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-0054518
Owner:	City of Sweet Springs
Address:	324 South Miller Street, Sweet Spring, MO 65351
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Sweet Springs Wastewater Treatment Facility
Facility Address:	¼ Mile West of 125th Road & Rose Street Intersection, Sweet Springs, MO 65351
Legal Description:	NE¼, SE¼, Sec. 03, T48N, R23W, Saline County
UTM Coordinates:	X= 463243, Y= 4314094
Receiving Stream:	Unnamed Tributary to Davis Creek (U)
First Classified Stream and ID:	Davis Creek (P) (00907)
USGS Basin & Sub-watershed No.:	(10300104-0205)

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

FACILITY DESCRIPTION

Outfall #001 - POTW – SIC# 4952
The use or operation of this facility shall be by or under the supervision of a **Certified "D" Operator**
Four-cell lagoon / aerated primary cell / sludge is retained in lagoon.
Design population equivalent is 1959.
Design flow is 0.271 million gallons per day.
Actual flow is 0.115 million gallons per day.
Design sludge production is 29.4 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.

June 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2016
Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A-1. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 2 of 8
		PERMIT NUMBER MO-0054518

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 **May 31, 2017**. 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/weekday**	24 hr. estimate
E. coli (Note 1, Page 3)	#/100 ml		1030	206	once/week	grab
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/month	grab
Total Suspended Solids	mg/L		110	70	once/month	grab
pH – Units	SU	***		***	once/month	grab
Ammonia as N	mg/L	*		*	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Copper, Total Recoverable	µg/L	20.4		7.1	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE JUNE 28, 2013. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Zinc, Total Recoverable	µg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Condition #20			once/year	grab
WET TEST REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2014.						

* Monitoring requirement only.
** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
*** 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**	**Effluent Parameters**	**Report is Due**
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

OUTFALL #001	TABLE A-2. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS	PAGE NUMBER 3 of 8
		PERMIT NUMBER MO-0054518

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 **June 1, 2017**, 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/weekday**	24 hr. estimate
E. coli (Note 1, Page 3)	#/100 ml		1030	206	once/week	grab
Biochemical Oxygen Demand$_5$	mg/L		65	45	once/month	grab
Total Suspended Solids	mg/L		110	70	once/month	grab
pH – Units	SU	***		***	once/month	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	 3.9 8.3		 1.4 2.8	once/month	grab
Oil & Grease	mg/L	15		10	once/month	grab
Copper, Total Recoverable	µg/L	20.4		7.1	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE JULY 28, 2017. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Zinc, Total Recoverable	µg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2017. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Condition #20			once/year	grab
WET TEST REPORTS SHALL BE SUBMITTED ANNUALLY; THE FIRST REPORT IS DUE JANUARY 28, 2014.						

* Monitoring requirement only.
** Once each weekday means: Monday, Tuesday, Wednesday, Thursday, and Friday.
*** 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**	**Effluent Parameters**	**Report is Due**
First	January, February, March	Sample at least once during any month of the quarter	April 28th
Second	April, May, June	Sample at least once during any month of the quarter	July 28th
Third	July, August, September	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample at least once during any month of the quarter	January 28th

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).

TABLE B.
INFLUENT MONITORING REQUIREMENTS

The facility is required to meet a removal efficiency of 65% or more as a monthly average. The monitoring requirements shall become effective upon issuance and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand$_5$	mg/L	once/quarter*****	grab
Total Suspended Solids	mg/L	once/quarter*****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013.

***** See table below for quarterly sampling.

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

C. STANDARD CONDITIONS

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated October 1, 1980, May 1, 2013, and August 15, 1994, and hereby incorporated as though fully set forth herein.

D. SPECIAL CONDITIONS

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

   The permit as modified or reissued under this paragraph shall also contain any other requirements of the Clean Water Act then applicable.

2. All outfalls must be clearly marked in the field.

3. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

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

D. SPECIAL CONDITIONS (continued)

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

5. 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.

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

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

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

9. The permittee shall submit a report annually in January to the Northeast Regional Office with the Discharge and Monitoring reports which address measures taken to locate and eliminate sources of infiltration and inflow into the collection system serving the facility for the previous year.

10. 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.

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

12. 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.

13. 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.

D. SPECIAL CONDITIONS (continued)

14. 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.

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

16. 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.

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

18. 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.

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

20. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	once/year	Grab	Any

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

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

(i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

(ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

(iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; $p = 0.05$) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.

(3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

D. SPECIAL CONDITIONS (continued)

(4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.
   (i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.
   (ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(5) Follow-up tests do not negate an initial failed test.

(6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.

(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

(9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

E. SCHEDULE OF COMPLIANCE

The facility shall attain compliance with final effluent limitations for Ammonia as N 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, for Ammonia as N.

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

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL
OF
MO-0054518
SWEET SPRINGS

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: POTW - SIC #4952

Facility Description:
Four-cell lagoon / aerated primary cell / 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: 10/03/2011
Expiration Date: 03/23/2012

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.42	Secondary Equivalence	Domestic (Sanitary) Wastewater	0.5

Receiving Water Body's Water Quality & Facility Performance History:
No Stream Survey data available. This facility was last inspected on November 27, 2012 and was found to not be in compliance at that time for facility not meeting effluent limits, failing to comply with Chapter 8 regulations, failure to comply with permit conditions, failure to upgrade facilities and schedule of compliance not being met.

Part II – Operator Certification Requirements

Applicable ☒; This facility is required to have a certified operator.

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Owned or operated by or for:
  - Municipalities ☒
  - Public Sewer District: ☐
  - County ☐
  - Public Water Supply Districts: ☐
  - Private sewer company regulated by the Public Service Commission: ☐
  - State or Federal agencies: ☐

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

- Department required: ☒
  The Department requires this facility to retain the services of a certified operator due to having a Population Equivalent greater than two hundred (200) and more than fifty (50) service connections.

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

Operator's Name: Chad Eckhoff
Certification Number: 11800
Certification Level: D

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

Part III– Operational Monitoring

As per [10 CSR 20-9.010(4))], the facility is 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:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	EDU**
Unnamed Tributary to Davis Creek	U	--	General Criteria	10300104-0205	Central Plains/ Blackwater/Lamine
Davis Creek	P	0907	LWW, AQL, 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).
** - Ecological Drainage Unit

RECEIVING STREAM(S) LOW-FLOW VALUES:

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

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.

☒ - Except for Total Recoverable Zinc, all limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.

☒ - For Total Recoverable Zinc, limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44.

☒ - Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance.

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 land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.

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

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

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

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

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

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

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

Applicable ☒; A RPA was conducted on appropriate parameters. Please see **APPENDIX B– RPA RESULTS.**

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

Applicable ☒; Equivalent to Secondary Treatment is 65% removal [40 CFR Part 133.105(a)(3) & (b)(3)].

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

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

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

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

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.

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 facility may not be able to meet final effluent limitations and may require construction upgrades. The Department feels that the SOC granted in the permit provides sufficient time for the permittee to acquire necessary funding, submit any necessary applications and engineering design and specifications, and complete construction. If the permittee feels that a longer SOC is required, then the permittee must submit justification as to why more time is needed.

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

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

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

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

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:

$$Ce = \frac{(Qe + Qs)C - (Cs \times Qs)}{(Qe)}$$ (EPA/505/2-90-001, Section 4.5.5)

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

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

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

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

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

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

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

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

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

☐ Facility is a designated Major.
☐ Facility continuously or routinely exceeds its design flow.
☐ Facility (industrial) that alters its production process throughout the year.
☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
☒ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
☒ Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
☐ Other – please justify.

40 CFR 122.41(M) - BYPASSES:
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass, which includes blending, is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-2.010(11) defines a bypass as the diversion of wastewater from any portion of wastewater treatment facility or sewer system to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

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.

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

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

Part VI – 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.

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

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	
TSS	mg/L	1, 4		110	70	No	
pH	SU	1, 4	≥ 6.5		≥ 6.5	Yes	≥ 6.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	3.9		1.4	Yes	*
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	8.3		2.8	Yes	*
Escherichia coli	**	1, 3		1030	206	Yes	Change from Fecal Coliform
Oil & Grease (mg/L)	mg/L	1, 3	15		10	No	
Copper, Total Recoverable	µg/L	1, 2	20.4		7.1	Yes	17.1/8.5
Zinc, Total Recoverable	µg/L	1, 2	*		*	Yes	168.6/84
Whole Effluent Toxicity (WET) Test	% Survival	11	Please see WET Test in the Derivation and Discussion Section below.				

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

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow**. In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.

- **Biochemical Oxygen Demand (BOD_5).**

  ☒ – 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 (Default).

Season	Temp (^oC)	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 = ((.42 + 0.0)1.5 – (0.0 * 0.01))/.42
C_e = 1.5 mg/L

Acute WLA: C_e = ((.42 + 0.0)12.1 – (0.0 * 0.01))/.42
C_e = 12.1 mg/L

LTA_c = 1.5 mg/L (0.757) = 1.14 mg/L [CV = 0.68, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.290) = 3.51 mg/L [CV = 0.68, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.14 mg/L (3.45) = 3.9 mg/L [CV = 0.68, 99th Percentile]
AML = 1.14 mg/L (1.21) = 1.4 mg/L [CV = 0.68, 95th Percentile, n =30]

Winter: October 1 – March 31

Chronic WLA: C_e = ((.42 + 0.0)3.1 – (0.0 * 0.01))/.42
C_e = 3.1 mg/L

Acute WLA: C_e = ((.42 + 0.0)12.1 – (0.0 * 0.01))/.42
C_e = 12.1 mg/L

LTA_c = 3.1 mg/L (0.747) = 2.32 mg/L [CV = 0.71, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.277) = 3.35 mg/L [CV = 0.71, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 2.32 mg/L (3.61) = 8.3 mg/L [CV = 0.71, 99th Percentile]
AML = 2.32 mg/L (1.23) = 2.8 mg/L [CV = 0.71, 95th Percentile, n =30]

- ***Escherichia coli (E. coli)***. Monthly average of 206 per 100 ml as a geometric mean and Weekly Average of 1030 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.

Metals

Effluent limitations for total recoverable metals were developed using methods and procedures outlined in the "Technical Support Document For Water Quality-based Toxic Controls" (EPA/505/2-90-001) and "The Metals Translator: Guidance For Calculating A Total Recoverable Permit Limit From A Dissolved Criterion" (EPA 823-B-96-007). General warm-water fishery criteria apply and a water hardness of 156 mg/L is used in the conversion below.

METAL	CONVERSION FACTORS	
	ACUTE	CHRONIC
Copper	0.960	0.960
Zinc	0.980	0.980

Conversion factors for Cd and Pb are hardness dependent. Values calculated using equation found in Section 1.3 of EPA 823-B-96-007 and hardness = 156 mg/L.

- **Copper, Total Recoverable**. Protection of Aquatic Life Chronic Criteria = 13.64 µg/L, Acute Criteria = 21.28 µg/L.

  Chronic = 13.64/0.960 = 13.09 µg/L
  Acute = 21.28/0.960 = 20.43 µg/L

  Chronic WLA: $C_e = ((0.42 + 0.0)13.09 – (0.0 * 0.0))/0.42$
  $C_e = 13.09$ µg/L

  Acute WLA: $C_e = ((0.42 + 0.0)20.43 – (0.0 * 0.0))/0.42$
  $C_e = 20.43$ µg/L

  LTA_c = 13.09 (0.266) = 3.48 µg /L [CV = 1.492, 99th Percentile]
  LTA_a = 20.43 (0.145) = **2.96** µg/L [CV = 1.492, 99th Percentile]

  Use most protective number of LTA_c or LTA_a.

  MDL = 2.96 (6.90) = 20.4 µg/L [CV = 1.492, 99th Percentile]
  AML = 2.96 (2.39) = 7.1 µg/L [CV = 1.492, 95th Percentile, n = 4]

- **Zinc, Total Recoverable**. Due to No Reasonable Potential to exceed effluent limitations, it is the staffs' best professional judgment that this parameter has a Monitoring Only Requirement. This monitoring requirement is being placed in the permit to ensure efficacy of the facility's pretreatment program.

- **Hardness Monitoring**. Hardness monitoring removed. Hardness data from effluent is not representative of instream hardness in the classified receiving stream, and therefore cannot be used in calculations for metals with toxicity which varies by hardness. Therefore this monitoring is determined to no longer be necessary.

- **WET Test**. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring*. It is recommended that WET testing be conducted during the period of lowest stream flow.

  ☒ Acute

  ☒ No less than **ONCE/YEAR:**
  ☒ Facility has Water Quality-based effluent limitations for toxic substances (other than NH_3).

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

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/weekday	once/month
E. coli	once/week	once/month
BOD_5	once/month	once/month
TSS	once/month	once/month
pH	once/month	once/month
Ammonia as N	once/month	once/month
Oil & Grease	once/month	once/month
Copper, Total Recoverable	once/month	once/month
Zinc, Total Recoverable	once/quarter	once/quarter

Sampling Frequency Justification:
Previous Sampling and Reporting Frequencies have been reevaluated and determined to be protective of water quality standards. Therefor sampling and reporting frequencies have been retained from previous permit. Reporting frequency for zinc was reduced to once/quarter due to a lack of reasonable potential. Except for *E. coli*, weekly sampling is required per 10 CSR 20-7.015.

Sampling Type Justification
As per 10 CSR 20-7.015, samples collected for lagoons shall be grab samples.

Part VII – Finding of Affordability

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

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

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

Part VIII – Administrative Requirements

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

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

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

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

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

☒ - The Public Notice period for this operating permit was between April 12 and May 13, 2013. No comments were received.

DATE OF FACT SHEET: JANUARY 8, 2013

COMPLETED BY:

JEREMY PAYNE, ENVIRONMENTAL SPECIALIST II
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
FINANCIAL ASSISTANCE CENTER
573-751-6823
jeremy.payne@dnr.mo.gov

Appendices

APPENDIX A- CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	.2
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	.3
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page **ONE (1)**	----	8.5

APPENDIX A- CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	2
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	
Aerated lagoon	8	8
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page **TWO (2)**	----	10
Total from page **ONE (1)**	---	8.5
Grand Total	---	18.5

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

APPENDIX B– RPA RESULTS:

Parameter	CMC	RWC Acute	CCC	RWC Chronic	n	Max/Min	CV	MF	Reasonable Potential
Ammonia as Nitrogen (Summer)	12.10	10.09	1.50	10.09	30.00	4.67/0.03	0.68	2.16	YES
Ammonia as Nitrogen (Winter)	12.10	25.99	3.10	25.99	29.00	11.5/0.42	0.71	2.26	YES
Copper, Total Recoverable	22.05	67.24	14.09	63.84	37.00	22.2/0.00	1.25	3.05	YES
Zinc, Total Recoverable	706.10	37.87	706.81	35.95	20.00	15.8/0.00	0.63	2.41	NO

N/A – Not Applicable
* - Units are (µg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

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

APPENDIX C– AFFORDABILITY ANALYSIS:

Missouri Department of Natural Resources
Water Protection Program
Affordability Determination and Finding

(In accordance with RSMo 644.145)

Sweet Springs Wastewater Treatment Plant
City of Sweet Springs
Renewal and Modification - Operating Permit #MO-0054518

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

Description:
The Sweet Springs Wastewater Treatment Facility (WWTF) is located ¼ mile west of the intersection of 125th Road and Rose Street, Sweet Springs, MO. This facility discharges to a tributary of Davis Creek (Class P) (WBID 0907).

Residential Connections: __571_____
Commercial Connections: __13____
Total Connections: ___584[1]_____

Proposed New Permit Requirements or Requirements Now Being Enforced:
Missouri State Operating Permit No. MO-0054518 expired on March 22, 2012. An application for renewal was received on October 3, 2011. New effluent limits are being considered for *E.coli* (replacing fecal coliform), ammonia and total recoverable copper. The proposed new permit requirements may require the design, construction and operation of ammonia treatment. A schedule of compliance may be included which will allow the City of Sweet Springs two (2) years from the date of permit issuance to achieve compliance with the new limits.

Range of Anticipated Costs Associated with Complying with the New Requirements:
The department estimates the cost for adding treatment for ammonia to be between $1,106,638 and $3,306,952 (CAPDETWORKS cost estimator was used). This cost, if financed through user fees, might cost each household up to $42 per month.

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

If user rates are used to finance and operate an upgrade, the rates may need to be as high as $42 per month, which may make each household rate as high as 1.13% of the community's MHI. Percentages between 1% and 2% could create a medium burden for a community.

[1] The number of connections was obtained from Form B of the application for permit renewal. The number shown for "commercial connections" appears on the application as "other" connections.

APPENDIX C– AFFORDABILITY ANALYSIS: (CONTINUED)

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

Current Annual Operating Costs (Exclude Depreciation):	unknown
Current User Rate:	$18.70/mo.
Future User Rate:	$42/mo.
Estimated Capital Cost of Pollution Control Options:	$1,106,638 - $3,306,952
Annual Cost of Additional *(operating costs and debt service)*:	NA
Estimated Resulting User Rate:	$42/mo.
Median Household Income[2]	$44,583
Current Usage Rate as a % of Median Household Income:	0.5%
Future Usage Rate as a % of Median Household Income:	1.13%[2]

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

If the user rates were calculated to finance the new permit requirements, the rates could be 1.13% of the MHI, and result in a medium financial impact.

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

The new permit limits on ammonia are anticipated to cost between $1,106,638 and $3,306,952. The environmental benefits of the increased ammonia removal will improve conditions for aquatic life in the stream receiving the discharge.

(4) An inclusion of ways to reduce economic impacts on distressed populations in the community, including but not limited to low and fixed income populations. This requirement includes but is not limited to:

(a) Allowing adequate time in implementation schedules to mitigate potential adverse impacts on distressed populations resulting from the costs of the improvements and taking into consideration local community economic considerations; and

(b) Allowing for reasonable accommodations for regulated entities when inflexible standards and fines would impose a disproportionate financial hardship in light of the environmental benefits to be gained;

[2] 42/(44583/12) = 1.13

APPENDIX C– AFFORDABILITY ANALYSIS: (CONTINUED)

Potentially Distressed Populations	
Unemployment for Sweet Springs[3]	1.3%
Median Household Income (MHI) in Sweet Springs[4]	$44,583
Percent Change in MHI (2000-2010)	32% Increase from $33,819 to $44,583
Percent Population Growth/Decline[5]	-8.85% Decrease from 2000 to 2010
Change in Median Age in Years (2000-2010)	+8% (from 39.3 to 42.4)
Percent of Households in Poverty[6]	9.5%
Percent of Households Relying on Food Stamps	15.0%

Opportunity for cost savings or cost avoidance:
None known.

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

(5) An assessment of other community investments relating to environmental improvements;

Unknown.

(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;***

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

[4] Median Household Income is provided by the American Fact Finder – INCOME IN THE PAST 12 MONTHS (IN 2010 INFLATION ADJUSTED DOLLARS) – 2006 – 2010 American Community Survey 5-Year Estimates, which can be found online at:
http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?pid=ACS_10_5YR_S1901&prodType=table

[5] Population trend data was obtained from online at http://mcdc1.missouri.edu/cgi-bin/profiler/profiler.py?profile_id=SF1_2010&geoids=16000US2971890

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

APPENDIX C– AFFORDABILITY ANALYSIS: (CONTINUED)

Secondary indicators for consideration:

Socioeconomic, Debt and Financial Indicators

Indicators	Strong (3 points)	Mid-Range (2 points)	Weak (1 point)	Score
Bond Rating Indicator	Above BBB or Baa	BBB or Baa	Below BBB or Baa	NA
Overall Net Debt as a % of Full Market Property Value	Below 2%	2% - 5%	Above 5%	NA
Unemployment Rate	>1% below Missouri average	± 1% of Missouri average	>1% above Missouri average	3
Median Household Income	More than 25% above Missouri MHI	± 25% of Missouri MHI	More than 25% below Missouri average	2
Property Tax Revenues as a % of Full Market Property Value	Below 2%	2% - 4%	Above 4%	NA
Property Tax Collection Rate	Above 98%	94% - 98%	Below 94%	NA

Average Score for Financial Capability Matrix: 2.5

Residential Indicator (from Criteria #2 above): 1.13

Financial Capability Matrix

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

Estimated Financial Burden: Medium Burden

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

Unknown.

APPENDIX C– AFFORDABILITY ANALYSIS: (CONTINUED)

Conclusion and Finding

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

The Department estimates that adding ammonia treatment will cost the City an estimated $1,106,638 to $3,306,952. Should this cost be financed through increased user fees, the increase might require user fees at 1.13% of the community's Median Household Income. This analysis concludes that the evaluated permit action will result in user fees between 1% and 2% of the community's median household income.

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

AP8095

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

FORM B2 – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY

FACILITY NAME	
Sweet Springs Wastewater Treatment Facility	no funds rec'd 10-3-11 ASD
PERMIT NO.	COUNTY
MO-0054518	Saline

APPLICATION OVERVIEW

Form B2 has been developed in a modular format and consists of Parts A, B and C and a Supplemental Application Information (Parts D, E, F and G) packet. All applicants must complete Parts A, B and C. Some applicants must also complete parts of the Supplemental Application Information packet. The following items explain which parts of Form B2 you must complete. Submittal of an incomplete application may result in the application being returned.

BASIC APPLICATION INFORMATION

A. Basic Application Information for all Applicants. All applicants must complete Part A.

B. Additional Application Information for all Applicants. All applicants must complete Part B.

C. Certification. All applicants must complete Part C.

SUPPLEMENTAL APPLICATION INFORMATION

D. Expanded Effluent Testing Data. A treatment works that discharges effluent to surface water of the United States and meets one or more of the following criteria must complete *Part D - Expanded Effluent Testing Data*:

1. Has a design flow rate greater than or equal to 1 million gallons per day.
2. Is required to have or currently has a pretreatment program.
3. Is otherwise required by the permitting authority to provide the information.

E. Toxicity Testing Data. A treatment works that meets one or more of the following criteria must complete *Part E - Toxicity Testing Data*:

1. Has a design flow rate greater than or equal to 1 million gallons per day.
2. Is required to have or currently has a pretreatment program.
3. Is otherwise required by the permitting authority to provide the information.

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 3 2011
US MAIL
___Email ___FAX ___UPS
___Hand Delivery ___Fed Ex

F. Industrial User Discharges and Resource Conservation and Recovery Act / Comprehensive Environmental Response, Compensation and Liability Act Wastes. A treatment works that accepts process wastewater from any significant industrial users, also known as SIUs, or receives a Resource Conservation and Recovery Act or CERCLA wastes must complete *Part F - Industrial User Discharges and Resource Conservation and Recovery Act /CERCLA Wastes*.

SIUs are defined as:

1. All Categorical Industrial Users, or CIUs, subject to Categorical Pretreatment Standards under 40 Code of Federal Regulations 403.6 and 40 Code of Federal Regulations 403.6 and 40 CFR Chapter 1, Subchapter N.
2. Any other industrial user that meets one or more of the following:
   i. Discharges an average of 25,000 gallons per day or more of process wastewater to the treatment works (with certain exclusions).
   ii. Contributes a process waste stream that makes up five percent or more of the average dry weather hydraulic or organic capacity of the treatment plant.
   iii. Is designated as an SIU by the control authority.

G. Combined Sewer Systems. A treatment works that has a combined sewer system must complete *Part G - Combined Sewer Systems.*

RECEIVED
OCT 18 2011
WATER PROTECTION PROGRAM

ALL APPLICANTS MUST COMPLETE PARTS A, B and C

no funds rec'd 10-3-11 ASD

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION CONTROL BRANCH

FORM B2 – APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE AND HAVE A DESIGN FLOW MORE THAN 100,000 GALLONS PER DAY

FOR AGENCY USE ONLY	
CHECK NUMBER: NONE SENT	
DATE RECEIVED: 10/18/11	FEE SUBMITTED: Ø

(K)

PART A – BASIC APPLICATION INFORMATION

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, 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- 0054518 Expiration Date 03/28/2012
- ☐ An operating permit modification: Permit #MO-_____ Reason: _____

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 3 2011
US MAIL
Email FAX UPS
Hand Delivery Fed Ex

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

NAME		TELEPHONE NUMBER WITH AREA CODE	
Sweet Springs Wastewater Treatment Facility		660-335-4221	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP
1/4 MILE WEST OF 125TH RD & ROSE ST INTERSECTIO	SWEET SPRINGS	MO	65351

2.1 **LEGAL DESCRIPTION** (Plant Site): NE ¼, SE ¼, ¼, Sec. 3 , T 48 , R 23 W County SALINE

2.2 UTM Coordinates Easting (X): 38.9 Northing (Y): 93.4
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

3. OWNER

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE	
CITY OF SWEET SPRINGS		660-335-4564	
ADDRESS	CITY	STATE	ZIP
324 S MILLER ST	SWEET SPRINGS	MO	65351

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		CITY	
CITY OF SWEET SPRINGS		SWEET SPRINGS	
ADDRESS	CERTIFICATE NUMBER (IF APPLICABLE)	STATE	ZIP
324 S MILLER ST	11800	MO	65351

5. OPERATOR

NAME	TITLE	TELEPHONE NUMBER WITH AREA CODE
CHAD ECKHOFF	SEWER SUPT	660-619-8332

6. FACILITY CONTACT

NAME	TITLE
CHAD ECKHOFF	SEER SUPT

MO 780-1805 (09-08)

FACILITY NAME	PERMIT NO.	OUTFALL NO.
SWEET SPRINGS WASTEWATER TR	MO- 0054518	#001

PART A – BASIC APPLICATION INFORMATION

7. ADDITIONAL FACILITY INFORMATION

7.1 BRIEF DESCRIPTION OF FACILITIES

Four cell lagoon / aerated primary cell / sludge is retained in lagoon.

7.2 TOPOGRAPHIC MAP. ATTACH TO THIS APPLICATION A TOPOGRAPHIC MAP OF THE AREA EXTENDING AT LEAST ONE MILE BEYOND FACILITY PROPERTY BOUNDARIES. THIS MAP MUST SHOW THE OUTLINE OF THE FACILITY AND THE FOLLOWING INFORMATION. (YOU MAY SUBMIT MORE THAN ONE MAP IF ONE MAP DOES NOT SHOW THE ENTIRE AREA.)

a. The area surrounding the treatment plant, including all unit processes.
b. The location of the downstream landowner(s). (See Item 10.)
c. The major pipes or other structures through which wastewater enters the treatment works and the pipes or other structures through which treated wastewater is discharged from the treatment plant. Include outfalls from bypass piping, if applicable.
d. The actual point of discharge.
e. Wells, springs, other surface water bodies and drinking water wells that are: 1) within ¼ mile of the property boundaries of the treatment works, and 2) listed in public record or otherwise known to the applicant.
f. Any areas where the sewage sludge produced by the treatment works is stored, treated or disposed.
g. If the treatment works receives waste that is classified as hazardous under the Resource Conservation and Recovery Act, or RCRA, by truck, rail or special pipe, show on the map where that hazardous waste enters the treatment works and where it is treated, stored or disposed.

7.3 PROCESS FLOW DIAGRAM OR SCHEMATIC. PROVIDE A DIAGRAM SHOWING THE PROCESSES OF THE TREATMENT PLANT. ALSO, PROVIDE A WATER BALANCE SHOWING ALL TREATMENT UNITS, INCLUDING DISINFECTION (E.G. CHLORINATION AND DECHLORINATION). THE WATER BALANCE MUST SHOW DAILY AVERAGE FLOW RATES AT INFLUENT AND DISCHARGE POINTS AND APPROXIMATE DAILY FLOW RATES BETWEEN TREATMENT UNITS. INCLUDE A BRIEF NARRATIVE DESCRIPTION OF THE DIAGRAM.

7.4 FACILITY SIC CODE	DISCHARGE SIC CODE:	FACILITY NAICS CODE:	DISCHARGE NAICS CODE:
4952 .	4952 .	2213 .	2213 .

7.5 NUMBER OF SEPARATE DISCHARGE POINTS
1

7.6 NUMBER OF PEOPLE PRESENTLY CONNECTED OR POPULATION EQUIVALENT	DESIGN POPULATION EQUIVILENT
1428	1959

NUMBER OF UNITS PRESENTLY CONNECTED
HOMES 558 APARTMENTS 3 TRAILERS 10 OTHER 13

TOTAL DESIGN FLOW (ALL OUTFALLS)	ACTUAL FLOW
271,000	115,000

7.7 DOES ANY BYPASSING OCCUR ANYWHERE IN THE COLLECTION SYSTEM OR AT THE TREATMENT FACILITY?
Yes ☐ No ■ (If Yes, attach an explanation.)

7.8 LENGTH OF THE SANITARY SEWER COLLECTION SYSTEM IN MILES
13

7.9 IS INDUSTRIAL WASTE DISCHARGED TO THE FACILITY IDENTIFIED IN ITEM 2? Yes ☐ No ☑

7.10 WILL THE DISCHARGE BE CONTINUOUS THROUGH THE YEAR? Yes ☑ No ☐

A. DISCHARGE WILL OCCUR DURING THE FOLLOWING MONTHS	B. HOW MANY DAYS OF THE WEEK WILL THE DISCHARGE OCCUR?
January through December	7 days a week

7.11 IS WASTEWATER LAND APPLIED? (If Yes, Attach Form I)	7.12 DOES THIS FACILITY DISCHARGE TO A LOSING STREAM OR SINKHOLE?
Yes ☐ No ☑	Yes ☐ No ☑

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.

8. LABORATORY CONTROL INFORMATION

8.1 LABORATORY WORK CONDUCTED BY PLANT PERSONNEL

Lab work conducted outside of plant.	Yes ☑	No ☐
Push–button or visual methods for simple test such as pH, settleable solids.	Yes ☐	No ☑
Additional procedures such as Dissolved Oxygen, Chemical Oxygen Demand, Biological Oxygen Demand, titrations, solids, volatile content.	Yes ☐	No ☑
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	Yes ☐	No ☑
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph.	Yes ☐	No ☑

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Sweet Springs Wastewater Treatment Fac	MO- 0054518	#001

PART A – BASIC APPLICATION INFORMATION

9. SLUDGE HANDLING, USE AND DISPOSAL

9.1 IS THE SLUDGE A HAZARDOUS WASTE AS DEFINED BY 10 CSR 25?
Yes ☐ No ☑

9.2 SLUDGE PRODUCTION, INCLUDING SLUDGE RECEIVED ROM OTHERS
Design Dry Tons/Year 29.4 tons/yr Actual Dry Tons/Year 24.0 tons/yr

9.3 CAPACITY OF SLUDGE HOLDING STRUCTURES

9.4 SLUDGE STORAGE PROVIDED
Cubic Feet Days of Storage Average Percent Solids of Sludge ☑ No Sludge Storage is Provided

9.5 TYPE OF STORAGE
☐ Holding Tank ☐ Basin ☐ Building ☐ Concrete Pad ☐ Other (Describe) _____

9.6 SLUDGE TREATMENT
☐ Anaerobic Digester ☐ Storage Tank ☐ Lime Stabilization ☑ Lagoon
☐ Aerobic Digester ☐ Air or Heat Drying ☐ Composting ☐ Other (Attach Description)

9.7 SLUDGE USE OR DISPOSAL
☐ Land Application ☐ Contract Hauler ☐ Hauled to Another Treatment Facility ☐ Solid Waste Landfill
☐ Surface Disposal (Sludge Disposal Lagoon, Sludge Held For More Than Two Years) ☐ Incineration
☐ Other (Attach Explanation Sheet) _____

9.8 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY

NAME			
n/a			
ADDRESS	CITY	STATE	ZIP
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO	
		MO-	

9.9 SLUDGE USE OR DISPOSAL FACILITY
☐ By Applicant ☐ By Others (Complete Below)

NAME			
n/a			
ADDRESS	CITY	STATE	ZIP
CONTACT PERSON	TELEPHONE NUMBER WITH AREA CODE	PERMIT NO	
		MO-	

9.10 DO THE SLUDGE OR BIOSOLIDS DISPOSAL COMPLY WITH FEDERAL SLUDGE REGULATIONS UNDER 40 CFR 503?
☐ Yes ☐ No (Attach Explanation)

10. DOWNSTREAM LANDOWNER(S). (ATTACH ADDITIONAL SHEETS AS NECESSARY.)

NAME			
Allen Hall Family			
ADDRESS	CITY	STATE	ZIP
c/o 1104 S Locust St	Sweet Springs	MO	65351

11. DRINKING WATER SUPPLY INFORMATION

11.1 SOURCE OF YOUR DRINKING WATER SUPPLY

A. PUBLIC SUPPLY (MUNICIPAL OR WATER DISTRICT WATER) (IF PUBLIC, PLEASE GIVE NAME OF PUBLIC SUPPLY)
C.P.W.D. #2 of Lafayette, Saline and Johnson Counties

B. PRIVATE WELL

C. SURFACE WATER (LAKE, POND OR STREAM)

11.2 DOES YOUR DRINKING WATER SOURCE SERVE AT LEAST 25 PEOPLE AT LEAST 60 DAYS PER YEAR (NOT NECESSARILY CONSECUTIVE DAYS)? Yes ☑ No ☐

11.3 DOES YOUR SPPLY SERVE HOUSING THAT IS OCCUPIED YEAR ROUND BY THE SAME PEOPLE? THIS DOES NOT INCLUDE HOUSING THAT IS OCCUPIED SEASONALLY? Yes ☑ No ☐

END OF PART A

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 3
US MAIL
FAX UPS

MAKE ADDITIONAL COPIES OF THIS FORM FOR EACH OUTFALL

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Sweet Springs Wastewater Treatment Fac	MO- 0054518	#001

PART B – ADDITIONAL APPLICATION INFORMATION

20. INFLOW AND INFILTRATION

ESTIMATE THE AVERAGE NUMBER OF GALLONS PER DAY THAT FLOW INTO THE TREATMENT WORKS FROM INFLOW AND INFILTRATION.

Gallons Per Day We have no way to monitor

BRIEFLY EXPLAIN ANY STEPS UNDERWAY OR PLANNED TO MINIMIZE INFLOW AND INFILTRATION.

We have been smoke testing areas of town and pluging leaks or requiring property owners to.

20.1 OPERATION AND MAINTENANCE PERFORMED BY CONTRACTOR(S)

ARE ANY OPERATIONAL OR MAINTENANCE ASPECTS (RELATED TO WASTEWATER TREATMENT AND EFFLUENT QUALITY) OF THE TREATMENT WORKS THE RESPONSIBILITY OF A CONTRACTOR?

Yes ☐ No ☑ If Yes, list the name, address, telephone number and status of each contractor and describe the contractor's responsibilities. (Attach additional pages if necessary.)

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 2
US MAIL
Email FAX UPS
Hand Delivered Fed Ex

NAME

MAILING ADDRESS

TELEPHONE NUMBER WITH AREA CODE

RESPONSIBILITIES OF CONTRACTOR

20.2 SCHEDULED IMPROVEMENTS AND SCHEDULES OF IMPLEMENTATION. PROVIDE INFORMATION ABOUT ANY UNCOMPLETED IMPLEMENTATION SCHEDULE OR UNCOMPLETED PLANS FOR IMPROVEMENTS THAT WILL AFFECT THE WASTEWATER TREATMENT, EFFLUENT QUALITY OR DESIGN CAPACITY OF THE TREATMENT WORKS. IF THE TREATMENT WORKS HAS SEVERAL DIFFERENT IMPLEMENTATION SCHEDULES OR IS PLANNING SEVERAL IMPROVEMENTS, SUBMIT SEPARATE RESPONSES FOR EACH. (IF NONE, GO TO QUESTION B-20.3.)

A. List the outfall number that is covered by this implementation schedule	B. Indicate whether the planned improvements or implementation schedule are required by local, state or federal agencies.
Outfall No. 001	Yes ☑ No ☐

20.3 WASTEWATER DISCHARGES:

COMPLETE QUESTIONS 20.4 THROUGH 20.7 ONCE FOR EACH OUTFALL (INCLUDING BYPASS POINTS) THROUGH WHICH EFFLUENT IS DISCHARGED. DO NOT INCLUDE INFORMATION ON COMBINED SEWER OVERFLOWS IN THIS SECTION.

20.4 DESCRIPTION OF OUTFALL

OUTFALL NUMBER

A. LOCATION

¼ NE ¼ SE ¼ ___ Section 3 Township 48N Range 23 ☐ E ☑ W

UTM Coordinates Easting (X): 3 Northing (Y): 48

For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

B. Distance from Shore (If Applicable)	C. Depth Below Surface (If Applicable)	D. Average Daily Flow Rate
___ ft.	___ ft.	.115 mgd

E. Does this outfall have either an intermittent or periodic discharge?

☐ Yes ☑ No If Yes, Provide the following information:

Number of Days Per Year Discharge Occurs:	Average Duration of Each Discharge:	Average Flow Per Discharge: mgd	Months in Which Discharge Occurs:

Is Outfall Equipped with a Diffuser? ■ Yes ☐ No

20.5 DESCRIPTION OF RECEIVING WATER

B. Name of Receiving Water

Unnamed tributary to Davis Creek

B. Name of Watershed (If Known)	U.S. Soil Conservation Service 14-Digit Watershed Code (If Known)
Davis Creek	10300104080002
B. Name of State Management/River Basin (If Known)	**U.S. Geological Survey 8-Digit Hydrologic Cataloging Unit Code (If Known)**
Central plains/Blackwater/Lamine	10300104
B. Critical Flow of Receiving Stream (If Applicable)	**B. Total Hardness of Receiving Stream at Critical Low Flow (If Applicable)**
Acute ___ cfs Chronic ___ cfs	mg/L of $CaCO_3$

MO 780-1805 (09-08)

FACILITY NAME	PERMIT NO.	OUTFALL NO.
Sweet Springs Wastewater Treatment Fac	MO- 0054518	#001

PART B – ADDITIONAL APPLICATION INFORMATION (CONTINUED)

20.6 DESCRIPTION OF TREATMENT

A. WHAT LEVELS OF TREATMENT ARE PROVIDED? Check All That Apply

☐ Primary ☑ Secondary ☐ Advanced ☐ Other (Describe)

B. INDICATE THE FOLLOWING REMOVAL RATES (AS APPLICABLE)

Design BOD_5 Removal Or Design $CBOD_5$ Removal 65 % Design SS Removal 65 %

Design P Removal ___% Design N Removal ___% Other ___ ___%

C. What type of disinfection is used for the effluent from this outfall? If disinfection varies by season, please describe:

If disinfection is by chlorination, is dechlorination used for this outfall? ☐ Yes ☐ No

Does the treatment plant have post aeration? ☐ Yes ☐ No

20.7 EFFLUENT TESTING DATA. ALL APPLICANTS THAT DISCHARGE TO WATERS OF THE U.S. MUST PROVIDE EFFLUENT TESTING DATA FOR THE FOLLOWING PARAMETERS. PROVIDE THE INDICATED EFFLUENT DATA **FOR EACH OUTFALL THROUGH WHICH EFFLUENT IS DISCHARGED**. DO NOT INCLUDE INFORMATION OF COMBINED SEWER OVERFLOWS IN THIS SECTION. ALL INFORMATION REPORTED MUST BE BASED ON DATA COLLECTED THROUGH ANALYSIS CONDUCTED USING 40 CFR PART 136 METHODS. IN ADDITION, THIS DATA MUST COMPLY WITH QA/QC REQUIREMENTS OF 40 CFR PART 136 AND OTHER APPROPRIATE QA/QC REQUIREMENTS FOR STANDARD METHODS FOR ANALYTES NOT ADDRESSED BY 40 CFR PART 136.

OUTFALL NUMBER

PARAMETER	MAXIMUM DAILY VALUE		AVERAGE DAILY VALUE		
	VALUE	UNITS	VALUE	UNITS	NO. OF SAMPLES
pH (Minimum)	7.6	S.U.	8.85	S.U.	2 per week
pH (Maximum)	10.1	S.U.	8.85	S.U.	2 per week
FLOW RATE	.052 daily	MGD	.052	MGD	1 time daily
TEMPERATURE (Winter)	6	°C	10	°C	2 per week
TEMPERATURE (Summer)	22	°C	19	°C	2 per week

*For pH report a minimum and a maximum daily value.

POLLUTANT		MAXIMUM DAILY DISCHARGE		AVERAGE DAILY DISCHARGE			ANALYTICAL METHOD	ML/MDL
		CONC.	UNITS	CONC.	UNITS	NO. OF SAMPLES		
Conventional and Nonconventional Compounds								
BIOCHEMICAL OXYGEN DEMAND (Report One)	BOD_5		mg/L	40	mg/L	1 per month	lab	
	$CBOD_5$		mg/L		mg/L			
FECAL COLIFORM		1000	#/100 mL	31	#/100 mL	1	lab	
TOTAL SUSPENDED SOLIDS (TSS)			mg/L	70	mg/L	1	lab	
AMMONIA (AS N)			mg/L	2.97	mg/L	1	lab	
CHLORINE (TOTAL RESIDUAL, TRC)			mg/L		mg/L			
DISSOLVED OXYGEN			mg/L		mg/L			
TOTAL KJELDAHL NITROGEN (TKN)			mg/L		mg/L			
NITRATE PLUS NITRITE NITROGEN			mg/L		mg/L			
OIL AND GREASE		15	mg/L	4.4	mg/L	1	lab	
PHOSPHORUS (TOTAL)			mg/L		mg/L			
TOTAL DISSOLVE SOLIDS (TDS)			mg/L		mg/L			
OTHER			mg/L		mg/L			

END OF PART B

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 3 2011
US MAIL ___ FAX ___ UPS
___ Email ___ Hand Delivery

MO 780-1805 (09-08)

PART C - CERTIFICATION

30. CERTIFICATION

All applicants must complete the Certification Section. This certification must be signed by an officer of the company or city official. All applicants must complete all applicable sections as explained in the Application Overview. By signing this certification statement, applicants confirm that they have reviewed the entire form and have completed all sections that apply to the facility for which this application is submitted.

ALL APPLICANTS MUST COMPLETE THE FOLLOWING CERTIFICATION.

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

PRINTED NAME AND OFFICIAL TITLE (MUST BE AN OFFICER OF THE COMPANY OR CITY OFFICIAL)

Raymond Kinney, Mayor

SIGNATURE

TELEPHONE NUMBER WITH AREA CODE

660-335-4564

DATE SIGNED

09/29/2011

Upon request of the permitting authority, you must submit any other information necessary to assess wastewater treatment practices at the treatment works or identify appropriate permitting requirements.

For Design Flows Less than 1 Million Gallons Per Day, Send Completed Form to:	For Design Flows of 1 Million Gallons Per Day or Greater, Send Completed Form to:
Appropriate Regional Office Map of regional offices with addresses and phone numbers is available on the Web at www.dnr.mo.gov/regions/ro-map.pdf.	Department of Natural Resources Water Protection Program ATTN: NPDES Permits and Engineering Section P.O. Box 176 Jefferson City, MO 65102

END OF PART C.
REFER TO THE APPLICATION OVERVIEW TO DETERMINE WHICH OTHER PARTS OF FORM B2 YOU MUST COMPLETE.

Do not complete the remainder of this application, unless:

1. Your facility design flow is equal to or greater than 1,000,000 gallons per day.
2. Your facility is a pretreatment treatment works.
3. Your facility is a combined sewer system.

Submittal of an incomplete application may result in the application being returned. Permit fees for returned applications shall be forfeited. Permit fees for applications being processed by the department that are withdrawn by the applicant shall be forfeited.

Department of Natural Resources
Northeast Regional Office
RECEIVED
OCT - 3 2011
US MAIL
____Email ____FAX ____UPS
____Hand Delivery ____Fed Ex

Note: Right click on a **blue marker** to remove it.

Clear/Reset All Markers | Center Red Marker

Get the Latitude and Longitude of a Point

When you click on the map, move the marker or enter an address the latitude and longitude coordinates of the point are inserted in the boxes below.

Latitude: 38.975032858304885

Longitude: -93.42417240142822

Department of Natural Resources
Northeast Regional Office
RECEIVED

OCT - 3

US MAIL
___Email ___FAX ___UPS
___Hand Delivery ___Fed Ex

Show Point from Latitude and Longitude

Use this if you know the latitude and longitude coordinates of a point and want to see where on the map the point is.

Use: **+** for *N* Lat or *E* Long **-** for *S* Lat or *W* Long.
Example: +40.689060 -74.044636
Note: Your entry should not have any embedded spaces.

Decimal Deg. Latitude:

Decimal Deg. Longitude: -09325276

Show Point

Example: **+34 40 50.12** for *34N 40' 50.12"*

http://itouchmap.com/latlong.html

Latitude and Longitude of a...

Try out the Google Earth Plug-in. Google Earth gives you a 3D look of the area around the center of the map, which is usually your last click point, and includes latitude, longitude and elevation information

Latitude and Longitude of a Point

Note: Right click on a **blue marker** to remove it.

Clear/Reset All Markers | Center Red Marker

Get the Latitude and Longitude of a Point

When you click on the map, move the marker or enter an address the latitude and longitude coordinates of the point are inserted in the boxes below.

Show Point from Latitude and Longitude

Use this if you know the latitude and longitude coordinates of a point and want to see where on the map the point is

Use: + for *N* Lat or *E* Long - for *S* Lat or *W* Long
Example: +40 689060 -74 044636
Note: Your entry should not have any embedded spaces

Decimal Deg. Latitude

Decimal Deg. Longitude -09325276

zealand
never leaves you
START PLANNING
NEW ZEALAND
100% PURE

3:48 PM
9/28/2011

Department of Natural Resources
Northeast Regional Office
RECEIVED

US MAIL
Email FAX UPS
Hand Delivered Fed Ex

Wednesday, Sep 28, 2011 03:49 PM