

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

In compliance with the Missouri Clean Water Law, (Chapter 644 R.S. Mo. as amended, hereinafter, the Law), and the Federal Water Pollution Control Act (Public Law 92-500, 92nd Congress) as amended,

Permit No. MO-0093891

Owner: City of Breckenridge
Address: 783 W Oak, Breckenridge, MO 64625

Continuing Authority: Same as owner
Address: Same as owner

Facility Name: Breckenridge Wastewater Lagoon
Facility Address: S of Old Hwy. 36, between NE Panther Rd. and S 4th St., Breckenridge, MO

Legal Description: SW ¼, NW ¼, Sec. 15, T57N, R26W, Caldwell County
UTM Coordinates: X = 430530, Y = 4400383

Receiving Stream: Tributary to Panther Creek (U)
First Classified Stream and ID: Panther Creek (C) (00521)
USGS Basin & Sub-watershed No.: (10280101 – 1504)

is authorized to discharge from the facility described herein, in accordance with the effluent limitations and monitoring requirements as set forth herein:

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4951

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

Three-cell lagoon/sludge is retained in lagoon
Design population equivalent is 800.
Design flow is 80,000 gallons per day.
Actual flow is 32,000 gallons per day.
Design sludge production is 12 dry tons/year.

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

May 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

March 30, 2017
Expiration Date

John Madras, Director, Water Protection Program

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 2 of 8	
					PERMIT NUMBER MO-0093891	
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 through APRIL 30, 2018 . 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/month	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	once/month	grab
Total Suspended Solids	mg/L		45	30	once/month	grab
pH – Units	SU	***		***	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>JUNE 28, 2013</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN. THERE SHALL BE NO DISCHARGE OF WATER THAT CAUSES A DISCERNABLE COLOR CHANGE IN THE RECEIVING STREAM.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions #9			once/permit cycle	24 hr. comp.**
MONITORING REPORTS SHALL BE SUBMITTED <u>ONCE/PERMIT CYCLE</u> ; THE FIRST REPORT IS DUE <u>BY APRIL 28, 2017</u> .						
Inflow & Infiltration Reports	See Special Conditions #8			Annually, due in November		
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>NOVEMBER 28, 2013</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II, & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

* Monitoring requirement only.

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

*** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.5 pH units.

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS					PAGE NUMBER 3 of 8	
					PERMIT NUMBER MO-0093891	
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 MAY 1, 2018 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/month	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		45	30	once/month	grab
Total Suspended Solids	mg/L		45	30	once/month	grab
pH – Units	SU	***		***	once/month	grab
Ammonia as N (April 1 – Sept 30)	mg/L	5.6		1.2	once/month	grab
(Oct 1 – March 31)		12.1		2.6		
Oil & Grease	mg/L	15		10	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>JUNE 28, 2018</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM, OR WATER WITH A VISIBLE SHEEN. THERE SHALL BE NO DISCHARGE OF WATER THAT CAUSES A DISCERNABLE COLOR CHANGE IN THE RECEIVING STREAM.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Conditions #9			once/permit cycle	24 hr. comp.**
MONITORING REPORTS SHALL BE SUBMITTED <u>ONCE/PERMIT CYCLE</u> ; THE FIRST REPORT IS DUE <u>BY APRIL 28, 2017</u> .						
Inflow & Infiltration Reports	See Special Conditions #8			Annually, due in November		
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>NOVEMBER 28, 2013</u> .						
B. STANDARD CONDITIONS						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II, & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

* Monitoring requirement only.

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

*** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.5 pH units.

C. INFLUENT MONITORING REQUIREMENTS		PAGE NUMBER 4 of 8	
		PERMIT NUMBER MO-0093891	
The facility is required to meet a removal efficiency of 85% or more as a monthly average. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:			
SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Influent</u>			
Biochemical Oxygen Demand ₅	mg/L	once/quarterly****	grab
Total Suspended Solids	mg/L	once/quarterly****	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>JUNE 28, 2013</u> .			

**** See table below for quarterly sampling.

Minimum Sampling Requirements			
Quarter	Months	Influent Parameters	Report is Due
First	January, February, March	Sample at least once during any month of the quarter	April 28 th
Second	April, May, June	Sample at least once during any month of the quarter	July 28 th
Third	July, August, September	Sample at least once during any month of the quarter	October 28 th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28 th

D. SPECIAL CONDITIONS

1. This permit may be reopened and modified, or alternatively revoked and reissued, to:
 - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
 - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.
 - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
 - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.

The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.
2. All outfalls must be clearly marked in the field.
3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
4. 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.

D. SPECIAL CONDITIONS (continued)

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.
7. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.
8. The permittee shall develop and implement a program for maintenance and repair of the collection system. The permittee shall submit a report annually in November to the Kansas City Regional Office with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the collection system serving the facility.
9. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	Once/Permit Cycle	24 hr. composite*	Any in 2015

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

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

- (a) Test Schedule and Follow-Up Requirements
 - (1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.
 - (a) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

D. SPECIAL CONDITIONS (continued)

- (b) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.
- (c) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.
- (2) The WET test will be considered a failure if mortality observed in effluent concentrations equal to or less than the AEC is significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.
- (3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.
- (4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.
 - (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
 - (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.
- (5) Follow-up tests do not negate an initial failed test.
- (6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.
- (7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.
- (8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.
- (9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.
- (10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.
- (11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

- (1) Test Type: Acute Static non-renewal
- (2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.
- (3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.
- (4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

D. SPECIAL CONDITIONS (continued)

- (5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.
- (6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.
- (7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.
- (8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.
- (9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

E. SCHEDULE OF COMPLIANCE

1. The City of Breckenridge will submit an **engineering evaluation** for the Breckenridge WW Lagoon as required by the report for the September 7, 2011 inspection by the deadline contained within that report.
2. By six (6) months from the date of issuance of this permit the City of Breckenridge will submit a Wasteload Allocation Study on the receiving stream for the Breckenridge WW Lagoon along with a Water Quality Review Sheet (WQRS) Request.
3. By twelve (12) months from the date of issuance of this permit the City of Breckenridge will submit an Antidegradation Review along with a Facility Plan to address upgrades or modifications to the plant deemed necessary to protect water quality in the receiving stream.
4. By eighteen (18) months from the date of issuance of this permit the City of Breckenridge will submit and Application for Construction Permit.

This Schedule of Compliance is for **Ammonia**.

The facility shall attain compliance with final effluent limitations for Ammonia as soon as reasonably achievable or no later than **5 years** of the effective date of this permit.

1. Within six months of the effective date of this permit, the permittee shall report progress made in attaining compliance with the final effluent limits.
2. The permittee shall submit interim progress reports detailing progress made in attaining compliance with the final effluent limits every 12 months from **issuance date**.
3. **No more than 5 years** from the effective date of this permit, the permittee shall attain compliance with the final effluent limits, for Ammonia.

PERMIT TRANSFER

This permit may be transferred to a new owner by submitting an "Application for Transfer of Operating Permit" signed by the seller and buyer of the facility, along with the appropriate modification fee.

PERMIT RENEWAL REQUIREMENTS

Unless this permit is terminated, the permittee shall submit an application for the renewal of this permit no later than six (6) months prior to the permit's expiration date. Failure to apply for renewal may result in termination of this permit and enforcement action to compel compliance with this condition and the Missouri Clean Water Law.

TERMINATION

In order to terminate this permit, the permittee shall notify the department by submitting Form J, included with the State Operating Permit. The permittee shall complete Form J and mail it to the department at the address noted in the cover letter of this permit. Proper closure of any storage structure is required prior to permit termination. A closure plan shall be submitted to the department and approved prior to initiating closure activities.

DUTY OF COMPLIANCE

The permittee shall comply with all conditions of this permit. Any noncompliance with this permit constitutes a violation of Chapter 644, Missouri Clean Water Law, and 10 CSR 20-6. Noncompliance may result in enforcement action, termination of this authorization, or denial of the permittee's request for renewal.

Missouri Department of Natural Resources
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO0093891
BRECKENRIDGE WASTEWATER LAGOON

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 Major

Part I – Facility Information

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

Facility Description:

Three cell lagoon/sludge is retained in lagoon

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

- Yes; (details are listed under the Comments section below)

Application Date: 05/02/2011
Expiration Date: 09/21/2011
Last Inspection: 06/05/2012 Non-Compliance

A routine compliance inspection was conducted on 9/7/2011 by Jesse Cochran of the Kansas City Regional Office. The facility was found to be in noncompliance for the following reasons:

- Damage to the lagoons berms
- Erosion of the inner berms to the point of inundating the lagoon's control valve systems
- Non-functioning lagoon control valves
- Lack of adequate functioning flow measurement device
- Excessive duckweed cover
- Strong septic odor at cell three, at the outfall, and in the receiving stream
- White algae deposits at the outfall
- Grey water, sludge, and pollution tolerant organisms in the receiving stream
- Prolonged degradation of the receiving stream

The inspection report contains a list of required and recommended actions that the City of Breckenridge must follow in order to return the lagoon to compliance. A major component of this list is the requirement to conduct an engineering evaluation of the lagoon system. Due to the condition of the receiving stream, a schedule of compliance, containing requirements in addition to the engineering evaluation are included in this permit renewal (see comments section below for details).

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
#001	0.1237	Equivalent to Secondary	Domestic	~ 2.73

Outfall #001

Legal Description: SW ¼, NW ¼, Sec.15, T57N, R26W, Caldwell County

UTM Coordinates: X = 430530, Y = 4400383

Receiving Stream: Tributary to Panther Creek (U)

First Classified Stream and ID: Panther Creek (C) (00521)

USGS Basin & Sub-watershed No.: (10280101 – 1504)

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

Monthly discharge monitoring reports (DMR) from the previous permit cycle were reviewed. From October 2006 through December 2007 as well as in March 2008 and February 2010 this facility reported "no-discharge" for the entire month. The facility reported exceedances for Total Suspended Solids in August 2008 and in May 2008.

Comments:

This three cell lagoon has an average daily flow of 32,000 gallons per day, based on DMRs from the past twelve months. According to the renewal application, there are 170 homes, 24 trailers, 27 apartments, and 9 other establishments connected to the lagoon. There is approximately 16,500 feet of pipe in the collection system.

The previous permit for this facility contained equivalent to secondary effluent limitations for Biochemical Oxygen Demand (BOD) (65mg/L weekly average/45mg/L monthly average) and for Total Suspended Solids (TSS) (110mg/L weekly average/70mg/L monthly average). State regulations [10 CSR 20-7.015(8)(A)3.] authorizes equivalent to secondary limits when a water quality impact study shows that the alternate limits will not cause a negative impact to the receiving stream. A department memo on Lagoon Operating Permit Renewal Guidance, dated May 3, 2006, provides instruction, to permit writers, to renew permits for lagoons with equivalent to secondary limits until the department conducts a low flow survey, which is deemed equivalent to a water quality impact study.

A low flow survey was not conducted on this facility's receiving stream during the previous permit cycle. As observed during the September 7, 2011 compliance inspection, however, this facility has caused prolonged degradation and has made a significant negative impact on the Tributary to Panther Creek, which has little assimilative capacity for contaminants. The fact that the Breckenridge WW Lagoon has consistently met the equivalent to secondary limits through the majority of the previous permit cycle, yet has caused the negative impacts observed, indicates that these limits are not protective of water quality for this stream. As such, effluent limitations for BOD and TSS have been changed to secondary limits of 45mg/L weekly average and 30mg/L monthly average. The inspection report from September 7, 2011 requires the facility to conduct an engineering evaluation. The schedule of compliance included in this permit will additionally require a wasteload allocation study to determine what limits are appropriate for this stream, request to the department for a water quality review sheet, submission of an antidegradation evaluation, and a construction permit application to upgrade or replace the facility such that no further negative stream impacts occur and water quality is restored.

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:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
 - Municipalities

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

This facility currently requires an operator with D Certification Level. Please see **Appendix - Classification Worksheet**. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Operator’s Name: David Bethel
 Certification Number: 5807
 Certification Level: WW - A

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III – 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.

All Other Waters [10 CSR 20-7.015(8)]:

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Tributary to Panther Creek	U	N/A	General Criteria	10280101	Central Plains/ Grand/Chariton
Panther Creek	C	00521	LWW, AQL, SCR***		

* - Irrigation (IRR), Livestock & Wildlife Watering (LWW), Protection of Warm Water Aquatic Life and Human Health-Fish Consumption (AQL), Cool Water Fishery(CLF), Cold Water Fishery (CDF), Whole Body Contact Recreation (WBC), Secondary Contact Recreation (SCR), Drinking Water Supply (DWS), Industrial (IND), Groundwater (GRW).
 ** - Ecological Drainage Unit
 *** - UAA conducted 6/15/2007

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Panther Creek (U)	0	0	0

MIXING CONSIDERATIONS:

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part 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 or are stored in the lagoon.

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)].

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

Applicable ;

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

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

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

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

- In accordance with Missouri RSMo §644.026.1.(15) and 40 CFR Part 122.41(e), the permittee is required to develop and/or implement a program for maintenance and repair of the collection system and shall be required in this operating permit by either means of a Special Condition or Schedule of Compliance. In addition, the Department considers the development of this program as an implementation of this condition. Additionally, 40 CFR Part 403.3(o) defines a POTW to include any device and systems used in the storage, treatment, recycling and reclamation of municipal sewage or industrial wastes of liquid nature. It also includes sewers, pipes, and other conveyances only if they convey wastewater to a POTW Treatment Plant.

At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

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)]. This permit contains final effluent limits for ammonia. Due to the medium to high financial burden of Ammonia limits, the facility has been given a 5 years schedule to comply with final Ammonia limits.

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.

Not Applicable .

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

VARIANCE:

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

Not Applicable .

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Applicable ;

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

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

Where C = downstream concentration

Cs = upstream concentration

Qs = upstream flow

Ce = effluent concentration

Qe = effluent flow

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

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

Number of Samples "n":

Additionally, in accordance with the TSD for water quality-based permitting, effluent quality is determined by the underlying distribution of daily values, which is determined by the Long Term Average (LTA) associated with a particular Wasteload Allocation (WLA) and by the Coefficient of Variation (CV) of the effluent concentrations. Increasing or decreasing the monitoring frequency does not affect this underlying distribution or treatment performance, which should be, at a minimum, be targeted to comply with the values dictated by the WLA. Therefore, it is recommended that the actual planned frequency of monitoring normally be used to determine the value of "n" for calculating the AML. However, in situations where monitoring frequency is once per month or less, a higher value for "n" must be assumed for AML derivation purposes. Thus, the statistical procedure being employed using an assumed number of samples is "n = 4" at a minimum. For Total Ammonia as Nitrogen, "n = 30" is used.

WLA MODELING:

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

Not Applicable ;

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

WATER QUALITY STANDARDS:

Per [10 CSR 20-7.031(3)], General Criteria shall be applicable to all waters of the state at all times including mixing zones.

Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Applicable .

Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by all facilities meeting the following criteria:

Facility is a municipality or domestic discharger with a Design Flow \geq 22,500 gpd.

40 CFR 122.41(M) - BYPASSES:

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass, 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 devices designed for peak wet weather flows.

- The permittee has not entered or does not meet the necessary requirements for entering into a VCA with the Department.

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.

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

Part V – 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	MGD	1	*		*	NO	SAME
BOD ₅	MG/L	1/9		45	30	YES	65/45
TSS	MG/L	1/9		45	30	YES	110/70
pH	SU	1/9	>6.5		>6.5	YES	≥ 6.0
AMMONIA AS N (APRIL 1 – SEPT 30)	MG/L	1/3/5	5.6		1.2	YES	*
AMMONIA AS N (OCT 1 – MARCH 31)	MG/L	1/3/5	12.1		2.6	YES	*
OIL & GREASE (MG/L)	MG/L	2/3	15		10	NO	SAME
TEMPERATURE (EFFLUENT)	°C	5	*		*	YES	****
WHOLE EFFLUENT TOXICITY (WET) TEST	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				
PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
DISSOLVED OXYGEN (DO)	MG/L	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 (BOD₅).** Secondary treatment limitations, 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average, due to equivalent to secondary limits being inadequate to protect water quality in the receiving stream. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.
- **Total Suspended Solids (TSS).** Secondary treatment limitations, 45 mg/L as a Weekly Average and 30 mg/L as a Monthly Average, due to equivalent to secondary limits being inadequate to protect water quality in the receiving stream. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information**.
- **pH.** Effluent limitation range is ≥ 6.5 or 6.5 – 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU. No mixing considerations allowed; therefore, WLA = appropriate criterion. Site specific coefficients of variation and multipliers were used as effluent data from the previous permit cycle contains more than 10 data points for each time period.

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 = 1.5mg/L

Acute WLA = 12.1mg/L

$LTA_c = 1.5 \text{ mg/L} (0.547) = \mathbf{0.8205 \text{ mg/L}}$
 $LTA_a = 12.1 \text{ mg/L} (0.145) = 1.7545 \text{ mg/L}$

[CV = 1.486, 99th Percentile, 30 day avg.]
 [CV = 1.486, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = 0.8205 mg/L (6.88) = 5.6 mg/L
AML = 0.8205 mg/L (1.50) = 1.2 mg/L

[CV = 1.486, 99th Percentile]
 [CV = 1.486, 95th Percentile, n =30]

Winter: October 1 – March 31

Chronic WLA = 3.1mg/L

Acute WLA = 12.1mg/L

$LTA_c = 3.1 \text{ mg/L} (0.536) = \mathbf{1.6616 \text{ mg/L}}$
 $LTA_a = 12.1 \text{ mg/L} (0.137) = 1.6577 \text{ mg/L}$

[CV = 1.599, 99th Percentile, 30 day avg.]
 [CV = 1.599, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = 1.6616 mg/L (7.28) = 12.1 mg/L
AML = 1.6616 mg/L (1.54) = 2.6 mg/L

[CV = 1.599, 99th Percentile]
 [CV = 1.599, 95th Percentile, n =30]

- **Dissolved Oxygen.** Monitoring requirement only.
- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum.
- **WET Test.** WET Testing schedules and intervals are established in accordance with the Department’s Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow

Acute

No less than ONCE/PERMIT CYCLE:

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

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

Part VII – Finding of Affordability

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

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

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

Part VII – 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 Public Notice period for this operating permit was from March 1, 2013, to April 1, 2013. No comments were received.

DATE OF FACT SHEET: 04/03/2013

COMPLETED BY:

**HILLARY CLARK, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
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Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	1
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	3
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page ONE (1)	----	4

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	5
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	---	5
Total from page ONE (1)	---	4
Grand Total	---	9

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

APPENDIX – 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	40.25	1.5	40.25	21	8.2/0.017	1.483	4.909	Yes
Total Ammonia as Nitrogen (Winter) mg/L	12.1	125.34	3.1	125.34	19	22.2/0.025	1.599	5.646	Yes

N/A – Not Applicable

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

** - If the number of samples is greater than 10, 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.

APPENDIX – FACILITY AERIAL VIEWS



Figure 1. Aerial view of Breckenridge WW Lagoon showing the location of the structure housing the influent monitoring point and the location of the outfall discharging to a Tributary to Panther Creek.



Figure 2. Wide angle view of the City of Breckenridge and the proximity to the WW Lagoon and US Highway 36.

APPENDIX – AFFORDABILITY ANALYSIS:

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

**Breckenridge Municipal Wastewater Treatment Plant
City of Breckenridge
Renewal and Modification - Operating Permit #MO-0093891**

Section 644.145 RSMo requires DNR to make a “finding of affordability” when “issuing permits under” or “enforcing provisions of” state or federal clean water laws “pertaining to any portion of a combined or separate sanitary sewer system or publicly-owned treatment works.”

Description:

Three-cell lagoon/sludge is retained in lagoon
Legal Description: SW ¼, NW ¼, Sec. 15, T57N, R26W, Caldwell County
UTM Coordinates: X = 430530, Y = 4400383
Receiving Stream: Tributary to Panther Creek (U)
First Classified Stream and ID: Panther Creek (C) (00521)
USGS Basin & Sub-watershed No.: (10280101 – 1504)

Residential Connections: 221

Commercial Connections: 9

Total Connections: 230

The City of Breckenridge Wastewater Treatment Facility (WWTF) is located south of Old Hwy 36, between NE Panther Road and S 4th Street, Breckenridge, MO. This facility discharges to an unclassified tributary of Panther Creek (Class C) (WBID 0521).

Proposed New Permit Requirements or Requirements Now Being Enforced:

Permit No. MO-0093891 expired on September 21, 2011. An application for renewal was received from the City on May 2, 2011. On June 19, 2012, the department received information from the City to support an affordability analysis. The department is proposing to include new limits on ammonia based on an analysis that shows reasonable potential for the City’s discharge to exceed water quality criteria for that pollutant.

Anticipated Costs Associated with Complying with the New Requirements:

New permit requirements may require the design, construction and operation of ammonia treatment. The department estimates the cost for adding ammonia treatment to be between \$592,866 and \$1,586,695 (CAPDEWORKS cost estimator was used). This cost, if financed through user fees, would cost each household an estimated \$35 to \$72 per month.

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

The City’s sewer rate averages \$19.20 per month¹ and is currently at 0.71% of the community’s Medium Household Income (MHI). If user rates are used to finance and operate an upgrade, the rates may need to be increased up to 3.7% of the MHI. Percentages above 2% would create a high burden for a community.

¹ Obtained from City’s response received June 19, 2012, sent in request to the department’s request for affordability information.

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

Current annual operating costs (exclude depreciation):	\$3,746 ²
Current user rate:	\$19.20/mo. (avg.)
Future user rate:	\$35 - \$72/mo. (avg.)
Estimated capital cost of pollution control options:	\$592,866 - \$1,586,695
Annual cost of additional (<i>operating costs and debt service</i>):	NA
Estimated resulting user rate:	\$35 - \$72/mo. (avg.)
Median Household Income	\$32,361 ³
Current Usage Rate as a % of Median Household Income:	0.71%
Future Usage Rate as a % of Median Household Income:	1.3% – 3.7% ⁴

Check Appropriate Box	Financial Impact	Residential Indicatory (Usage Rate as a percent of Median Household Income)
	Low	Less than 1% MHI
	Medium	Between 1% and 2% MHI
X	High	Greater than 2% MHI

The current sewer rates are 0.71% of the MHI. If the rates were increased to finance the new permit requirements, the rates would be between 1.3% and 3.7% of the MHI, and result in a medium to high financial impact. Because Breckenridge is a smaller community and 18.8% of its residents are in poverty, this analysis anticipates a high burden to the community to achieve the new ammonia limits.

² Wastewater expenses reported between July 2011 and June 2012 in City’s response dated June 15, 2012, sent in request to the department’s request for affordability information.

³ Median Household Income is provided by the American Fact Finder – INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION ADJUSTED DOLLARS) – 2006 – 2010 American Community Survey 5-Year Estimates, which can be found online at:

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

⁴ $19.2/(32361/12) = 1.3$ and $72/(32361/12) = 3.7$

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

The new permit limits on ammonia is anticipated to cost between \$592,866 and \$1,586,695. The environmental benefits of the increased ammonia removal will improve conditions for aquatic life in the stream receiving the discharge.

The following is a discussion of the environmental benefits of the conditions of the permit. Ammonia (NH₃) is toxic to aquatic life and can damage habitat for ammonia sensitive species. Removal of NH₃ is beneficial to the environment because this can reduce damage to aquatic life in accordance with 10 CSR 20-7 and the Clean Water Act. Removal can enable the stream habitat to support a more healthy and diverse population of aquatic life. This facility has Ammonia as N final effluent limitations based on the Water Quality Standards (WQS) found in the above citation. The following details the calculations converting these limitations found in the permit in milligrams per liter (mg/L) to pounds of Ammonia allowed per day (lbs/day):

$$\text{Pounds of Ammonia as N per day} = (\text{flow, MGD}) \times (\text{concentration of ammonia limitation, mg/L}) \times (\text{conversion factor, 8.34})$$

Current Performance (2011-2012 DMR data)

Actual Flow = 0.032 MGD:

Summer Season:

$$\text{Monthly Average} = 0.032 \times 1.43 \times 8.34 = 0.38 \text{ lbs/day}$$

Winter Season:

$$\text{Monthly Average} = 0.032 \times 3.75 \times 8.34 = 1.00 \text{ lbs/day}$$

Necessary Performance

Design Flow = 0.124 MGD:

Summer Season:

$$\text{Monthly Average} = 0.124 \times 1.2 \times 8.34 = 1.24 \text{ lbs/day}$$

Winter Season:

$$\text{Monthly Average} = 0.124 \times 2.6 \times 8.34 = 2.67 \text{ lbs/day}$$

Environmental Benefit to Ammonia Removal

Design Flow = 0.124 MGD:

		<u>Summer</u>	<u>Winter</u>
Current average performance (lbs/day)	=	0.38	1.00
<u>-Necessary average performance limitations (lbs/day)</u>	=	<u>-1.24</u>	<u>-2.67</u>
Environmental Benefit (lbs/day)	=	-0.86	-1.67

The facilities average performance does not need to improve; however, due to the inconsistent performance of this facility a schedule of compliance to upgrade is still warranted. For example while the average summer time performance is 1.43 mg/L the facility reported values as high as 22.2 mg/L. Therefore, improved performance will reduce the discharges of this toxic pollutant.

- (4) *An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:*
- (a) *Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations; and*
 - (b) *Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained;*

Potentially Distressed Populations	
Unemployment for Breckenridge ⁵	5.1%
Median Household Income in Breckenridge ⁶	\$32,361
Percent Population Growth/Decline ⁷	15.64% Decrease from 2000 to 2010
Percent of Households in Poverty ⁸	18.8%

Opportunity for cost savings or cost avoidance:

The department is not aware of any other more cost-effective treatment options. This community may be eligible for a low cost loan or grant.

Opportunity for changes to implementation/compliance schedule:

The compliance schedule in the renewed permit could be matched with the time needed for the community to arrange appropriate means to finance an upgrade.

- (5) *An assessment of other community investments relating to environmental improvements;*
Unknown.

⁵ Unemployment data was obtained from American Fact Finder at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

⁶ Median Household Income is provided by the American Fact Finder – INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION ADJUSTED DOLLARS) – 2006 – 2010 American Community Survey 5-Year Estimates, which can be found online at:

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

⁷ Population trend data was obtained from online at http://mcde1.missouri.edu/cgi-bin/profiler/profiler.py?profile_id=SF1_2010&geoids=16000US2908128

⁸ Poverty data is provided by the American Fact Finder – POVERTY STATUS IN THE PAST 12 MONTHS – 2006-2010 American Community Survey 5-Year Estimates, which can be found online at http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_DP03&prodType=table

- (6) *An assessment of factors set forth in the United States Environmental Protection Agency's guidance, including but not limited to the "Combined Sewer Overflow Guidance for Financial Capability Assessment and Schedule Development" that may ease the cost burdens of implementing wet weather control plans, including but not limited to small system considerations, the attainability of water quality standards, and the development of wet weather standards;*

Secondary indicators for consideration:

Socioeconomic, Debt and Financial Indicators

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

Average Score for Financial Capability Matrix: 2
Residential Indicator (from Criteria #2 above): 1.3 – 3.7

Financial Capability Matrix

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

Estimated Financial Burden: Medium to High Burden

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

Conclusion and Finding

The Department identified the actions for which an affordability analysis is required under Section 644.145 RSMo. The City of Breckenridge applied for a renewed operating permit. As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the WWTF to add ammonia treatment.

The Department estimates that adding ammonia treatment will cost the City an estimated \$592,866 to \$1,586,695. Should this cost be financed through increased user fees, the increase might raise user fees to 1.3% - 3.7% of the City's Median Household Income. Breckenridge is a declining smaller community and 18.8% of its residents are in poverty. Because the City currently operates a lagoon, meeting ammonia limits may require a significant upgrade to the treatment system. Therefore, this analysis concludes that the evaluated permit action will likely result in user fees above 2% of the community's median household income.

The Department considered all seven (7) of the criteria presented in subsection 644.145.3 when evaluating the affordability of the relevant actions. Taking into consideration these criteria, this analysis examined whether the above referenced permit modifications affects the ability of an individual customer or household to pay a utility bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household. As a result of reviewing the above criteria, the Department hereby finds that the action described above will likely result in a high burden with regard to the community's overall financial capability and a high financial impact for most individual customers/households.

AP5145

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**MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH
FORM B - APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR
FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE (≤100,000 gallons per
day) UNDER MISSOURI CLEAN WATER LAW**

FOR AGENCY USE ONLY

CHECK NUMBER _____
DATE RECEIVED _____ FEE SUBMITTED _____

NOTE ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. This application is for:
- An operating permit and antidegradation review public notice.
 - A construction permit following an appropriate operating permit and antidegradation review public notice.
 - A construction permit and a concurrent operating permit and antidegradation review public notice.
 - A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).
 - An operating permit for a new or unpermitted facility. Construction Permit # _____
 - An operating permit renewal: Permit #MO- 0093891 Expiration Date 09/21/2011
 - An operating permit modification: Permit #MO- Reason: _____

- 1.1 Is this a Federal/State Funded Project? YES NO Funding Agency/Project #: _____
 1.2 Is the appropriate fee included with the application (See instructions for appropriate fee)? YES NO

2. FACILITY (Outfall of)

NAME City of Breckenridge Waste water Lagoons		TELEPHONE WITH AREA CODE None	
ADDRESS (PHYSICAL) Old Hwy 36	CITY Breckenridge	STATE Mo.	ZIP CODE 64625
2.1 LEGAL DESCRIPTION: SE. ¼, SW. ¼, ¼, Sec. 15, T 57N, R 26W		County <u>CAIDWELL</u>	
2.2 UTM Coordinates Easting (X): _____ Northing (Y): _____		For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)	
2.3 Name of receiving stream: <u>Tributary to Panther Creek (u)</u>			

3. OWNER

NAME City of BRECKENRIDGE		E-MAIL ADDRESS admincb@greenhills.net	TELEPHONE WITH AREA CODE (660) 644-5613
ADDRESS 783 W. Oak	CITY Breckenridge	STATE Mo.	ZIP CODE 64625

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

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

NAME		TELEPHONE WITH AREA CODE	
ADDRESS	CITY	STATE	ZIP CODE

5. OPERATOR

NAME David Bethal	CERTIFICATE NUMBER 5807	TELEPHONE WITH AREA CODE (816) 632-9577
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6. FACILITY CONTACT

NAME Linda Bills	TITLE water supervisor	TELEPHONE WITH AREA CODE (660) 644-5614
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7.0 ADDITIONAL FACILITY INFORMATION

- 7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)
- 7.2 Facility SIC code: 4952; Discharge SIC code: 4952; Facility NAICS code: 221340; Discharge NAICS code: 221320
- 7.3 Number of people presently connected or population equivalent (P.E.) 177 Design P.E. 800
 Number of units presently connected: Homes 170 Trailers 24 Apartments 27 Other 9
 Design flow for this outfall 80,000 Total design flow for the facility: 80,000 Actual flow for this outfall: 40,000
 Commercial Establishment: Daily number of employees working 1 Daily number of customers/guests 0
- 7.4 Length of pipe in the sewer collection system? 10,500 feet/miles (Please denote which unit is appropriate.)
- 7.5 Does any bypassing occur in the collection system or at the treatment facility? Yes No (If yes, attach explanation.)
- 7.6 Does significant infiltration occur in the collection system? Yes No (If yes, attach explanation and proposed repair.)
- 7.7 Is industrial waste discharged to the facility identified in Item 2? Yes No (If yes, see instructions.)
- 7.8 Will the discharge be continuous through the year? Yes No
 a. Discharge will occur during the following months: Jan. 1 to Dec. 1
 b. How many days of the week will the discharge occur? 7
- 7.9 Is wastewater land applied? Yes No (If yes, attach Form I.)
- 7.10 Will chlorine be added to the effluent? Yes No
 a. If chlorine is added, what is the resulting residual? _____ µg/l (micrograms per liter)
- 7.11 Does this facility discharge to a losing stream or sinkhole? Yes No
- 7.12 Attach a flow chart showing all influents, treatment facilities and outfalls.
- 7.13 Has a waste load allocation study been completed for this facility? Yes No
- 7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary.
 If none, write none. none

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8. SLUDGE HANDLING, USE AND DISPOSAL

- 8.1 Is the sludge a hazardous waste as defined by 10 CSR 25? Yes No
- 8.2 Sludge Production, including sludge received from others: _____ Design Dry Tons/Year _____ average percent solids of sludge;
- 8.3 Capacity of sludge holding structures:
Sludge storage provided: _____ cubic feet; _____ days of storage; _____ average percent solids of sludge;
 No sludge storage is provided.
- 8.4 Type of Storage: Holding tank Building
 Basin Other (Please describe) _____
 Concrete Pad
- 8.5 Sludge Treatment:
 Anaerobic Digester Lagoon Composting
 Storage Tank Aerobic Digester Other (Attach description)
 Lime Stabilization Air or Heat Drying
- 8.6 Sludge Use or Disposal:
 Land Application Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)
 Contract Hauler Incineration
 Hauled to Another Treatment Facility Sludge Retained in Wastewater treatment lagoon
 Solid Waste Landfill Other _____ Attach explanation sheet.
- 8.7 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY
 By Applicant By Others (complete below)

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

8.8 SLUDGE USE OR DISPOSAL FACILITY
 By Applicant By Others (Please complete below.)

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

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

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

NAME Joe Sanderson			
ADDRESS 8119 Catawba RD	CITY Breckenridge	STATE Mo.	ZIP CODE 64625

10. DRINKING WATER SUPPLY INFORMATION

- 10.1 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) X
- 10.2 Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)?
 Yes No
- 10.3 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. 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) <i>Linda Bills WATER SUPERVISOR</i>	TELEPHONE WITH AREA CODE <i>660-644-5614</i>
SIGNATURE <i>Linda Bills</i>	DATE SIGNED <i>4/28/11</i>



MISSOURI DEPARTMENT OF NATURAL RESOURCES
 DIVISION OF ENVIRONMENTAL QUALITY
 WATER PROTECTION PROGRAM
 KANSAS CITY REGIONAL OFFICE
 PERMITS SECTION
 MOCWIS TRACKING/TRANSMITTAL SHEET

Facility Name: Breckenridge WW Lagoon
 Permit No: MO-0093891 Expiration: 9/21/11
 County: Caldwell

Application ID: 5145 New Permit Application Received Date: 5/2/11

Public Notice Required ; Not Required
 Start Date: _____ End Date: _____
 Date of Issuance: _____
 Termination Date: _____

Pre-Public Notice Review ; Date Ended: _____ SOC Included ; What For?

Facility Description:
3 cell lagoon / Sludge Retention

Permitting Action	Reason
<input type="checkbox"/> Permit Writer Intro. Letter Sent on:	<input checked="" type="checkbox"/> Existing Facility
<input type="checkbox"/> Place Permit on Public Notice	<input type="checkbox"/> New Facility
<input type="checkbox"/> Issue Final Site-Specific Permit	<input type="checkbox"/> Modification (if Mod. then list reason below)
<input type="checkbox"/> Termination	<input type="checkbox"/> Renewal with Modification
	<input type="checkbox"/> Renewal without Modification

Pre-Public Notice Review Sent on: _____ Review Ends on: _____
 MOCWIS Clock Stopped MOCWIS Clock Started

Other Information/Comments/Instructions

	Site Specific Permit Fee Category <input checked="" type="checkbox"/> Domestic wastewater only <input checked="" type="checkbox"/> POTW <input type="checkbox"/> Private <input type="checkbox"/> Process wastewater <input type="checkbox"/> Categorical Industry <1 MGD <input type="checkbox"/> Non-Categorical ≥1 MGD <input type="checkbox"/> Non-Categorical <1 MGD <input type="checkbox"/> Storm water only <input type="checkbox"/> Categorical Industry <1 MGD <input type="checkbox"/> Non-Categorical ≥1 MGD <input type="checkbox"/> Non-Categorical <1 MGD General Permit Covered Facility <input type="checkbox"/> Land Disturbance <input type="checkbox"/> All others (This transmittal is not for CAFO or Ag Chem permits)
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Enforcement Case: YES ; NO ; Case Manager: _____ On Appeal: Yes ; NO

Approvals

Public Notice		Issuance	
Drafted By:	Date:	Drafted By:	Date:
Reviewed By:	Date:	Reviewed By:	Date:
Reviewed By Unit Chief:	Date:	Reviewed By Unit Chief:	Date:
Reviewed By Environmental Manager:	Date:	Reviewed By Environmental Manager:	Date:

Outfall Information (continued)

Outfall #

UTM Coordinates: X = _____ Y = _____
 Legal Description: ¼, ¼, ¼, Sec. T N, R W, County _____
 Receiving Stream: _____
 First Classified Stream: _____ Class: _____ WBID: _____
 Use Classifications: LWW AQL WBC-B WBC-A IND SCR DWS IRR CLF CDF
 Distance to first classified stream: _____ miles
 HUC 14: _____ EDU: _____
 UAA Conducted: YES ; NO ; Date Conducted: _____ Date Reviewed: _____
 303(d) Listed: ; Year: _____ For: _____ Is this facility a source: YES ; NO
 TMDL Approved: YES ; NO ; Year: _____ For: _____ Are WLAs Included: YES ; NO
 Losing Stream

Outfall #

UTM Coordinates: X = _____ Y = _____
 Legal Description: ¼, ¼, ¼, Sec. T N, R W, County _____
 Receiving Stream: _____
 First Classified Stream: _____ Class: _____ WBID: _____
 Use Classifications: LWW AQL WBC-B WBC-A IND SCR DWS IRR CLF CDF
 Distance to first classified stream: _____ miles
 HUC 14: _____ EDU: _____
 UAA Conducted: YES ; NO ; Date Conducted: _____ Date Reviewed: _____
 303(d) Listed: ; Year: _____ For: _____ Is this facility a source: YES ; NO
 TMDL Approved: YES ; NO ; Year: _____ For: _____ Are WLAs Included: YES ; NO
 Losing Stream

Outfall #

UTM Coordinates: X = _____ Y = _____
 Legal Description: ¼, ¼, ¼, Sec. T N, R W, County _____
 Receiving Stream: _____
 First Classified Stream: _____ Class: _____ WBID: _____
 Use Classifications: LWW AQL WBC-B WBC-A IND SCR DWS IRR CLF CDF
 Distance to first classified stream: _____ miles
 HUC 14: _____ EDU: _____
 UAA Conducted: YES ; NO ; Date Conducted: _____ Date Reviewed: _____
 303(d) Listed: ; Year: _____ For: _____ Is this facility a source: YES ; NO
 TMDL Approved: YES ; NO ; Year: _____ For: _____ Are WLAs Included: YES ; NO
 Losing Stream

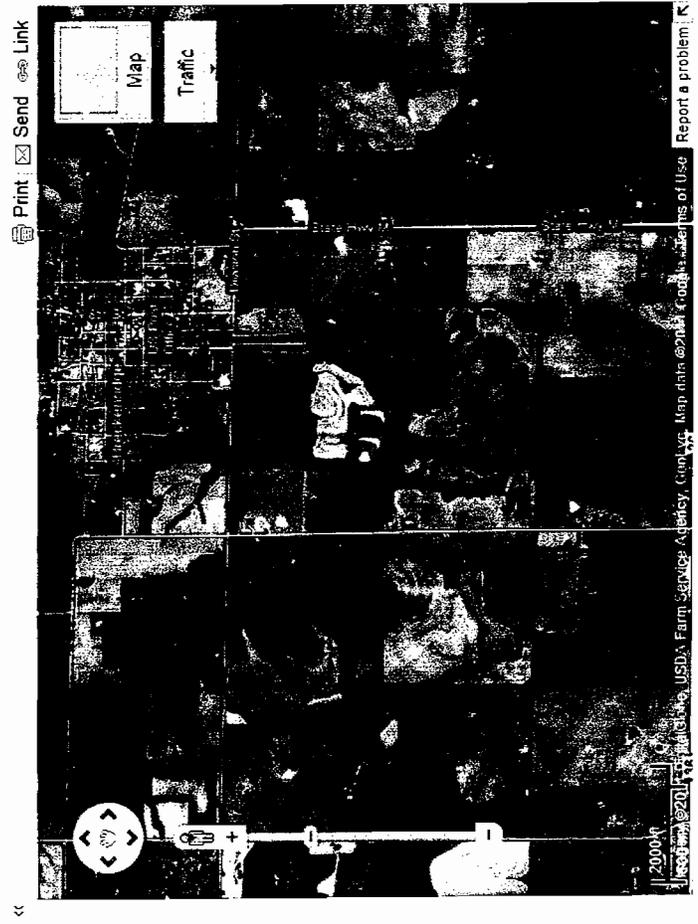
If more outfalls are needed print additional pages

Mixing Considerations

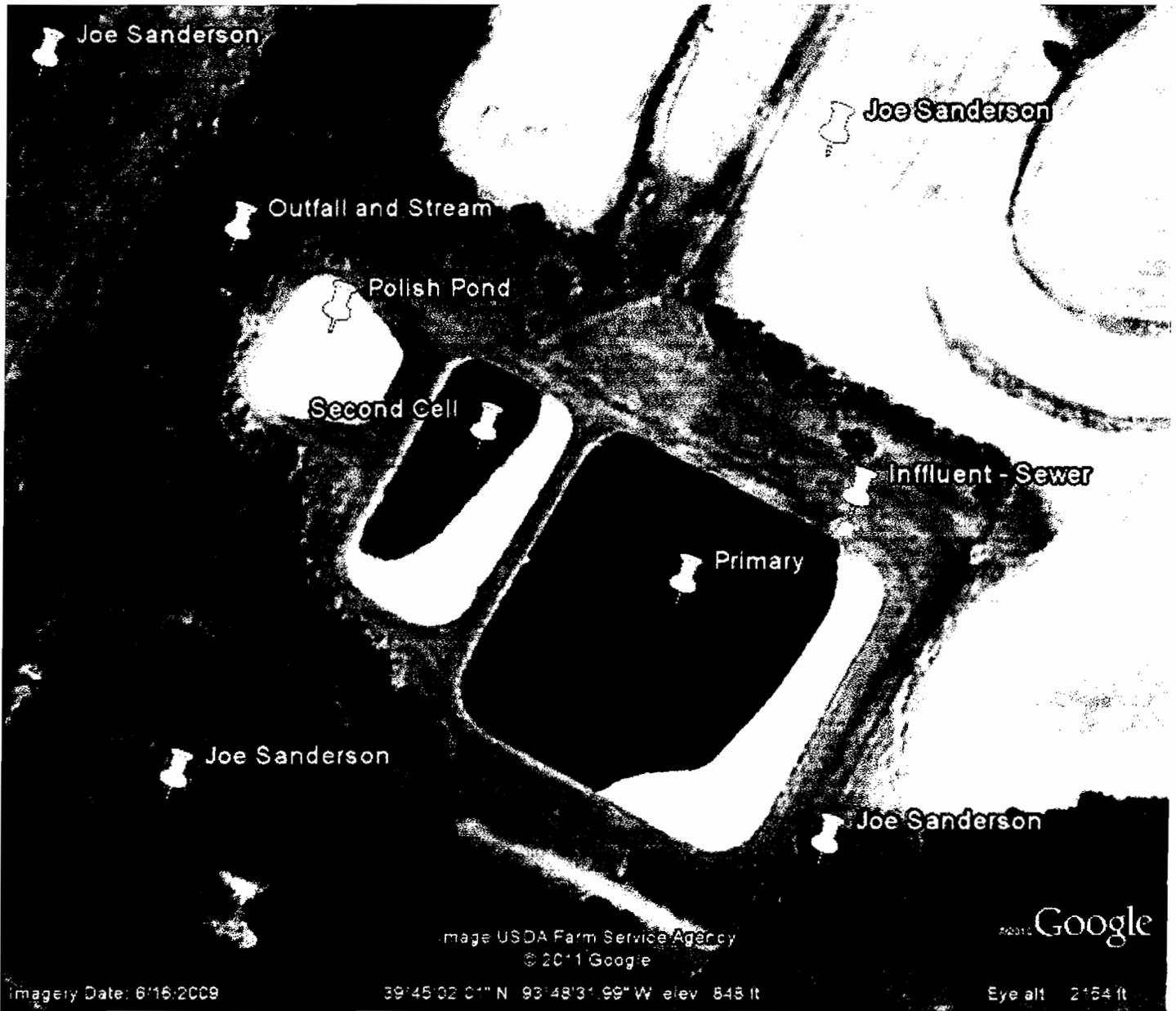
Low Flow Values			Mixing Zone		Zone of Initial Dilution	
1Q10: ○	7Q10: ○	30Q10: ○	7Q10: ○	30Q10: ○	1Q10: ○	7Q10: ○

Google maps

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New! Explore the Colosseum and other wondrous Italian landmarks using Street View
Set default location
Put your business on Google Maps



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Imagery Date: 6/16/2009

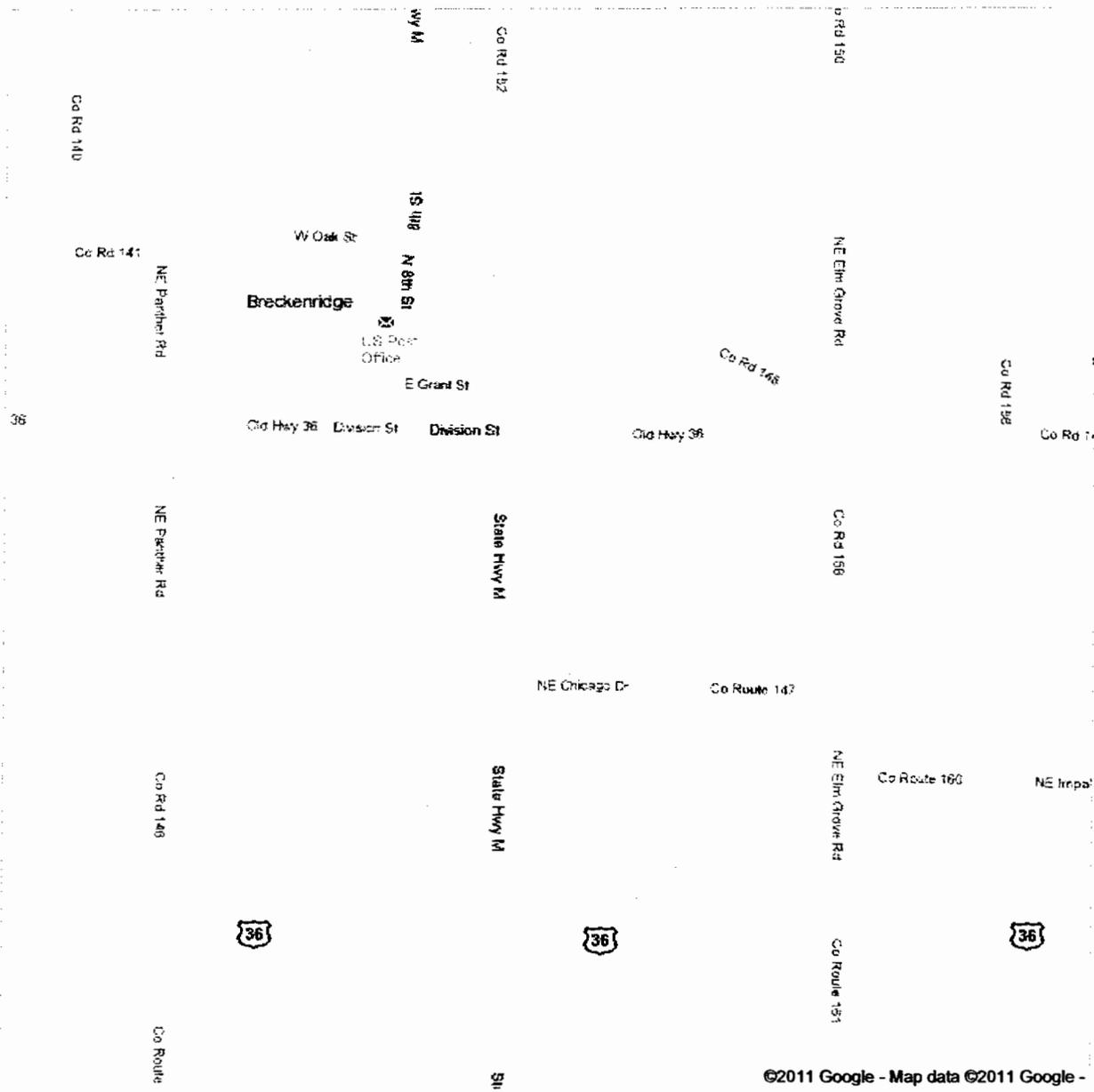
Image USDA Farm Service Agency
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39° 45' 00.11" N, 93° 48' 30.77" W elev. 843 ft

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Eye alt 1694 ft

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