fact Finder at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

⁷ Median Household Income is provided by the American Fact Finder – INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION ADJUSTED DOLLARS) – 2006 – 2010 American Community Survey 5-Year Estimates, which can be found online at: http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

⁸ Population trend data was obtained from online at http://mcdc1.missouri.edu/cgi-bin/profiler/profiler.py?profile_id=SF1_2010&geoids=16000US2912988

⁹ Poverty data is provided by the American Fact Finder – POVERTY STATUS IN THE PAST 12 MONTHS – 2006-2010 American Community Survey 5-Year Estimates, which can be found online at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_DP03&prodType=table

Opportunity for cost savings or cost avoidance:

The Rocky Mount Sewer District has applied for a SRF funding consisting of a loan and grant. The district is receiving nearly 75% of the capital costs as a grant from the Department due to their status as a Disadvantaged Community¹⁰. The district will also realize savings in interest comparing a SRF loan to a private loan.

Opportunity for changes to implementation/compliance schedule:

None noted.

(5) An assessment of other community investments relating to environmental improvements:

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

(6) 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:

Secondary indicators for consideration:

Socioeconomic, Debt and Financial Indicators

Indicators	Strong (3 points)	Mid-Range (2 points)	Weak (1 point)	Score
Bond rating indicator	Above BBB or Baa	BBB or Baa	Below BBB or Baa	N/A
Overall net debt as a % of full market property value	Below 2%	2% - 5%	Above 5%	N/A
Unemployment Rate	>1% below Missouri average	± 1% of Missouri average	>1% above Missouri average	1
Median household income	More than 25% above Missouri MHI	± 25% of Missouri MHI	More than 25% below Missouri average	2
Property tax revenues as a % of full market property value	Below 2%	2% - 4%	Above 4%	N/A
Property tax collection rate	Above 98%	94% - 98%	Below 94%	N/A

Secondary Indicators Average Score: 1.5

Residential Indicator (from Criteria #2 above): 1.90% medium impact

¹⁰ A Disadvantaged Community is defined as any community with a population of 3,300 or less, whose user rates will be at or above 2% of MHI and the MHI is at or below 75% of the state average MHI. A Disadvantaged Community may receive a grant for up to 75% of eligible project costs and a loan for the remaining 25% of eligible project costs.

Financial Capability Matrix:

Financial Capability Indicators Score from above ↓	Residential Indicator (User rate as a % of MHI)		
	Low (Below 1%)	Mid-Range (Between 1.0% and 2.0%)	High (Above 2.0%)
Weak (below 1.5)	Medium Burden	High Burden	High Burden
Mid-Range (1.5 – 2.5)	Low Burden	Medium Burden	High Burden
Strong (above 2.5)	Low Burden	Low Burden	Medium Burden

Estimated Financial Burden: medium burden

(7) An assessment of any other relevant local community economic condition.

Morgan County’s population grew 32% from 1990-2010. In terms of economic strength, Morgan County is on lower than average when compared to other counties in the State. The per capita income is 19.4% lower than the State’s average.¹¹

In terms of retail Sales, Morgan County loses retail customers to surrounding counties and the County residents spend less than the state average on retail goods and services. The buying power index of Morgan County residents is on average compared to the rest of the regional economy.¹²

Conclusion and Finding

The Rocky Mount Sewer District requested a construction permit for the construction of a centralized collection system and new wastewater treatment facility for the district. The Department finds that these improvements will improve the water quality of the Lake of the Ozarks by elimination of failing on-site systems and improve the public health of the community.

The Department considered all seven (7) of the criteria presented in subsection 644.145.3 when evaluating the affordability of the relevant actions. Taking into consideration these criteria, this analysis examined whether the above referenced permit modifications affects 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. As a result of reviewing the above criteria, the Department hereby finds that the action described above will result in a medium burden with regard to the community’s overall financial capability and a medium financial impact for most individual customers/households.

¹¹ County per capita income was obtained online at <http://www.missourieconomy.org/indicators/wages/pci10county.stm>.

¹² Retail trade analysis was obtained online at http://www.missourieconomy.org/pdfs/central_via_retail_trade_analysis.pdf.

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION**

**Revised
October 1, 1980**

**PART I - GENERAL CONDITIONS
SECTION A - MONITORING AND REPORTING**

1. **Representative Sampling**
 - a. Samples and measurements taken as required herein shall be representative of the nature and volume, respectively, of the monitored discharge. All samples shall be taken at the outfall(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
 - b. Monitoring results shall be recorded and reported on forms provided by the Department, postmarked no later than the 28th day of the month following the completed reporting period. Signed copies of these, and all other reports required herein, shall be submitted to the respective Department Regional Office, the Regional Office address is indicated in the cover letter transmitting the permit.
2. **Schedule of Compliance**

No later than fourteen (14) calendar days following each date identified in the "Schedule of Compliance", the permittee shall submit to the respective Department Regional Office as required therein, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements, or if there are no more scheduled requirements, when such noncompliance will be corrected. The Regional Office address is indicated in the cover letter transmitting the permit.
3. **Definitions**

Definitions as set forth in the Missouri Clean Water Law and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein.
4. **Test Procedures**

Test procedures for the analysis of pollutant shall be in accordance with the Missouri Clean Water Commission Effluent Regulation 10 CSR 20-7015.
5. **Recording of Results**
 - a. For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 - (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. 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 this permit 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 both.
 - c. Calculations for all limitations which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified by the Director in the permit.
6. **Additional Monitoring by Permittee**

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Monitoring Report Form. Such increased frequency shall also be indicated.

7. **Records Retention**

The permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recording for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this 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.

SECTION B - MANAGEMENT REQUIREMENTS

1. **Change in Discharge**
 - a. All discharges authorized herein shall be consistent with the terms and conditions of this permit. The discharge of any pollutant not authorized by this permit or any pollutant identified in this permit more frequently than or at a level in excess of that authorized shall constitute a violation of the permit.
 - b. Any facility expansions, production increases, or process modifications which will result in new, different, or increased discharges of pollutants shall be reported by submission of a new NPDES application at least sixty (60) days before each such change, or, if they will not violate the effluent limitations specified in the permit, by notice to the Department at least thirty (30) days before such changes.
2. **Noncompliance Notification**
 - a. If, for any reason, the permittee does not comply with or will be unable to comply with any daily maximum effluent limitation specified in this permit, the permittee shall provide the Department with the following information, in writing within five (5) days of becoming aware of such conditions:
 - (i) a description of the discharge and cause of noncompliance, and
 - (ii) the period of noncompliance, including exact dates and times or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.
 - b. Twenty-four hour reporting. The permittee shall report any noncompliance which may endanger health or the environment. Any information shall be provided orally with 24 hours from the time the permittee becomes aware of the circumstances. A written submission shall also be provided with five (5) days of the time the permittee becomes aware of the circumstances. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.
3. **Facilities Operation**

Permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions. Operators or supervisors of operations at publicly owned or publicly regulated wastewater treatment facilities shall be certified in accordance with 10 CSR 209.020(2) and any other applicable law or regulation. Operators of other wastewater treatment facilities, water contaminant source or point sources, shall, upon request by the Department, demonstrate that wastewater treatment equipment and facilities are effectively operated and maintained by competent personnel.
4. **Adverse Impact**

The permittee shall take all necessary steps to minimize any adverse impact to waters of the state resulting from noncompliance with any effluent limitations specified in this permit or set forth in the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

- a. Any bypass or shut down of a wastewater treatment facility and tributary sewer system or any part of such a facility and sewer system that results in a violation of permit limits or conditions is prohibited except:
 - (i) where unavoidable to prevent loss of life, personal injury, or severe property damages; and
 - (ii) where unavoidable excessive storm drainage or runoff would catastrophically damage any facilities or processes necessary for compliance with the effluent limitations and conditions of this permit;
 - (iii) where maintenance is necessary to ensure efficient operation and alternative measures have been taken to maintain effluent quality during the period of maintenance.
 - b. The permittee shall notify the Department in writing of all bypasses or shut down that result in a violation of permit limits or conditions. This section does not excuse any person from liability, unless such relief is otherwise provided by the statute.
6. **Removed Substances**
Solids, sludges, filter backwash, or any other pollutants removed in the course of treatment or control of wastewaters shall be disposed of in a manner such as to prevent any pollutants from entering waters of the state unless permitted by the Law, and a permanent record of the date and time, volume and methods of removal and disposal of such substances shall be maintained by the permittee.
 7. **Power Failures**
In order to maintain compliance with the effluent limitations and other provisions of this permit, the permittee shall either:
 - a. in accordance with the "Schedule of Compliance", provide an alternative power source sufficient to operate the wastewater control facilities; or,
 - b. if such alternative power source is not in existence, and no date for its implementation appears in the Compliance Schedule, halt or otherwise control production and all discharges upon the reduction, loss, or failure of the primary source of power to the wastewater control facilities.
 8. **Right of Entry**
For the purpose of inspecting, monitoring, or sampling the point source, water contaminant source, or wastewater treatment facility for compliance with the Clean Water Law and these regulations, authorized representatives of the Department, shall be allowed by the permittee, upon presentation of credentials and at reasonable times;
 - a. to enter upon permittee's premises in which a point source, water contaminant source, or wastewater treatment facility is located or in which any records are required to be kept under terms and conditions of the permit;
 - b. to have access to, or copy, any records required to be kept under terms and conditions of the permit;
 - c. to inspect any monitoring equipment or method required in the permit;
 - d. to inspect any collection, treatment, or discharge facility covered under the permit; and
 - e. to sample any wastewater at any point in the collection system or treatment process.
 9. **Permits Transferable**
 - a. Subject to Section (3) of 10 CSR 20-6.010 an operating permit may be transferred upon submission to the Department of an application to transfer signed by a new owner. Until such time as the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
 - b. The Department, within thirty (30) days of receipt of the application shall notify the new permittee of its intent to revoke and reissue or transfer the permit.
 10. **Availability of Reports**
Except for data determined to be confidential under Section 308 of the Act, and the Law and Missouri Clean Water Commission Regulation for Public Participation, Hearings and Notice to Governmental Agencies 10 CSR 20-6.020, all reports prepared in accordance with the terms of this permit shall be available for public inspection at the offices of the Department. As required by statute, effluent data shall not be considered confidential. Knowingly making any false statement on any such report shall be subject to the imposition of criminal penalties as provided in Section 204.076 of the Law.
 - 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) violation 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 and 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.
12. **Permit Modification - Less Stringent Requirements**
If any permit provisions are based on legal requirements which are lessened or removed, and should no other basis exist for such permit provisions, the permit shall be modified after notice and opportunity for a hearing.
 13. **Civil and Criminal Liability**
Except as authorized by statute and provided in permit conditions on "Bypassing" (Standard Condition B-5) and "Power Failures" (Standard Condition B-7) nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.
 14. **Oil and Hazardous Substance Liability**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties to which the permittee is or may be subject under Section 311 of the Act, and the Law and Regulations. Oil and hazardous materials discharges must be reported in compliance with the requirements of the Federal Clean Water Act.
 15. **State Laws**
Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable state statute or regulations.
 16. **Property Rights**
The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of or violation of federal, state or local laws or regulations.
 17. **Duty to Reapply**
If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for a new permit 180 days prior to expiration of this permit.
 18. **Toxic Pollutants**
If a toxic effluent standard, prohibition, or schedule of compliance is established, under Section 307(a) of the Federal Clean Water Act for a toxic pollutant in the discharge of permittee's facility and such standard is more stringent than the limitations in the permit, then the more stringent standard, prohibition, or schedule shall be incorporated into the permit as one of its conditions, upon notice to the permittee.
 19. **Signatory Requirement**
All reports, or information submitted to the Director shall be signed (see 40 CFR-122.6).
 20. **Rights Not Affected**
Nothing in this permit shall affect the permittee's right to appeal or seek a variance from applicable laws or regulations as allowed by law.
 21. **Severability**
The provisions of this permit are severable, and if any provisions of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
Revised
October 1, 1980**

**PART II - SPECIAL CONDITIONS - PUBLICLY OWNED
TREATMENT WORKS
SECTION A - MAJOR CONTRIBUTING INDUSTRY**

1. Definitions

Definitions as set forth in the Missouri Clean Water Laws and Missouri Clean Water Commission Definition Regulation 10 CSR 20-2.010 shall apply to terms used herein, in addition to the following:

- a. A "major contributing industry" to a publicly owned treatment facility is a wastewater source that meets any one of the following criteria:
- (1) has a flow of 50,000 gallons or more per average workday;
 - (2) has an average daily flow greater than five percent (5%) of the flow carried by the system receiving the waste;
 - (3) has in its waste a toxic pollutant in toxic amounts as defined in standards issued under Section 307(a) of the Federal Water Pollution Control Act (hereinafter the Act), or
 - (4) has significant impact, either singly or in combination with other contributing industries, on the treatment works or in the quality of its effluent.
- b. "Compatible pollutants" are biochemical oxygen demand, suspended solids, pH, and fecal coliform bacteria, plus additional pollutants, e.g., nitrogen or phosphorus, identified in the NPDES permit, if the publicly owned treatment facility was designed to treat such pollutants, approved by the Department and in fact does remove such pollutants to design specifications.
- c. An "incompatible pollutant" is any pollutant which is not a compatible pollutant as defined above.

2. Industrial Effluent Monitoring

The permittee shall establish and implement a procedure to periodically or regularly obtain monitoring data on the quality and quantity of all effluents introduced by each major contributing industry. Frequency of monitoring shall be subject to approval by the Department.

3. Industrial Users Report

Each permittee which has a major contributing industry shall also submit to the permit-issuing authority semi-annual reports summarizing all major contributing industries subject to the pretreatment requirements of the Missouri Clean Water Law and Regulations (hereinafter the Law and Regulations), or Section 307 of the Act. These reports must be filed with the Department of Natural Resources, PO Box 176, 205 Jefferson Street, Jefferson City,

Missouri 65102 by January 1 and July 1 of each year. Such a report shall include at least the following information:

- a. name and number of major contributing industries using the treatment works and the waste type, raw materials usage (lbs/day or kg/day), and average daily flow for each industry;
- b. summary of monitoring data obtained in accordance with Standard Conditions Part II, Section A.2 above, detailing the quality and quantity of all effluents introduced by each major contributing industry, and the frequency of monitoring performed;
- c. number of major contributing industries in full compliance with the requirements of the Law and Regulations and Section 307 of the Act or not subject to these requirements (e.g., discharge only compatible pollutants), and
- d. a list identifying by name those major contributing industries presently in violation of the requirements of the Law and Regulations and Section 307 of the Act (e.g., discharges pollutant which interferes with, passes through or is incompatible with the municipal treatment works).

4. Report on Pollutant Introduction

The permittee shall give notice to the department of any new introduction of pollutants or any substantial change in the character or volume of pollutants already being introduced. Such notice shall include:

- a. the origin, quality, and quantity of pollutants to be introduced into the publicly owned treatment works; and
- b. any anticipated impact on the quality and quantity of the effluent to be discharged by such treatment works;
- c. any anticipated impact on the quality of sludge produced by such treatment works causing the sludge to be hazardous under Federal and State Law.

5. Industrial Users Compliance Schedules

The permittee shall identify any introduction of pollutants into the facility subject to pretreatment standards under Section 307(b) of the Federal Clean Water Act. In addition, the permittee shall require any industrial user of such treatment works to comply with the requirements of Section 204(b), 307, and 308 of the Federal Clean Water Act. As a means of compliance from each industrial user, subject to the requirements of Section 307 of the Federal Clean Water Act and shall forward to the Department a copy of periodic notice, over intervals not to exceed nine (9) months, of progress towards full compliance with Section 307 requirements.

**STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
AUGUST 15, 1994**

PART III – SLUDGE & BIOSOLIDS FROM DOMESTIC WASTEWATER TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation and incorporates applicable federal sludge disposal requirements under 40 CFR 503. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFS 503 until such time as Missouri is delegated the new EPA sludge program. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Sludge and Biosolids Use and Disposal Practices.
 - a. Permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. Permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. Permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
 - d. A separate operating permit is required for each operating location where sludge or biosolids are generated, stored, treated, or disposed, unless specifically exempted in this permit or in 10 CSR 20, Chapter 6 regulations. For land application, see section H, subsection 3 of these standard conditions.
4. Sludge Received From Other Facilities
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.
 - c. Sludge received from out-of-state generators shall receive prior approval of the permitting authority and shall be listed in the facility description or special conditions section of the permit.
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after du process) be modified, or alternatively revoked and reissued, to comply with any applicable 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 the STANDARD CONDITIONS, the department may include sludge limitations in the special conditions portion or other sections of this permit.
9. Alternate Limits in Site Specific Permit.

Where deemed appropriate, the department may require an individual site specific permit in order to authorize alternate limitations:

 - a. An individual permit must be obtained for each operating location, including application sites.
 - b. To request a site specific permit, an individual permit application, permit fees, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the department, as follows:
 - a. The department will prepare a permit modification and follow permit public notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owners of property located adjacent to each land application site, where appropriate.
 - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.
11. Compliance Period
Compliance shall be achieved as expeditiously as possible but no later than the compliance dates under 40 CFR 503.2.

SECTION B – DEFINITIONS

1. Biosolids means an organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge. Untreated sludge or sludge that does not conform to the pollutants and pathogen treatment requirements in this permit is not considered biosolids.
2. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
3. 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 503.
4. 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 (PFRP) in accordance with 40 CFR 503.
5. 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 public owned treatment works (POTW) or privately owned facility.
6. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include unaerated wastewater treatment lagoons and constructed wetlands for wastewater treatment.
7. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
8. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the next growing season after biosolids application.
9. Sinkhole is a depression in the land surface into which surface water flows to join an underground drainage system.
10. Site Specific Permit is a permit that has alternate limits developed to address specific site conditions for each land application site or storage site.
11. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks.
12. Sludge lagoon is an earthen 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.
13. Wetlands are those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamp, marshes, bogs, and similar areas. Wetlands do not include constructed wetlands used for wastewater treatment.

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

1. Sludge shall be routinely removed from the wastewater treatment facilities and handled according to the permit facility description and sludge conditions in this permit.
2. The permittee shall operate the facility so that there is no sludge loss into the discharged effluent in excess of permit limits, no sludge bypassing, and no discharge of sludge to waters of the state.
3. Mechanical treatment plants shall have separate sludge storage compartments in accordance with 10 CSR 20, Chapter 8. Failure to remove sludge from these storage compartments on the required design schedule is a violation of this permit.

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

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the department; or the hauler transports the sludge to another permitted treatment facility.
3. The permittee shall require documentation from the contractor of the disposal methods used and permits obtained by the contractor.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility.

SECTION E – WASTEWATER TREATMENT LAGOONS AND STORMWATER RETENTION BASINS

1. Sludge that is retained within a wastewater treatment lagoon is subject to sludge disposal requirements when the sludge is removed from the lagoon or when the lagoon ceases to receive and treat wastewater.
2. If sludge is removed during the year, an annual sludge report must be submitted.
3. Storm water retention basins or other earthen basins, which have been used as sludge storage for a mechanical treatment system is considered a sludge lagoon and must comply with Section G of this permit.

SECTION F – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
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 waste, shall be disposed in accordance with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored; and ash use or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.
4. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions sections of this permit.

SECTION G – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

1. Surface disposal sites shall comply with the requirements in 40 CFR 503 Subpart C, and solid waste disposal regulations under 10 CSR 80.
2. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions section of this permit.
3. Effective February 19, 1995, a sludge lagoon that has been in use for more than two years without removal of accumulated sludge, or that has not been properly closed shall comply with one of the following options:
 - a. Permittee shall obtain a site specific permit to address surface disposal requirements under 40 CFR 503, ground water quality regulations under 10 CSR 20, Chapter 7 and 8, and solid waste management regulations under 10 CSR 80;
 - b. Permittee shall clean out the sludge lagoon to remove any sludge over two years old and shall continue to remove accumulated sludge at least every two years or an alternate schedule approved under 40 CFR 503.20(b). In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the department; or
 - c. Permittee shall close the lagoon in accordance with Section 1.

SECTION H – LAND APPLICATION

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the Facility Description or special conditions section of the permit.
2. This permit replaces and terminates all previous sludge management plan approvals by the department for land application of sludge or biosolids.
3. Land application sites within a 20 mile radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless a site specific permit is required under Section A, Subsection 9.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
 - a. This permit does not authorize the land application of sludge except when sludge meets the definition of biosolids.
 - b. This permit authorizes “Class A or B” biosolids derived from domestic wastewater sludges to be land applied onto grass land, crop land, timber land or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites.
Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the department. Applications for approval shall be in the form of an engineering report and shall address priority pollutants and dioxin concentrations. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site-specific permit.

6. Agricultural and Silvicultural Sites.

In addition to specified conditions herein, this permit is subject to the attached Water Quality Guides numbers WQ 422 through 426 published by the University of Missouri, and hereby incorporated as though fully set forth herein. The guide topics are as follows:

WQ 422	Land Application of Septage
WQ 423	Monitoring Requirements for Biosolids Land Application
WQ 424	Biosolids Standards for Pathogens and Vectors
WQ 425	Biosolids Standards for Metals and Other Trace Substances
WQ 426	Best Management Practices for Biosolids Land Applications

SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater treatment facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids, and ash. Permittee must maintain this permit until the facility is properly closed per 10 CSR 20-6.010 and 10 CSR 20-6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more, the sludge in the lagoon qualifies for Class B with respect to pathogens (see WQ 424, Table 3), and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B limitations. See WQ 423 and 424.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. See WQ 426 for calculation procedures. For a grass cover crop, the allowable PAN is 300 pounds/acre.
4. When closing a wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works” definition. See WQ 422. 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 the 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 more than 100 dry tons/acre will be left in the lagoon, test for nitrogen and determine the PAN in accordance with WQ 426. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berms shall be demolished, and the site shall be graded and vegetated so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoon closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed five acres in accordance with 10 CSR 20-6.200.
7. If sludge exceeds agricultural loading rates under Section H or I, a landfill permit or solid waste disposal permit shall be obtained to authorize 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 503, Subpart C.

SECTION J – MONITORING FREQUENCY

1. At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed.
2. Testing for land application is listed under Section H, Subsection 6 of these standard conditions (see WQ 423). Once per year is the minimum test frequency. Additional testing shall be performed for each 100 dry tons of sludge generated or stored during the year.
3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.
4. Monitoring requirements shall be performed in accordance with, “POTW Sludge Sampling and Analysis Guidance Document”, United States Environmental Protection Agency, August 1989, and subsequent revisions.

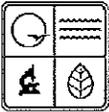
SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these Standard Conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting Period
 - a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
 - b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Report shall be submitted as follows:
Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit
(See cover letter of permit)

EPA Region VII
Water Compliance Branch (WACM)
Sludge Coordinator
901 N 5th Street
Kansas City, KS 66101

5. Annual Report Contents. The annual report shall include the following:
 - a. Sludge/biosolids testing performed. Include a copy or summary of all test results, even if not required by this permit.
 - b. Sludge or Biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at end of year, and the quantity used 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.
 - (1) This must include the name, address and permit number for the hauler and the sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name and permit number of that facility.
 - (2) Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
 - f. Contract Hauler Activities.
If contract hauler, provide a copy of a signed contract or billing receipts 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 sludge disposal or biosolids use permit.
 - g. Land Application Sites.
 - (1) 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 legal description for nearest ¼, ¼, Section, Township, Range, and County, or as latitude and longitude.
 - (2) If biosolids application exceeds 2 dry tons/acre/year, report biosolids nitrogen results. Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement, available nitrogen in the soil prior to biosolids application, and PAN calculations for each site.
 - (3) If the “Low Metals” criteria is exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative loading which has been reached at each site.
 - (4) Report the method used for compliance with pathogen and vector attraction requirements.
 - (5) Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 WATER PROTECTION PROGRAM
 APPLICATION FOR AN OPERATING PERMIT FOR DOMESTIC OR MUNICIPAL
 WASTEWATER (≤100,000 gallons per day)

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. THIS APPLICATION IS FOR:

An operating permit for a new (including antidegradation review) or unpermitted facility. Construction Permit # _____

An operating permit renewal: Permit #MO- _____ Expiration Date _____

An operating permit modification: Permit #MO- _____ Reason: _____

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

1.2 Is a facility description included with this application (see 7.1)? YES NO

2. FACILITY

NAME Rocky Mount Sewer District WWTF		TELEPHONE NUMBER WITH AREA CODE (636) 288-3290	
ADDRESS (PHYSICAL) 3800 ft South of Hwy Y on Red Arrow Rd	CITY Rocky Mount	STATE MO	ZIP CODE 65072
OUTFALL NUMBER For multiple outfalls, this is number 1 of 1			
Estimated (actual) flow: 75000 gpd, Design Average Flow: 75000 gpd, Design Peak Hourly Flow: 23,200 gph			
2.1 Legal description: ¼, SE ¼, SE ¼, Sec. 32, T 41, R 16W County Morgan			
2.2 UTM Coordinates Easting (X): 1578958.57 Northing (Y): 884702.21 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: Unnamed Trib. to Lake of the Ozarks			

3. OWNER

NAME Rocky Mount Sewer District		E-MAIL ADDRESS rjjenings30772@charter.net	TELEPHONE NUMBER WITH AREA CODE (636) 288-3290
ADDRESS 30772 Weller Road	CITY Rocky Mount	STATE MO	ZIP CODE 65072
3.1 Request review of draft permit prior to public notice? <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 Same as Owner		E-MAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE
ADDRESS	CITY	STATE	ZIP CODE

5. OPERATOR

NAME TBD	CERTIFICATE NUMBER
E-MAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE

6. FACILITY CONTACT

NAME Red Jennings	TITLE Chairman (RMSD)
E-MAIL ADDRESS rjjenings30772@charter.net	TELEPHONE NUMBER WITH AREA CODE 636-288-3290

7. DESCRIPTION OF FACILITY

7.1 Describe the facility (attach additional sheet if required) and attach a flow chart showing the influents, treatment facilities and outfalls.
 The facility is an extended aeration WWTF. The first process is the Pre-Anoxic chamber, followed by the aerated flow equalization chamber. The next process is the aeration chamber sized for 24 hours of holding. Next, the wastewater flows into another anoxic chamber, and then to the clarifier. The next process is the tertiary filter, and then into a clearwell used for backwashing the tertiary filter. When the filter isn't being washed, the filtrate flows through the UV disinfection system then discharged.

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

7.3 Design flow for this outfall: 75k Total design flow for the facility: 75k Actual flow for this outfall: 75k

7.4 Number of people presently connected or population equivalent (P.E.): 0 Design P.E.: 965

7.5 Does the facility accept or process leachate from landfills? Yes No

8. ADDITIONAL FACILITY INFORMATION8.1 Facility SIC code: 7011; Discharge SIC code: 4952.

8.2 Milestone dates:

Date of completion of construction of facility: Fall 2013Dates of any construction modifications to the facility (along with description of modification): None

8.3 Connections to the facility:

Number of units presently connected: Homes 0 Trailers 0 Apartments 0Other (including industrial) 0 (If industrial, see instructions 8.1)Number of commercial establishments: 0Daily number of employees working (total estimate): 0 Daily number of customers/guests (total estimate): 08.4 Length of pipe in the sewer collection system? _____ feet or 8.2 miles (either unit is appropriate.)8.5 Does any bypassing occur in the collection system or at the treatment facility? Yes No (If yes, explain.)8.6 Does significant infiltration occur in the collection system? Yes No (If yes, explain and attach proposed repair.)**9. DISCHARGE INFORMATION**9.1 Will the discharge be continuous throughout the year? Yes No9.2 Discharge will occur during the following months: All9.3 How many days of the week will the discharge occur? 79.4 Is wastewater land-applied? Yes No (If yes, attach Form I.)9.5 Will chlorine be added to the effluent? Yes No

If chlorine is added, what is the resulting residual? _____ µg/l (micrograms per liter)

9.6 Does this facility discharge to a losing stream or sinkhole? Yes No9.7 Has a waste load allocation study been completed for this facility? Yes No**10. List all permit violations, including effluent limit exceedances, in the last five years. Attach a separate sheet if necessary. If none, write none.**

None

11. SLUDGE HANDLING, USE AND DISPOSAL

11.1 Is the sludge a hazardous waste as defined by 10 CSR 25? Yes No
 Sludge production, including sludge received from others: _____ Design Dry Tons/Year _____ Actual Dry Tons/Year

11.3 Capacity of sludge holding structures:
 Sludge storage provided: ²⁰¹⁶ _____ cubic feet; _____ days of storage; _____ average percent solids of sludge;
 No sludge storage is provided.

- Type of Storage: Holding tank Building
 Basin Other (Please describe) _____
 Concrete Pad
- Sludge Treatment:
 Anaerobic Digester Lagoon Composting
 Storage Tank Aerobic Digester Other (Attach description)
 Lime Stabilization Air or Heat Drying
- Sludge Use or Disposal:
 Land Application Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
 Contract Hauler Incineration
 Hauled to Another Sludge Retained in Wastewater treatment lagoon
 Treatment Facility Other _____ Attach explanation sheet.
 Solid Waste Landfill
- Person responsible for hauling sludge to disposal facility
 By Applicant By Others (complete below)

NAME TBD		E-MAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

Sludge use or disposal facility
 By applicant By others (Please complete below.)

NAME TBD		E-MAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO. MO-	

Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?
 Yes No (Please explain)

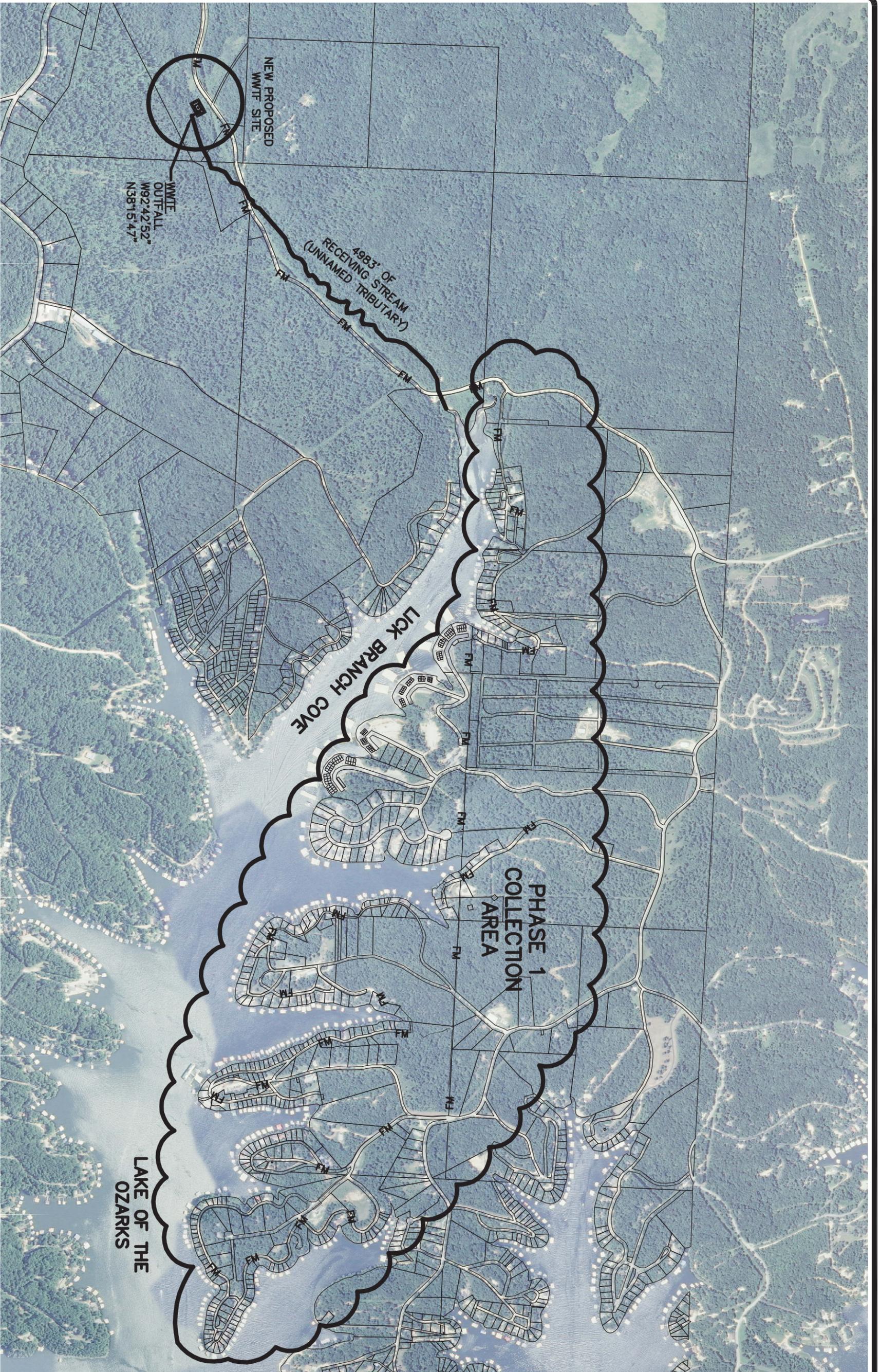
12. DOWNSTREAM LANDOWNERS - ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.

NAME Ed Sanning			
ADDRESS PO Box 859	CITY Rocky Mount	STATE MO	ZIP CODE 65072

13. CERTIFICATION

I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Red Jennings, RMSD Chairman		TELEPHONE NUMBER WITH AREA CODE (636) 288-3290
SIGNATURE 	DATE SIGNED 4/4/13	



WWTF OUTFALL
N92°42'52"
N38°15'47"

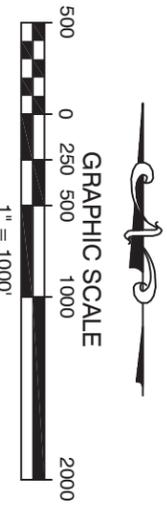
NEW PROPOSED
WWTF SITE

4983' OF
RECEIVING STREAM
(UNNAMED TRIBUTARY)

LICK BRANCH COVE

PHASE 1
COLLECTION
AREA

LAKE OF THE
OZARKS



SHEET: 4	SERVICE AREA AERIAL
	2/14/2013 AutoCAD Civil 3D Designed by: Surveyed by: Checked by: JW Drawn by: KWF Project #: 210228 Sheet Size: 11X17 File: RELOCATION MAP.DWG

**SANITARY SEWER SYSTEM FOR
ROCKY MOUNT SEWER DISTRICT**

 MORGAN COUNTY, MISSOURI

SSE
 Schultz Surveying & Engineering
 www.schultzengineering.com
Civil Engineering - Land Surveying - Materials Testing

Southeast Missouri Office - (573) 686-0806
 Doniphan Office - (573) 996-4447
 Lake of the Ozarks Office - (573) 365-2003
 Branson Office - (417) 337-8820
 New Orleans, LA Office - (504) 467-6009

