



Jeremiah W. (Jay) Nixon, Governor

Sara Parker Pauley, Director

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

Lanagan Housing Authority
P. O. Box 396
Anderson, MO 64831

Dear Permittee:

Missouri State Operating Permit MO-0100251 issued on May 16, 2008, is hereby modified as per the enclosed. This modification is to correct the facility description to change the facility type following construction, replace fecal coliform with e. coli, and remove temperature monitoring. The enclosed permit is for your official record.

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

This modification does not affect any monitoring or analysis of the effluent that may be necessary to comply with other requirements of your permit or other state regulations and does not in any way relieve you of your obligations to achieve the final effluent limitations as provided in the permit.

This permit is both your Federal Discharge Permit and your new State Operating Permit and replaces all previous State Operating Permits for this facility. In all future correspondence regarding this facility, please refer to your State Operating Permit number and facility name as shown on page one of the permit.

Please be aware that nothing in this permit relieves the permittee of any other legal obligations or restrictions, such as other federal or state laws, court orders, or county or other local ordinances or restrictions.

If you were adversely affected by this decision, you may be entitled to an appeal before the administrative hearing commission pursuant to 10 CSR 20-1.020 and Section 621.250, RSMo. To appeal, you must file a petition with the administrative hearing commission within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the administrative hearing commission. Any appeal shall be directed to: Administrative Hearing Commission, Truman Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, MO 65102, Phone: 573-751-2422, Fax: 573-751-5018, website: www.oa.mo.gov/ahc.



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Lanagan Housing Authority Wastewater Treatment Facility
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If you have any questions concerning this permit please contact Mr. Joshua L. Grosvenor, EI, of my staff by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, MO 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

A handwritten signature in cursive script that reads "Cynthia S. Davies".

Cynthia S. Davies
Regional Director

CSD/jgg

Enclosures

c: Mr. Dale Johansen, Missouri Public Service Commission

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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-0100251

Owner: Lanagan Housing Authority
Address: P. O. Box 396, Anderson, MO 64831

Continuing Authority: Same as Above
Address: Same as Above

Facility Name: Lanagan Housing Authority #2 WWTF
Facility Address: Highway 59, Lanagan, MO 64847

Legal Description: NW¼, SE¼, Sec. 25, T22N, R33W, McDonald County
UTM (X,Y): 370531 / 4052474

Receiving Stream: Unnamed Tributary to Indian Creek (U)
First Classified Stream and ID: Indian Creek (P) (03256) 303 (d)
USGS Basin & Sub-watershed No.: (11070208-0307)

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 - Subdivision - SIC #8641

Septic tanks as part of a STEP system / recirculating Advantex textile filter system / ultraviolet disinfection / step cascade post aeration / sludge disposal by contract hauler.

Design organic population equivalent is 30.
Design average daily flow is 0.003 MGD.
Design sludge production is 0.21 dry tons/year.

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

May 16, 2008 November 18, 2011
Effective Date (Revised)

Sara Parker Pauley, Director, Department of Natural Resources

May 15, 2013
Expiration Date

Cynthia S. Davies, Regional Director, Southwest Regional Office

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS				PAGE NUMBER 2 of 4		
				PERMIT NUMBER MO-0100251		
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 upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	GPD	*		*	once/month**	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	once/month**	****
Total Suspended Solids	mg/L		45	30	once/month**	****
pH – Units	SU	***		***	once/month**	grab
<i>E. coli</i> (Note 1)	#/100 ml	630		126	once/month**	grab
Ammonia as N { April-September } { October-March }	mg/L	3.7 7.5		1.4 2.9	once/month**	grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Dissolved Oxygen	mg/L	*		*	once/month**	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY ; THE FIRST REPORT IS DUE January 28, 2012 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

MO 780-0010 (8/91)

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- * Monitoring requirement only.
- ** Reports shall be submitted by the 28th day of the month following the reporting period, e.g. Reporting period is the month of March (samples collected weekly and monthly) report due by April 28th.
- *** pH is measured in pH units and is not to be averaged. The pH for all facilities except lagoons is limited to the range of 6.0-9.0 pH units.
- **** A composite sample made up from a minimum of four grab samples collected within a 24-hour period with a minimum of two hours between each grab sample. A person may physically collect the four grab samples or a composite sampler may be set up to collect the four grab samples.

Note 1 - Final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. Geometric mean for n samples = $[a_1 \times a_2 \times a_3 \dots \times a_n]^{1/n}$.

C. 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. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

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

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

6. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;

C. SPECIAL CONDITIONS (continued)

- (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
- (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
- (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
- (5) There shall be no significant human health hazard from incidental contact with the water;
- (6) There shall be no acute toxicity to livestock or wildlife watering;
- (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
- (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

**Missouri Department of Natural Resources
Statement of Basis
Lanagan Housing Authority #2 WWTF
MSOP #: MO-0100251
McDonald County**

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

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

Plans and specifications for this facility are currently being reviewed under construction permit number CP0000578 by the Department of Natural Resources. The design engineer, a registered Missouri professional engineer, has certified that the plans and specifications meet all requirements of 10 CSR 20-Chapter 8 Waste Treatment Design.

Part I – Facility Information

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

Facility Description: Septic tanks as part of a STEP system / recirculating Advantex textile filter system / ultraviolet disinfection / step cascade post aeration / sludge disposal by contract hauler.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.005	Secondary	Unnamed Tributary to Indian Creek	0.1

Receiving Water Body’s Water Quality & Facility Performance History:

A review of the file indicated exceedances of total residual chlorine.

This is for a modification. The facility is replacing two (2) existing extended aeration facilities with chlorine disinfection to a recirculating Advantex textile filter system with ultraviolet disinfection and cascade post aeration.

Comments: The facility was last inspected on November 20, 2007. The inspection showed the following unsatisfactory features at the facility: The facility was old many components were needing repaired including the clarifier weirs showing rust and missing pieces and the chlorine system was not showing the proper baffling for correct contact time. The facility is being replaced with a new system.

Part II – Operator Certification Requirements

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 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Not Applicable ; This facility is not required to have a certified operator.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

As per Missouri’s Effluent Regulations [10 CSR 20-7.015], the waters of the state are divided into the below listed seven (7) categories. Each category list effluent limitations for specific parameters, which are presented in each outfall’s Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section.

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

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Tributary to Indian Creek	U	N/A	General Criteria	11070208	Ozark/Neosho
Indian Creek	P	3256	IRR, LWW, AQL, CLF, WBC-A, SCR		

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

** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Tributary to Indian Creek	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)].

Part IV – 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.

Not Applicable ;

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

ANTI-BACKSLIDING:

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

- New facility.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

As per [10 CSR 20-6.010(8)(A)10.], when a Continuing Authority under paragraph 10 CSR 20-6.010(3)(B)1. or 2. is expected to be available for connection within the next five (5) years, any operating permit issued to a permittee under this paragraph, located within the service area of the paragraph (3)(B)1. or 2. facility, shall contain the following special condition... This language is contained in Special Condition #3 of this operating permit.

ANTIDegradation:

Policies which ensure protection of water quality for a particular water body where the water quality exceeds levels necessary to protect fish and wildlife propagation and recreation on and in the water. This also includes special protection of waters designated as outstanding natural resource waters. Antidegradation requirements are consistent with 40 CFR 131.12 that outlines methods used to assess activities that may impact the integrity of a water and protect existing uses. This policy may compel the state to maintain a level of water quality above those mandated by criteria.

Applicable .

Please see **APPENDIX B – ANTIDegradation ANALYSIS.**

APPLICABLE PERMIT PARAMETERS:

Effluent parameters for conventional, non-conventional, and toxic pollutants have been obtained from the technology based effluent limits, water quality based limits, and from appropriate sections of the application.

Bio-solids, Sludge, & Sewage Sludge:

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. 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.

Not Applicable .

This condition is not applicable to the permittee for this specific facility.

COMPLIANCE AND ENFORCEMENT:

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

Not Applicable .

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

PRETREATMENT PROGRAM:

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

Not Applicable ;

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

REASONABLE POTENTIAL ANALYSIS (RPA):

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

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). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

Not Applicable ;

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

SANITARY SEWER OVERFLOWS (SSOs), BYPASSES, INFLOW & INFILTRATION (I&I) – PREVENTION/REDUCTION:

Sanitary Sewer Systems (SSSs) are municipal wastewater collection system that convey domestic, commercial, and industrial wastewater, and limited amounts of infiltrated groundwater and storm water (i.e. I&I), to a POTW. SSSs are not designed to collect large amounts of storm water runoff from precipitation events.

Untreated or partially treated discharges from SSSs are commonly referred to as SSOs. SSOs have a variety of causes including blockages, line breaks, sewer defects that allow excess storm water and ground water to overload the system, lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. A SSOs is defined as an untreated or partially treated sewage release from a SSS. SSOs can occur at any point in an SSS, during dry weather or wet weather. SSOs include overflows that reach waters of the state. SSOs also include overflows out of manholes and onto city streets, sidewalks, and other terrestrial locations. SSSs can back up into buildings, including private residences. When sewage backups are caused by problems in the publicly-owned portion of an SSS, they are considered SSOs.

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 *Storm Water Management for Industrial Activities: Developing Pollution Prevention Plans and Best Management Practices* [EPA 832-R-92-006] (Storm Water Management), 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.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Applicable ;

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

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

- Where C = downstream concentration
- C_s = upstream concentration
- Q_s = upstream flow
- C_e = effluent concentration
- Q_e = effluent flow

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

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

WLA MODELING:

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.

Not Applicable ;

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

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

Section 303(d) of the federal Clean Water Act requires that each state identify waters that are not meeting water quality standards and for which adequate water pollution controls have not been required. Water quality standards protect such beneficial uses of water as whole body contact (such as swimming), maintaining fish and other aquatic life, and providing drinking water for people, livestock and wildlife. The 303(d) list helps state and federal agencies keep track of waters that are impaired but not addressed by normal water pollution control programs.

A TMDL is a calculation of the maximum amount of a given pollutant that a body of water can absorb before its water quality is affected. If a water body is determined to be impaired as listed on the 303(d) list, then a watershed management plan will be developed that shall include the TMDL calculation

Applicable ;

Indian Creek is listed on the 2004 / 2006 Missouri 303(d) List for bacteria.

– This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of Indian Creek.

Adjusted Design Flow:

10 CSR 20-6.011(1)(B)1. provides for an Adjusted Design Flow when calculating permit fees on human sewage treatment facilities. If the average flow is sixty percent (60%) or less than the system's design flow, the average flow may be substituted for the design flow when calculating the permit fee on human sewage treatment facilities. If the facility's actual average flow is consistently 60% or less than the permitted design flow, the facility may qualify for a reduction in your fee when:

- The facility has a valid permit, or has applied for re-issuance, is in compliance with the terms, conditions and effluent limitations of the permit, and the facility has a good compliance history; and
- Flow is not expected to exceed 60% of design flow for the remaining term of the existing operating permit.

Not Applicable ;

At this time, the permittee has not requested an Adjusted Design Flow modification.

Outfall #001 – Main Facility Outfall

EFFLUENT LIMITATIONS TABLE:

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*	--	*	NO	S
BOD ₅	MG/L	1	--	45	30	NO	S
TSS	MG/L	1	--	45	30	NO	S
pH (S.U.)	SU	1	6.0-9.0	--	6.0-9.0	NO	S
AMMONIA AS N (OCTOBER - MARCH)	MG/L	1,5	7.5	--	2.9	YES	MONITORING
AMMONIA AS N (APRIL - SEPTEMBER)	MG/L	1,5	3.7	--	1.4	YES	MONITORING
<i>ESCHERICHIA COLIFORM</i>	***	1	630	--	126	YES	NONE
DISSOLVED OXYGEN	MG/L	1,11	*	--	*	NO	S
TOTAL RESIDUAL CHLORINE	MG/L	8	--	--	--	YES	0.019/0.0095
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

*** - Monitoring requirement only**

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

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

N/A – Not applicable

S – Same as previous operating permit

Basis for Limitations Codes:

- | | |
|--|-----------------------------------|
| 1. State or Federal Regulation/Law | 6. Antidegradation Policy |
| 2. Water Quality Standard (includes RPA) | 7. Water Quality Model |
| 3. Water Quality Based Effluent Limits | 8. Best Professional Judgment |
| 4. Lagoon Policy | 9. TMDL or Permit in lieu of TMDL |
| 5. Ammonia Policy | 10. WET test Policy |
| | 11. Dissolved Oxygen 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). Please see APPENDIX B – ANTIDegradation ANALYSIS.

Total Suspended Solids (TSS). Please see APPENDIX B – ANTIDegradation ANALYSIS.

pH. Please see APPENDIX B – ANTIDegradation ANALYSIS.

Temperature. Temperature has been removed because it is no longer pertinent in determining ammonia limitations.

Total Ammonia Nitrogen. Please see **APPENDIX B – ANTIDegradation Analysis.**

Fecal Coliform. *E. coli* has replaced fecal coliform at the applicable bacteria criteria in Missouri’s water quality standards.

Escherichia coli (E. coli). Monthly average of 126 per 100 ml as a geometric mean and Daily Maximum of 630 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). Daily Maximum effluent variability will be evaluated in development of a future effluent limit. An effluent limit for both monthly average and daily maximum is required by 40 CFR 122.45(d).

Total Residual Chlorine (TRC). Limits were removed based on the installation of an ultraviolet disinfection system and the removal of the chlorination system.

Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen are included to determine whether “reasonable potential” to exceed water quality standards exists after the discharge begins.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	MONTHLY	MONTHLY
BOD ₅	MONTHLY	MONTHLY
TSS	MONTHLY	MONTHLY
PH	MONTHLY	MONTHLY
AMMONIA AS N	MONTHLY	MONTHLY
E. COLI	WEEKLY	MONTHLY
DISSOLVED OXYGEN	MONTHLY	MONTHLY

Sampling Frequency Justification:

This facility is a new facility monthly sampling is required to determine if the facility will be in compliance with the operating permit in accordance with Appendix U of Missouri’s Water Pollution Control Permit Manual.

Sampling Type Justification

Due to the small amount of flow sample type shall be modified composites.

Administrative Requirements

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

Date of Factsheet: February 4, 2010 **Modified:** November 14, 2011

Mr. Joshua L. Grosvenor, EI
WP Engineering Unit
(417) 891-4300
josh.grosvenor@dnr.mo.gov

APPENDIX B – ANTIDegradation ANALYSIS:



Jeremiah W. (Jay) Nixon, Governor • Mark N. Templeton, Director

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

DEC 21 2009

Sprenkle & Associates, Inc.
ATTN: Mr. Kevin Sprenkle, PE, LSIT
218 5th Street
Monett, MO 65708

RE: Antidegradation Review Applicability for Lanagan Housing Authority WWTF in
McDonald County, MO-0049948

Dear Mr. Sprenkle:

In accordance with the Missouri Antidegradation Rule and Implementation Procedure, your proposed discharge is not subject to an Antidegradation Review. You may proceed with submittal of the appropriate permit application along with a copy of this letter and the attached *Water Quality and Antidegradation Review (WQAR)* to the Southwest Regional Office.

The attached *WQAR* summarizes this determination based upon your non-degradation evaluation review request received on September 15, 2009. You propose to replace the existing two – 2400 gallon per day extended aeration treatment plants with one – 3000 gallon per day recirculating textile filter treatment plant.

The facility will be required to meet secondary treatment effluent regulations and/or water quality based effluent limits for all pollutants of concern. Effluent concentration for ammonia will be water quality standard based as the facility is replacing the two existing outfalls with one outfall and therefore is not subject to an antidegradation review for this replacement.

Based on the Department's initial review, the department's preliminary determination is that the applicant-supplied antidegradation review documentation satisfies the requirements of the *Missouri Antidegradation Rule and Implementation Procedure (AIP)*. This *WQAR*/preliminary determination may be appealed within 30 days of this letter in accordance with the AIP Section II.F.4.

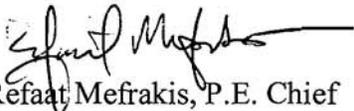
For your convenience, the Water Protection Program has developed a new Internet web page (<http://www.dnr.mo.gov/env/wpp/permits/antideg-implementation.htm>) where you may access information related to implementation of the antidegradation rule. The Internet web site includes links to forms, data sources, publications, as well as links to related Internet web sites.



Lanagan Housing Authority
Page Two

If you should have questions, please feel free to contact Keith Forck by telephone at (573) 526-4232, by e-mail at keith.forck@dnr.mo.gov, or by mail at P.O. Box 176, Jefferson City, Missouri 65102-0176.

Sincerely,



Refaat Mefrakis, P.E. Chief
NPDES Permits and Engineering Section Chief Enclosure

RM:kfn

Enclosure

c: Lanagan Housing Authority, PO Box 396, Anderson, MO 64831
Southwest Regional Office Permit File
Water Protection Program, WPCB, NPDES Permits and Engineering Section



**Missouri Department of Natural Resources
Water Protection Program
NPDES PERMITS AND ENGINEERING SECTION**

Water Quality and Antidegradation Review (WQAR)
Determination of Effluent Limits and Monitoring Requirements

FACILITY INFORMATION

FACILITY NAME: Lanagan Housing Authority WWTF NPDES #: MO-0049948

FACILITY TYPE/DESCRIPTION: Replace extended aeration package treatment plants (MO-0049948 and MO-0100251) that are in non-repairable condition. The original sizing of each treatment plant was based on the number of units and anticipated number of persons per unit at the time of construction. These plants are nearly double of the capacity required by the actual flows. Therefore, the proposal is to replace the two – 2400 gallon per day treatment plants with one – 3000 gallon per day recirculating textile filter treatment plant at the location of MO-0049948. MO-0100251 will be terminated upon proper closure.

EDU*: Ozark/Neosho 8-DIGIT HUC: 11070208 COUNTY: McDonald
* - Ecological Drainage Unit

LEGAL DESCRIPTION: NW¼, SE¼, Sec. 25, T22N, R33W LATITUDE/LONGITUDE: +3636324/-09426516

WATER QUALITY HISTORY: No recent stream survey has been conducted for either facility. Both facilities (MO-0049948 and MO-0100251) have several total residual chlorine violations over the past five years.

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	RECEIVING WATERBODY	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.005	Secondary	Unnamed Tributary to Indian Creek	0.1

RECEIVING WATERBODY INFORMATION

WATERBODY NAME	CLASS	WBID	LOW-FLOW VALUES (CFS)			DESIGNATED USES**
			1Q10	7Q10	30Q10	
Unnamed Tributary to Indian Creek	U	-	0.0	0.0	0.0	General Criteria
Indian Creek	P	3256	0.1	0.1	1.0	IRR, LWW, AQL, CLF, WBC(A), SCR

** 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)

COMMENTS: The replacement facility is tributary to the Indian Creek (about 0.1 miles downstream). Indian Creek is on the EPA 2006 303(d) List for Bacteria. This replacement facility will not contribute any additional loading to this impairment.

ANTIDegradation Review 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 is to develop a statewide antidegradation policy and corresponding procedures to implement the policy. The Antidegradation Review of this proposed discharge has determined that this discharge is non-degrading and does not decrease the receiving water body's available assimilative capacity. Effective August 30, 2008, a facility is required to use *Missouri's Antidegradation Rule and Implementation Procedure (AIP)*. This procedure is applicable to new and expanded wastewater facilities.

Tier Determination

Below is a list of pollutants of concern reasonably expected to be in the discharge (see Appendix B: 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).

POLLUTANTS OF CONCERN	TIER	DEGRADATION / BASIS	COMMENTS
BOD ₅ /DO	2	NO DEGRADATION	
TOTAL SUSPENDED SOLIDS (TSS)	*	NO DEGRADATION	
PH	**	STATE REGULATIONS APPLIED	
AMMONIA	2	NO DEGRADATION	
BACTERIA (FECAL AND E. COLI)	1	NO INCREASE IN LOADING	

* No in-stream standards for this parameter, therefore tier determination was not possible.

** Standard for this parameter is a range and therefore tier determination was not possible.

GENERAL ASSUMPTIONS OF THE WATER QUALITY REVIEW SHEET:

1. A Water Quality Review Sheet (WQRS) assumes that [10 CSR 20-6.010(3) Continuing Authorities] has been or will be addressed in a Missouri State Operating Permit or Construction Permit Application.
2. A WQRS 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 subsequent to the drafting of this WQRS 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 supercede ELG only when they are more stringent. Mass limits derived from technology based limits are still appropriate.
6. A WQRS 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 WQRS may change as Water Quality Standards, Methodology, and Implementation procedures change.
8. Nothing in this WQRS removes any obligations to comply with county or other local ordinances or restrictions.

MIXING CONSIDERATIONS

Mixing Zone (MZ): Not allowed, 7Q10 less than 0.1 cfs [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)].

PERMIT LIMITS AND 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):

N

FREQUENCY: N/A

AEC: N/A

METHOD: N/A

PARAMETER	UNITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	WQBEL (NOTE 1)	MONITORING FREQUENCY
FLOW	GPD	*		*	N/A	ONCE/DAY
BOD ₅	MG/L		45	30	FSR & NDEL	ONCE/QUARTER
TSS	MG/L		45	30	FSR & NDEL	ONCE/QUARTER
PH	SU	6-9		6-9	FSR	ONCE/QUARTER
AMMONIA AS N (MAY 1- OCT 31)	MG/L	3.7		1.4	WQBEL & NDEL	ONCE/QUARTER
AMMONIA AS N (NOV 1 - APR 30)	MG/L	7.5		2.9	WQBEL & NDEL	ONCE/QUARTER
FECAL COLIFORM	COLONIES/ 100 ML	1000		400**	FSR	ONCE/QUARTER
ESCHERICHIA COLIFORM (E. COLI)	COLONIES/ 100 ML			126**	FSR	ONCE/WEEK

* - Monitoring requirement only.

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

Note 1 - Water Quality-based Effluent Limitation --WQBEL; or Minimally Degrading Effluent Limit--MDEL; or 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 WQRS #4 & #5**.

RECEIVING WATER MONITORING REQUIREMENTS

No receiving water monitoring requirements recommended at this time.

DERIVATION AND DISCUSSION OF LIMITS

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

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

Where C = downstream concentration

C_s = upstream concentration

Q_s = upstream flow
 C_e = effluent concentration
 Q_e = effluent flow

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

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

Outfall #001 – Main Facility Outfall

- **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) and Total Suspended Solids (TSS).** 30 mg/L monthly average, 45 mg/L weekly average [10 CSR 20-7.015(8)(B)1].

The below calculation table below verifies no increase in loading to the stream. A dissolved oxygen model was not required due to the reduction in BOD₅ loading.

Calculation of TSS and BOD₅ Loading

Pollutant of Concern		Existing Lagoon				Proposed Treatment Plant			
Parameter	Limit	Permit Limits (mg/L)	(lbs/MG)/(mg/L)	Design Flow (MGD)	Load (lbs/day)	Permit Limits (mg/L)	(lbs/MG)/(mg/L)	Design Flow (MGD)	Load (lbs/day)
BOD ₅	Monthly	30	8.34	0.00480	1.20	30	8.34	0.00300	0.75
	Weekly	45	8.34	0.00480	1.80	45	8.34	0.00300	1.13
TSS	Monthly	45	8.34	0.00480	1.20	30	8.34	0.00300	0.75
	Weekly	30	8.34	0.00480	1.80	45	8.34	0.00300	1.13

- **pH.** pH shall be maintained in the range from six to nine (6 – 9) standard units [10 CSR 20-7.015 (8)(B)2].
- **Fecal Coliform.** Discharge shall not contain more than a monthly geometric mean of 400 colonies/100 mL and a daily maximum of 1000 colonies/100 mL during the recreational season (April 1 – October 31) [10 CSR 20-7.015(8)(B)4]. Future renewals of the facility operating permit will contain effluent limitations for E. coli that will replace fecal coliform as the applicable bacteria criteria in Missouri's water quality standards when Missouri adopts the implementation of the E. coli standards. Also, please see **General Assumptions of the WQAR #7.**
- **Escherichia Coliform (E. Coli).** Discharge shall not contain more than a monthly geometric mean of 126 colonies/100 mL during the recreational season (April 1 – October 31). This facility will be required to have E. coli effluent limitations when Missouri adopts the implementation of the E. coli effluent regulations. The proposed E. Coli rule was published in the Missouri Register on November

2, 2009. In the proposed rule, weekly monitoring is required during the recreational season. To view the proposed law, to submit comments on the rule or to attend the public hearing on January 6, 2010, please visit <http://dnr.mo.gov/env/wpp/rules/wpp-rule-dev.htm>. Also, please see **General Assumptions of the WQRS #7.**

- **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: May 1 – October 31, Winter: November 1 – April 30.

Due to the relative location of the discharge to the classified stream, no time of travel analysis was conducted for this Outfall #002.

$$[\text{NH}_3\text{N}]_t = [\text{NH}_3\text{N}]_{t=0} * e^{-kt}$$

Where

$[\text{NH}_3\text{N}]_t$ = ammonia concentration at confluence with classified segment.

$[\text{NH}_3\text{N}]_{t=0}$ = ammonia concentration at pipe = C_e

k = NH_3 oxidation per day ($k_{1,20}$) $\Xi_1^{(\text{Temp}-20)}$

$$k_{1,20} = 0.3(\text{day}^{-1})$$

$$\Xi_1 = \text{temperature correction factor} = 1.083$$

Summer Temp. = 26°C

$$\text{LTA}_c = 1.5 \text{ mg/L } (0.780) = \mathbf{1.2 \text{ mg/L}}$$

[CV = 0.6, 99th Percentile, 30 day average]

$$\text{LTA}_a = 12.1 \text{ mg/L } (0.321) = 3.9 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$\text{MDL} = 1.2 \text{ mg/L } (3.11) = 3.7 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$\text{AML} = 1.2 \text{ mg/L } (1.19) = 1.4 \text{ mg/L}$$

[CV = 0.6, 95th Percentile, n = 30]

Winter Temp. = 6°C

$$\text{LTA}_c = 3.1 \text{ mg/L } (0.780) = \mathbf{2.4 \text{ mg/L}}$$

[CV = 0.6, 99th Percentile, 30 day average]

$$\text{LTA}_a = 12.1 \text{ mg/L } (0.321) = 3.9 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$\text{MDL} = 2.4 \text{ mg/L } (3.11) = 7.5 \text{ mg/L}$$

[CV = 0.6, 99th Percentile]

$$\text{AML} = 2.4 \text{ mg/L } (1.19) = 2.9 \text{ mg/L}$$

[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

Using the existing facilities presumed effluent limits without decay (as facilities are currently monitoring only for ammonia) and proposed effluent limits from above, we calculated the load in mass units at the existing and proposed design flows, respectively. The calculation table below verifies no increase in loading to the stream.

Calculation of Ammonia Loading

Pollutant of Concern		Existing Lagoon				Proposed Treatment Plant			
Ammonia	Limit	Effluent Data (mg/L)	(lbs/MG) / (mg/L)	Design Flow (MGD)	Load (lbs/day)	Permit Limits (mg/L)	(lbs/MG) / (mg/L)	Design Flow (MGD)	Load (lbs/day)
Summer	Monthly	1.4	8.34	0.0048	0.06	1.4	8.34	0.0030	0.04
	Daily	3.7	8.34	0.0048	0.15	3.7	8.34	0.0030	0.09
Winter	Monthly	2.9	8.34	0.0048	0.12	2.9	8.34	0.0030	0.07
	Daily	7.5	8.34	0.0048	0.30	7.5	8.34	0.0030	0.19

Reviewer: Keith Forck 

Date: December 17, 2009

Unit Chief: John Rustige

Monitoring and effluent limits contained within this document have been developed in accordance with EPA guidelines using the best available data and are believed to be consistent with Missouri's Water Quality Standards and Effluent Regulations. If additional water quality data or anecdotal information are available that may affect the recommended monitoring and effluent limits, please forward these data and information to the author.