

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, 92<sup>nd</sup> Congress) as amended,

Permit No. MO-0124001

Owner: Lake Home Neighbor's Association, Inc.  
Address: 31411 Barrel Rd., Stover, MO 65078

Continuing Authority: Same as Above  
Address: Same as Above

Facility Name: Lake Home Neighbor's Subdivision WWTF  
Facility Address: 31411 Barrel Road, Stover MO 65078

Legal Description: SW¼, NE¼, NE¼, Sec. 18, T40N, R18W, Morgan County  
UTM (X/Y): 503973 / 4232124

Receiving Stream: Lake of the Ozarks (L2)  
First Classified Stream and ID: Lake of the Ozarks (L2) (07205)  
USGS Basin & Sub-watershed No.: (10290109-0205)

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

The use or operation of this facility does not require a CERTIFIED OPERATOR.

Septic tanks / recirculating sand filter / seasonal chlorination / seasonable dechlorination/ sludge disposal by contract hauler

Design organic population equivalent is 7.  
Design flow is 555 GPD.  
Design sludge production is 0.05dry 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.

November 10, 2011      July 22, 2015  
Effective Date      Revised Date

Sara Parker Pauley, Director, Department of Natural Resources

November 9, 2016  
Expiration Date

John Madras, Director, Water Protection Program

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 7	
					PERMIT NUMBER MO-0124001	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect until <b>April 30, 2013</b> . Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> Flow Biochemical Oxygen Demand <sub>5</sub> Total Suspended Solids pH – Units <i>E. coli</i> (Note 1) Total Residual Chlorine as Cl <sub>2</sub> Ammonia as N	GPD mg/L mg/L SU #/100 ml mg/L mg/L	*   *** 630 1.0 (Note 2) *	  30 30    	*  20 20  126 1.0 (Note 2) *	once/quarter** once/quarter** once/quarter** once/quarter** once/quarter** once/quarter** once/quarter**	24 hr. estimate grab grab grab grab grab grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> Dissolved Oxygen	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <b>QUARTERLY</b> ; THE FIRST REPORT IS DUE <b>JANUARY 28, 2012</b> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

**A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)**

PAGE NUMBER 3 of 7

PERMIT NUMBER MO-0124001

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective **May 1, 2013** and remain in effect until **November 30, 2014**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Flow	GPD	*		*	once/quarter**	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		30	20	once/quarter**	grab
Total Suspended Solids	mg/L		30	20	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
<i>E. coli</i> (Note 1)	#/100 ml	630		126	once/quarter**	grab
Total Residual Chlorine as Cl <sub>2</sub>	mg/L	0.019 (Note 2) (0.13 ML)		0.0095 (Note 2) (0.13ML)	once/quarter**	grab
Ammonia as N	mg/L	*		*	once/quarter**	grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Dissolved Oxygen	mg/L	*		*	once/quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE **JULY 28, 2013**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)					PAGE NUMBER 4 of 7	
					PERMIT NUMBER MO-0124001	
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 <b>December 1, 2014</b> 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/quarter**	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		30	20	once/quarter**	grab
Total Suspended Solids	mg/L		30	20	once/quarter**	grab
pH – Units	SU	***		***	once/quarter**	grab
<i>E. coli</i> (Note 1)	#/100 ml	630		126	once/quarter**	grab
Total Residual Chlorine as Cl <sub>2</sub>	mg/L	0.019 (Note 2) (0.13 ML)		0.0095 (Note 2) (0.13ML)	once/quarter**	grab
Ammonia as N	mg/L	12.1		4.6	once/quarter**	grab
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u>						
Dissolved Oxygen	mg/L	*		*	once/quarter**	grab
MONITORING REPORTS SHALL BE SUBMITTED <b>QUARTERLY</b> ; THE FIRST REPORT IS DUE <b>JANUARY 28, 2015</b> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I &amp; 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.
- \*\* Sampling shall occur once per quarter in the periods of January through March, April through June, July through September, and October through December, please note that monitoring reports shall be submitted no later than the 28th day of the month following the monitoring period (April 28th, July 28th, October 28th, and January 28th, respectively).
- \*\*\* 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 6.5-9.0 pH units.

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 =  $[a_1 \times a_2 \times a_3 \dots \times a_n]^{1/n}$

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

- (a) This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The Department has determined the current acceptable ML for total residual chlorine to be 0.13 mg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 0.13 mg/L will be considered violations of the permit and values less than the minimum quantification level of 0.13 mg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- (b) Disinfection is required year-round unless the permit specifically states that “Final limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31.” If your permit does not require disinfection during the non-recreational months, do not chlorinate in those months.
- (c) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit.**
- (d) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 mg/L” TRC.

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;

C. SPECIAL CONDITIONS (continued)

- (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;
    - (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.

D. SCHEDULE OF COMPLIANCE

**For Total Residual Chlorine**

1. By **February 15, 2012** submit a completed application for construction permit, application fee, and one copy each of an engineering report, plans and specifications prepared by a professional engineer registered in the State of Missouri to the Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807, for providing wastewater treatment dechlorination improvements to comply with the final effluent limitations as listed in Part A of this permit, designed in accordance with Missouri Clean Water Law Regulation 10 CSR 20 Chapter 8.
2. Within fifteen (15) calendar days of receipt of any request for additional information or changes in the engineering report, plans or specifications, respond and if necessary submit engineering modifications to the department.
3. Within 180 calendar days of issuance of the construction permit, construct the permitted wastewater treatment dechlorination improvements.
4. Within fifteen (15) calendar days of completion of construction of wastewater treatment dechlorination improvements, submit a Statement of Work Completed form, signed, sealed, and dated by a professional engineer registered in the State of Missouri certifying that the project has been completed substantially in accordance with the approved plans and specifications. In addition to the Statement of Work Completed, submit an application for a Missouri State Operating Permit modification complete with the appropriate modification fee to the Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807.
5. Annual progress reports shall be submitted on January 28<sup>th</sup> of each year until the construction completed. The report shall include what step of the process the facility is at, how much construction has been completed, approximately time of completion, etc. The first report is due **January 28, 2013**.

If you have questions you may contact the Missouri Department of Natural Resources, Southwest Regional Office by calling 417-891-4300 or by mail at 2040 West Woodland, Springfield, Missouri, 65807.

**For Ammonia**

1. Please note that you may be able to meet the Ammonia final effluent limits without a construction permit. If the final effluent limits can be achieved without a construction permit please submit in writing by **April 1, 2013** how you are planning to meet the new effluent limits.
2. If a Construction Permit is needed please submit a completed application for construction permit, and one copy each of an engineering report, plans and specifications prepared by a professional engineer registered in the State of Missouri to the Missouri Department of Natural Resources, 2040 West Woodland, Springfield, Missouri, 65807, for providing wastewater treatment dechlorination improvements to comply with the final effluent limitations as listed in Part A of this permit, designed in accordance with Missouri Clean Water Law Regulation 10 CSR 20 Chapter 8.
3. The entire project shall be completed by **December 1, 2014**.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**STATEMENT OF BASIS**  
**MO-0124001**  
**LAKE HOME NEIGHBOR'S WWTF**

This Statement of Basis (Statement) gives pertinent information regarding minor modification(s) to the above listed operating permit without the need for a public comment process.

A Statement is not an enforceable part of a Missouri State Operating Permit.

**Part I – Facility Information**

Facility Type:                      Subdivision  
Facility SIC Code(s):            #8641

Facility Description:

Septic tanks / recirculating sand filter / seasonal chlorination / sludge disposal by contract hauler

Design organic population equivalent is 7.

Design flow is 555 GPD.

Design sludge production is 0.05dry tons/year

**Part II – Modification Rationale**

This operating permit is hereby modified to reflect an addition of dechlorination to the system at this facility. No other changes were made at this time.

**Part III – 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 STATEMENT OF BASIS:** JUNE 26, 2015

**COMPLETED BY:**

**ADAM PAIGE, ENVIRONMENTAL SPECIALIST**  
**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**WATER PROTECTION PROGRAM**  
**OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT**  
**(573) 526-2445**  
**adam.paige@dnr.mo.gov**

**Missouri Department of Natural Resources  
Statement of Basis  
Lake Home Neighbor's Subdivision WWTF  
MSOP #: MO-0124001  
Morgan County**

A Statement of Basis (Statement) gives pertinent information regarding the applicable regulations and rationale 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.

**Part I – Facility Information**

Facility Type: NON-POTW  
Subdivision - SIC #8641

Facility Description: Septic tanks / recirculating sand filter / seasonal chlorination / sludge disposal by contract hauler

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.0009	Secondary	Domestic	Direct discharge

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

A review of the facility's Discharge Monitoring Reports (DMRs) submitted between May 2006 and most recent was conducted. The facility has submitted all required DMRs and no exceedances were noted.

This is for a renewal.

Comments: The facility was last inspected on October 20, 2009. The conditions of the facility at the time of inspection were found to be satisfactory.

**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 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.

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 1<sup>st</sup> 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**
Lake of the Ozarks	L2	07205	General Criteria, LWW, AQL, WBC-A, SCR	10290109	Ozark/Osage

\* - 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
Lake of the Ozarks	307	379	443

**MIXING CONSIDERATIONS TABLE:**

MIXING ZONE (CFS) [10 CSR 20-7.031(4)(A)4.B.(II)(a)]		
1Q10	7Q10	30Q10
76.8	94.8	110.8

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.

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

**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.

Not Applicable ;

Renewal no degradation proposed and no further review necessary.

**APPLICABLE PERMIT PARAMETERS:**

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

- Sludge/biosolids are removed by contract hauler or are stored in the lagoon.

**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)].

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

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

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

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):**

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 (BOD<sub>5</sub>) 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](http://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 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.

Applicable ;

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

**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<sub>s</sub> = upstream concentration  
Q<sub>s</sub> = upstream flow  
C<sub>e</sub> = effluent concentration  
Q<sub>e</sub> = 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:**

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.

**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, which includes blending, 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.

- Not Applicable, this facility does not bypass.

**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.

**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 <sub>5</sub>	MG/L	1		30	20	NO	S
TSS	MG/L	1		30	20	NO	S
pH (S.U.)	SU	1	6.5-9.0		6.5-9.0	YES	6.0-9.0
AMMONIA AS N	MG/L	3, 5	12.1		4.6	YES	*
ESCHERICHIA COLI	***	1,2,3	630		126	YES	****
CHLORINE, TOTAL RESIDUAL	MG/L	3	0.019 (0.13 ML)		0.0095 (0.13 ML)	YES	1.0, 1.0
DISSOLVED OXYGEN	MG/L	11	*		*	YES	****
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

**\* - Monitoring requirement only**

\*\*\* - # of colonies/100mL; the Monthly Average for 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 (BOD<sub>5</sub>).**

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

**Total Suspended Solids (TSS).**

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

**pH.**

– pH is limited to the range of 6.5 – 9.0 pH units, as per [10 CSR 20-7.031(4)(E)]. pH is measured in pH units and is not to be averaged.

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

**Ammonia as N:** 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)
Oct. 1 – March 31	6	7.8	3.1	12.1
April 1 – Sept. 30	27	7.8	1.4	12.1

Winter: Oct 1 – March 31, Summer: April 1 – Sept. 30

$$Q_e = 0.0009 \text{ cfs}$$

$$Q_s = 110.8 \text{ cfs}$$

**Summer** – Zone of Initial Dilution is not allowed. Mixing Zone is allowed = 110.8 cfs

Acute

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

$$((0.0009 + 0) * 12.1 - (0 * 0.01)) / 0.0009 = 12.1$$

$$LTA_a = 12.1 \text{ mg/L } (0.321) = 3.9 \text{ mg N/L}$$

[CV = 0.6, 99<sup>th</sup> Percentile]

Chronic

$$((0.0009 + 110.8) * 1.4 - (110.8 * 0.01)) / 0.0009 = 171,126$$

$$LTA_c = 171,126 \text{ mg/L } (0.780) = 133,478 \text{ mg N/L}$$

[CV = 0.6, 99<sup>th</sup> Percentile, 30 day average]

Acute is more protective

$$MDL = 3.9 \text{ mg/L} * 3.11 = 12.1 \text{ mg N/L}$$

[CV = 0.6, 99<sup>th</sup> Percentile]

$$AML = 3.9 \text{ mg/L} * 1.19 = 4.6 \text{ mg N/L}$$

[CV = 0.6, 95<sup>th</sup> Percentile, n = 30]

Because the chronic summer number is the smallest compared to fall, spring, and winter and the summer chronic was higher than the acute, the other seasons for chronic were not calculated because it would have shown that the acute value would be more protective.

Maximum Daily Limit (mg N/L)	Average Monthly Limit (mg N/L)
12.1	4.6

**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 (WBC-A) per 100 ml as a geometric mean and Daily Maximum 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).** Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L. Due the fact the flows through the lakes are large, Acute criteria will be used only.

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

$$\text{Acute: } C_c = ((0.0009 + 0) * 0.019 - (0 * 0)) / 0.0009 = 0.019$$

$$WLA_a = 0.019 \text{ mg/L}$$

$$LTA_a = 0.019 (0.321) = 0.0061 \text{ mg/L}$$

[CV = 0.6, 99<sup>th</sup> Percentile]

$$MDL = 0.0061(3.114) = 0.019 \text{ mg/L}$$

[CV = 0.6, 99<sup>th</sup> Percentile]

$$AML = 0.0061(1.55) = 0.0095 \text{ mg/L}$$

[CV = 0.6, 95<sup>th</sup> Percentile, n = 4]

- **Dissolved Oxygen. Dissolved Oxygen.** Monitoring only included to determine if the facility has the reasonable potential to cause a violation of water quality standards in the receiving stream. Dechlorination chemicals have the potential to reduce dissolved oxygen concentrations in the discharge, resulting in an anoxic discharge, unless carefully controlled. Data will be reviewed upon renewal to determine if an effluent limitation is necessary to protect water quality.

**Minimum Sampling and Reporting Frequency Requirements.**

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
FLOW	QUARTERLY	QUARTERLY
BOD <sub>5</sub>	QUARTERLY	QUARTERLY
TSS	QUARTERLY	QUARTERLY
pH	QUARTERLY	QUARTERLY
AMMONIA AS N	QUARTERLY	QUARTERLY
<i>E. COLI</i>	QUARTERLY	QUARTERLY
TOTAL RESIDUAL CHLORINE	QUARTERLY	QUARTERLY
DISSOLVED OXYGEN	QUARTERLY	QUARTERLY

**Sampling Frequency Justification:**

Quarterly sampling is required in accordance with Appendix U of 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 gallons per day or less.

**Sampling Type Justification**

Sand filters are not defined in the regulations; they are not technically mechanical plants and based on the small flow grab samples are appropriate.

**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:** September 16, 2011

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**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  
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 28<sup>th</sup> 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 5<sup>th</sup> 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  
**FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE  
 PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR  
 EQUAL TO 100,000 GALLONS PER DAY**

AP21144

FOR AGENCY USE ONLY	
CHECK NUMBER	1819
DATE RECEIVED	5/11/15
FEE SUBMITTED	\$37.50

RS

**READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM**

**1. THIS APPLICATION IS FOR:**

- An operating permit for a new or unpermitted facility. Construction Permit # \_\_\_\_\_  
 (Include completed antidegradation review or request for antidegradation review, see instructions)
- A site-specific operating permit renewal: Permit #MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_
- A site-specific operating permit modification: Permit #MO- 0124001 Reason: Dechlorination MAY 01 2015
- General permit (MOGD – Non POTWs discharging < 50,000 GPD or MOG823 – Land Application of Domestic Wastewater):  
 Permit #MO- \_\_\_\_\_ Expiration Date \_\_\_\_\_

**RECEIVED**

**WATER PROTECTION PROGRAM**

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

**2. FACILITY**

NAME Lake Home Neighbor's WWTF		TELEPHONE NUMBER WITH AREA CODE (913) 422-5821	
ADDRESS (PHYSICAL) 31411 Barrel Road	CITY Stover	STATE MO	ZIP CODE 65078
2.1 Legal description: SW ¼, NE ¼, NE ¼, Sec. 18, T40N R 18W		County Morgan	
2.2 UTM Coordinates Easting (X): 503973 Northing (Y): 4232124 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: Lake of the Ozarks (L2)			
2.4 Number of outfalls: 1 Wastewater outfalls: 1 Stormwater outfalls: 0 Instream monitoring sites: 0			

**3. OWNER**

NAME Lake Home Neighbor's Association, Inc.		EMAIL ADDRESS N/a	TELEPHONE NUMBER WITH AREA CODE (913) 422-5821
ADDRESS 31411 Barrel Road	CITY Stover	STATE MO	ZIP CODE 65078
3.1 Request review of draft permit prior to public notice?		YES <input checked="" type="checkbox"/> NO	
3.2 Are you a publicly owned treatment works? If yes, is the Financial Questionnaire attached?		YES <input checked="" type="checkbox"/> NO     YES <input checked="" type="checkbox"/> NO	
3.3 Are you a privately owned treatment works?		<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO	
3.4 Are you a privately owned treatment facility regulated by the Public Service Commission?		<input type="checkbox"/> YES <input checked="" type="checkbox"/> NO	

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

NAME Lake Home Neighbor's Association, Inc.		EMAIL ADDRESS N/a	TELEPHONE NUMBER WITH AREA CODE (913) 422-5821 372-3963
ADDRESS 31411 Barrel Road	CITY Stover	STATE MO	ZIP CODE 65078

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

**5. OPERATOR**

NAME	TITLE	CERTIFICATE NUMBER
EMAIL ADDRESS	TELEPHONE NUMBER WITH AREA CODE	

**6. FACILITY CONTACT**

NAME Phillip Sappenfield		TITLE President
EMAIL ADDRESS		TELEPHONE NUMBER WITH AREA CODE (913) 422-5821 (513) 372-3963
ADDRESS 31411 Barrel Road	CITY Stover	STATE MO
		ZIP CODE 65078

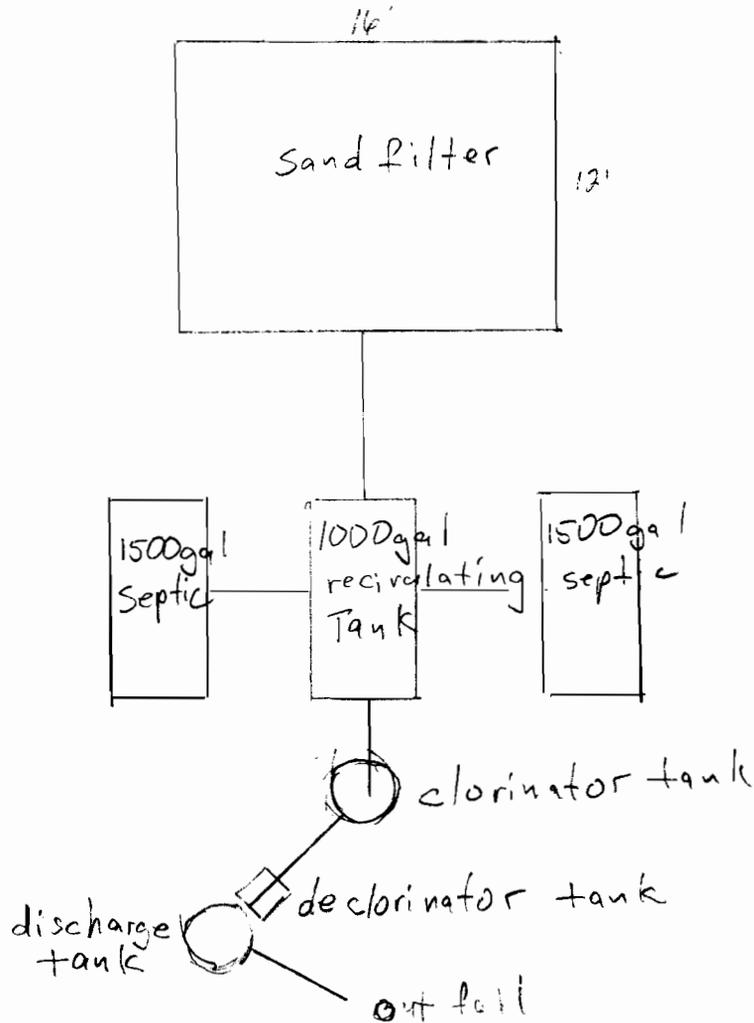
SW Morgan

**7. DESCRIPTION OF FACILITY**

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

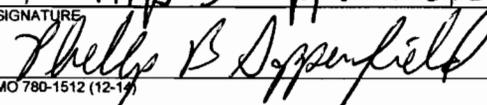
Attach sheets as necessary.

See attached.



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

8. ADDITIONAL FACILITY INFORMATION	
8.1	Facility SIC code: <u>8641</u> Discharge SIC code: <u>4952</u>
8.2	Number of people presently connected or population equivalent (P.E.) _____ Design P.E. 7
8.3	Connections to the facility: Number of units presently connected: Homes _____ Trailers _____ Apartments _____ Other (including industrial) _____ Number of commercial establishments: _____
8.4	Design flow: 555 gpd Actual flow: _____
8.5	Will discharge be continuous through the year? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Discharge will occur during the following months: All
	How many days of the week will discharge occur? Seven (7)
8.6	Is industrial wastewater discharged to the facility? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, attach a list of the industries that discharge to your facility
8.7	Does the facility accept or process leachate from landfills? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8.8	Is wastewater land applied? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, is Form I attached? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8.9	Does the facility discharge to a losing stream or sinkhole? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
8.10	Has a wasteload allocation study been completed for this facility? Yes <input checked="" type="checkbox"/> No
9. LABORATORY CONTROL INFORMATION	
LABORATORY WORK CONDUCTED BY PLANT PERSONNEL	
Lab work conducted outside of plant.	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
Push-button or visual methods for simple test such as pH, settleable solids.	<input type="checkbox"/> Yes <input type="checkbox"/> No
Additional procedures such as dissolved oxygen, chemical oxygen demand, biological oxygen demand, titrations, solids, volatile content.	<input type="checkbox"/> Yes <input type="checkbox"/> No
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No
10. COLLECTION SYSTEM	
10.1	Length of pipe in the sewer collection system? N/a _____ Feet, or N/a _____ Miles (either unit is appropriate)
10.2	Does significant infiltration occur in the collection system? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No If yes, briefly explain any steps underway or planned to minimize inflow and infiltration:
11. BYPASSING	
Does any bypassing occur in the collection system or at the treatment facility? Yes <input checked="" type="checkbox"/> No	
If yes, explain:	

12. SLUDGE HANDLING, USE AND DISPOSAL			
12.1 Is the sludge a hazardous waste as defined by 10 CSR 25? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No			
12.2 Sludge production, including sludge received from others: 0.05 Design dry tons/year _____ Actual dry tons/year			
12.3 Capacity of sludge holding structures: Sludge storage provided: _____ cubic feet, _____ days of storage; _____ average percent solids of sludge; <input checked="" type="checkbox"/> No sludge storage is provided. <input type="checkbox"/> Sludge is stored in lagoon.			
12.4 Type of Storage: <input type="checkbox"/> Holding tank <input type="checkbox"/> Building <input type="checkbox"/> Basin <input type="checkbox"/> Lagoon <input type="checkbox"/> Concrete Pad <input checked="" type="checkbox"/> Other (Describe) <u>Septic Tanks</u>			
12.5 Sludge Treatment: <input checked="" type="checkbox"/> Anaerobic Digester <input type="checkbox"/> Lagoon <input type="checkbox"/> Composting <input type="checkbox"/> Storage Tank <input type="checkbox"/> Aerobic Digester <input type="checkbox"/> Other (Attach description) <input type="checkbox"/> Lime Stabilization <input type="checkbox"/> Air or Heat Drying			
12.6 Sludge Use or Disposal: <input type="checkbox"/> Land Application <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years) <input checked="" type="checkbox"/> Contract Hauler <input type="checkbox"/> Hauled to Another treatment facility <input type="checkbox"/> Incineration <input type="checkbox"/> Sludge Retained in Wastewater treatment lagoon <input type="checkbox"/> Solid waste landfill			
12.7 Person responsible for hauling sludge to disposal facility: <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (complete below)			
NAME		EMAIL ADDRESS	
Bullock Septic Pumping, Inc			
ADDRESS	CITY	STATE	ZIP CODE
172 Flagstone Road	Gravois Mills	MO	65037
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO.	
Travis Bullock	573 374 6688	MO-	
12.8 Sludge use or disposal facility <input type="checkbox"/> By applicant <input checked="" type="checkbox"/> By others (Complete below.)			
NAME		EMAIL ADDRESS	
ADDRESS	CITY	STATE	ZIP CODE
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO.	
		MO-	
12.9 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No (Explain)			
13. 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 (TYPE OR PRINT)		OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Phillip B Sappentfield		President	573 372-3963
SIGNATURE		DATE SIGNED	
		4-27-15	

**INSTRUCTIONS FOR COMPLETING FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES  
THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW  
LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY (continued)**

9. Self-explanatory.
- 10.1 Self-explanatory.
- 10.2 If Inflow and Infiltration (I&I) is a problem at the facility, list possible actions to be taken to repair the collection and treatment facility.
11. Include overflows of combined sewers and lift stations or bypassing of the wastewater treatment facility. Provide a detailed description of the circumstances that sewage bypassing occurs and the frequency of occurrence.
12. A copy of 10 CSR 25 is available on the Web at [www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25](http://www.sos.mo.gov/adrules/csr/current/10csr/10csr.asp#10-25).
- 12.1-12.9 Self-explanatory.
- 12.9 Refer to University of Missouri Extension Environmental Quality publications about biosolids (WQ420-WQ426). The documents are available at [extension.missouri.edu/main/DisplayCategory.aspx?C=74](http://extension.missouri.edu/main/DisplayCategory.aspx?C=74). In addition, the federal sludge regulations are available through the U.S. Government Printing Office at [www.gpoaccess.gov/cfr/index.html](http://www.gpoaccess.gov/cfr/index.html).
13. **CERTIFICATION**  
Signature - All applications must be signed as follows and the signatures must be **original**:
- a. For a corporation, by an officer having responsibility for the overall operation of the regulated facility or activity or for environmental matters.
  - b. For a partnership or sole proprietorship, by a general partner or the proprietor.
  - c. For a municipal, state, federal or other public facility, by either a principal executive officer or by an individual having overall responsibility for environmental matters at the facility.

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

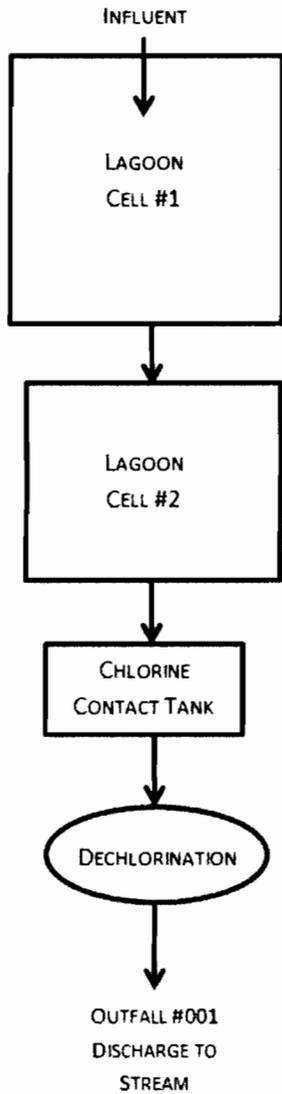
This completed form and any attachments along with the applicable permit fees, should be submitted to:

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

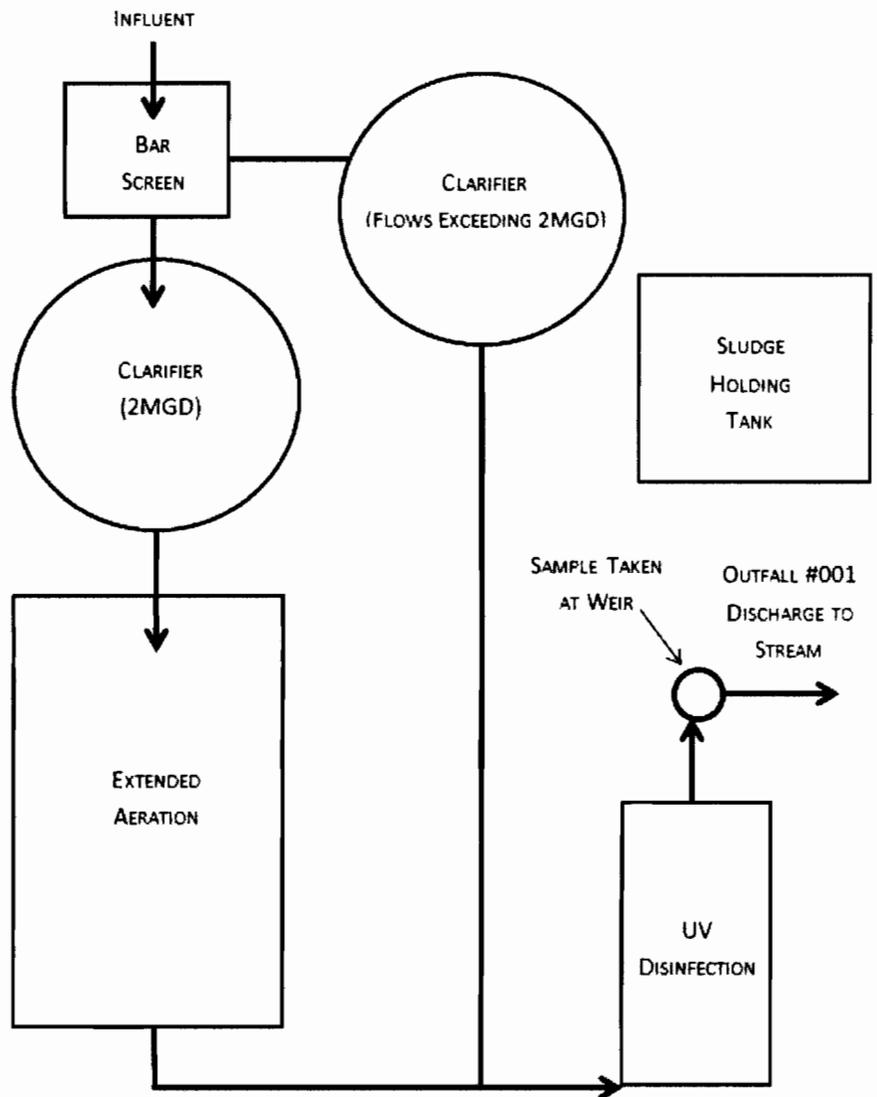
Map of regional offices with addresses and phone numbers are available on the Web at [www.dnr.mo.gov/regions/ro-map.pdf](http://www.dnr.mo.gov/regions/ro-map.pdf). If there are any questions concerning this form, contact the appropriate regional office or the Department of Natural Resources, Water Protection Program, NPDES Permits and Engineering Section at 800-361-4827 or 573-751-6825.

7.1 Process Flow Diagram Examples

WASTEWATER TREATMENT LAGOON



WASTEWATER TREATMENT FACILITY



7.2 A topographic map is available on the Web at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/) or from the Department of Natural Resources' Geological Survey Division in Rolla at 573-368-2125.

8.1 For Standard Industrial Codes visit [www.osha.gov/pls/imis/sicsearch.html](http://www.osha.gov/pls/imis/sicsearch.html) or contact the Department of Natural Resources' Water Protection Program. For example, a family style restaurant has a Facility SIC code of 5812.

8.2-8.7 Self-explanatory.

8.8 If wastewater is land applied submit for Form I: [www.dnr.mo.gov/forms/780-1686-f.pdf](http://www.dnr.mo.gov/forms/780-1686-f.pdf).

8.9-8.10 Self-explanatory

**INSTRUCTIONS FOR COMPLETING FORM B: APPLICATION FOR OPERATING PERMIT FOR FACILITIES THAT RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW LESS THAN OR EQUAL TO 100,000 GALLONS PER DAY**  
**(Facilities over 100,000 gallons per day of domestic waste must use FORM B2)**  
**(Facilities that receive wastes other than domestic contact the department)**

1. Check the appropriate box. **Do not check more than one item.** Operating permit refers to a permit issued by the Department of Natural Resources' Water Protection Program. If an Antidegradation Review has not been conducted, submit the application located at the following link to the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102: [dnr.mo.gov/forms/780-1893-f.pdf](http://dnr.mo.gov/forms/780-1893-f.pdf).

1.1 **Fees Information:**

**DOMESTIC OPERATING PERMIT FEES – PRIVATE**

Annual operating permit fees are based on flow.

Annual fee/Design flow	Annual fee/Design flow	Annual fee/Design flow
\$150.....<5,000 gpd	\$1,000..... 15,000-24,999 gpd	\$4,000..... 100,000-249,999 gpd
\$300..... 5,000-9,999 gpd	\$1,500..... 25,000-29,999 gpd	\$5,000..... ≥250,999 gpd
\$600..... 10,000-14,999 gpd	\$3,000..... 30,000-99,999 gpd	

New domestic wastewater treatment facilities must submit the annual fee with the original application.

If the application is for a site-specific permit re-issuance, send no fees. You will be invoiced separately by the department on the anniversary date of the original permit. Permit fees must be current for the department to reissue the operating permit. Late fees of two percent per month are charged and added to outstanding annual fees.

**PUBLIC SEWER SYSTEM OPERATING PERMIT FEES** (city, public sewer district, public water district, or other publicly owned treatment works). Annual fee is based on number of service connections. The table of fees is in 10 CSR 20-6.011 and is available at <http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-6.pdf>. New public sewer system facilities should not submit any fee as the department will invoice the permittee.

**OPERATING PERMIT MODIFICATIONS**, including transfers, are subject to the following fees:

- a. Publicly Owned Treatment Works (POTWs) - \$200 each.
- b. Non-POTWs – \$100 each for a minor modification (name changes, address changes, other non-substantive changes) or a fee equal to 25% of the facility's annual operating fee for a major modification.

2. **Name of Facility** – Include the name by which this facility is locally known. Example: Southwest Sewage Treatment Plant, Country Club Mobile Home Park, etc. Provide the street address or location of the facility. If the facility lacks a street name or route number, provide the names of the closest intersection, highway, country road, etc.

2.1 Self-explanatory

2.2 Global Positioning System, or GPS, is a satellite-based navigation system. The department prefers that a GPS receiver is used at the outfall pipe and the displayed coordinates submitted. If access to a GPS receiver is not available, use a mapping system to approximate the coordinates; the department's mapping system is available at [www.dnr.mo.gov/internetmapviewer/](http://www.dnr.mo.gov/internetmapviewer/).

2.3-2.4 Self-explanatory

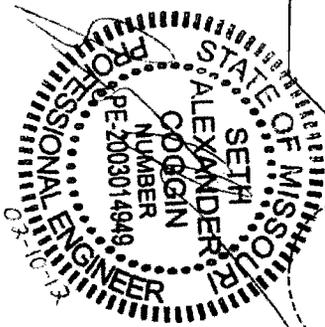
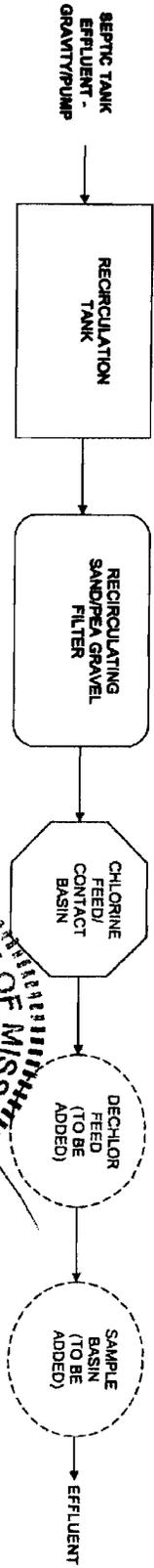
3. **Owner** – Provide the legal name, mailing address, phone number, and email address of the owner. Prior to submitting a permit to public notice, the Department of Natural Resources shall provide the permit applicant 15 days to review the draft permit for nonsubstantive drafting errors. In the interest of expediting permit issuance, permit applicants may waive the opportunity to review draft permits prior to public notice.

3.2-3.4 Self-explanatory.

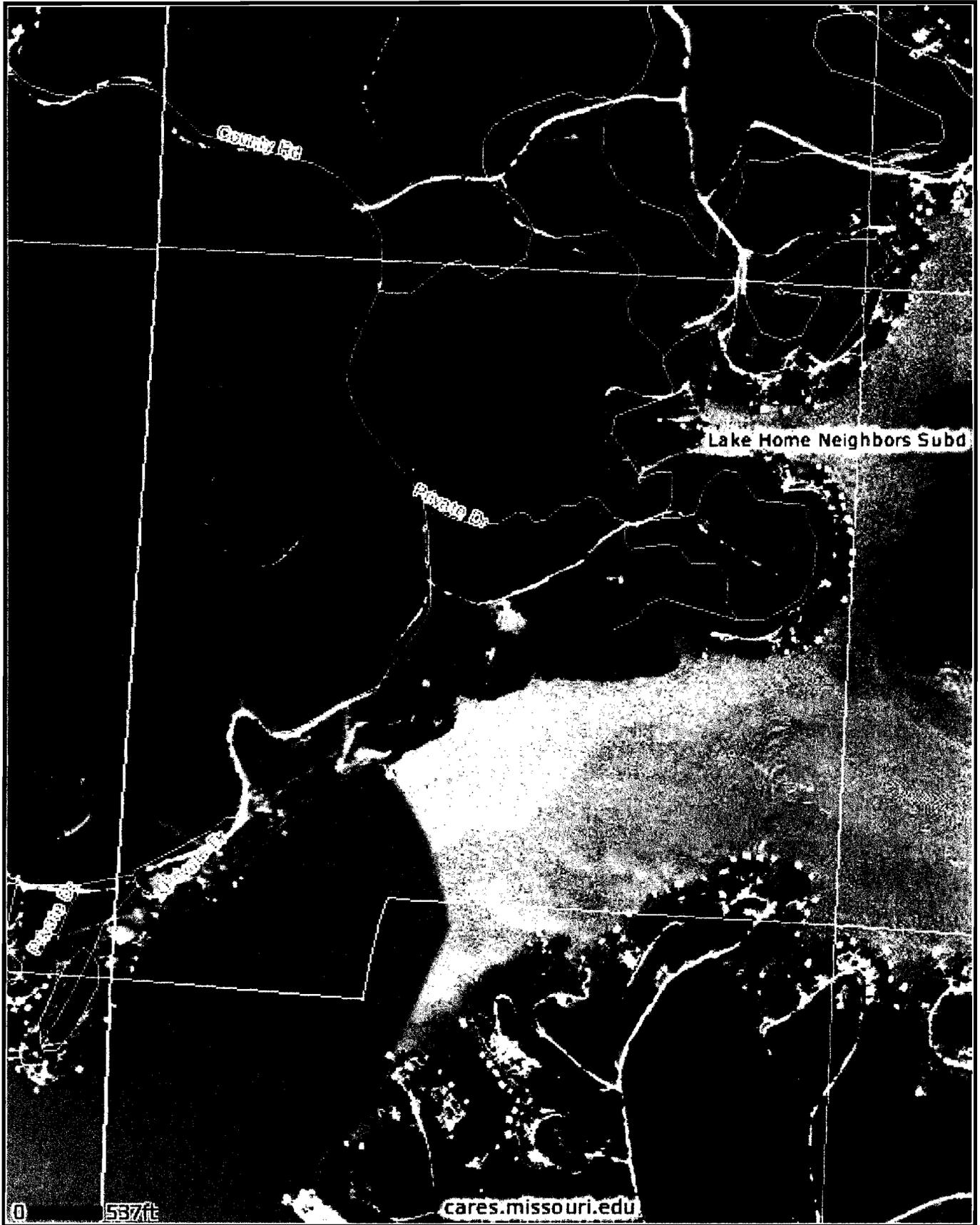
4. **Continuing Authority** – Include the permanent organization that will serve as the continuing authority for the operation, maintenance and modernization of the facility. The regulatory requirement regarding continuing authority is available at <http://www.sos.mo.gov/adrules/csr/current/10csr/10c20-6.pdf> or contact the Department of Natural Resources Water Protection Program (see contact information below).

5. **Operator** – Provide the name, certificate number, title, mailing address, phone number, and e-mail address of the operator of the facility.

6. Provide the name, title, mailing address, work phone number, and e-mail address of a person who is thoroughly familiar with the operation of the facility and with the facts reported in this application and who can be contacted by the department.



# Lake Home Neighbors, MO-0124001, Morgan County



## Legend

## Locator Map

### NPDES Pollutant Outfalls, 2007

-  CAFO
-  Publicly Owned Facilities
-  Other Facilities

### MoDOT Roads and Highways, 2007

-  Interstate
-  U.S. Highway
-  State Numbered Highway
-  State Lettered Highway
-  Principal Road

Road or Street

Private Road or Drive

### Public Land Survey Lines

Section Boundary

Land Grant Boundary

Township Boundary

State Boundary

Artificial Boundary

### Incorporated Areas, 2007

City

Town

Village

Census Designated Place

Other

2010 Aerial Photos (NAIP)

2010 Aerial Photos (NAIP)



Map prepared by:  
<http://cares.missouri.edu>,  
1/27/2012



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM  
**STATEMENT OF WORK COMPLETED**

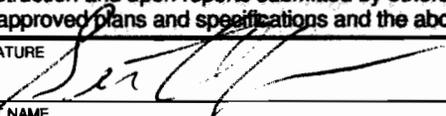
<b>1. PROJECT INFORMATION</b>			
CONSTRUCTION PERMIT # CP0001248		DEPARTMENT FUNDED PROJECT # N/a	
NAME OF THE PROJECT Lake Home Neighbor's WWTF - Dechlorination			
LOCATION OF THE PROJECT 31411 Barrel Road, Stover, MO 65078			
BRIEF DESCRIPTION OF THE PROJECT The addition of a tablet dechlorinator capable of treating up 100,000 gpd, including all necessary appurtenances to make a complete and usable system.			
<b>2. AS BUILTS</b>			
<input type="checkbox"/> An electronic copy of the as builts are required and included with this application.			
<b>3. PROJECT OWNER</b>			
NAME Lake Home Neighbor's Association, Inc. (Phillip Sappenfield)		TELEPHONE NUMBER WITH AREA CODE 913-422-5821 573-372-3963	
ADDRESS 31411 Barrel Road	CITY Stover	STATE MO	ZIP CODE 65078
<b>4. CONTRACTOR COMPANY</b>			
CONTRACT NUMBER N/a			
NAME Lake Home Neighbor's Association, Inc.		TELEPHONE NUMBER WITH AREA CODE	
ADDRESS 31411 Barrel Road	CITY Stover	STATE MO	ZIP CODE 65078
<b>5. INSPECTIONS CONDUCTED BY CONSULTANT</b>			
DATES OF CONSTRUCTION INSPECTIONS DURING CONSTRUCTION N/a			
DATE OF FINAL INSPECTION 04/11/2015			
<b>6. ADDENDA APPROVAL</b>			
ISSUED ADDENDUM #		DEPARTMENT APPROVAL DATE	
N/a			

**7. CHANGE ORDER APPROVAL**

EXECUTED CHANGE ORDER #	DEPARTMENT APPROVAL DATE
N/a	

**8. CONSULTANT:** I hereby affirm, to the best of my knowledge and belief, based on inspections, observations, testing of the construction and upon reports submitted by others, that this project is complete. The construction was completed in accordance with the approved plans and specifications and the above listed and approved Addenda and Change Order(s).

SIGNATURE



PRINT NAME

Seth A. Coggin, P.E.

DATE

04/17/2015

CONSULTING FIRM NAME

Total Environmental Services, Inc.

LICENSE #

PE-2003014949

ADDRESS

PO Box 510

CITY

Osage Beach

STATE

MO

ZIP CODE

65065

NAME OF THE PROJECT

Lake Home Neighbor's WWTF - Dechlorination

TELEPHONE NUMBER WITH AREA CODE

573-346-3810

Mail completed copy to:

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM  
 P.O. BOX 176  
 JEFFERSON CITY, MO 65102-0176

MO 780-2155 (12-11)



## **INSTRUCTIONS FOR COMPLETING STATEMENT OF WORK COMPLETED**

When construction is complete, the applicant shall submit the Statement of Work Completed form. See 10 CSR 20-6.010(5)(D). Submit this form along with the appropriate Form A, B or B2 and applicable fee.

All department-funded projects are required to submit this form.

1. Complete Project information.
2. Attach an electronic copy of the as builts to this form in accordance with 10 CSR 20-8.110(8). The electronic copy shall be submitted on a Compact Disc, or CD, and in the Adobe Portable Document Format, or PDF, Searchable format. If the as builts are scanned, set the resolution to a minimum of 200 dpi at 17 inches by 22 inches.
3. Complete Project Owner Information. The project owner name should match the information provided in the construction permit application.
4. Complete Contractor Company information. Attach a separate sheet if multiple contracts were awarded for the project.
5. List all construction inspection dates conducted by the consultant. Attach additional sheets as necessary.
6. List all Addenda and corresponding information. An addendum is a change to the approved plans and specifications prior to the bid opening. Addenda must be approved by the department in accordance with 10 CSR 20-4 and 10 CSR 20-8.110(8). Attach additional sheets as necessary.
7. List all Change Orders and corresponding information. A change order is a change to the approved plans and specifications after the bid award and contract execution. Change Order(s) must be approved by the department in accordance with 10 CSR 20-4 and 10 CSR 20-8.110(8). Attach additional sheets as necessary.
8. Complete Consultant certification and information.

Mail the completed form to the department.

If there are any questions concerning this form, please contact the Department of Natural Resources, Water Protection Program at 573-751-1300.