

**STATE OF MISSOURI**  
**DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**



**MISSOURI STATE OPERATING PERMIT**

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

Permit No. MO-0058246

Owner: City of LaPlata  
Address: 101 South Gex Street, La Plata, MO 63549

Continuing Authority: Same as above  
Address: Same as above

Facility Name: LaPlata WWTF  
Address: July Road, La Plata, MO 63549

Legal Description: SE ¼, SW ¼, Sec. 7, T60N, R14W, Macon County  
Latitude/Longitude: +4001026 / -09230078

Receiving Stream: Tributary to Long Branch Creek (U)  
First Classified Stream and ID: Long Branch Creek (C) (696)  
USGS Basin & Sub-watershed No.: (10280203 – 030001)

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 Class "D" Operator Required**

Two cell, no discharge lagoon system/irrigation onto row crops, pastures and golf course as needed. Sludge is retained in lagoon or land applied.

Design population equivalent is 1850.

Design flow is 216,202 gallons per day (1-in-10 year design including net rainfall minus evaporation).

Average design flow is 182,350 gallons per day (dry weather flows).

Actual flow is 167,150 gallons per day.

Design sludge production is 27.75 dry tons per year.

**Continued on page 2.**

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

July 23, 2010  
Effective Date

May 7, 2013  
Revised Date

Sara Parker Pauley, Director, Department of Natural Resources

July 22, 2015  
Expiration Date

John Madros, Director, Water Protection Program

**FACILITY DESCRIPTION** (continued)

**Outfall 001 - Storage Basin operational monitoring**

Legal Description: SE ¼, SW ¼, Sec. 7, T60N, R14W, Macon County  
Latitude/Longitude: +4001026 / -09230078  
Receiving Stream: Unnamed Tributary to Long Branch Creek (U)  
First Classified Stream and ID: Long Branch Creek (C) (696)  
USGS Basin & Sub-watershed No.: (10280203-030001)

**Receiving Stream Watershed:** A gaining stream setting

**Facility Type:**

No discharge Storage and Irrigation System

<b><u>Design Basis:</u></b>	<b><u>Avg Annual</u></b>
Design dry weather flows	<u>182,350</u> gpd
Design with 1-in-10 year flows	<u>216,202</u> gpd
Design PE <u>1850</u>	

**Storage Basin/Tank:**

Freeboard for basin: 2 feet  
Storage volume (minimum to maximum water levels) 33,606,353 gallons

**Storage Capacity (in Days):**

Design with 1-in 10 year flows: 155 days; (basin 1 = 100 days, Basin 2 = 55 days)

**Land Application:**

Irrigation Volume/year: 78,913,874 gallons (including 1-in-10 year flows)

**Outfall 002 - Land Application to Golf Course:** SW ¼, Section 7, T60N, R14W, Irrigation water is chlorinated.

Legal Description: N ½, SE ¼, Sec. 7, T60N, R14W  
Latitude/Longitude: +4001102 / -09230078  
Receiving Stream: Unnamed Tributary to Long Branch Creek (U)  
First Classified Stream and ID: Long Branch Creek (C) (696)  
USGS Basin & Sub-watershed No.: (10280203-030001)

Irrigation areas: 60 acres at design loading (60 acres total available)  
Application rates/acre: 0.2 inch/hour; 1 inch/day; 3 inches/week; 24 inches/year  
Field slopes: less than 15 percent  
Equipment type: sprinklers  
Vegetation: grass  
Application rate is based on: hydraulic loading rate

**Outfall 003 – Land Application to Private Agricultural Land**

Legal Description: SW ¼, Sec.17, T60N, R14W  
Latitude/Longitude: +4000105 / -09229207  
Receiving Stream: Unnamed trib. to Middle Fk. Salt River  
First Classified Stream and ID: Middle Fk. Salt River (C) (123)  
USGS Basin & Sub-watershed No.: (07110006-010001)

Irrigation areas: 120 acres at design loading (150 acres total available)  
Application rates/acre: 0.2 inch/hour; 1 inch/day; 3 inches/week; 18.5 inches/year  
Field slopes: less than 15 percent  
Equipment type: center pivots  
Vegetation: hay or crops  
Application rate is based on: hydraulic loading rate

<b>A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>					PAGE NUMBER 3 of 6	
					PERMIT NUMBER MO-0058246	
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 upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:						
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
<u>Outfall #001</u> - Land Application Operational Monitoring (Notes 1, 2 & 3)						
Lagoon Freeboard	feet	*			once/month	measured
Rainfall	inches	*			daily	total
<u>Outfall #002</u> – Land Application to Golf Course (Notes 2, 3 & 4 )						
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/acre	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2011</u> .						
Fecal Coliform	#/100 mL	200			once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>MONTHLY</u> ; THE FIRST REPORT IS DUE <u>September 28, 2010</u> .						
<u>Outfall #003</u> - Irrigated Wastewater (Notes 2 & 3)						
Irrigation Period	hours	*			daily	total
Volume Irrigated	gallons	*			daily	total
Application Area	acres	*			daily	total
Application Rate	inches/acre	*			daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2011</u> .						
<b>B. STANDARD CONDITIONS</b>						
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I, II &amp; III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 &amp; August 15, 1994</u> AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.						

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

\* Monitoring requirement only.

Note 1 - **No-discharge facility requirements.** Wastewater shall be stored and land applied during suitable conditions so that there is no-discharge from the lagoon or irrigation site. An emergency discharge may occur when excess wastewater has accumulated above feasible irrigation rates due to precipitation exceeding the 1-in-10-year 365 day rainfall or the 25-year 24-hour storm event.

Note 2 - Records shall be maintained and summarized into an annual operating report, which shall be submitted by January 28th of each year for the previous calendar year period using report forms approved by the Department. The report shall include the following:

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

- (a) Record of maintenance and repairs performed during the year, average number of times per month the facility is checked to see if it is operating properly, and description of any unusual operating conditions encountered during the year;
- (b) The number of days the lagoon has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- (c) A summary of the irrigation operations including freeboard at the start and end of the irrigation season, the number of days of irrigation for each month, the total gallons irrigated, the total acres used, crops grown, crop yields per acre, the application rate in inches/acre per day and for the year, the monthly and annual precipitation received at the facility and summary of testing results. This report is in addition to the reporting requirements of Table A, Effluent Limitations and Monitoring Requirements.

Note 3 - Lagoon freeboard shall be reported as lagoon water level in feet below the overflow level. See Special Conditions for Wastewater Irrigation System requirements.

Note 4 - Wastewater that is irrigated shall be sampled at the irrigation pump or wet well.

C. SPECIAL CONDITIONS

- 1. Emergency Discharge. Outfall 001 may only discharge if rainfall exceeds the 1 in 10 year (Data taken from the Missouri Climate Atlas) or the 24 hour, 25 year (Data taken from NRCS Urban Hydrology for Small Watersheds) rainfall events. **Discharge for any other reason shall constitute a permit violation and shall be recorded in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once per day while discharging. Test results are due on the 28<sup>th</sup> day of the month after the cessation of the discharge. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Biochemical Oxygen Demand <sub>5</sub>	mg/L
Total Suspended Solids	mg/l
Total Ammonia Nitrogen	mg/L
Temperature	°C
pH – Units	Standard Units

- 2. Report as no-discharge when a discharge does not occur during the report period.
- 3. Outfalls must be marked in field and on the topographic site map submitted with the permit application.
- 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;
    - (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.

C. SPECIAL CONDITIONS (continued)

5. 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.

6. Sludge and Biosolids Use For Domestic Wastewater Treatment Facilities

- (a) Permittee shall comply with the pollutant limitations, monitoring, reporting, and other requirements in accordance with the attached permit Standard Conditions.
- (b) If sludge is not removed by a contract hauler, permittee is authorized to land apply biosolids. Permit Standard Conditions, Part III shall apply to the land application of biosolids. Permittee shall notify the department at least 180 days prior to the planned removal of biosolids from the lagoon. The department may require submittal of a biosolids management plan for department review and approval as determined appropriate on a case-by-case basis.

7. Wastewater Irrigation System.

- (a) Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
- (b) Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the Emergency Spillway except due to exceedance of the 1-in-10 year or 25-year-24 hour storm events. The 1-in-10 year Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.
- (c) Emergency Spillway. Lagoons and earthen storage basins should have an emergency spillway to protect the structural integrity of earthen structures during operation at near full water levels and in the event of overflow conditions. The spillway shall be at least one foot below top of berm. The department may waive the requirement for overflow structures on small existing basins.
- (d) General Irrigation Requirements. The wastewater irrigation system shall be operated so as to provide uniform distribution of irrigated wastewater over the entire irrigation site. A complete ground cover of vegetation shall be maintained on the irrigation site unless the system is approved for row crop irrigation. The wastewater irrigation system shall be capable of irrigating the annual design flow during an application period of less than 100 days or 800 hours per year.
- (e) Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions.
- (f) Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling; or 50 feet of the property line.
- (g) Public Access Restrictions. Public access shall not be allowed to the irrigation site at Outfall 003.
- (h) Operation and Maintenance Manual. The permittee shall develop, maintain and implement an Operation and Maintenance (O&M) Manual that includes all necessary items to ensure the operation and integrity of the waste handling and land application systems. Copies of the O&M Manual and subsequent revisions shall be submitted to Regional Office for review and approval. The O&M Manual shall be reviewed and updated at least every five years.

C. SPECIAL CONDITIONS (continued)

- (i) Nitrogen Loading Rates. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year. Hydraulic application rates exceeding 60 inches per acre per year shall calculate nitrogen loading rates and include results in the annual report. The calculation procedures are as follows:  $(\text{Total N}) \times (0.226) \times (\text{inches per acre irrigated}) = \text{pounds total N per acre}$ . Where  $\text{Total N} = [\text{Total Kjeldahl Nitrogen (TKN) as N}] + [\text{Nitrate Nitrogen as N}]$ . If the applied wastewater exceeds, 150 pounds total nitrogen per acre/year, the permittee must reduce the application rates or submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops. PAN availability factors for surface application are:  $[\text{Ammonia N} \times 0.6] + [\text{Nitrate N} \times 0.9] + [\text{Organic N} \times 0.6] = \text{PAN}$ . The annual report shall include testing results for wastewater, soils and crop yields and calculations for nitrogen applied and crop removal of nitrogen.
  - (j) Equipment Checks during Irrigation. The irrigation system and application site shall be visually inspected at least once/day during wastewater irrigation to check for equipment malfunctions and runoff from the irrigation site.
8. The permittee shall comply with any applicable requirements listed in 10 CSR 20-8 and 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. In accordance with 10 CSR 20-9.010(3) the department has determined that pH and Dissolved Oxygen monitoring are not required for process control at this facility. The Permittee shall continue to record flow and ambient weather as specified in 10 CSR 20-9.010(5) (A).
9. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide for Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report semi-annually in April and October 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.
10. Irrigation may occur during nighttime hours, provided that a certified operator is present to monitor the irrigation system at all times. Nighttime application includes any time between one half hour after sunset and one half hour before sunrise. The certified operator is to check for equipment malfunctions and runoff from the irrigation site at least once per night during the irrigation period.
11. Wastewater irrigation at golf course – Outfall #002
  - (a) Wastewater that exceeds fecal coliform limits of 200 colonies/100 mL shall not be irrigated at the golf course.
  - (b) Irrigation shall not occur during access by the public.
  - (c) Wastewater irrigation lines shall be constructed and in accordance with 10 CSR 20-Chapter 8 to avoid use as potable water supplies or cross connection with potable water systems.

**Missouri Department of Natural Resources**  
**Statement of Basis**  
**#MO-0058246**  
**City of La Plata**

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

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

**Part I – Facility Information**

**Outfall # 001 - POTW - SIC #4952 Class “D” Operator Required**

Two cell, no discharge lagoon system/irrigation onto row crops, pastures and golf course as needed. Sludge is retained in lagoon or land applied.

Design population equivalent is 1850.

Design flow is 216,202 gallons per day (1-in-10 year design including net rainfall minus evaporation ).

Average design flow is 182,350 gallons per day (dry weather flows).

Actual flow is 167,150 gallons per day.

Design sludge production is 27.75 dry tons per year.

**Part II – Modification Rationale**

This operating permit is hereby modified to allow nighttime irrigation at outfall #3, thus allowing nighttime irrigation to both land application sites.

No other changes were made at this time.

**Part III – Administrative Requirements**

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

**Date of Statement of Basis:** April 11, 2013

Submitted by

Jeremy Payne, Environmental Specialist II  
Water Protection Program  
Financial Assistance Center  
573-751-6823  
[jeremy.payne@dnr.mo.gov](mailto:jeremy.payne@dnr.mo.gov)

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR THE PURPOSE OF RENEWAL**  
**OF**  
**MO-0058246**  
**LAPLATA WWTF**

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

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

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

This Factsheet is for a Major , Minor , Industrial Facility ; Variance ; Master General Permit ; General Permit Covered Facility ; and/or permit with widespread public interest .

**Part I – Facility Information**

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

**Facility Description:**

Two cell, no discharge lagoon system/irrigation onto crop land during growing season as needed for consumptive irrigation/sludge is retained in lagoon.

Application Date: 11/9/7  
 Expiration Date: 7/10/08  
 Last Inspection: 4/3/07 In Compliance ; Non-Compliance

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE	DISTANCE TO CLASSIFIED SEGMENT (MI)
001	0.283	Equivalent to secondary	domestic	0
002	N/A	Land app. Golf Course	N/A	N/A
003	N/A	Land app. Agricultural site	N/A	N/A

**Outfall #001**

Legal Description: SE ¼, SW ¼, Sec. 7, T60N, R14W, Macon County  
 Latitude/Longitude: +4001026 / -09230078  
 Receiving Stream: Unnamed Tributary to Long Branch Creek (U)  
 First Classified Stream and ID: Long Branch Creek (C) (696)  
 USGS Basin & Sub-watershed No.: (10280203 – 030001)

**Outfall #002**

Legal Description: N ½, SE ¼, Sec. 7, T60N, R14W  
 Latitude/Longitude: +4001102 / -0923095  
 Receiving Stream: Unnamed Tributary to Long Branch Creek (U)  
 First Classified Stream and ID: Long Branch Creek (C) (696)  
 USGS Basin & Sub-watershed No.: (10280203 – 030001)

Outfall #003

Legal Description: SW ¼, Sec.17, T60N, R14W  
Latitude/Longitude: +4000105 / -09229207  
Receiving Stream: Unnamed trib. to Middle Fk. Salt River  
First Classified Stream and ID: Middle Fk. Salt River (C) (123)  
USGS Basin & Sub-watershed No.: (071100-07110006)

Water Quality History:

They have exceeded limits twice for ammonia and three times for BOD<sub>5</sub> in the last five years.

Comments:

**Part II – Operator Certification Requirements**

As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

- Population Equivalent greater than two hundred (200):
- Fifty (50) or more service connections:
  
- 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:

This facility currently requires an operator with a D Certification Level. Please see **Appendix #1 - Classification Worksheet**

Operator's Name: Donnie Mitten  
Certification Number: 5181  
Certification Level: C

**Part III – Receiving Stream Information**

**APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:**

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

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

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

**RECEIVING STREAM(S) TABLE:**

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed trib. To Long Branch Creek	U	N/A	General Criteria	10280203	Central Plains/Grand/Chariton
Long Branch Creek	C	696	AQL, LWW, WBC(B)***		

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

\*\* Ecological Drainage Unit

\*\*\* UAA conducted in May 2007 and approved on November 21, 2007.

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

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed trib. To Long Branch Creek (U)	0	0	0

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

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

**RECEIVING STREAM MONITORING REQUIREMENTS:**

No receiving water monitoring requirements recommended at this time.

**Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions**

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

Not Applicable ;

The facility does not discharge to a Losing Stream as defined by [10 CSR 20-2.010(36)] & [10 CSR 20-7.031(1)(N)], or is an existing facility.

**ANTI-BACKSLIDING:**

A provision in the Federal Regulations [CWA §303(d)(4); CWA §402(c); 40 CFR Part 122.44(I)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

**ANTIDegradation:**

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

- Renewal no degradation proposed and no further review necessary.

**APPLICABLE PERMIT PARAMETERS:**

Effluent parameters contained in Factsheets and Missouri State Operating Permits are obtained from Technology Based Effluent Limit (TBEL), Missouri’s Effluent Regulations [10 CSR 20-7.015], Missouri’s Water Quality Standards [10 CSR 20-7.031], previous Missouri State Operating Permits, and from Operating Permit Applications.

**BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:**

Bio-solids are solid materials resulting from wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sludge is any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility or any other such waste having similar characteristics and effect. Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works.

Not Applicable ;

This condition is not applicable to the permittee for this specific facility.

**COMPLIANCE AND ENFORCEMENT:**

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

Not Applicable ;

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

**PRETREATMENT PROGRAM:**

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

Not Applicable ;

At this time, the permittee is not required to implement and enforce a Pretreatment Program.

**REASONABLE POTENTIAL ANALYSIS (RPA):**

Limitations must control all pollutants or pollutant parameters that are or may be discharged at a level which will cause, have reasonable potential to cause, or contribute to an excursion above the Missouri Water Quality Standards.

Not Applicable ;

A RPA was not conducted for this facility.

**REMOVAL EFFICIENCY:**

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD<sub>5</sub>) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ [www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm](http://www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm)

Not Applicable ;

This wastewater treatment facility is a no discharge facility. Influent monitoring is not being required to determine percent removal.

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

Collection systems are a critical element in the successful performance of the wastewater treatment process. Under certain conditions, poorly designed, built, managed, operated, and/or maintained systems can pose risks to public health, the environment, or both. Causes of SSOs include, but are not limited to, the following: high levels of I&I during wet weather; blockages; structural, mechanical, or electrical failures; collapsed or broken sewer pipes; insufficient conveyance capacity; and vandalism. Effective and continuous management, operation, and maintenance, as well as ensuring adequate capacity and rehabilitation when necessary are critical to maintaining collection system capacity and performance while extending the life of the system.

Applicable ;

The permittee is required to develop 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.

**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.

Not Applicable ;

This permit does not contain a SOC.

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

A plan to schedule activities, prohibitions of practices, maintenance procedures, and other management practices to prevent or reduce the pollution of waters of the state. The plan may include, but is not limited to, treatment requirements, operating procedures, and practices to control facility site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage.

Not Applicable ;

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

**VARIANCE:**

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

Not Applicable ;

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

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

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

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

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

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

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

Not Applicable ;

Wasteload allocations were not calculated.

**WLA MODELING:**

Not Applicable ;

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

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

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

Not Applicable ; At this time, the permittee is not required to conduct WET test for this facility.

**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 V – Effluent Limits Determination**

*Outfall #001 – Storage Basin*

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
BOD <sub>5</sub> - (APRIL 1 – OCT 31)	MG/L	1	*		*	YES	15/8
BOD <sub>5</sub> - (NOV 1 – MAR 31)	MG/L	1	*		*	YES	25/12
TSS	MG/L	1	*		*	YES	110/70
pH	SU	1	*		*	NO	
AMMONIA AS N (APRIL 1 – OCT 31)	MG/L	2/9	*		*	YES	2/1
AMMONIA AS N (NOV 1 – MAR 31)	MG/L	2/9	*		*	YES	3/2
TEMPERATURE	°C	1/8	*		*	NO	
LAGOON FREEBOARD	FEET	1	**		**	NO	
RAINFALL	INCHES	1	**		**	NO	
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\* - Discharge for reasons other than those allowed in the permit will constitute a violation. Monitoring requirement only.

\*\* - Monitoring Only

N/A - Not applicable

*Outfall #002, 003 – Land Application*

**EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
IRRIGATION PERIOD	HOURS	1	**		**	NO	**
VOLUME IRRIGATED	GALLONS	1	**		**	NO	**
APPLICATION AREA	ACRES	1	**		**	NO	**
APPLICATION RATE	INCHES/ACRE	1	**		**	NO	**
FECAL COLIFORM – 002 ONLY	#/100 mL	1	200			NO	**
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

\*\* - Monitoring Only

**Basis for Limitations Codes:**

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

**DERIVATION AND DISCUSSION OF LIMITS:**

**OUTFALL #001**

All parameters for this outfall are monitoring requirements only with the exception of pH.

- **Minimum Sampling and Reporting Frequency Requirements #001:** Permittee shall notify the Northeast Regional Office immediately when a discharge begins and when the discharge ceases.

**OUTFALL #002, #003**

All parameters for this outfall are monitoring requirements only

**MINIMUM SAMPLING AND REPORTING FREQUENCY REQUIREMENTS**

**OUTFALL #001**

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY
LAGOON FREEBOARD (FEET)	**			Daily
RAINFALL (INCHES)	**			Daily

**OUTFALL #002, #003**

PARAMETER	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MONITORING FREQUENCY
LAGOON FREEBOARD (FEET)	**			once/month
IRRIGATION PERIOD (HOURS)	**			Daily
VOLUME IRRIGATED (GALLONS)	**			Daily
APPLICATION AREA (ACRES)	**			Daily
APPLICATION RATE (INCHES/ACRE)	**			Daily
FECAL COLIFORM (002 ONLY)	200 COLONIES / 100 mL			Once/Month

\*\* - Monitoring requirements only.

## **Part VI – 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.

### **PUBLIC NOTICE:**

As per the Missouri Clean Water Law, the Missouri Clean Water Commission, and the federal Clean Water Act, persons wishing to comment on Missouri State Operating Permits are directed to do so by a department approved Public Notice coversheet. This Public Notice coversheet is attached to a Missouri State Operating Permit during the Public Notice period.

- **The Public Notice period for this operating permit is tentatively schedule to begin July 2008.**

- The Public Notice period for this operating permit was from (DATE) to (DATE). Responses to the Public Notice of this operating permit warrant the modification of effluent limits and/or the terms and conditions of this permit. (Please explain). (Also if applicable – Due to the major modifications of this permit, this operating permit is to be placed on Public Notice again, which is tentatively scheduled to begin on (DATE) or is in process.

- The Public Notice period for this operating permit was from (DATE) to (DATE). No responses received or responses to the Public Notice of this operating permit do not warrant the modification of effluent limits and/or the terms and conditions of this permit.

**DATE OF FACT SHEET:** JULY 30, 2008

### **COMPLETED BY:**

**ALAN MOREAU, ENVIRONMENTAL SPECIALIST  
WATER PROTECTION PROGRAM  
PERMITTING AND ENGINEERING SECTION  
NPDES AND STORM WATER PERMITS UNIT  
(573) 522-2553  
[alan.moreau@dnr.mo.gov](mailto:alan.moreau@dnr.mo.gov)**

**Part VII – Appendix 1**

**CLASSIFICATION WORKSHEET:**

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	
<b>EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:</b>		
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
<b>PRELIMINARY TREATMENT - Headworks</b>		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
<b>PRIMARY TREATMENT</b>		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
<b>REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)</b>		
Lab work conducted outside of plant	0	
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	
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	7
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
<b>ALTERNATIVE FATE OF EFFLUENT</b>		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	3
High rate	5	
Overland flow	4	
Total from page <b>ONE (1)</b>	----	13

**APPENDIX 1 - CLASSIFICATION WORKSHEET (CONTINUED):**

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
<b>VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)</b>		
Variation do not exceed those normally or typically expected	0	
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
<b>SECONDARY TREATMENT</b>		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	
Stabilization ponds without aeration	5	5
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
<b>DISINFECTION</b>		
Chlorination or comparable	5	5
Dechlorination	2	
On-site generation of disinfectant (except UV light)	5	
UV light	4	
<b>SOLIDS HANDLING - SLUDGE</b>		
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 <b>TWO (2)</b>	----	10
Total from page <b>ONE (1)</b>	---	13
<b>Grand Total</b>	---	23

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