

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-0117650

Owner: Lewis Co. C-1 School District
Address: P.O. Box 366, Ewing, MO 63440

Continuing Authority: Same as above
Address: Same as above

Facility Name: Lewis Co. C-1 School District WWTF
Facility Address: 21504 State Hwy 6, Lewistown, MO 63452

Legal Description: NE¼, SE¼, NE¼, Sec. 1, T60N, R8W, Lewis County
UTM Coordinates: X= 608299.703, Y= 4431830.806

Receiving Stream: Unnamed tributary to Grassy Creek (U)
First Classified Stream and ID: Grassy Creek (C) (0072)
USGS Basin & Sub-watershed No.: (07110003-0401)

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 – School – SIC #4952 / 8211
No Certified Operator required.

Three-cell lagoon / sludge is retained in lagoon
Design population equivalent is 1,335.
Design flow is 22,500 gallons per day. Adjusted Design Flow is 4,999 gallons per day
Actual flow is 2,575 gallons per day.
Design sludge production is 20 dry tons/year.

This permit authorizes only wastewater discharges under the Missouri Clean Water Law and the National Pollutant Discharge Elimination System; it does not apply to other regulated areas. This permit may be appealed in accordance with Section 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

February 1, 2014
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2017
Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A-1. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 6
		PERMIT NUMBER MO-0117650

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 **January 31, 2018**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		65	45	once/quarter***	grab
Total Suspended Solids	mg/L		110	70	once/quarter***	grab
<i>E. coli</i> (Note 1, Page 3)	#/100 ml	1030		206	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	*		*	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab

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

- * Monitoring requirement only.
- ** 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.
- *** See table below for quarterly sampling.

Minimum Sampling Requirements				
Quarter	Months	E. coli	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 th
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 th
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 th
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 th

OUTFALL #001	TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS			PAGE NUMBER 3 of 6		
				PERMIT NUMBER MO-0117650		
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 February 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:						
EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter***	24 hr. estimate
Biochemical Oxygen Demand ₅	mg/L		65	45	once/quarter***	grab
Total Suspended Solids	mg/L		110	70	once/quarter***	grab
<i>E. coli</i> (Note 1, Page 3)	#/100 ml	1030		206	once/quarter***	grab
pH – Units	SU	**		**	once/quarter***	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	3.6 7.5		1.4 2.9	once/quarter***	grab
Oil & Grease	mg/L	15		10	once/quarter***	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY ; THE FIRST REPORT IS DUE APRIL 28, 2018 . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						

- * Monitoring requirement only.
- ** 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.
- *** See table below for quarterly sampling.

Minimum Sampling Requirements				
Quarter	Months	<i>E. coli</i>	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 th
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 th
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 th
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 th

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

B. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I & III standard conditions dated November 1, 2013 and August 15, 1994, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of 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 water quality standards triennial review. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view 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.
5. Water Quality Standards
 - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
 - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

D. SPECIAL CONDITIONS (continued)

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 by the Director in accordance with 40 CFR 122.44(f).
- (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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 Northeast Regional Office.

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

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

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

13. 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.

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

15. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.

16. A minimum of two (2) feet freeboard must be maintained in the lagoon cell.

17. The berms of the lagoons shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.

18. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the lagoon and to divert stormwater runoff around the lagoon and protect embankments from erosion.

E. SCHEDULE OF COMPLIANCE

The facility shall attain compliance with final effluent limitations as soon as reasonably achievable or no later than **4 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. Within **4 years** of the effective date of this permit, the permittee shall attain compliance with the final effluent limits.

Please submit progress reports to the Missouri Department of Natural Resources, Northeast Regional Office, 1709 Prospect Drive, Macon, Missouri, 63552.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0117650
LEWIS CO. C-1 SCHOOL DISTRICT WWTF**

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

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

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

This Factsheet is for a Minor

Part I – Facility Information

Facility Type: School - SIC #4952/8211

Facility Description:

Three-cell lagoon / sludge retained in lagoon

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

- No.

Application Date: 01/23/2013

Expiration Date: 08/07/2013

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.034875	Secondary	Domestic

Facility Performance History:

This facility was last inspected on January 29, 2013. The inspection showed the following unsatisfactory features;

1. Failure to mark outfall.
2. Failure to maintain the inner berm slopes of the lagoon to be no less than three to one (3:1).
3. Deep-rooted vegetation was discovered growing on the lagoon berms.

Comments:

Temperature monitoring no longer required. There is no reasonable potential to violate water quality standards.

Part II – Operator Certification Requirements

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

Part III- Operational Monitoring

As per [10 CSR 20-9.010(4)], the facility is not required to conduct operational monitoring.

Part IV – Receiving Stream Information

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

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Unnamed tributary to Grassy Creek	U	----	General Criteria	07110003-0401	~ 0.92
Grassy Creek	C	0072	AQL, LWW, WBC - B		

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

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Grassy Creek (C)	0.0	0.0	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.

Receiving Water Body's Water Quality

No water quality impact's noted at this time.

Part V – Rationale and Derivation of Effluent Limitations & Permit Conditions

ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:

As per [10 CSR 20-7.015(4)(A)], discharges to losing streams shall be permitted only after other alternatives including land application, discharges to a gaining stream and connection to a regional wastewater treatment facility have been evaluated and determined to be unacceptable for environmental and/or economic reasons.

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.

- No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:

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

BIOSOLIDS & SEWAGE SLUDGE:

Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: <http://dnr.mo.gov/env/wpp/pub/index.html>, items WQ422 through WQ449.

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

COMPLIANCE AND ENFORCEMENT:

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

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

PRETREATMENT PROGRAM:

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

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.

Not Applicable ; A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Not Applicable ; Influent monitoring is not being required to determine percent removal. The DMR results did not contain enough data points to conduct a facility reasonable potential analysis; therefore, the facility will be given default effluent limits for ammonia.

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.

- 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 has been given a schedule of compliance to meet final effluent limits for Ammonia as N. The four (4) year schedule of compliance allowed for this facility should provide adequate time to evaluate operations, obtain an engineering report, hold a bond election, obtain a construction permit and implement upgrades required to meet effluent limits. Due to the high economic burden on this community of the cost of compliance and associated difficulty in raising the necessary funding, the schedule has been established at 4 years in accordance with the Department's "Schedule of Compliance, Policy for Staff Drafting Operating Permits". Please see the Affordability Analysis attached as an appendix to the permit for further detail on how the socio-economic status of the community has impacted this SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

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

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

VARIANCE:

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

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

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

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

Where C = downstream concentration
Cs = upstream concentration
Qs = upstream flow
Ce = effluent concentration
Qe = effluent flow

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

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

Number of Samples "n":

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

WLA MODELING:

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

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

WATER QUALITY STANDARDS:

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

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 anticipate bypassing.

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

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

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

Part VI –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 and gill breathing snails. Missouri’s current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 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. Current effluent limitations in this permit are:

Summer – 3.6 mg/L daily maximum, 1.4 mg/L monthly average.
Winter – 7.5 mg/L daily maximum, 2.9 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing /the mixing consideration listed in Part IV of the Fact Sheet 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 VII – Effluent Limits Determination

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

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	*/*
BOD ₅	mg/L	1, 4		65	45	No	65/45
TSS	mg/L	1, 4		110	70	No	110/70
pH	SU	1, 4	≥ 6.5		≥ 6.5	Yes	≥ 6.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	3.6		1.4	Yes	*/*
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	7.5		2.9	Yes	*/*
Escherichia coli	***	1, 3	1030		206	Yes	Fecal Coliform 1000/400
Oil & Grease (mg/L)	mg/L	1, 3	15		10	No	****

* - 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).**
 – Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Total Suspended Solids (TSS).**
 – Effluent limitations have been retained from previous state operating permit, please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **pH.** Effluent limitation range is ≥ 6.5 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.
- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU Background total ammonia nitrogen = 0.01 mg/L.

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: $C_e = ((0.034875 + 0.0)1.5 - (0.0 * 0.01)) / 0.034875$
 $C_e = 1.5 \text{ mg/L}$

Acute WLA: $C_e = ((0.034875 + 0.0)12.1 - (0.0 * 0.01)) / 0.034875$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 1.5 \text{ mg/L} (0.780) = 1.17 \text{ mg/L}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.89 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = 1.17 mg/L (3.11) = 3.6 mg/L [CV = 0.6, 99th Percentile]
AML = 1.17 mg/L (1.19) = 1.4 mg/L [CV = 0.6, 95th Percentile, n=30]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.034875 + 0.0)3.1 - (0.0 * 0.01)) / 0.034875$
 $C_e = 3.1 \text{ mg/L}$

Acute WLA: $C_e = ((0.034875 + 0.0)12.1 - (0.0 * 0.01)) / 0.034875$
 $C_e = 12.1 \text{ mg/L}$

$LTA_c = 3.1 \text{ mg/L} (0.780) = 2.42 \text{ mg/L}$ [CV = 0.6, 99th Percentile, 30 day avg.]
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.89 \text{ mg/L}$ [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a .

MDL = 2.42 mg/L (3.11) = 7.5 mg/L [CV = 0.6, 99th Percentile]
AML = 2.42 mg/L (1.19) = 2.9 mg/L [CV = 0.6, 95th Percentile, n=30]

- **Escherichia coli (E. coli).** Monthly average of 206 per 100 mL as a geometric mean and Daily Maximum of 1030 per 100mL during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (B) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- **Oil & Grease.** Conventional pollutant, effluent limitation for protection of aquatic life; 10 mg/L monthly average, 15 mg/L daily maximum. The facility is already meeting the above limits; therefore neither a schedule of compliance, not an affordability analysis are necessary.

Minimum Sampling and Reporting Frequency Requirements.

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

Sampling Frequency Justification:

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, BOD₅ and TSS samples collected for lagoons may be grab samples. Grab samples must be collected for pH, Ammonia as N, *E. coli*, TRC and Oil & Grease. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia, and the fact that pH cannot be preserved and must be sampled in the field. As Ammonia and Oil & Grease samples must be immediately preserved with acid, these samples are to be collected as a grab. For further information on sampling and testing methods please review 10 CSR 20-7.015(9)(A) 2.

Part VIII – 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 IX – 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 began on May 10, 2013 and ended on June 10, 2013. No comments were received during the Public Notice period. Post Public Notice, Department staff corrected typographical errors in the permit. The permittee is not required to obtain a Certified Operator for operations and maintenance of the facility. This has been updated on the cover page of the permit. In addition, the pH was incorrectly written as a range requirement between 6.5-9.0 Standard Units. This was corrected in the permit to reflect the effluent limitations for lagoon systems at ≥ 6.5 Standard Units. Finally, the permittee was granted a Schedule of Compliance (SOC) to meet final effluent limitations based on the Affordability Analysis. This Affordability Analysis has been attached as an appendix and references the socio-economic status of the school district and community in order to develop a reasonable timeframe for the SOC. Due to the addition of the SOC, the permit is required to be placed on Public Notice again.

The second Public Notice period for this operating permit began on November 27, 2013 and ended on December 27, 2013. No comments were received during this Public Notice period.

DATE OF FACT SHEET: 03/28/2013

COMPLETED BY:

**HILLARY CLARK, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
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DATE OF REVISION: 10/31/2013

COMPLETED BY:

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Appendices

APPENDIX – AFFORDABILITY ANALYSIS:

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

Lewis County C-1 School District Wastewater Treatment Facility
Lewis County C-1 School District
#MO-0117650

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.”

Facility Description:

Outfall #001 – School – SIC #4952 / 8211
No Certified Operator required.

Three-cell lagoon / sludge is retained in lagoon
Design population equivalent is 1,335.
Design flow is 22,500 gallons per day.
Actual flow is 2,575 gallons per day.
Design sludge production is 20 dry tons/year.

Adjusted Design Flow is 4,999 gallons per day

Receiving Stream:	Unnamed tributary to Grassy Creek (U)
First Classified Stream and ID:	Grassy Creek (C) (0072)
USGS Basin & Sub-watershed No.:	(07110003-0401)

Total Connections: 1

New Permit Requirements or Requirements Now Being Enforced:

The proposed renewal of Missouri State Operating Permit #MO-0117650 contains new effluent limitations for Ammonia as N. The Schedule of Compliance outlines a timeline for the facility to meet the new requirements.

Range of Anticipated Costs Associated with Complying with Requirements:

The Department estimates the cost for complete replacement of the existing treatment facility in order to meet new ammonia effluent limits is between \$1,374,187 and \$1,976,525 (*CAPDEWORKS cost estimator was used*). This cost, if financed over a twenty-year period, might cost the school district between \$68,709.35 and \$98,826.25 per year.

CAPDEWORKS (CapDet) is a preliminary design and costing software program from Hydromantis¹ for wastewater treatment plants. CapDet uses national indices, such as the Marshall and Swift Index and Engineering News Records Cost Index for pricing in development of capital, operating, maintenance, material, and energy costs for each treatment technology. As the program works from national indices and each community is unique in its budget commitments and treatment design, the estimated costs are higher than actual costs.

The Department evaluated multiple technologies through CapDet at a range of flows, then using a linear interpolation developed the spreadsheet for high and low costs for treatment plants. To calculate the estimated user cost per 5000 gallons, the Department used the equations currently being used in the Financial Assurance Center’s rate calculator. The equations account for replacement costs, debt retirement, capital costs, and an inflation factor.

¹ <http://www.hydromantis.com/CapdetWorks.html>

This affordability analysis does not dictate how a facility will upgrade, or how they will comply with the new permit requirements. Land application costs are not estimated in this analysis because: land may not be available for purchase, the cost of land varies broadly across the state and cannot be estimated, local factors mean that the cost of land varies a great deal and cannot be estimated, and the flows from the facility may not be amenable to a land application system.

However, a no discharge facility, of which land application is the most common form, is required to be demonstrated as infeasible before a discharging system may be constructed per [10 CSR 20-6.010(4)(D)]. This demonstration is completed by a consulting engineer for the permittee while evaluating alternatives. A higher cost to construct is not by itself enough to indicate that land application is infeasible. The permittee must consider not only compliance with current water quality standards, but also upcoming changes to ammonia, new water quality standards for nutrients, and other future unknowns. The no discharge system is of value to the permittee when considering additional costs associated with possible future upgrades.

For any questions associated with the *CAPDEWORKS cost estimator*, please contact the Engineering Section at (573) 751-6621.

Interpretation of Funding Available to Schools and School Districts:

A school district acquires operating funds through local, state and federal tax revenue. Additionally, local tax levies are developed so that a monetary value, voted on by the local residents, will be taken out of each \$1000 of assessed property value of those residents. These tax revenues are then allocated to the school district for proper operations of the facilities. The Department assumes that all households within the county will be required to contribute the levied tax value associated with this school district. However, the Department does not have the resources or knowledge to determine how much each property owner will pay on an individual basis.

Therefore, the total estimated costs will be equally divided amongst all households within the county over a twenty-year period. This provides a conservative estimate of costs due to unaccounted-for property owned by these residents. This varies the assessed property value for each household. Please note that this is an estimated cost for complete replacement of the existing wastewater treatment facility that services this school. Actual total taxes paid in accordance to the levy may vary due to total number of schools and residents, and individual property.

Additional Assumptions Associated with this Analysis:

The cost assumptions in this affordability analysis anticipate complete replacement of the existing treatment facility. Because the methods used to derive the analysis have been demonstrated to estimate costs that are greater than actual costs associated with an upgrade, this analysis reflects a conservative estimate of costs anticipated for a community. This is because it is not possible to determine what existing equipment and structures will be reused in the upgraded facility. This affordability analysis does not dictate how a facility will upgrade, or how they will comply with the new permit requirements.

(1) The school district's financial capability and ability to raise or secure necessary funding.

Current Tax Revenues (2012) ² :	<u>\$2,423,972</u>
Total Expenditures (2013) ³ :	<u>\$9,470,947</u>
Current Expenditures (2013) ³ :	<u>\$7,708,040</u>
Current outstanding debt (2013) ⁴ :	<u>\$1,762,907</u>
School District Tax Levy (2013) ³ :	<u>\$3.4554</u>
Assessed Value of School District Infrastructure (2013) ³ :	<u>\$70,162,473</u>
Median Value of a Household Unit in Lewis County (2011) ⁵ :	<u>\$80,100</u>
Estimated Annual Tax Revenue from Tax Levy per Household ⁶ :	<u>\$276.78</u>
Other indicators:	<u>None identified at this time.</u>

Based on the financial data for the school district, the estimated annual tax revenue for the school district is \$276.78 per household per year in Lewis County. Please note that this only accounts for the median value of a household in Lewis County as estimated by the U.S. Census Bureau. The actual values may vary due to unaccounted-for property.

² Review of 2012 Property Tax Rates, Missouri State Auditor

³ Missouri Department of Elementary and Secondary Education

<http://mcds.dese.mo.gov/guided inquiry/District%20and%20School%20Information/Missouri%20School%20Directory.aspx>

⁴ Total Expenditures – Current Expenditures = Outstanding Debt

⁵ American Fact Finder, United States Census Bureau

http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_11_5YR_B25077&prodType=table

⁶ Tax Levy x (Median Value of Household / \$1,000) = Estimated Annual Tax Revenue per Household per Year

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

Current annual operating costs (exclude depreciation) ⁷ :	<u>\$615,904</u>
Total Present Worth (including depreciation) ⁸ :	<u>\$1,374,187 - \$1,976,525</u>
Estimated capital cost of pollution control options ⁸ :	<u>\$413,750-\$810,000</u>
Annual cost of additional (Operating Costs & Debt Service) ⁸ :	<u>\$60,378-\$93,605</u>
Median Household Income ⁵ :	<u>\$42,008</u>
Number of Household Units in Lewis County ⁵ :	<u>4,568</u>
Annual Cost per Household per Year (AC) ⁹ :	<u>\$15.04 - \$21.63</u>
Percent of Median Household Income (AC/MHI) ¹⁰ :	<u>0.036% - 0.051%</u>

Check Appropriate Box	Financial Impact	School District Indicator (Annual Cost per Households as a percent of MHI)
X	Low	Less than 1% MHI
	Medium	Between 1% and 2% MHI
	High	Greater than 2% MHI

The Department has concluded that over a twenty-year period, each tax paying household unit within Lewis County will need to pay less than 1% of their median household income each year. Please note that this is an estimate similar to an annual sewer rate. The actual tax levy per property owner and total tax revenue for the school district may vary.

Additionally, the Department has concluded that the estimated annual tax revenue per household is less than 1% of the community's MHI ($[\$276.78 / \$42,008] \times 100 = 0.66\%$). This provides an over-estimate of the actual cost for completely replacing the facility, while supporting the burden determination above.

Furthermore, the Department has completed calculations to compare the estimated total tax revenue over a twenty year period to the total present worth of completely replacing the facility. If the estimated annual tax revenue per household is multiplied by the estimated number of households units, the school district will acquire an estimated \$25,286,620.80 over the twenty year period ($[\$276.78 \times 4,568] \times 20 \text{ years} = \$25,286,620.80$). This estimated total present worth for completely replacing the facility is only 5.4% - 7.8% of the estimated total tax revenue that the school district may acquire in the next twenty years. The Department feels that the school district has the capability to allocate funds appropriately in order to fund a complete replacement of the existing wastewater treatment facility.

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

The complete replacement of the existing wastewater treatment facility is anticipated to cost between \$1,374,187 and \$1,976,525. The environmental benefit of increased ammonia removal is improving conditions for aquatic life in the receiving stream.

This permit renewal requires final effluent limitations for Ammonia as N based on Missouri Water Quality Standards (WQS) 10 CSR 20-7 and the Clean Water Act. Ammonia (NH3) is toxic to early stages of aquatic life. NH3 removal prevents damage to aquatic life and enables the receiving stream to support a healthier and diverse aquatic life community.

⁷ School District Database - School District Financial Data 01 24 2013.xlsx

⁸ CAPDEWORKS cost estimate summary.xls

⁹ (Total Present Worth / 20 Years) / Number of Household Units in Lewis County = Annual Cost per Household per Year

¹⁰ Annual Cost per Household per Year / Median Household Income = Percent MHI of Estimated Cost to Replace Facility

- (4) **An inclusion of ways to reduce economic impacts on distressed populations within the school district, 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.*

Data Collected for Lewis County:

Potentially Distressed Populations	
Unemployment for Lewis County ¹¹	6.4%
Median Household Income Lewis County ¹¹	\$42,008
Percent change in Median Household Income (1990-2011) ¹¹	+97.2%
Percent Population Growth/Decline (1990-2011) ¹¹	-0.3%
Change in Median Age in Years (1990-2011) ¹¹	+15.0%
Percent of Households in Poverty ¹¹	34.0%
Percent of Households Dependent on Food Stamps ¹¹	13.1%

Data Collected for the State of Missouri:

Potentially Distressed Populations	
Unemployment ¹¹	7.4%
Median Household Income ¹¹	\$48,864
Percent change in Median Household Income (1990-2011) ¹¹	+37.2%
Percent Population Growth/Decline (1990-2011) ¹¹	+17.46%
Change in Median Age in Years (1990-2011) ¹¹	+12.5%
Percent of Households in Poverty ¹¹	15.8%
Percent of Households Dependent on Food Stamps ¹¹	12.2%

Opportunity for cost savings or cost avoidance:

If available, connection to a larger centralized sewer system in the area may be more cost effective for the community.

The permittee may apply for State Revolving Fund (SRF) financial support in order to help fund a Capital Improvements Plan. Other loans and grants also exist for which the facility may be eligible. Contact information for the Department's Financial Assistance Center (FAC) and more information can be found on the Department's website at <http://dnr.mo.gov/env/wpp/srf/wastewater-assistance.htm>.

Although the Department cannot dictate the way in which other political subdivisions of the state allocate tax revenue or other funding sources, nor can it dictate the level of property tax that a community votes to levy for particular uses, a potential cost savings measure would be to increase the tax levy for the school districts in Lewis County. This will be solely and completely the decision of the community and should be considered at a local level only.

Opportunity for changes to implementation/compliance schedule:

The facility may propose changes to the schedule of compliance based on their own cost estimate or financial information.

- (5) **An assessment of other school district investments relating to environmental improvements;**

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

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

See Section (2) of this analysis for the residential indicator as outlined in the above-referenced EPA guidance.

¹¹ Pre-Screening Tool (Updated September, 2013), developed by Missouri Department of Natural Resources based on American Fact Finder, U.S. Census Bureau. Pre-screening Tool September 2013.xlsx

Secondary indicators for consideration:

Indicators	Strong (3 points)	Mid-Range (2 points)	Weak (1 point)	Score
Current outstanding debt as a % of assessed value of infrastructure	Below 2%	2% - 5%	Above 5%	2
Unemployment Rate	>1% below Missouri average	± 1% of Missouri average	>1% above Missouri average	2
Median household income	More than 25% above Missouri MHI	± 25% of Missouri MHI	More than 25% below Missouri average	2
Property tax revenues as a % of assessed value of infrastructure	Below 2%	2% - 4%	Above 4%	2
Property tax collection rate	Above 98%	94% - 98%	Below 94%	Unknown

Secondary Indicators Average Score: 2.0
 School District Indicator (from Criteria #2 above)*: 0.051%

**Only the high range from the residential indicator burden determination is used here. This will ensure that the highest cost burden is considered in the final affordability analysis determination below, thus providing the most conservative estimate.*

Financial Capability Matrix:

Secondary Indicators Score from above	School District Indicator (Annual Cost per Households as a percent 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: **Low Burden**

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

The community/school district did not report any other relevant local economic conditions.

Conclusion and Finding

As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to completely replace the existing wastewater treatment facility. The Department identified the actions for which an affordability analysis is required under Section 644.145 RSMo.

The Department estimates the cost for complete replacement of the existing treatment facility in order to meet new ammonia effluent limits is between \$1,374,187 and \$1,976,525. The school district currently has a tax levy of \$3.4554. The estimated annual tax revenue per household in Lewis County is only 0.66% of the MHI. When comparing the estimated cost of constructing a new facility to the number of households in the county, assuming the cost will be split equally to that number of household units, the cost burden is only 0.051% of the MHI. Due to the fact that the funding options considered in this analysis results in a cost that is less than 1% of the community's MHI, the Department can conclude that compliance with the proposed permit requirements will have a low financial burden on the community.

The Department considered all seven (7) of the criteria presented in subsection 644.145.3 when evaluating the affordability of the relevant actions. Taking into consideration these criteria, this analysis examined whether the above referenced permit modifications affects the ability of an individual customer or household to pay a utility bill without undue hardship or unreasonable sacrifice in the essential lifestyle or spending patterns of the individual or household. As a result of reviewing the above criteria, the Department hereby finds that the action described above will likely result in a low burden with regard to the community's overall financial capability and a low financial impact for most individual customers/households. However, this determination is based on readily available data, and may over-estimate the financial impact on the community. When the permittee submits their facility plan as part of the construction permit process, the plan includes a discussion of community details, what the community can afford, existing obligations, future growth potential, an evaluation of options available to the permittee with cost information, and a discussion on no-discharge alternatives. The cost information provided through the facility plan process, which is developed by the permittee and their engineer, is more comprehensive of the permittee's individual factors in relation to selected treatment technology and costing information.



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These Standard Conditions incorporate permit conditions as required by 40 CFR 122.41 or other applicable state statutes or regulations. These minimum conditions apply unless superseded by requirements specified in the permit.

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
 - a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
 - b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.
2. **Monitoring Requirements.**
 - a. Records of monitoring information shall include:
 - i. The date, exact place, and time of sampling or measurements;
 - ii. The individual(s) who performed the sampling or measurements;
 - iii. The date(s) analyses were performed;
 - iv. The individual(s) who performed the analyses;
 - v. The analytical techniques or methods used; and
 - vi. The results of such analyses.
 - b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.
3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.
4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is “sufficiently sensitive” when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility’s discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.
5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee’s sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

6. **Illegal Activities.**
 - a. The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under the permit shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than two (2) years, or both. If a conviction of a person is for a violation committed after a first conviction of such person under this paragraph, punishment is a fine of not more than \$20,000 per day of violation, or by imprisonment of not more than four (4) years, or both.
 - b. The Missouri Clean Water Law provides that any person or who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than \$10,000, or by imprisonment for not more than six (6) months, or by both. Second and successive convictions for violation under this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Section B – Reporting Requirements

1. **Planned Changes.**
 - a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
 - i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
 - ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
 - iii. The alteration or addition results in a significant change in the permittee’s sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
 - iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.
2. **Twenty-Four Hour Reporting.**
 - a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
 - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
 - ii. Any upset which exceeds any effluent limitation in the permit.
 - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
 - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Sanitary Sewer Overflow Reporting.** The following requirements solely reflect reporting obligations, and reporting does not necessarily reflect noncompliance, which may depend on the circumstances of the incident reported.
- a. **Twenty-Four Hour (24-Hour) Reporting.** The permittee or owner shall report any incident in which wastewater escapes the collection system such that it reaches waters of the state or it may pose an imminent or substantial endangerment to the health or welfare of persons. Relevant information shall be provided orally or via the current electronic method approved by the Department within 24 hours from the time the permittee becomes aware of the incident. A written submission shall also be provided within five (5) business days of the time the permittee or owner becomes aware of the incident. The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours. The five (5) day reports may be provided via the current electronic method approved by the Department.
 - b. **Incidents Reported via Discharge Monitoring Reports (DMRs).** The permittee or owner shall report any event in which wastewater escapes the collection system, which does not enter waters of the state and is not expected to pose an imminent or substantial endangerment to the health or welfare of persons, which occur typically during wet weather events. Relevant information shall be provided with the permittee's or owner's DMRs.
4. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
5. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
6. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, 4, and 7 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
7. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
8. **Discharge Monitoring Reports.**
- a. Monitoring results shall be reported at the intervals specified in the permit.
 - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
 - c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
 - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
 - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
 - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
 - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
 - b. Notice.
 - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
 - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
 - c. Prohibition of bypass.
 - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
 1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
 2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
 3. The permittee submitted notices as required under paragraph 2. b. of this section.
 - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
 - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
 - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
 - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
 - ii. The permitted facility was at the time being properly operated; and
 - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
 - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
 - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.



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Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
 - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
 - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
 - c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
 - d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
 - a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
 - b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
 - c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
 - a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
 - i. Violations of any terms or conditions of this permit or the law;
 - ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
 - iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
 - iv. Any reason set forth in the Law or Regulations.
 - b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.



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7. **Permit Transfer.**
 - a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
 - b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
 - c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.
10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
 - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
 - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
 - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
 - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
 - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
 - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
 - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
 - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

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AUGUST 15, 1994**

PART III – SLUDGE & BIOSOLIDS FROM DOMESTIC WASTEWATER TREATMENT FACILITIES

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation and incorporates applicable federal sludge disposal requirements under 40 CFR 503. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFS 503 until such time as Missouri is delegated the new EPA sludge program. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address federal requirements.
2. These PART III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW) and privately owned facilities.
3. Sludge and Biosolids Use and Disposal Practices.
 - a. Permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
 - b. Permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
 - c. Permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
 - d. A separate operating permit is required for each operating location where sludge or biosolids are generated, stored, treated, or disposed, unless specifically exempted in this permit or in 10 CSR 20, Chapter 6 regulations. For land application, see section H, subsection 3 of these standard conditions.
4. Sludge Received From Other Facilities
 - a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
 - b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge.
 - c. Sludge received from out-of-state generators shall receive prior approval of the permitting authority and shall be listed in the facility description or special conditions section of the permit.
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after du process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Act or under Chapter 644 RsMo.
8. In addition to the STANDARD CONDITIONS, the department may include sludge limitations in the special conditions portion or other sections of this permit.
9. Alternate Limits in Site Specific Permit.

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

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

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – WASTEWATER TREATMENT LAGOONS AND STORMWATER RETENTION BASINS

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

SECTION F – INCINERATION OF SLUDGE

1. Sludge incineration facilities shall comply with the requirements of 40 CFR 503 Subpart E; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Permittee may be authorized under the facility description of this permit to store incineration ash in lagoons or ash ponds. This permit does not authorize the disposal of incineration ash. Incineration ash shall be disposed in accordance with 10 CSR 80; or if the ash is determined to be hazardous waste, shall be disposed in accordance with 10 CSR 25.
3. In addition to normal sludge monitoring, incineration facilities shall report the following as part of the annual report, quantity of sludge incinerated, quantity of ash generated, quantity of ash stored; and ash use or disposal method, quantity, and location. Permittee shall also provide the name of the disposal facility and the applicable permit number.
4. Additional limitations, monitoring, and reporting requirements may be addressed in the Special Conditions sections of this permit.

SECTION G – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

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

SECTION H – LAND APPLICATION

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

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the department. Applications for approval shall be in the form of an engineering report and shall address priority pollutants and dioxin concentrations. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site-specific permit.

6. Agricultural and Silvicultural Sites.

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

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

SECTION I – CLOSURE REQUIREMENTS

1. This section applies to all wastewater treatment facilities (mechanical and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids, and ash. Permittee must maintain this permit until the facility is properly closed per 10 CSR 20-6.010 and 10 CSR 20-6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure shall not exceed the agricultural loading rates as follows:
 - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
 - b. If a wastewater treatment lagoon has been in operation for 15 years or more, the sludge in the lagoon qualifies for Class B with respect to pathogens (see WQ 424, Table 3), and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B limitations. See WQ 423 and 424.
 - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. See WQ 426 for calculation procedures. For a grass cover crop, the allowable PAN is 300 pounds/acre.
4. When closing a wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works” definition. See WQ 422. Under the septage category, residuals may be left in place as follows:
 - a. Testing for metals or fecal coliform is not required.
 - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at the rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
 - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If more than 100 dry tons/acre will be left in the lagoon, test for nitrogen and determine the PAN in accordance with WQ 426. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berms shall be demolished, and the site shall be graded and vegetated so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoon closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed five acres in accordance with 10 CSR 20-6.200.
7. If sludge exceeds agricultural loading rates under Section H or I, a landfill permit or solid waste disposal permit shall be obtained to authorize on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION J – MONITORING FREQUENCY

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

SECTION K – RECORD KEEPING AND REPORTING REQUIREMENTS

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

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

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

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

C10787
AP14390



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 1/23/13	FEE SUBMITTED 0.88

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- 0117650 Expiration Date 08/07/2013
- 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 Lewis Co. C-1 School District (Highland High School and Highland Elementary School)		TELEPHONE WITH AREA CODE (573) 209-3217	
ADDRESS (PHYSICAL) 21504 State Hwy. 6	CITY Lewistown	STATE Mo	ZIP CODE 63452

2.1 LEGAL DESCRIPTION: NE ¼, SE ¼, NE ¼, Sec. 1, T 60n, R 8W Lewis County

2.2 UTM Coordinates Easting (X): 4001471 Northing (Y): -09143506
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: *unnamed tributary to Grassy Creek*

3. OWNER

NAME Lewis Co. C-1 School District		E-MAIL ADDRESS smiller@lewis.k12.mo.us	TELEPHONE WITH AREA CODE (573) 209-3217
ADDRESS PO Box 366	CITY Ewing	STATE Mo.	ZIP CODE 63440

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 Lewis Co. C-1 School District		TELEPHONE WITH AREA CODE (573) 209-3217	
ADDRESS PO Box 366	CITY Ewing	STATE Mo.	ZIP CODE 63440

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
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6. FACILITY CONTACT

NAME Mr. Scott Miller	TITLE Director of Maintenance	TELEPHONE WITH AREA CODE (573) 209-3217
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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: _____; Facility NAICS code: 6110 Discharge NAICS code: _____

7.3 Number of people presently connected or population equivalent (P.E.): 1150 Design P.E. 1335
Number of units presently connected: Homes _____ Trailers _____ Apartments _____ Other X _____
Design flow for this outfall: 22500 Total design flow for the facility: ADF4999 Actual flow for this outfall: 2575
Commercial Establishment: Daily number of employees working _____ Daily number of customers/guests _____

7.4 Length of pipe in the sewer collection system? 1mi 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: Mar-Oct. Depends on rainfall
b. How many days of the week will the discharge occur? 7 depends on rainfall

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. _____

JAN 23 2013



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

DEPARTMENT OF NATURAL RESOURCES

www.dnr.mo.gov

CERTIFIED MAIL

7008 1140 0000 3140 9198

5.200 Lewis County C-1 School
Lewis County
MO-0117650

March 26, 2010

Mr. E.H. Smith, Administrative Assistant
Lewis County C-1 School District
P. O. Box 366
Ewing, MO 63440

LETTER OF WARNING

Dear Mr. Smith:

On March 18, 2010, the Missouri Department of Natural Resources' Northeast Regional Office conducted an investigation of a sanitary sewer overflow that occurred at the Lewis County C-1 Elementary School, in Lewis County, Missouri. Enclosed is a copy of the investigation report.

Please direct your attention to the Required Actions for the Unsatisfactory Features and Recommendations sections of the report. The information requested by the Department is to be submitted to the Northeast Regional Office by **April 16, 2010**. Your cooperation in this matter will be appreciated.

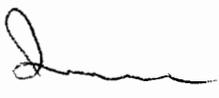
Samples were collected at the time of the investigation, and submitted for laboratory analysis. The Environmental Services Program Results of Sample Analyses were not completed as of the date of this report. Additional Unsatisfactory Features may be revealed upon receipt of these sample analysis results. **Please be advised, that if sample analysis results reveal that violations of the Clean Water Commission Water Quality Standards occurred, your facility may be referred to the Enforcement Section of the Water Pollution Control Branch for progressive enforcement actions.**

Mr. E.H. Smith, Administrative Assistant
Lewis County C-1 School District
March 26, 2010
Page 2

If you have any questions, please contact Darryl McCullough or me at (660) 385-8000 in the Northeast Regional Office, 1709 Prospect Drive, Macon, MO 63552-2602.

Sincerely,

Northeast Regional Office



Irene Crawford
Regional Director

IC/dma

Enclosure: Report of Investigation

c: Ms. Lauren Patterson, Water Pollution Control Branch

**REPORT OF INVESTIGATION
LEWIS COUNTY C-1 SCHOOL
LEWIS COUNTY
MO-0117650
March 26, 2010**

INTRODUCTION

On March 18, 2010, the Missouri Department of Natural Resources' Northeast Regional Office received notification from Mr. E.H. Smith, Administrative Assistant of Lewis County C-1 School, that a sewer bypass had occurred at the facility. Pursuant to Section 644.026.1 RSMo of the Missouri Clean Water Law, an investigation of the area of the reported bypass in Lewis County, Missouri, was conducted by Mr. Darryl McCullough with the Missouri Department of Natural Resources' Northeast Regional Office on March 18, 2010.

This investigation was conducted to determine the facility's compliance with Missouri State Operating Permit #MO-0117650, the Missouri Clean Water Commission Regulations, and the Missouri Clean Water Law. This report presents the findings and observations made during the investigation.

FACILITY DESCRIPTION/HISTORY

Missouri State Operating Permit #MO-0117650 was last issued on August 8, 2008, and expires on August 7, 2013. This permit sets forth effluent limitations, monitoring requirements, and permit conditions, both standard and specific, that the permittee is to follow.

The wastewater treatment facility serving the Lewis County C-1 School is a three-celled lagoon system with sludge retained in the lagoon. The permit lists the design flow through this system as 22,500 gallons per day with an actual flow of 2,575 gallons per day listed. The receiving stream for this operation is an unnamed tributary to Grassy Creek. The legal description of the Lewis County C-1 School Wastewater Treatment Facility is listed on the permit as the NE¼, SE¼, NE¼, Section 1, Township 60N, Range 8W, in Lewis County.

The last onsite inspection by the Department of Natural Resources' Northeast Regional Office was conducted on August 26, 2009. At the time of that inspection, there were no unsatisfactory features noted.

DISCUSSION OF INVESTIGATION AND OBSERVATIONS

On March 18, 2010, Mr. Darryl McCullough of the Missouri Department of Natural Resources' Northeast Regional Office conducted an investigation of the area of a reported bypass in Lewis County, Missouri. The investigation was conducted in response to a report received on March 18, 2010, at approximately 3:00 p.m. that a sewer bypass had occurred at the Lewis County C-1 School near Ewing, Missouri.

The investigator arrived at the site at approximately 6:05 p.m., and met with Mr. E.H. Smith. Mr. Smith explained that the discharge from the manhole had been discovered earlier that day at 11:00 a.m. Mr. Smith stated that after discovering the discharge, he contacted a plumbing contractor to come to the site. The plumbing contractor determined that the sewer line was

Report of Investigation
Lewis County C-1 School
March 26, 2010
Page 2

plugged between the manhole and the lagoon, near the east side of the lagoon. The plumbing contractor was able to jet out the sewer line, which stopped the discharge from the manhole. The investigator observed the area around the sanitary sewer manhole. Solids and debris were observed around the top of the manhole, and on top of the ground adjacent to the manhole. At the time of the investigation, there was no discharge flowing from the manhole. The investigator observed the area located downhill from the manhole to determine if the discharge had flowed off of the site. The area around the manhole and the lagoon berms was mowed very short. The discharge from the manhole had left behind a slight stain on the short vegetation, which enabled the investigator to see where the flow had occurred. These observations indicated that the flow from the manhole had traveled down hill toward the west, then entered the storm water diversion on the east side of the lagoon. The discharge then followed the storm water diversion south along the lagoon berm, then traveled under the fence surrounding the lagoon. After flowing under the lagoon fence, the discharge flowed east and entered a small drainage way east of the lagoon.

The investigator observed the small drainage way upstream of the location where the discharge entered the drainage way. Water in that location was clear and odorless. Field analysis equipment revealed no ammonia at that location. The investigator observed the area downstream of the location where the discharge entered the drainage way. Field analysis at that location revealed that the ammonia level was greater than 3 parts per million (ppm). Water was observed in small pools, but was not flowing. The water at this location was clear and odorless. The permitted outfall for the lagoon system (Outfall #001) is located approximately 300 feet downstream of the location where the discharge entered the drainage way. At the time of the investigation, a discharge was occurring from Outfall #001. No flow was observed in the drainage way upstream of the outfall location. A small flow, consistent with the volume of flow observed flowing from Outfall #001, was observed below the outfall location. Field analysis revealed an ammonia level of greater than 3 ppm immediately downstream of the outfall location. The water at this location was clear and odorless. The investigator concluded that any remaining flow from the discharge would be comingled with the flow from Outfall #001 at that location, and at all downstream locations.

The flow from Outfall #001 flowed off of the Lewis County C-1 School property approximately 100 feet south of the outfall location. After leaving the school property, the flow traveled through a culvert under Highway 6, then traveled southward onto an adjacent property. The investigator observed the drainage way immediately south of Highway 6. The water at this location was clear and odorless. Field analysis at this location revealed an ammonia level of greater than 3 ppm. While on the Highway 6 right-of-way, the investigator observed that the drainage way traveled approximately another 600 feet, where it then entered a private lake approximately three acres in size. A private home could be observed on the east side of the private lake.

The investigator recommended to Mr. Smith that he contact the owner of the downstream lake, and notify them that untreated sewage had been discharged from the school property. Mr. Smith was also advised to warn the adjacent property owner of possible health hazards associated with coming in contact with untreated sewage.

Report of Investigation
Lewis County C-1 School
March 26, 2010
Page 3

While Mr. Smith was making contact with the adjacent property owner, the investigator collected samples for laboratory analysis. Samples were collected upstream of the location where the discharge had entered the small drainage way, and between the entry point to the drainage way and Outfall #001. Samples were also collected from Outfall #001, and on the south side of Highway 6.

After Mr. Smith returned to the site, the investigator discussed recommendations for remediation of the discharge. The investigator recommended that lime be placed on the soil around the manhole, and on the soil in the area that had come in contact with the untreated wastewater. The investigator also recommended that signs be posted at access points to the stream, notifying the public that the stream had been impacted by untreated wastewater. The investigator informed Mr. Smith that the findings of the investigation, including any violations, would be summarized in a report that would be sent to the Lewis County C-1 School.

On March 19, 2010, the investigator made contact with Mr. Smith by telephone. Mr. Smith informed the investigator that lime had been applied to the soil surrounding the manhole that was the source of the discharge. Mr. Smith further stated that he had secured the materials, and was in the process of installing warning signs at public access points along the stream.

A Self Reporting Form for Wastewater Bypasses was submitted by the Lewis County C-1 School District and received at the Northeast Regional Office on March 19, 2010.

WATER QUALITY MONITORING

The appropriate sampling materials were taken on the investigation, including a copy of the Missouri Department of Natural Resources' Standard Operating Procedures for Sampling. Instruments for field monitoring were taken on the investigation that are capable of testing pH, temperature, conductivity, and dissolved oxygen. A HACH® ammonia test kit for water quality monitoring was also taken on the investigation.

Water quality field monitoring was conducted at the following locations for the listed parameters.

Approximately 100 feet upstream of discharge into drainage way		
Parameter	Result	Units
pH	6.66	s.u.
Conductivity	417	Microsiemens
Temperature	11.5	°C
Dissolved Oxygen	6.33	mg/L

Between discharge into drainage way and Outfall #001		
Parameter	Result	Units
pH	6.89	s.u.
Conductivity	885	Microsiemens
Temperature	12.1	°C
Dissolved Oxygen	2.21	mg/L

Discharge from Outfall #001		
Parameter	Result	Units
pH	8.06	s.u.
Conductivity	394	Microsiemens
Temperature	12.2	°C
Dissolved Oxygen	10.32	mg/L

South side of Highway 6		
Parameter	Result	Units
pH	7.67	s.u.
Conductivity	583	Microsiemens
Temperature	11.6	°C
Dissolved Oxygen	8.17	mg/L

Sampling was conducted at the aforementioned locations and submitted for laboratory analysis. The Environmental Services Program Results of Sample Analyses were not available at the time this report was written. **Receipt of the sample analysis results may result in additional violations of the Missouri Clean Water Law and the Clean Water Commission Regulations being revealed.**

COMPLIANCE DETERMINATION

The facility was found to be in non-compliance with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit MO-0117650, based upon the observations made at the time of the investigation.

UNSATISFACTORY FEATURES

1. On March 18, 2010, operated, used or maintained a water contaminant source, domestic wastewater from a non-permitted outfall, which discharged to a tributary to Grassy Creek, waters of the state, without a Missouri State Operating Permit (MSOP) [Sections 644.051.2 and 644.076.1, RSMo, and 10 CSR 20-6.010(1)(A) and (5)(A)].

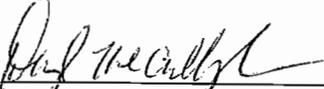
Report of Investigation
Lewis County C-1 School
March 26, 2010
Page 5

REQUIRED ACTIONS: The facility shall submit a written statement to the Northeast Regional Office by **April 16, 2010**, explaining what actions have been taken to correct the unsatisfactory feature and prevent a reoccurrence in the future.

RECOMMENDATIONS – **Actions that are being recommended by the investigator but are not required to bring the facility into compliance at the time of the investigation.**

- Ensure that all overflows, or instances of noncompliance which may endanger health or the environment are reported to the Department of Natural Resources within twenty-four hours of discovery.
- Ensure that future applications for renewal of Missouri State Operating Permit MO-0117650 are submitted to the Northeast Regional Office at least 180 days prior to the expiration date listed on the permit.

SUBMITTED BY:



Darryl McCullough
Environmental Specialist
Northeast Regional Office

DM/ad

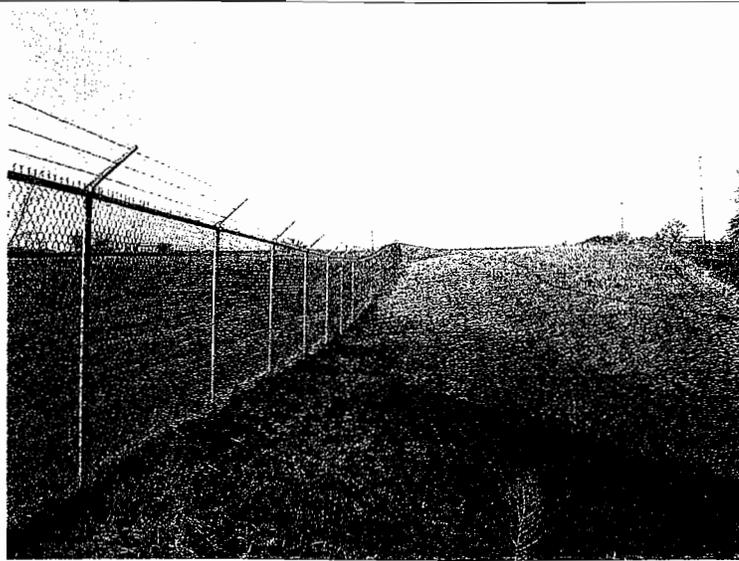


Photo #: 1 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Path of flow of bypass from manhole
around lagoon diversion.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 2 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Path of flow of bypass from manhole
around lagoon diversion.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 3 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Path of flow of bypass from manhole
around lagoon diversion.

Date/Time Taken: March 18, 2010
Program: WPC Unit

Initial DM



Photo #: 4 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Location where bypass entered stream.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 5 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream, upstream of bypass.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 6 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream, upstream of bypass.

Date/Time Taken: March 18, 2010
Program: WPC Unit

Initial Dm



Photo #: 7 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream, downstream of
bypass.

Date/Time Taken: March 18, 2010
Program: WPC Unit

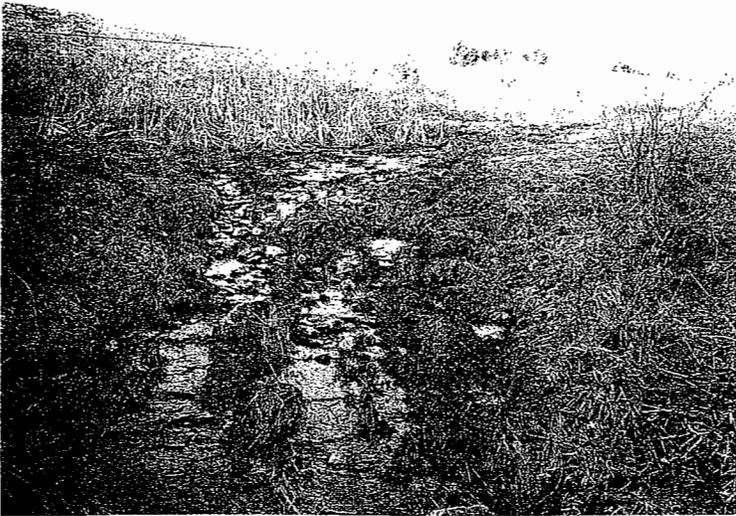


Photo #: 8 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream, downstream of
Outfall #001 and bypass.

Date/Time Taken: March 18, 2010
Program: WPC Unit

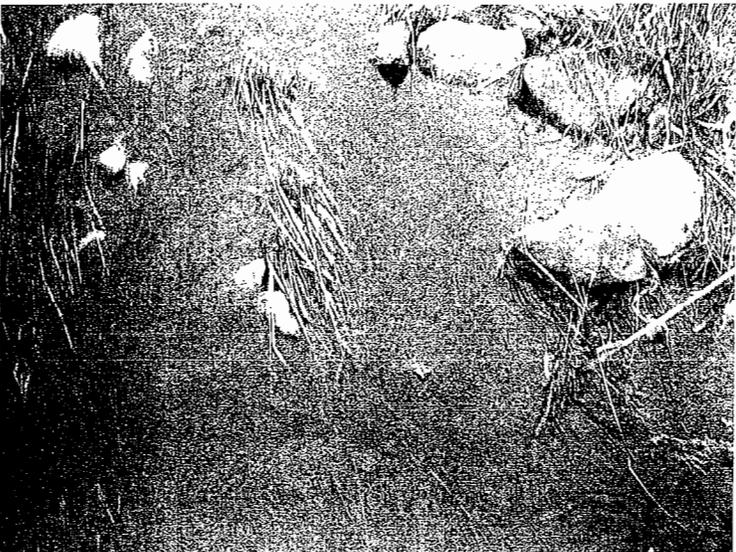


Photo #: 9 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream, downstream of
Outfall #001 and bypass.

Date/Time Taken: March 18, 2010
Program: WPC Unit

Initial DM



Photo #: 10 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream on south side of
Highway 6.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 11 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream on south side of
Highway 6.

Date/Time Taken: March 18, 2010
Program: WPC Unit



Photo #: 12 of 12
By: Darryl McCullough
Facility: Lewis County C-1 School
Permit: MO-0117650
Location: NE ¼, SE ¼, NE ¼, Sec. 1, T60N, R8W,
Lewis County.

Description: Water in stream on south side of
Highway 6.

Date/Time Taken: March 18, 2010
Program: WPC Unit

Initial Dm

Self Reporting Form For Wastewater Bypasses

Notice: Under RSMO 10 CSR 20-7.015 and in accordance with reporting requirements in your Missouri State Operating Permit (MSOP), all permittees shall provide the following notices if an unscheduled sanitary sewer overflow or bypass occurs:

- Within 24 hours of the occurrence, notify the Missouri Department of Natural Resources (MDNR) by telephone.
- Within 5 days of the occurrence, provide a written report describing the overflow or bypass, including all information requested on this form. The permittee is required to submit this form or other equivalent written notification.

Failure to notify the department as specified may result in civil or criminal penalties for noncompliance.

Instructions: Use this form to report all unscheduled sanitary sewer overflow or bypass occurrences. Attach additional information as necessary to explain or document the overflow or bypass. For the purpose of this report, an overflow or bypass is defined as the diversion of wastewater from any portion of a wastewater treatment facility or sewer system to waters of the state or where the contaminants might reasonably reach waters of the state.

Use one form per occurrence. A single occurrence may be more than one day if the circumstance causing the overflow or bypass results in a discharge duration more than 24 hours. If there is a stop and restart of the overflow or bypass within 24-hours, but it is caused by the same circumstance, report it as one occurrence. If the discharges are separated by more than 24 hours, they should be reported as separate occurrences.

Notification Information		Permit Number: MO-0117650	
Permittee (Municipality or Facility Name) <i>Lewis County Elementary Wastewater Treatment Facility</i>		Overflow or Bypass Reported to MDNR	
Person Representing Permittee Who Contacted MDNR <i>E. H. Smith</i>		Date <i>3/18/2010</i>	Time <i>3:45</i> <input type="checkbox"/> am <input checked="" type="checkbox"/> pm
MDNR Office and Person Contacted <i>Kriste Sperry</i>			
Overflow or Bypass Details			
Date(s) and Duration of Overflow or Bypass Occurrence (complete a separate form for each occurrence)			
Start Date <i>Discovered 3/18/2010</i>	Time (to nearest 15 minutes) <i>11:00</i> <input checked="" type="checkbox"/> am <input type="checkbox"/> pm	End Date <i>3/18/2010</i>	Time (to nearest 15 minutes) <i>3:00</i> <input type="checkbox"/> am <input checked="" type="checkbox"/> pm
Duration of the overflow or bypass (hours and minutes) <i>From discovery to repair - 4 hours</i>		Estimated Volume of Wastewater Discharged (gallons) <i>1000 GALLON</i>	
Location of the Overflow or Bypass (complete a separate form for each discharge location) <i>MANHOLE APPROXIMATELY 25 YARDS EAST OF LAGOON.</i>			
Circumstances Causing the Overflow or Bypass (check all that apply)			
<input type="checkbox"/> Rain	<input type="checkbox"/> Power Outage	<input type="checkbox"/> Equipment Failure	
<input type="checkbox"/> Rain and/or Snow Melt	<input checked="" type="checkbox"/> Plugged Sewer	<input type="checkbox"/> Widespread Flooding	
<input type="checkbox"/> Vandalism	<input type="checkbox"/> Broken Sewer	<input type="checkbox"/> Other (explain below)	
Type of Bypass:			
<input type="checkbox"/> Pipe Break	<input type="checkbox"/> Lagoon/Basin Overflow	<input type="checkbox"/> Digester	<input checked="" type="checkbox"/> Manhole
<input type="checkbox"/> Drying Beds	<input type="checkbox"/> Lift Station	<input type="checkbox"/> Clarifier/Filter/Batch Reactor	<input type="checkbox"/> Head Works
Strength of Bypass: <input checked="" type="checkbox"/> Raw <input type="checkbox"/> Partially Treated			

Overflow or Bypass Details

Provide a narrative description to further explain why the overflow or bypass occurred. For example, describe what equipment failed, what caused the power outage, or what plugged the sewer. Flooding should only be indicated as a cause if there is significant flooding that is caused by high river, stream, or lake water levels, not just localized high water in the street.

In the process of checking the lagoon and taking a draw for sampling I discovered water coming out of the top of the man hole. We had a plumber come. He found the sewer line to be plugged just past the manhole toward the lagoon. He unplugged it with a hose and water pressure. We do not know the cause of the plug.

Wet Weather Data (if applicable)

Document the weather conditions if it contributed to the cause of the overflow or bypass. An overflow or bypass may be caused by a series of short rain storms or in combination with a snow melt. The wet weather data should include the cumulative amount of precipitation that caused the overflow or bypass.

Date(s) and Duration of Rainfall

Start Date	Time (to nearest 15 minutes) <input type="checkbox"/> am <input type="checkbox"/> pm	End Date	Time (to nearest 15 minutes) <input type="checkbox"/> am <input type="checkbox"/> pm
Amount of Rainfall (nearest rain gauge to 0.1 inch accuracy)		Amount of Snow Melt (estimated inches melted)	

Contributing Soil Conditions (saturated, frozen, soil type)

Where Did the Discharge from the Overflow or Bypass Go? (check all that apply)

Provide the name of the local receiving water that the wastewater enters, which could be a nearby stream, river, lake, or wetland. If discharge does not enter directly into a surface water, but indirectly by way of a ditch or storm sewer, trace the path of the ditch or storm sewer to find the receiving water.

- Runs on ground and absorbs into the soil.
- Ditch. Name of surface water it drains to: unnamed tributary to GRASSY Creek
- Storm sewer. Name of surface water it drains to: _____
- Surface water direct discharge: _____
- Other, describe: _____

Actions to Correct This Occurrence and Prevent Future Overflows or Bypasses

Describe what actions were taken to minimize the volume of wastewater discharged from the overflow or bypass reported on this form. Also describe what actions are planned to prevent or minimize future overflows or bypasses. The MSOP permit prohibits bypasses, unless certain specified conditions are met. If the permittee fails to operate and maintain the sewage collection system to prevent overflows and bypasses, they will be subject to enforcement action.

The sewer line was unclogged and sewage is now going to the lagoon as designed. I distributed lime around the affected area on 3/19/2010 between the hours of 7:30 and 8:15 a.m. I posted a sign near the affected area on each side of highway 6 near the affected ditch stating "Raw Sewage Keep Out" and reported the spill to the home owner down from the spill where water from the ditch flows into a pond at approximately 7:15 pm on the 18th of March. We will check the lagoon weekly for any problems. The signs were put up 3/19/2010 at approximately 11:00 am.

Type of Samples Taken: BOD TSS Fecal Ammonia DO None Other: _____
Attach copies of any test results.

Report Completed By

Authorized Representative Name (Print) <i>E. H. Smith</i>	Title <i>Administrative Assistant to the Supt.</i>
--	---

Authorized Representative Signature <i>E. H. Smith</i>	Date <i>3/19/2010</i>
---	--------------------------

RECEIVED AUG 16 2010

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
NPDES DISCHARGE MONITORING REPORT

11 August 2010

L1807

Facility: Lewis County Elementary

Location: Lewistown, Missouri

Description: 3 Cell Lagoon

Permit No: MO- 0117650 Facility: 001 County: Lewis

Monitoring Period: 01 July 2010 - 30 September 2010

Frequency: Quarterly

Sample Date: 21 July 2010

Weather:

Sample Type: Grab Sample

Sample Collected by: Others

Time: 9:30 AM

Sample Temp: degrees C

Flow: mgd Flow Type:

Effluent

Report Due: 28 October 2010

PARAMETER	UNITS	9853	Detection	Method
Biochemical Oxygen Demand	mg/l	<6	2.0	5210 B
Total Suspended Solids	mg/l	22	1.0	2540 D
pH	units	7.3		4500-H B
Ammonia	mg/l	1.4	0.3	4500NH3B C
Grease & Oil	mg/l	<1.0	1.0	EPA 1664
Fecal Coliform	#/100 ml	1,260	1.0	9222 D

Comments: Sample secured and delivered to laboratory by others

Analysis performed in strict accordance with sample holding times and test procedures outlined in "Standard Methods for the Examination of Water and Wastewater", latest edition

- INSTRUCTIONS: 1. Date and sign one copy and retain for your records.
 2. Date and sign one copy and mail to: **Department of Natural Resources**
 Northeast Regional Office
 1709 Prospect Drive
 Macon, MO 63552

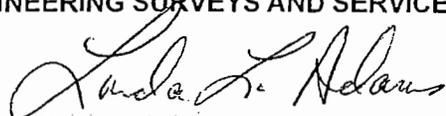
OWNER APPROVAL: _____



DATE: 8-20-2010

CC: 1 E.H. Smith

ENGINEERING SURVEYS AND SERVICES
BY:



Linda L. Adams

Facility Name	Lewis County Elementary Wastewater Treatment Facility			Current Address:	Owner <input checked="" type="checkbox"/> Billing <input checked="" type="checkbox"/>	Address Change For: Owner <input type="checkbox"/> Billing <input type="checkbox"/>
Permit Number	#MO-0117650			Lewis Co. C1 School District		
County	Lewis County			P.O. Box 366		
Facility Type	Three cell lagoon			Ewing Mo. 63440		
SAMPLES COLLECTED BY	DATE	PHONE NUMBER	ANALYSES PERFORMED BY (Lab)	PHONE NUMBER (Lab)	This report covers the period of: July 1st-Sept. 30 2010	
Scott Miller- Industrial Tech/Maintenance Supervisor	July 21st	573-209-3217	Engineering Surveys and Services	573-449-2646		
SIGNATURE AND TITLE OF INDIVIDUAL PREPARING REPORT	DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)			
<i>Scott Miller</i>	<i>Sept 15th</i>	same				
SIGNATURE OF OWNER OR DESIGNEE APPROVING REPORT	DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)			
<i>Jud Tech / Maintenance Supervisor</i>	<i>Sept 15th</i>	same				

PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

Parameter	Interim Permit Limitations			Monitoring Requirement		Due Date
	Units	Daily Maximum	Weekly Average	Monthly Average	Frequency	
Flow	MGD	*		*	monthly	24 hr estimate
Biochemical Oxygen Demand	mg/L		65	45	quarterly ***	grab
Total Suspended Solids	mg/L		110	70	quarterly ***	grab
pH	SU	**		**	quarterly ***	grab
Ammonia	mg/L	*		*	quarterly ***	grab
Temperature (Effluent)	°C	*		*	quarterly ***	grab
Oil & Grease	mg/L	15		10	quarterly ***	grab
Fecal Coliform	Notes 1 & 2	1000		400	quarterly ***	grab

The 28th day following the end of the quarter

DMR SAMPLING SUMMARY

Parameter	Outfall #001			NO DISCHARGE <input type="checkbox"/>
	Daily Minimum	Daily Maximum	Weekly Average	
Flow		0.0288mgc		0.0288mgd
Biochemical Oxygen Demand			<6	<6
Total Suspended Solids			22	22
pH	7.3	7.3		
Ammonia		1.4		1.4
Temperature (Effluent)		29.4c		29.4c
Oil & Grease		<1		<1
Fecal Coliform		1260		1260

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY. THE FIRST REPORT IS DUE OCTOBER 28, 2009.

IF A VIOLATION OCCURRED, PLEASE ATTACH THE FOLLOWING: AN EXPLANATION OF POSSIBLE CAUSE, EXACT DATE OF NON-COMPLIANCE, DATE ANTICIPATED TO RETURN TO COMPLIANCE, AND WHAT STEPS YOUR OPERATION WILL TAKE TO PREVENT A REOCCURRENCE OF THE VIOLATION.

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units
- *** Sample discharge at least once for the months of Jan, Feb, Mar-1st Quarter, Apr, May, Jun -2nd Quarter, Jul, Aug, Sep-3rd Quarter, Oct, Nov, Dec-4th Quarter

THIS DMR IS EFFECTIVE ON: August 6, 2013
THIS DMR EXPIRES ON: August 7, 2013



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 1 of	2
Month:	7
Year:	2010

Outfall #001	EFFLUENT							This report covers the period of:
DATE	Flow MGD	Biochemical Oxygen Demand mg/L	Total Suspended Solids mg/L	pH SU	Ammonia mg/L	Temperature (Effluent) ° C	Oil & Grease mg/L	July 1st-Sept. 30 2010
1								For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
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21	.0288mgd	<6	22	7.3	1.4	29.4c	<1	The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
TOTAL	.0288mgd	<6	22					
DAILY MINIMUM	.0288mgd	<6	22	7.3	1.4	29.4c	<1	
DAILY MAXIMUM	.0288mgd	<6	22	7.3	1.4	29.4c	<1	
WEEKLY AVERAGE	.0288mgd	<6	22					
MONTHLY AVERAGE	.0288mgd	<6	22		1.4	29.4c	<1	



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	7
Year	2010

Outfall #001, continued	EFFLUENT							This report covers the period of:
DATE	Fecal Coliform #/100mL							July 1st-Sept. 30 2010
1								<p>For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:</p> <ul style="list-style-type: none"> (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
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31								
TOTAL	1260							<p>The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.</p>
DAILY MINIMUM	1260							
DAILY MAXIMUM	1260							
WEEKLY AVERAGE								
MONTHLY AVERAGE	1260							

Dec 7th
October 14, 2010

Dept. of Natural Resources
1709 Prospect Drive
Macon, Mo. 63552

Dear Ms. Crawford

Enclosed you will find the results for our fourth quarter DMR. As you will see our fecal limits are well below the limits but the hold time was missed by one hour. This hold time was missed due to an oversight by Praire Analytical Systems Inc. (see attached email). I contacted Praire Analytical and they said they would retest at no fee. At that time we had no discharge and I felt I had to force a discharge as suggested by Praire Analytical to retest. I forced a discharge by opening a lower valve on our second cell therefore raising the level in the third cell and collected a sample at the outlet. The lab tested within the hold time and as you will see our fecal number is high. I feel this result is inaccurate due to the forced discharge. To my knowledge the valve opened had not been opened in some time. Sludge and buildup in this pipe and valve was released contaminating the third cell during this forced discharge giving us an inaccurate reading.

I have been assured by our testing facility that they will meet the required hold time for any future testing. I have been in contact with Mr. Scott Adams and will notify Mr. Adams in the future if we encounter any other unusual circumstances. Please feel free to contact me if you have any other questions regarding this issue.

Sincerely,

Scott Miller
Ind. Tech/Maintenance Supervisor



Scott Miller <smiller@lewis.k12.mo.us>

fecal hold time

1 message

Carlee Scharnhorst <carlee@prairieanalytical.com>
To: smiller@lewis.k12.mo.us

Mon, Oct 18, 2010 at 12:03 PM

Scott,

I figured you were in class, so I thought I would follow up through email so that we can keep moving forward on the fecal results.

I investigated into the setup time of the fecal and unfortunately the 7 hour time is correct. I had my lab director investigate why this happened and basically it comes down to the variety of hold times all associated with one test code for fecal coliform testing. There is a lot of confusion as to what is a 6 hr hold versus a 12 hour and so on. I have stressed in the past that all of the MO wastewater samples have to be set up in the 6 hour window, but this one was missed. The lab director is going to reinforce to the analysts that anything I bring needs to be set up within six hours of sampling.

I know the future caution does not fix this sample. We will of course reanalyze at no charge. I'm sorry this is requiring you to figure out how to force a discharge. Please let me know if there is anything I can do to help. I apologize for this oversight. Feel free to call me with any questions or concerns.

Thanks,

Carlee Scharnhorst
Prairie Analytical Systems, Inc.
1210 Capital Airport Drive
Springfield, IL 62707
ph: 217-414-7762
fax: 217-223-7922
www.prairieanalytical.com

CONFIDENTIALITY NOTICE: The information contained in and transmitted with this message is or may be attorney-client privileged, attorney work product, or otherwise confidential and is intended only for the individual or entity named above. You are hereby notified that any dissemination, distribution, copying or other use of this communication by or to anyone other than the recipient named above is unauthorized and strictly prohibited. If you have received this message in error, please notify the sender by return email immediately and delete this message.

*Contacted Carlee Scharnhorst Dec 7 by phone with approval to send email to DNR.
sm*

Facility Name	Lewis County Elementary Wastewater Treatment Facility	Current Address:	Owner <input checked="" type="checkbox"/> Billing <input checked="" type="checkbox"/>	Address Change For: Owner <input type="checkbox"/> Billing <input type="checkbox"/>
Permit Number	#MO-0117650		Lewis Co. C1 School Dist.	
County	Lewis County		P. O. Box 366	
Facility Type	Three cell lagoon		Ewing Mo. 63440	
SAMPLES COLLECTED BY		DATE	PHONE NUMBER	ANALYSES PERFORMED BY (Lab)
Scott Miller- Industrial Tech/ Maintenance Supervisor		Dec. 5th	573-209-3217	Prairie Analytical Systems Inc.
SIGNATURE AND TITLE OF INDIVIDUAL PREPARING REPORT		DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)
<i>Scott Miller</i>		12/0-10	573-209-3217	
SIGNATURE OF OWNER OR DESIGNER APPROVING REPORT		DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)
PERMIT LIMITATIONS AND MONITORING REQUIREMENTS		DMR SAMPLING SUMMARY		

Parameter	Units	Interim Permit Limitations			Monitoring Requirement			Due Date
		Daily Maximum	Weekly Average	Monthly Average	Frequency	Sample Type		
Flow	MGD	*		*	monthly	24 hr estimate		
Biochemical Oxygen Demand	mg/L		65	45	quarterly ***	grab		
Total Suspended Solids	mg/L		110	70	quarterly ***	grab		
pH	SU	**		**	quarterly ***	grab		The 28th day following the end of the quarter
Ammonia	mg/L	*		*	quarterly ***	grab		
Temperature (Effluent)	°C	*		*	quarterly ***	grab		
Oil & Grease	mg/L		15	10	quarterly ***	grab		
Fecal Coliform	Notes 1 & 2 #/100ml		1000	400	quarterly ***	grab		

Parameter	Daily Minimum	Daily Maximum	Weekly Average	Monthly Average	Permit Limitation	NO DISCHARGE	
						Minimum	Maximum
Flow		.0007mgd					
Biochemical Oxygen Demand			2.76		2.76		
Total Suspended Solids			U		U		
pH	7.89	7.89					
Ammonia		0.144			0.144		
Temperature (Effluent)		16.67c			16.67		
Oil & Grease		U			U		
Fecal Coliform		<1			<1		

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY. THE FIRST REPORT IS DUE OCTOBER 28, 2009.
 IF A VIOLATION OCCURRED, PLEASE ATTACH THE FOLLOWING: AN EXPLANATION OF POSSIBLE CAUSE, EXACT DATE OF NON-COMPLIANCE, DATE ANTICIPATED TO RETURN TO COMPLIANCE, AND WHAT STEPS YOUR OPERATION WILL TAKE TO PREVENT A REOCCURRENCE OF THE VIOLATION.

* Monitoring requirement only.
 ** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units
 *** Sample discharge at least once for the months of: Jan, Feb, Mar-1st Quarter, Apr, May, Jun-2nd Quarter, Jul, Aug, Sep-3rd Quarter, Oct, Nov, Dec-4th Quarter

THIS DMR IS EFFECTIVE ON: August 6, 2013
 THIS DMR EXPIRES ON: August 7, 2013



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 1 of	2
Month:	10
Year:	2010

Outfall #001	EFFLUENT							This report covers the period of: Oct. 1st to Dec. 31st
	DATE	Flow MGD	Biochemical Oxygen Demand mg/L	Total Suspended Solids mg/L	pH SU	Ammonia mg/L	Temperature (Effluent) ° C	
1								
2								
3								
4	.00007mgd.	2.76	U	7.89	0.144	16.67	U	
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28								
29								
30								
31								
TOTAL	.00007mgd.	2.76	U					
DAILY MINIMUM	.00007mgd.	2.76	U	7.89	0.144	16.67	U	
DAILY MAXIMUM	.00007mgd.	2.76	U	7.89	0.144	16.67	U	
WEEKLY AVERAGE	.00007mgd.	2.76	U					
MONTHLY AVERAGE	.00007mgd.	2.76	U		0.144	16.67	U	

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 (i) the date, exact place, and time of sampling or measurements;
 (ii) the individual(s) who performed the sampling or measurements;
 (iii) the date(s) analyses were performed;
 (iv) the individual(s) who performed the analyses;
 (v) the analytical techniques or methods used; and
 (vi) the results of such analyses.

The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	10
Year	2010

Outfall #001, continued	EFFLUENT						This report covers the period of:
DATE	Fecal Coliform #/100mL						Oct 1st to Dec. 31st
1							For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
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31							
TOTAL	<1						The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.
DAILY MINIMUM	<1						
DAILY MAXIMUM	<1						
WEEKLY AVERAGE							
MONTHLY AVERAGE	<1						

Oct. 4 Test - missed hold time

Prairie Analytical Systems, Inc.

Date: 10/14/2010

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly testing I
Client Sample ID: Effluent
Collection Date: 10/4/10 8:00

Lab Order: 10J0033
Lab ID: 10J0033-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Conventional Chemistry Parameters									
*Ammonia (as N)	0.144	0.100		mg/L	1	10/6/10 0:00	10/6/10 18:45	SM 4500-NH	AJD
*Oil and Grease	U	1.00		mg/L	1	10/6/10 13:38	10/7/10 16:21	EPA 1664A	CEP
*Biochemical Oxygen Demand	2.76	2.00		mg/L	1	10/5/10 18:00	10/10/10 12:55	SM 5210B	RMN
*pH	7.89	0.0100		pH Units	1	10/4/10 16:01	10/4/10 16:27	SW 9040B	RMN
*Total Suspended Solids	U	4.00		mg/L	1	10/10/10 10:30	10/11/10 17:15	SM 2540D	RMN
TMI									
Fecal Coliform	< 1.0	1		CFU/100ml	1	10/4/10 3:00	10/4/10 3:00	SM 9222D Fe	RR

Oct. 26 - Retest by forced discharge

Prairie Analytical Systems, Inc.

Date: 11/3/2010

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Testing 1
Client Sample ID: Effluent
Collection Date: 10/26/10 7:45

Lab Order: 10J0363
Lab ID: 10J0363-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.coli	1200	1		CFU/100ml	1	10/26/10 12:00	10/26/10 12:00	SM 9222B	RR
FecalColiforms	1200	100		CFU/100ml	1	10/26/10 12:00	10/26/10 12:00	SM 9222D	RR

State of Missouri
Department of Natural Resources
1709 Prospect Drive
Macon, MO 63552-2602

February 23, 2011

Mr. Darryl McCullough

Enclosed you will find the original copies of the Self Reporting Form For Wastewater Bypasses along with an incident description. If I can be of any further assistance please feel free to contact me.

Thank you,

Scott Miller
Director of Maintenance
Lewis Co. C-1 School Dist.

On Monday February 21st I was checking our lagoon and taking a draw sample for testing. It was at that time around 1:30p.m. I discovered some sludge seeping from a manhole cover 25 yards east of the lagoon. At 1:35p.m. I contacted Geise Plumbing to fix the problem. At 2:00 p.m. I contacted Pam at the DNR Emergency Reporting Office to report the problem. By 2:30p.m. Geise Plumbing showed up with a jet machine to unplug the pipe. They were able to open the pipe from the manhole to the lagoon but noticed the pipe coming into the manhole was not flowing properly. At that point they moved back to the next manhole (approximately 50 yards east) and jetted towards the 1st manhole and lagoon. They were able to partially open the line but ran out of water. The line was probably 50% opened and level in the manhole was around 2' below the top of the manhole. They were to return the following morning with more water to completely open the line. On Tuesday February 22nd I checked the manholes at 7:30 a.m. noticing no change in the level in the manhole and no more seepage onto the ground. At 10:30a.m. Geise Plumbing returned to finish flushing out the line. By 11:30a.m. the line was 100% open. At around 2:30p.m. I received a phone call from Darryl McCullough asking about our bypass. Mr. McCullough gave me instructions to clean the area, spread lime on affected area, notify the landowner downstream, place a warning sign visible from Hwy. 6, and he sent the self reporting form to be completed within 5 days. At 3:00p.m. I cleaned up the sludge from around the manhole disposing of it within the lagoon. I then spread lime on top of the affected area. Around 5:00p.m. I notified the homeowner downstream explaining the situation. On Wednesday February 23rd I placed a warning sign downstream of the spill and visible from Hwy. 6. I have contacted Geise Plumbing and we are going to schedule a time that they can bring a camera to video this line to ensure there are no problems with the line itself. I will also continue to monitor the lagoon and check for any problems on a regular basis.

Sincerely,

Scott Miller
Director of Maintenance
Lewis Co. C-1 School Dist.

Self Reporting Form For Wastewater Bypasses

Notice: Under RSMO 10 CSR 20-7.015 and in accordance with reporting requirements in your Missouri State Operating Permit (MSOP), all permittees shall provide the following notices if an unscheduled sanitary sewer overflow or bypass occurs:

- Within **24 hours** of the occurrence, notify the Missouri Department of Natural Resources (MDNR) by telephone.
- Within **5 days** of the occurrence, provide a written report describing the overflow or bypass, including all information requested on this form. The permittee is required to submit this form or other equivalent written notification.

Failure to notify the department as specified may result in civil or criminal penalties for noncompliance.

Instructions: Use this form to report all unscheduled sanitary sewer overflow or bypass occurrences. Attach additional information as necessary to explain or document the overflow or bypass. For the purpose of this report, an overflow or bypass is defined as the diversion of wastewater from any portion of a wastewater treatment facility or sewer system to waters of the state or where the contaminants might reasonably reach waters of the state.

Use one form per occurrence. A single occurrence may be more than one day if the circumstance causing the overflow or bypass results in a discharge duration more than 24 hours. If there is a stop and restart of the overflow or bypass within 24-hours, but it is caused by the same circumstance, report it as one occurrence. If the discharges are separated by more than 24 hours, they should be reported as separate occurrences.

Notification Information		Permit Number: MO- <u>0117650</u>	
Permittee (Municipality or Facility Name)		Overflow or Bypass Reported to MDNR	
<u>Lewis Co. Elementary Wastewater Treatment Facility</u>		Date	Time
		<u>2/21/2011</u>	<u>2:00</u> <input type="checkbox"/> am <input checked="" type="checkbox"/> pm
Person Representing Permittee Who Contacted MDNR		MDNR Office and Person Contacted	
<u>Scott Miller</u>		<u>1-573-634-2436</u> <u>Emergency Reporting Office Pam</u>	
Overflow or Bypass Details			
Date(s) and Duration of Overflow or Bypass Occurrence (complete a separate form for each occurrence)			
Start Date	Time (to nearest 15 minutes)	End Date	Time (to nearest 15 minutes)
<u>Discovered 2-21-2011</u>	<u>1:30</u> <input type="checkbox"/> am <input checked="" type="checkbox"/> pm	<u>2-21-2011</u>	<u>4:30</u> <input type="checkbox"/> am <input checked="" type="checkbox"/> pm
Duration of the overflow or bypass (hours and minutes)		Estimated Volume of Wastewater Discharged (gallons)	
<u>From discovery to repair 3 hours</u>		<u>100 gallons or less</u> ^{?? mainly sludge} <u>around manhole</u>	
Location of the Overflow or Bypass (complete a separate form for each discharge location)			
<u>Manhole approximately 25 yards east of lagoon</u>			
Circumstances Causing the Overflow or Bypass (check all that apply)			
<input type="checkbox"/> Rain	<input type="checkbox"/> Power Outage	<input type="checkbox"/> Equipment Failure	
<input type="checkbox"/> Rain and/or Snow Melt	<input checked="" type="checkbox"/> Plugged Sewer	<input type="checkbox"/> Widespread Flooding	
<input type="checkbox"/> Vandalism	<input type="checkbox"/> Broken Sewer	<input type="checkbox"/> Other (explain below)	
Type of Bypass:			
<input type="checkbox"/> Pipe Break	<input type="checkbox"/> Lagoon/Basin Overflow	<input type="checkbox"/> Digester	<input checked="" type="checkbox"/> Manhole
<input type="checkbox"/> Drying Beds	<input type="checkbox"/> Lift Station	<input type="checkbox"/> Clarifier/Filter/Batch Reactor	<input type="checkbox"/> Head Works
Strength of Bypass: <input checked="" type="checkbox"/> Raw <input type="checkbox"/> Partially Treated			

Overflow or Bypass Details

Provide a narrative description to further explain why the overflow or bypass occurred. For example, describe what equipment failed, what caused the power outage, or what plugged the sewer. Flooding should only be indicated as a cause if there is significant flooding that is caused by high river, stream, or lake water levels, not just localized high water in the street.

In the process of getting a lab sample and checking the lagoon I noticed some sludge seeping out around the manhole cover. I immediately contacted a plumber who came within an hour and partially opened the line with a jet machine - No more waste was coming around the manhole but due to running out of water & daylight the plumber had to return the next morning to completely open the line.

Wet Weather Data (if applicable)

Document the weather conditions if it contributed to the cause of the overflow or bypass. An overflow or bypass may be caused by a series of short rain storms or in combination with a snow melt. The wet weather data should include the cumulative amount of precipitation that caused the overflow or bypass.

Date(s) and Duration of Rainfall

Start Date	Time (to nearest 15 minutes) <input type="checkbox"/> am <input type="checkbox"/> pm	End Date	Time (to nearest 15 minutes) <input type="checkbox"/> am <input type="checkbox"/> pm
------------	--	----------	---

Amount of Rainfall (nearest rain gauge to 0.1 inch accuracy)	Amount of Snow Melt (estimated inches melted)
--	---

Contributing Soil Conditions (saturated, frozen, soil type)

Where Did the Discharge from the Overflow or Bypass Go? (check all that apply)

Provide the name of the local receiving water that the wastewater enters, which could be a nearby stream, river, lake, or wetland. If discharge does not enter directly into a surface water, but indirectly by way of a ditch or storm sewer, trace the path of the ditch or storm sewer to find the receiving water.

- Runs on ground and absorbs into the soil.
- Ditch. Name of surface water it drains to: unnamed tributary to Grassy Creek
- Storm sewer. Name of surface water it drains to: _____
- Surface water direct discharge: _____
- Other, describe: _____

Actions to Correct This Occurrence and Prevent Future Overflows or Bypasses

Describe what actions were taken to minimize the volume of wastewater discharged from the overflow or bypass reported on this form. Also describe what actions are planned to prevent or minimize future overflows or bypasses. The MSOP permit prohibits bypasses, unless certain specified conditions are met. If the permittee fails to operate and maintain the sewage collection system to prevent overflows and bypasses, they will be subject to enforcement action.

The sewer line was opened and sewage is flowing to the lagoon as designed. I cleared up sludge from around the manhole and placed it in the lagoon. Lime was then spread on top of the affected area. The homeowner was notified that lives directly downstream of the lagoon. A sign was placed by the road, downstream of the spill stating "Raw Sewage, keep out!" We will continue to monitor & check the lagoon ~~for~~ weekly for any problems. We are also going to have a plumber run a camera down the line to check for any piping problems.

Type of Samples Taken: BOD TSS Fecal Ammonia DO None Other: _____

Report Completed By

Authorized Representative Name (Print) <u>Scott Miller</u>	Title <u>Director of Maintenance</u>
Authorized Representative Signature <u>Scott Miller</u>	Date <u>2-23-2011</u>

HIGHLAND HIGH SCHOOL

Home of the Cougars

Jason Fink
Principal

P. O. Box 366, Ewing, MO 63440
573-209-3215
573-209-3469 fax

Larry Post
Assistant Principal

June 25, 2011

Dept. of Natural Resources
1709 Prospect Drive
Macon, Mo. 63552

Dear Ms. Crawford

Enclosed is our 2011 Second Quarter DMR for Lewis County C-1 School District. You will also find weekly E. coli testing results for the weeks we were discharging since the beginning of this recreational season. I do have some concerns of possible inaccurate test results for the end of May and beginning of June. During this time frame we experienced unusual high rainfall amounts possibly explaining the dramatic change in my weekly E. coli monitoring. At that time I also found a dead raccoon in the second cell of our system. I feel that our system is working as it should and that the high E. coli results we experienced were due to uncontrollable circumstances. Please feel free to contact me if you have any questions.

Sincerely,

Scott Miller
Ind. Tech/Maintenance Supervisor

Facility Name	Lewis County Elementary Wastewater Treatment Facility		Current Address:	Owner <input checked="" type="checkbox"/> Billing <input checked="" type="checkbox"/>	Address Change For: Owner <input type="checkbox"/> Billing <input type="checkbox"/>
Permit Number	#MO-0117650		Lewis Co. C-1 School Dist		
County	Lewis County		PO Box 366		
Facility Type	Three cell lagoon		Ewing Mo. 63440		
SAMPLES COLLECTED BY	DATE	PHONE NUMBER	ANALYSES PERFORMED BY (Lab)	PHONE NUMBER (Lab)	
Scott Miller- Director of Maintenance	5/23/2011	573-209-3217	Praire Analytical Systems Inc.	217-753-1148	
SIGNATURE AND TYPE OF INDIVIDUAL PREPARING REPORT	DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)		This report covers the period of: Apr. 1st- June 30th 2011
<i>Scott Miller - Director of Maintenance</i>	5/23/11	same			
SIGNATURE OF OWNER OR DESIGNEE APPROVING REPORT	DATE	PHONE NUMBER	E-MAIL ADDRESS (Optional)		
		same			

PERMIT LIMITATIONS AND MONITORING REQUIREMENTS

Parameter	Outfall #001			Interim Permit Limitations			Monitoring Requirement		
	Units	Daily Maximum	Weekly Average	Monthly Average	Frequency	Sample Type	Due Date		
Flow	MGD	*	*	*	monthly	24 hr estimate			
Biochemical Oxygen Demand	mg/L	65	45	45	quarterly ***	grab			
Total Suspended Solids	mg/L	110	70	70	quarterly ***	grab			
pH	SU	**	**	**	quarterly ***	grab	The 28th day following the end of the quarter		
Ammonia	mg/L	*	*	*	quarterly ***	grab			
Temperature (Effluent)	°C	*	*	*	quarterly ***	grab			
Oil & Grease	mg/L	15	10	10	quarterly ***	grab			
Fecal Coliform	#/100mL	*	*	*	quarterly ***	grab			

DMR SAMPLING SUMMARY

Parameter	Outfall #001			NO DISCHARGE	
	Daily Minimum	Daily Maximum	Weekly Average	Monthly Average	
Flow	0.0108	0.0108		0.0108	
Biochemical Oxygen Demand			U	U	
Total Suspended Solids			10	10	
pH	8.04	8.04			
Ammonia		0.421		0.421	
Temperature (Effluent)		8.89c		8.89c	
Oil & Grease		U		U	
Fecal Coliform		2		2	

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY. THE FIRST REPORT IS DUE OCTOBER 28, 2009.

IF A VIOLATION OCCURRED, PLEASE ATTACH THE FOLLOWING: AN EXPLANATION OF POSSIBLE CAUSE, EXACT DATE OF NON-COMPLIANCE, DATE ANTICIPATED TO RETURN TO COMPLIANCE, AND WHAT STEPS YOUR OPERATION WILL TAKE TO PREVENT A REOCCURRENCE OF THE VIOLATION.

- * Monitoring requirement only.
- ** pH is measured in pH units and is not to be averaged. The pH is to be maintained at or above 6.0 pH units
- *** Sample discharge at least once for the months of Jan, Feb, Mar-1st Quarter, Apr, May, Jun-2nd Quarter, Jul, Aug, Sep-3rd Quarter, Oct, Nov, Dec-4th Quarter

THIS DMR IS EFFECTIVE ON:	THIS DMR EXPIRES ON:
August 8, 2008	August 5, 2013



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 1 of	2
Month:	4
Year:	2011

Outfall #001	EFFLUENT							This report covers the period of: Apr. 1st- June 30th 2011
	DATE	Flow MGD	Biochemical Oxygen Demand mg/L	Total Suspended Solids mg/L	pH SU	Ammonia mg/L	Temperature (Effluent) ° C	
1								
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20								
21	0.0108	U	10	8.04	0.421	8.89c	U	<p>For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:</p> <ul style="list-style-type: none"> (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
22								
23								
24								
25								
26								
27								
28								
29								
30								
31								
TOTAL	0.0108	U	10	8.04	0.421	8.89	U	
DAILY MINIMUM	0.0108	U	10	8.04	0.421	8.89	U	
DAILY MAXIMUM	0.0108	U	10	8.04	0.421	8.89	U	
WEEKLY AVERAGE	0.0108	U	10	8.04	0.421	8.89	U	
MONTHLY AVERAGE	0.0108	U	10	8.04	0.421	8.89	U	

The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	4
Year	2011

Outfall #001, continued	EFFLUENT						This report covers the period of:
DATE	Fecal Coliform #/100mL						Apr. 1st- June 30th 2011
1							For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
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30							
31							
TOTAL	2						
DAILY MINIMUM	2						
DAILY MAXIMUM	2						
WEEKLY AVERAGE	2						
MONTHLY AVERAGE	2						

The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	4
Year	2011

Outfall #001, continued	EFFLUENT						This report covers the period of:
DATE	ECOLI #/100mL						Apr. 2011
1							For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information: (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses.
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16	E						
17	L						
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28	U						
29							
30							
31							
TOTAL	6						
DAILY MINIMUM	0						
DAILY MAXIMUM	6						
WEEKLY AVERAGE	6						
MONTHLY AVERAGE	3						

The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	4
Year	2011

Outfall #001, continued	EFFLUENT					
DATE	ECOLI #/100mL					
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26						
27	660					
28						
29						
30						
31						
TOTAL	660					
DAILY MINIMUM	0					
DAILY MAXIMUM	660					
WEEKLY AVERAGE	660					
MONTHLY AVERAGE	330					

This report covers the period of:

May-11

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:
 (i) the date, exact place, and time of sampling or measurements;
 (ii) the individual(s) who performed the sampling or measurements;
 (iii) the date(s) analyses were performed;
 (iv) the individual(s) who performed the analyses;
 (v) the analytical techniques or methods used; and
 (vi) the results of such analyses.

The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.



Facility Name	Lewis County Elementary Wastewater Treatment Facility
Permit Number	#MO-0117650
County	Lewis County

Data Page 2 of 2	
Month	4
Year	2011

Outfall #001, continued	EFFLUENT							This report covers the period of:
DATE	ECOLI #/100mL							Jun-11
1								<p>For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:</p> <ul style="list-style-type: none"> (i) the date, exact place, and time of sampling or measurements; (ii) the individual(s) who performed the sampling or measurements; (iii) the date(s) analyses were performed; (iv) the individual(s) who performed the analyses; (v) the analytical techniques or methods used; and (vi) the results of such analyses. <p>The Federal Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or both.</p>
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3	232							
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28								
29	66							
30								
31								
TOTAL	371							
DAILY MINIMUM	20							
DAILY MAXIMUM	232							
WEEKLY AVERAGE	126							
MONTHLY AVERAGE	74.2							

LABORATORY RESULTS

Client: Lewis County C-1 School District
 Project: Quarterly Testing 1
 Client Sample ID: Effluent
 Collection Date: 4/21/11 8:00

Lab Order: 11D0387
 Lab ID: 11D0387-01
 Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
Conventional Chemistry Parameters									
*Ammonia (as N)	0.421	0.100		mg/L	1	4/26/11 15:49	4/26/11 15:49	SM 4500-NH	AJD
*Oil and Grease	U	1.00		mg/L	1	4/26/11 17:33	4/27/11 16:38	EPA 1664A	SLS
*Biochemical Oxygen Demand	U	2.00		mg/L	1	4/21/11 15:29	4/26/11 8:30	SM 5210B	RMN
*pH	8.04	0.0100		pH Units	1	4/21/11 14:00	4/21/11 14:00	SW 9040B	RMN
*Total Suspended Solids	10.0	4.00		mg/L	1	4/22/11 12:12	4/22/11 15:20	SM 2540D	AJD
TMI									
FecalColiforms	2	1		CFU/100ml	1	4/21/11 11:30	4/21/11 11:30	SM 9222D	RR
E. coli	6	1		CFU/100ml	1	4/21/11 11:30	4/21/11 11:30	SW 9223B	RR

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 10.0 Fecal
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LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Wastewater
Client Sample ID: Effluent
Collection Date: 4/28/11 8:00

Lab Order: 11D0497
Lab ID: 11D0497-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.coli	U	1		CFU/100ml	1	4/28/11 13:35	4/28/11 13:35	SM 9223B	RR

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Testing
Client Sample ID: Effluent
Collection Date: 5/5/11 8:00

Lab Order: 11E0086
Lab ID: 11E0086-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E. Coli	U	2		CFU/100ml	1	5/5/11 13:00	5/5/11 13:00	SM 9222B	JN

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Wastewater
Client Sample ID: Effluent
Collection Date: 5/27/11 9:45

Lab Order: 11E0488
Lab ID: 11E0488-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.coli	660	10		CFU/100ml	1	5/27/11 13:00	5/27/11 13:00	SM 9223B	RR

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Testing
Client Sample ID: Effluent
Collection Date: 6/3/11 8:20

Lab Order: 11F0070
Lab ID: 11F0070-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.coli	232	1		CFU/100ml	1	6/3/11 14:00	6/3/11 14:00	SM 9223B	RR

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Wastewater
Client Sample ID: Effluent
Collection Date: 6/8/11 8:10

Lab Order: 11F0142
Lab ID: 11F0142-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E. Coli	20	1		CFU/100ml	1	6/8/11 13:30	6/8/11 13:30	SM 9223B	JN

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Wastewater
Client Sample ID: Effluent
Collection Date: 6/15/11 8:15

Lab Order: 11F0271
Lab ID: 11F0271-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.coli	33	1		CFU/100ml	1	6/15/11 14:00	6/15/11 14:00	SM 9223B	RR

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Wastewater
Client Sample ID: Effluent
Collection Date: 6/21/11 8:45

Lab Order: 11F0393
Lab ID: 11F0393-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.Coli	20	1		CFU/ml	1	6/21/11 12:30	6/21/11 12:30	SM 9223B	RR

LABORATORY RESULTS

Client: Lewis County C-1 School District
Project: Quarterly Testing
Client Sample ID: Effluent
Collection Date: 6/29/11 8:15

Lab Order: 11F0563
Lab ID: 11F0563-01
Matrix: Water

Analyses	Result	Limit	Qual	Units	DF	Date Prepared	Date Analyzed	Method	Analyst
TMI									
E.Coli	66	1		CFU/100ml	1	6/29/11 13:45	6/29/11 13:45	SM 9223B	RR
