

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-0088285

Owner: Mr. Jim and Dorothy Polk  
Address: 434 Indian Creek Circle, Branson MO 65616

Continuing Authority: Same as above  
Address: Same as above

Facility Name: Alpine Lodge Resort WWTF  
Facility Address: 434 Indian Creek Circle, Branson MO 65616

Legal Description: SW $\frac{1}{4}$ , SE $\frac{1}{4}$ , NE $\frac{1}{4}$ , Sec. 31, T32N, R22W, Stone County  
UTM Coordinates: X = 468770, Y = 4056480

Receiving Stream: Unnamed tributary to Table Rock Lake, White River Arm (U)  
First Classified Stream and ID: Table Rock Lake, White River Arm (L2) (07313) (303d)  
USGS Basin & Sub-watershed No.: (11010001 – 1404)

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 - Tourist Cabins - SIC #7011  
Recirculating sand filter/chemical addition for phosphorus removal/chlorination/dechlorination/sludge disposal is by contract hauler.  
Design population equivalent is 51.  
Design flow is 2,775 gallons per day.  
Actual flow is 3,040 gallons per day.  
Design sludge production is 0.51 dry tons/year.

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

November 1, 2013  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

September 30, 2018  
Expiration Date

John Madras, Director, Water Protection Program

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 **October 31, 2016**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	Once/Quarter**	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		15	10	Once/Quarter**	grab
Total Suspended Solids	mg/L		20	15	Once/Quarter**	grab
<i>E. coli</i> (Note 1, Page 4)	#/100 ml	126		126	Once/Quarter**	grab
pH – Units	SU	***		***	Once/Quarter**	grab
Total Residual Chlorine (Note 2, Page 4)	µg/L	17		8	Once/Quarter**	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	* *		* *	Once/Quarter**	grab
Total Phosphorus as P	mg/L	*		0.5	Once/Quarter**	grab
Dissolved Oxygen (Note 3, Page 4)	mg/L	*		*	Once/Quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE **JANUARY 28, 2014**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED Parts I & III STANDARD CONDITIONS DATED October 1, 1980, May 1, 2013, and August 15, 1994, AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.

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

\* Monitoring requirement only.

\*\* Quarterly sampling is required and samples shall be collected and tested for the parameters listed in Table A if a discharge occurs during the reporting period. If the facility serves a part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. See table below for quarterly sampling.

<b>Minimum Sampling Requirements</b>				
Quarter	Months	E. coli, Total Residual Chlorine (TRC), and Dissolved Oxygen	All Other Parameters	Report is Due
First	January, February, March	Not required to sample.	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	July 28 <sup>th</sup>
Third	July, August, September	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	October 28 <sup>th</sup>
Fourth	October, November, December	Sample once during October; no sample required in either November or December	Sample at least once during any month of the quarter	January 28 <sup>th</sup>

\*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective on **November 1, 2016**, and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Outfall #001						
Flow	MGD	*		*	Once/Quarter**	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		15	10	Once/Quarter**	grab
Total Suspended Solids	mg/L		20	15	Once/Quarter**	grab
<i>E. coli</i> (Note 1, Page 4)	#/100 ml	126		126	Once/Quarter**	grab
pH – Units	SU	***		***	Once/Quarter**	grab
Total Residual Chlorine (Note 2, Page 4)	mg/L	17		8	Once/Quarter**	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	3.7 7.5		1.4 2.8	Once/Quarter**	grab
Total Phosphorus as P	mg/L	*		0.5	Once/Quarter**	grab
Dissolved Oxygen (Note 3, Page 4)	mg/L	*		*	Once/Quarter**	grab

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE **JANUARY 28, 2017**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

**B. STANDARD CONDITIONS**

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

- \* Monitoring requirement only.
- \*\* Quarterly sampling is required and samples shall be collected and tested for the parameters listed in Table A if a discharge occurs during the reporting period. If the facility serves a part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. See table below for quarterly sampling.

<b>Minimum Sampling Requirements</b>				
Quarter	Months	E. coli, Total Residual Chlorine (TRC), and Dissolved Oxygen	All Other Parameters	Report is Due
First	January, February, March	Not required to sample.	Sample at least once during any month of the quarter	April 28 <sup>th</sup>
Second	April, May, June	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample once during October; no sample required in either November or December	Sample at least once during any month of the quarter	January 28th

\*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

Note 1 – Final effluent limits of 126 cfu per 100 ml daily maximum and monthly average applicable year round due to losing stream designation.

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

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 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/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.

- (a) 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.
- (b) Do not chemically dechlorinate **if it is not needed to meet the limits in your permit**.
- (c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 µg/L” TRC.

Note 3 - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri’s current Water Quality Standard. On August 22, 2013, the Environmental Protection Agency (EPA) published a notice in the Federal Register announcing the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA's guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state's water quality standards. States must adopt new ammonia criteria consistent with EPA’s published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources intends to adopt the new ammonia criteria during the next review. Information on this topic can be obtained by viewing the Department’s 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.pdf>.
2. 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.

3. All outfalls must be clearly marked in the field.
4. 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.

D. SPECIAL CONDITIONS (continued)

5. 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.

6. Changes in Discharges of Toxic Substances

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

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

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

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

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

10. At least one sign shall appear on the fence on each side of each facility. Minimum wording shall be "SEWAGE TREATMENT FACILITY – KEEP OUT", in letters at least 2 inches high.

11. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.

D. SCHEDULE OF COMPLIANCE

1. Within six months of issuance of this permit, the permittee shall submit an engineer's evaluation detailing the reasons for exceeding design flow. The evaluation shall either determine whether upgrades are necessary to enable the facility to effectively treat the hydraulic loading to this facility, if reduction of inflow and infiltration will reduce the hydraulic overloading, or if the design flow can be adjusted. This report shall also address the options for attaining compliance with the final effluent limits for Ammonia.
2. Within one year of issuance of this permit, the permittee shall submit a report detailing progress made in attaining compliance with the final effluent limits for Ammonia. If the engineer's evaluation allows for an adjustment of the design flow the facility shall request a design flow adjustment in the form of an application to modify this permit. The facility shall submit a complete application to modify, supporting documentation, and the appropriate fees. If the engineer's evaluation does not allow for an adjustment of the design flow, the facility shall apply for a construction permit to upgrade the facility to meet the needs for the actual flow of the facility.
3. Within two years of issuance of this permit, the permittee shall submit a report detailing progress made in attaining compliance with the final effluent limits for Ammonia.
4. Within three years of issuance of this permit, the permittee shall attain compliance with the final effluent limits for Ammonia.

Please submit progress reports to the Missouri Department of Natural Resources, Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri, 65807.

**Missouri Department of Natural Resources**  
**Statement of Basis**  
**#MO-0088285**  
**Alpine Lodge Resort**

This Statement of Basis (Statement) gives pertinent information regarding minor/simple 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: Tourist Cabins - SIC #7011

**Part II – Modification Rationale**

This operating permit is hereby modified to revise Special Condition #1. The requirement to submit a report has been removed. 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.

**Date of Statement of Basis:** 10-24-2013

Submitted by

Curt Gateley, Chief  
Domestic Wastewater Unit  
Operating Permits Section  
Water Protection Program

**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0088285**  
**ALPINE LODGE RESORT**

The Federal Water Pollution Control Act ("Clean Water Act" Section 402 Public Law 92-500 as amended) established the National Pollution Discharge Elimination System (NPDES) permit program. This program regulates the discharge of pollutants from point sources into the waters of the United States, and the release of storm water from certain point sources. All such discharges are unlawful without a permit (Section 301 of the "Clean Water Act"). After a permit is obtained, a discharge not in compliance with all permit terms and conditions is unlawful. Missouri State Operating Permits (MSOPs) are issued by the Director of the Missouri Department of Natural Resources (Department) under an approved program, operating in accordance with federal and state laws (Federal "Clean Water Act" and "Missouri Clean Water Law" Section 644 as amended). MSOPs are issued for a period of five (5) years unless otherwise specified.

As per [40 CFR Part 124.8(a)] and [10 CSR 20-6.020(1)2.] a Factsheet shall be prepared to give pertinent information regarding the applicable regulations, rationale for the development of effluent limitations and conditions, and the public participation process for the Missouri State Operating Permit (operating permit) listed below.

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

This Factsheet is for a Minor .

**Part I – Facility Information**

Facility Type: Tourist Cabins  
Facility SIC Code(s): 7011

Facility Description:

Recirculating sand filter/chemical addition for phosphorus removal/chlorination/dechlorination/sludge disposal is by contract hauler.

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

- No.

Application Date: March 19, 2012  
Expiration Date: September 20, 2012  
Last Inspection: November 26, 2007 In Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	0.004	Secondary	Domestic	0.1

Outfall #001

Legal Description: SW¼, SE¼, NE¼, Sec. 31, T32N, R22W, Stone County

UTM Coordinates: X = 468770, Y = 4056480

Receiving Stream: Unnamed tributary to Table Rock Lake, White River Arm (U)

First Classified Stream and ID: Table Rock Lake, White River Arm (L2) (07313) (303d)

USGS Basin & Sub-watershed No.: (11010001 – 1404)

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

The Liquid Waste Treatment Sites-Engineering Geological Report by James David Vaughn of the Missouri Division of Geology and Land Survey dated October 26, 1999 identified the receiving stream as Losing. There have been no exceedances of TSS, BOD, Bacteria, or Total Residual Chlorine within the last five years. There has been one exceedance of Phosphorous.

**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 20-9.020(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*	12-DIGIT HUC	EDU**
Unnamed tributary to Table Rock Lake, White River Arm	U		General Criteria	11010001 – 1404	Ozark White
Table Rock Lake, White River Arm	L2	7313	AQL, LWW, SCR, WBC(A)		

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

\*\* - Ecological Drainage Unit

**RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:**

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Table Rock Lake (U)	0.0	0.0	0.0

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

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

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

## **Part 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 operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

### **ANTIDegradation:**

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

- Renewal no degradation proposed and no further review necessary.

### **AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

As per [10 CSR 20-6.010(3)(B)], ...An applicant may utilize a lower preference continuing authority by submitting, as part of the application, a statement waiving preferential status from each existing higher preference authority, providing the waiver does not conflict with any area-wide management plan approved under section 208 of the Federal Clean Water Act or any other regional sewage service and treatment plan approved for higher preference authority by the Department.

### **BIOSOLIDS & SEWAGE SLUDGE:**

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address:

<http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

- Sludge/biosolids are removed by contract hauler.

### **COMPLIANCE AND ENFORCEMENT:**

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

Not Applicable ;

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

**PRETREATMENT PROGRAM:**

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

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

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

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

Not Applicable ;

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

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any give pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

Applicable .

A RPA was conducted on appropriate parameters. Please see **APPENDIX A – RPA RESULTS**.

**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)/municipals.

Not Applicable .

Influent monitoring is not being required to determine percent removal.

**SANITARY SEWER OVERFLOWS (SSO) AND INFLOW AND INFILTRATION (I&I):**

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

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

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

**SCHEDULE OF COMPLIANCE (SOC):**

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Applicable ;

The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)]. The facility is seasonally occupied and has a recirculating sand filter that is both hydraulically overloaded and unable to meet the Ammonia limitations required. The permittee shall have two years to address both the hydraulic overloading and compliance with the final Ammonia limitations.

**STORM WATER POLLUTION PREVENTION PLAN (SWPPP):**

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

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

Not Applicable ;

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

**VARIANCE:**

As per the Missouri Clean Water Law § 644.061.4, variances shall be granted for such period of time and under such terms and conditions as shall be specified by the commission in its order. The variance may be extended by affirmative action of the commission. In no event shall the variance be granted for a period of time greater than is reasonably necessary for complying with the Missouri Clean Water Law §§644.006 to 644.141 or any standard, rule or regulation promulgated pursuant to Missouri Clean Water Law §§644.006 to 644.141.

Not Applicable ;

This operating permit is not drafted under premises of a petition for variance.

**WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:**

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

Not Applicable ;

Wasteload allocations were not calculated.

**WLA MODELING:**

There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

Not Applicable ;

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

**WATER QUALITY STANDARDS:**

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

**WHOLE EFFLUENT TOXICITY (WET) TEST:**

A WET test is a quantifiable method of determining if a discharge from a facility may be causing toxicity to aquatic life by itself, in combination with or through synergistic responses when mixed with receiving stream water.

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 is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process.

Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri’s Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

- Not Applicable, this facility does not 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

Applicable ;

Table Rock Lake, White River Arm is listed on the 2002 Missouri 303(d) List for Chlorophyll and Nitrogen.

- This facility is not considered to be a source of the above listed pollutant(s) or considered to contribute to the impairment of Table Rock Lake, White River Arm.

## **Part V –2013 Water Quality Criteria for Ammonia**

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels. Missouri is home to 65 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. But very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA; however, we will utilize any available flexibility based on actual species of mussels that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Typical effluent limits for ammonia for a facility in a location such as this, under current regulations, with no mixing available, would be:

Summer – 3.7 mg/L daily maximum, 1.4 mg/L monthly average.

Winter – 7.5 mg/L daily maximum, 2.8 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, your estimated effluent limitations will be:

Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average.

Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. It is expected that the new WQS will be adopted in the next review of our standards. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

## **Part VI – Effluent Limits Determination**

### ***Outfall #001 – Main Facility Outfall***

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

#### **EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	*/*
BOD <sub>5</sub>	MG/L	1		15	10	NO	15/10
TSS	MG/L	1		20	15	NO	20/15
pH	SU	1	6.5-9.0		6.5-9.0	YES	6-9
AMMONIA AS N (APRIL 1 – SEPT 30)	MG/L	2,3,5	3.7		1.4	YES	*/*
AMMONIA AS N (OCT 1 – MARCH 31)	MG/L	2,3,5	7.5		2.8	YES	*/*
ESCHERICHIA COLI	**	1	126		126	YES	1000/400 FECAL
CHLORINE, TOTAL RESIDUAL	µG/L	1	17		8	YES	0.019/0.0095
TOTAL PHOSPHOROUS AS P	MG/L	1	*		0.5	YES	-/0.5
Dissolved Oxygen (DO)**	mg/L	3, 9	*		*	YES	****

\* - Monitoring requirement only.

\*\* - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.

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

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

#### **Basis for Limitations Codes:**

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

#### **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 from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, 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 from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.
- **pH.** Effluent limitation range is from 6.5 to 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged. Staff has verified that the new pH range of 6.5 – 9.0 is attainable for this facility with no exceedances below 6.5 SU.

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU. No mixing considerations allowed; therefore, WLA = appropriate criterion.

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

Summer: April 1 – September 30

Chronic WLA:  $C_e = ((0.004 + 0.0)1.5 - (0.0 * 0.01))/0.004$   
 $C_e = 1.5 \text{ mg/L}$

Acute WLA:  $C_e = ((0.004 + 0.0)12.1 - (0.0 * 0.01))/0.004$   
 $C_e = 12.1 \text{ mg/L}$

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

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

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

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

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 1.2 mg/L (3.11) = 3.7 mg/L

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

AML = 1.2 mg/L (1.19) = 1.4 mg/L

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

Winter: October 1 – March 31

Chronic WLA:  $C_e = ((0.004 + 0.0)3.1 - (0.0 * 0.01))/0.004$   
 $C_e = 3.1 \text{ mg/L}$

Acute WLA:  $C_e = ((0.004 + 0.0)12.1 - (0.0 * 0.01))/0.004$   
 $C_e = 12.1 \text{ mg/L}$

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

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

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

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

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 2.4 mg/L (3.11) = 7.5 mg/L

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

AML = 2.4 mg/L (1.19) = 2.8 mg/L

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

- ***Escherichia coli (E. coli)*.** Discharges to losing streams shall not exceed 126 per 100 ml as a Daily Maximum and Monthly Average at any time, as per 10 CSR 20-7.031(4)(C).

- **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.

Chronic WLA:  $C_e = ((10.08 + 0.0)10 - (0.0 * 0.0))/10.08$   
 $C_e = 10 \text{ µg/L}$

Acute WLA:  $C_e = ((10.08 + 0.0)19 - (0.0 * 0.0))/10.08$   
 $C_e = 19 \text{ µg/L}$

$LTA_c = 10 (0.527) = \mathbf{5.3 \text{ µg/L}}$

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

$LTA_a = 19 (0.321) = 6.1 \text{ µg/L}$

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

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 5.3 (3.11) = 16.5 µg/L

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

AML = 5.3 (1.55) = 8.2 µg/L

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

Total Residual Chlorine effluent limits of 0.017 mg/L daily maximum, 0.008 mg/L monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum level (ML), should be included in the permit.

- **Total Phosphorus as P.** Effluent limitations from the previous state operating permit have been reassessed and verified that they are still protective of the receiving stream's Water Quality. Therefore, 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.**
- **Dissolved Oxygen.** Monitoring requirement only. Monitoring for dissolved oxygen is included to determine whether reasonable potential to exceed water quality standards.

**Sampling Frequency Justification:**

Sampling and Reporting Frequency was retained from previous permit.

**For flows less than or equal to 100,000 gpd use:**

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**

As per 10 CSR 20-7.015, BOD<sub>5</sub> and TSS samples collected for sand filters may be grab samples. Grab samples must be collected for pH, Ammonia as N, *E. coli*, TRC, Dissolved Oxygen and Total Phosphorus. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia and Total Phosphorus samples must be immediately preserved with acid, these samples are to be collected as a grab. For further information on sampling and testing methods please review 10 CSR 20-7.015(9)(A) 2.

**Part VII – Finding of Affordability**

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

Not Applicable;

The Department is not required to determine findings of affordability because the facility is not a **combined or separate sanitary sewer system for a publically-owned treatment works.**

## **Part VIII – Administrative Requirements**

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

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the department to explore a watershed based permitting effort at some point in the future.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing.

The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit.

For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The first Public Notice period for this operating permit began on June 8, 2012 and ended on July 9, 2012. No comments were received during this Public Notice period.

After this first Public Notice period, Department staff noticed that the permit did not include Dissolved Oxygen (DO) monitoring. The facility contains a dechlorination system which can deplete the amount of DO in the effluent. The Department requires facilities with dechlorination systems to monitor for DO to ensure adequate protection of aquatic life. Also, Department staff removed the following special condition from the permit:

“8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.”

The facility does not meet the requirements for a certified operator. This condition refers to facilities that are required to hire a certified operator to maintain the facility. Therefore, the Department has removed this condition.

The resulting changes made to the permit after the first Public Notice period has prompted a new Public Notice period to notify the public and the permittee of the changes made prior to final issuance. The second Public Notice period is tentatively scheduled to begin in July, 2013.

The second Public Notice period for this operating permit began on July 12, 2013 and ended on August 12, 2013. No comments were received during this Public Notice period.

**DATE OF FACT SHEET: MAY 3, 2012**

### **COMPLETED BY:**

**Steven W Lang, P.E., Environmental Engineer**

**NPDES Permits Unit**

**Permitting and Engineering Section**

**Water Protection Program**

**(314) 416-2465**

**[steve.lang@dnr.mo.gov](mailto:steve.lang@dnr.mo.gov)**

## Appendices

### APPENDIX A – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	45.4	1.5	45.5	8	21.6/0.01	0.7	2.1	Yes
Total Ammonia as Nitrogen (Winter) mg/L	12.1	N/A	3.1	N/A	0	N/A	N/A	N/A	N/A

N/A – Not Applicable

\* - Units are (µg/L) unless otherwise noted.

\*\* - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent.

\*\*\* - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.

RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).

n – Is the number of samples.

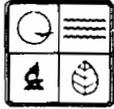
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.

RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

MP 10000  
C8773

MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
(SEE MAP FOR APPROPRIATE REGIONAL OFFICE)



**FORM B — APPLICATION FOR CONSTRUCTION OF  
OPERATING PERMIT FOR FACILITIES WHICH  
RECEIVE PRIMARILY DOMESTIC WASTE  
UNDER MISSOURI CLEAN WATER LAW**



FOR AGENCY USE ONLY	
CHECK NUMBER	No Fee Required
DATE RECEIVED	3/19/12
FEE SUBMITTED	0

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

1.00 This application is for:  Federal/State  an operating permit renewal: permit # MO 0084285  
 a construction permit  Funded Project Expiration date: 09/20/12  
 an operating permit for a new or unpermitted facility  an operating permit modification  
(See instructions for appropriate fee to be submitted with application) Reason: \_\_\_\_\_

**2.00 FACILITY**

NAME Alpine Lodge Resort PHONE 417 338 2514  
ADDRESS (PHYSICAL) 434 INDIAN CRK CIR CITY BRANSON STATE MO ZIP 65616

2.10 LEGAL DESCRIPTION: SW 1/4, SE 1/4, NE 1/4, Sec. 31, T23N R 22W Stone County

2.20 Is this a new facility constructed under a Missouri Construction Permit?  YES  NO  
If yes, please provide Missouri Construction Permit Number: \_\_\_\_\_

2.30 Name of receiving stream(s) Unnamed Tributary to Table Rock Lake (U)

**3.00 OWNER**

NAME Jim + Dorothy Poik EMAIL ADDRESS ALPINE LODGE RESORT@GMAIL.COM PHONE 417 338 2514  
ADDRESS 434 INDIAN CRK CIR CITY BRANSON STATE MO ZIP 65616

3.10 Request review of draft permit prior to Public Notice?  YES  NO

4.00 CONTINUING AUTHORITY: permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME Jim + Dorothy Poik PHONE 417 338 2514  
ADDRESS 434 INDIAN CRK CIR CITY BRANSON STATE MO ZIP 65616

**5.00 OPERATOR**

NAME Tillman Service Co CERTIFICATE NUMBER C 6097 PHONE 417 339 7864

**6.00 FACILITY CONTACT**

NAME DAVID OR JIM POIK TITLE OWNERS PHONE 417 338 2514

**7.00 ADDITIONAL FACILITY INFORMATION**

7.10 Description of facilities (attach additional sheet if required). Attach a 1" = 2000' scale USGS topographic map showing location of all outfalls. Recirculating sand filter / CHEMICAL ADD ON FOR Phos / Chlorination-dechlor.

7.15 Facility SIC code: 4952 / 7011; Discharge SIC code: Removal / Sludge Disposal

7.20 Number of separate discharge points one BY CONTRACTOR

7.30 Number of persons presently connected or population equivalent 45 Avg. Design P.E. 51

Number of units presently connected: Homes \_\_\_\_\_ Trailers \_\_\_\_\_

Apartments \_\_\_\_\_ Other 20 CABINS

Design flow: 2775 GPD Actual flow: 2235 GPD AVG.

7.40 Does any bypassing occur anywhere in the collection system or at the treatment facility?  
 Yes  No (If yes, attach explanation)

7.50 Is industrial waste discharged to the facility identified in item 2?  Yes  No (If yes, see instructions.)

7.60 Will the discharge be continuous through the year?  Yes  No

a. Discharge will occur during the following months: VARIES BETWEEN APRIL - NOVEMBER

b. How many days of the week will the discharge occur? VARIES 1-7 DAYS / WEEK

7.65 Is wastewater land applied?  Yes  No (If yes, attach Form I)

7.70 Will chlorine be added to the effluent?  Yes  No

a. If chlorine is added, what is the resulting residual? < 0.1 mg/L

7.80 Does this facility discharge to a losing stream or sinkhole?  Yes  No

7.85 Attach a flow chart showing all influents, treatment facilities and outfalls. ATTACHED

7.90 Has a waste load allocation study been completed for this facility?  Yes  No

7.95 List all permit violations, including effluent limit exceedances in the last 5 years. Attach a separate sheet if necessary.

If none, write none. SEE ATTACHED



**8.00 SLUDGE HANDLING, USE AND DISPOSAL**

8.10 Is the sludge a hazardous waste as defined by 10 CSR 25?  Yes  No

8.20 Sludge Production, including sludge received from others: 0.51 Design Dry Tons/Year 0 Actual Dry Tons/Year

8.30 Capacity of sludge holding structures:  
7.31 Sludge storage provided: \_\_\_\_\_ cubic feet; \_\_\_\_\_ days of storage

7.32 Average percent solids of sludge.  No sludge storage is provided.  
Type of storage:  Holding tank  Building  
 Basin  Other (describe) \_\_\_\_\_  
 Concrete Pad

8.40 Sludge Treatment:  
 Anaerobic Digester  Lagoon  Composting  
 Storage Tank  Aerobic Digester  Other (attach description)  
 Lime Stabilization  Air or Heat Drying Recirculating SAND Filter

8.50 Sludge Use or Disposal:  
 Land Application  Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than 2 years)  
 Contract Hauler  Incineration  
 Hauled to Another Treatment Facility  Sludge Retained in Wastewater treatment lagoon  
 Other \_\_\_\_\_  
 Solid Waste Landfill \_\_\_\_\_ Attach explanation sheet.

**8.60 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY**

By Applicant  By Others (complete below)

NAME Tillman Septic Service INC

ADDRESS 147 Victory Lane CITY BRANSON WEST STATE MO ZIP 65737

CONTACT PERSON JODY Tillman PHONE 417 739 4780 PERMIT NO. MO- \_\_\_\_\_

**8.70 SLUDGE USE OR DISPOSAL FACILITY**

By Applicant  By Others (complete below)

NAME CITY of BRANSON West

ADDRESS 147 VICTORY LANE CITY BRANSON WEST STATE MO ZIP 65737

CONTACT PERSON JODY Tillman PHONE 417 739 4780 PERMIT NO. MO- \_\_\_\_\_

8.80 Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503?  
 Yes  No (attach explanation)

**9.00 DOWNSTREAM LANDOWNER(S). ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.**

NAME U.S. ARMY CORPS of ENGINEERS

ADDRESS \_\_\_\_\_ CITY LITTLE ROCK STATE ARK ZIP \_\_\_\_\_

**10.00 DRINKING WATER SUPPLY INFORMATION**

10.10 WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY:  
A. Public supply (municipal or water district water) \_\_\_\_\_  
If public, please give name of the public supply \_\_\_\_\_  
 B. Private well \_\_\_\_\_  
C. Surface water (lake, pond, or stream) \_\_\_\_\_

10.20 Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)?  
 Yes  No

10.30 Does your supply serve housing which is occupied year round by the same people? This does not include housing which is occupied seasonally.  Yes  No

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) ROSEMARY Dalk OWNER PHONE NO. (AREA CODE & NO.) 417 338 2514  
SIGNATURE Rosemary Dalk DATE SIGNED \_\_\_\_\_

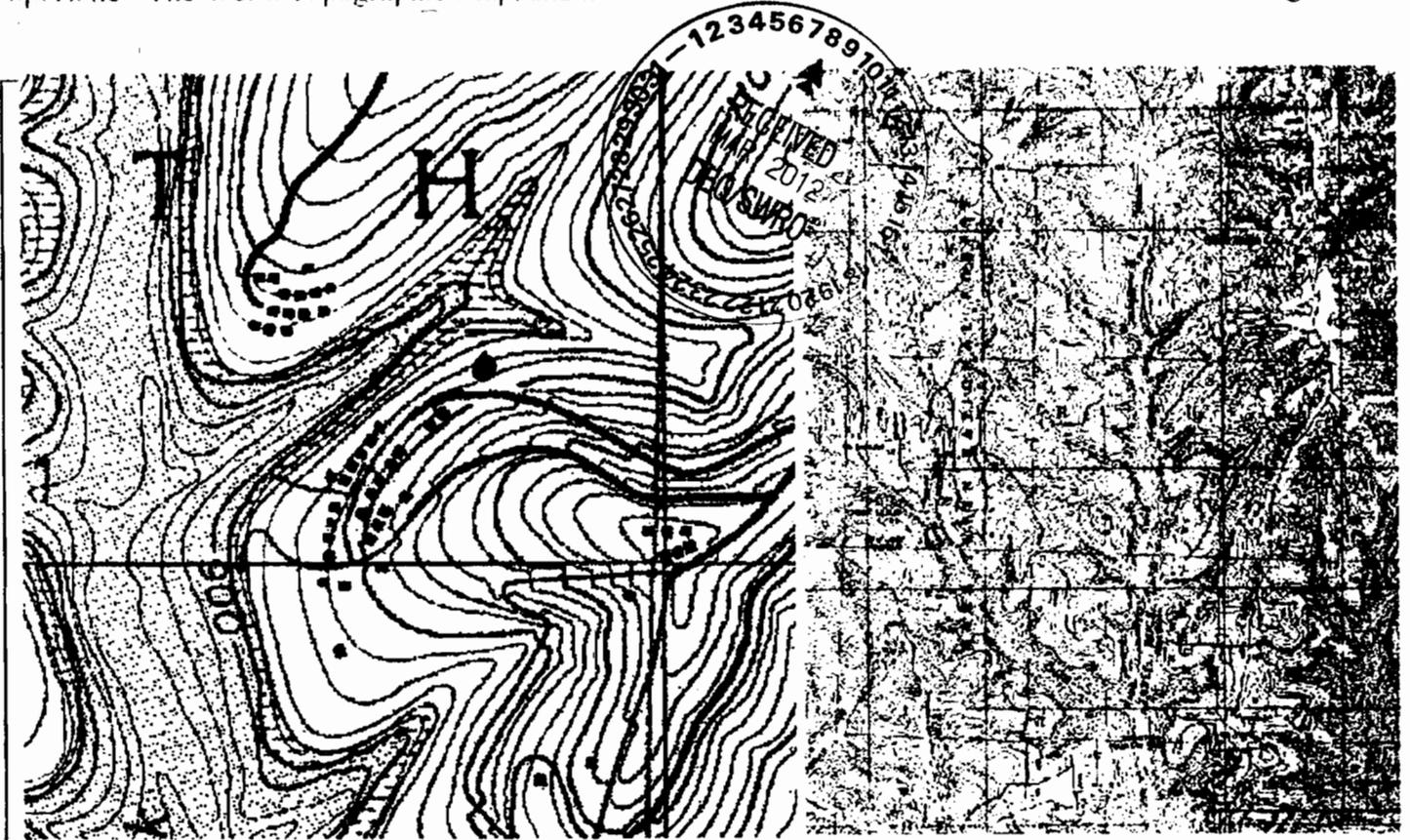


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Image will cover this area

**Land Area Covered:** 16.16 Miles by 16.16 Miles  
**Quad Name:** Table Rock Lake

**Source Scale:** 1:100000  
**Printed Map Date:** 1980

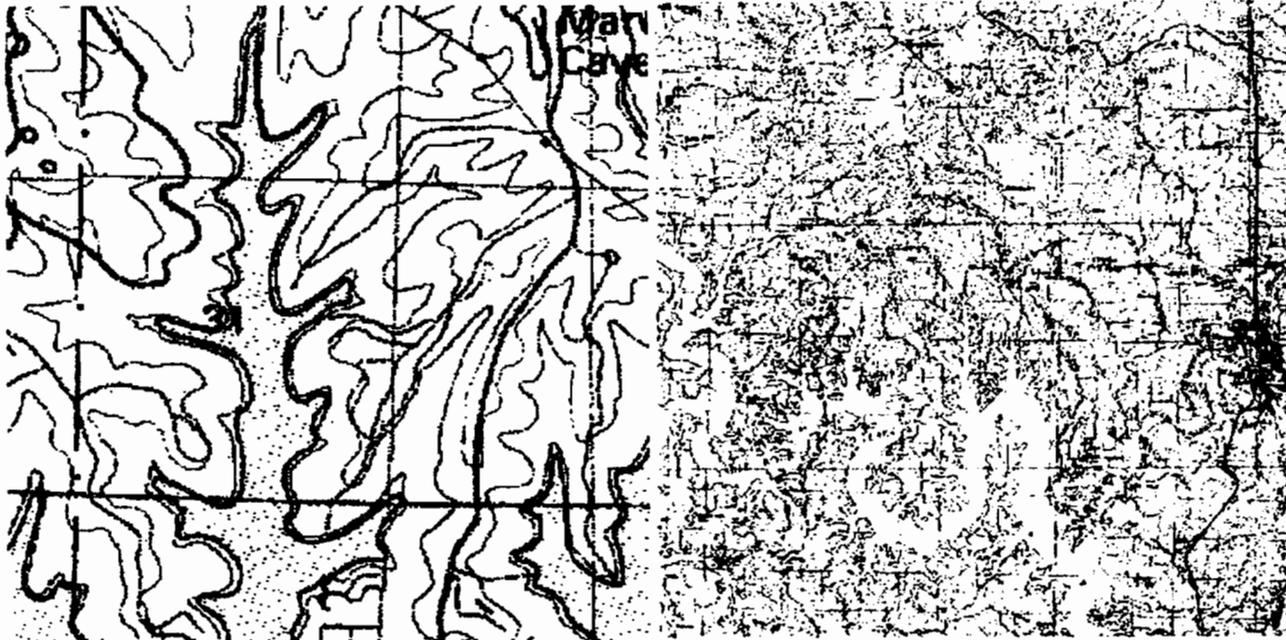


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**Land Area Covered:** 40 Miles by 40 Miles.  
**Quad Name:** Harrison

**Source Scale:** 1:250000  
**Printed Map Date:** 1985

**COPY**