

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-0126799

Owner: US Army Corps of Engineers (USCOE)  
Address: 16311 DD Highway, Smithville, MO 64089

Continuing Authority: Clay County Department of Parks, Recreation & Historic Sites  
Address: 17201 Paradesian Street, Smithville, MO 64089

Facility Name: Bauman Park at Smithville Lake  
Facility Address: 17201 Paradesian Street, Smithville, MO 64089

Legal Description: See pages 2-7  
UTM Coordinates: See pages 2-7

Receiving Stream: See pages 2-7  
First Classified Stream and ID: See pages 2-7  
USGS Basin & Sub-watershed No.: See pages 2-7

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

**FACILITY DESCRIPTION**

See pages 2-7

This permit authorizes land application of wastewater 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 1, 2016  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

March 31, 2020  
Expiration Date

John Madras, Director, Water Protection Program

**FACILITY DESCRIPTION** (continued)

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

**Outfall #001** – eliminated

**Outfall #002** – eliminated

**Outfall #003** – eliminated

**Outfall #004** – eliminated

**Permitted Feature #005** – Camp Branch – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.  
Three cell storage lagoon/wastewater irrigation/sludge is retained in lagoon.

Legal Description: NW ¼, NE ¼, Sec. 17, T53N, R32W, Clay County  
UTM Coordinates: X= 369285, Y= 4363195  
Receiving Stream: Tributary to Smithville Lake  
First Classified Stream and ID: Smithville Lake (L2) (7077)  
USGS Basin & Sub-watershed No.: (10240012-0706)

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

**Facility Type:**

No-discharge Storage: Three storage basins and irrigation system for year round flow

**Design Basis:**

	<b><u>Avg Annual</u></b>
Design dry weather flows:	<u>14,550</u> gpd
Design with 1-in-10 year flows:	<u>16,910</u> gpd
Design PE: 340	

**Storage Basin/Tank:**

Freeboard for basin: 2.0 feet  
Storage volume (minimum to maximum water levels): 2,805,000 gallons

**Storage Capacity (in Days):**

Design for Dry weather flows: 192 days  
Design with 1-in 10 year flows: 165 days

**Land Application:**

Irrigation Volume/year: 6,172,150 gallons at design loading (including 1-in-10 year flows)  
Irrigation areas: 6 acres at design loading  
Application rates: 0.12 inch/hour; 1.0 inch/day; 4.0 inches/week; 28 inches/year  
Field slopes: less than 6 percent  
Equipment type: Sprinklers  
Vegetation: Grassland  
Application rate is based on: Hydraulic rate

**Permitted Feature #006** – Sailboat Cove – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.  
Two cell storage lagoon / pump and haul wastewater to Camp Branch lagoon for land application as needed.

Legal Description: NE ¼, SW ¼, Sec. 05, T53N, R32W, Clay County  
UTM Coordinates: X= 368887, Y= 4365662  
Receiving Stream: Smithville Lake (L2) (7077)  
First Classified Stream and ID: Smithville Lake (L2) (7077)  
USGS Basin & Sub-watershed No.: (10240012-0707)

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

**FACILITY DESCRIPTION** (continued)

**Facility Type:**

No-discharge Storage with pump and haul wastewater to Camp Branch lagoon for land application as needed.

**Design Basis:**

	<b><u>Avg Annual</u></b>
Design dry weather flows:	<u>5,850</u> gpd
Design with 1-in-10 year flows:	<u>6,200</u> gpd
Design PE: <u>160</u>	

**Storage Basin/Tank:**

Freeboard for basin: 2.0 feet  
Storage volume (minimum to maximum water levels): 2,805,000 gallons

**Storage Capacity (in Days):**

Design for Dry weather flows: 48 days  
Design with 1-in 10 year flows: 45 days

**Permitted Feature #007**– Crow’s Creek Campground – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.  
Three cell storage lagoon/wastewater irrigation/sludge is retained in lagoon.

Legal Description:	SE ¼, NW ¼, Sec. 20, T53N, R32W, Clay County
UTM Coordinates:	X = 369100, Y = 4361190
Receiving Stream:	Tributary to Smithville Lake
First Classified Stream and ID:	Smithville Lake (L2) (7077)
USGS Basin & Sub-watershed No.:	(10240012-0707)

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

**Facility Type:**

No-discharge Storage and Irrigation System for annual flows

**Design Basis:**

	<b><u>Avg Annual</u></b>
Design dry weather flows:	<u>14,880</u> gpd
Design with 1-in-10 year flows:	<u>17,880</u> gpd
Design PE: <u>348</u>	

**Storage Basin/Tank:**

Freeboard for basin: 2.0feet  
Storage volume (minimum to maximum water levels): 3,680,000 gallons

**Storage Capacity (in Days):**

Design for Dry weather flows: 247 days  
Design with 1-in 10 year flows: 205 days

Application rate is based on: Hydraulic rate

**FACILITY DESCRIPTION** (continued)

**Permitted Feature #008** – Crow Creek Picnic Area – SIC #4952

The use or operation of this facility shall be by or under the supervision of a Certified “D” Operator.  
Three cell storage lagoon/ pump and haul wastewater to Crows Creek Campground lagoon for land application as needed.

Legal Description: NW ¼, SW ¼, Section 20, T53N, R32W, Clay County  
UTM Coordinates: X = 368497, Y = 4361015  
Receiving Stream: Smithville Lake (L2)  
First Classified Stream and ID: Smithville Lake (L2) (7077)  
USGS Basin & Sub-watershed No.: (10240012-0707)

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

**Facility Type:**

No-discharge Storage with pump and haul wastewater to Crows Creek Campground lagoon for land application as needed

**Design Basis:**

Design dry weather flows:  
Design with 1-in-10 year flows:  
Design PE: 86

**Avg Annual**

3,600 gpd  
4,060 gpd

**Storage Basin/Tank:**

Freeboard for basin: 2.0feet  
Storage volume (minimum to maximum water levels): 3,680,000 gallons

**Storage Capacity (in Days):**

Design for Dry weather flows: 94days  
Design with 1-in 10 year flows: 85days

**Permitted Feature #009** – Camp Branch Land Application Field

Legal Description: NW ¼, NE ¼, Sec. 17, T53N, R32W, Clay County  
UTM Coordinates: X=369370, Y= 4363410  
Receiving Stream: Tributary to Smithville Lake  
First Classified Stream and ID: Smithville Lake (L2) (7077)  
USGS Basin & Sub-watershed No.: (10240012-0706)

**Permitted Feature #010** – Crow’s Creek Campground Land Application Field

Legal Description: SE ¼, NW ¼, Sec. 20, T53N, R32W, Clay County  
UTM Coordinates: X= 368917, Y= 4361303  
Receiving Stream: Tributary to Smithville Lake  
First Classified Stream and ID: Smithville Lake (L2) (7077)  
USGS Basin & Sub-watershed No.: (10240012-0707)

PERMITTED FEATURE #005 & #007	TABLE A-1. IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS					
	EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS
DAILY MAXIMUM			WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Storage Basin Operational Monitoring (Notes 1 & 2)						
Storage Basin Freeboard (Note 3)	feet	*			once/month	measured
Precipitation	inches	*			daily	total
Irrigated Wastewater (Notes 2 & 4)						
Total Kjeldahl Nitrogen as N (Note 5)	mg/L	*			once/year	grab
Nitrate Nitrogen as N (Note 5)	mg/L	*			once/year	grab
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> .						

PERMITTED FEATURE #006 & #008	TABLE A-2. IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS					
	EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS
DAILY MAXIMUM			WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Storage Basin Operational Monitoring (Notes 1 & 2)						
Storage Basin Freeboard (Note 3)	feet	*			once/month	measured
Precipitation	inches	*			daily	total
Volume Pumped	MGD			*	daily	total
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> .						

PERMITTED FEATURE #009 & #010	TABLE A-3. IRRIGATION SYSTEM LIMITATIONS AND MONITORING REQUIREMENTS						
	The permittee is authorized to conduct land application of wastewater as specified in the application for this permit. The final limitations shall become effective on <b>July 1, 2016</b> , and remain in effect until expiration of the permit. The land application of wastewater shall be controlled, limited and monitored by the permittee as specified below:						
	EFFLUENT PARAMETER(S)	UNITS	FINAL LIMITATIONS			MONITORING REQUIREMENTS	
DAILY MAXIMUM			WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE	
Land Application Operational Monitoring (Note 2)							
Irrigation Period	hours	*			daily	total	
Volume Irrigated	gallons	*			daily	total	
Application Area	acres	*			daily	total	
Application Rate	inches	*			daily	total	
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>JANUARY 28, 2017</u> .							

\* 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 storage basin(s) 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. The facility is required to meet a removal efficiency of 85% or more as a monthly average, however because this is a no-discharge facility, a removal efficiency of 100% is achieved and no influent monitoring is required.

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 summarized annual report is in addition to the reporting requirements listed in Table A. The summarized annual report shall include the following:

- 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;
- The number of days the storage basin(s) has discharged during the year, the discharge flow, the reasons discharge occurred and effluent analysis performed; and
- 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, a summary of testing results for wastewater and soils, and calculations for nitrogen applied and crop removal of nitrogen if required by Special Condition 17 (l).

Note 3 - Storage Basin freeboard shall be reported as Storage Basin 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. If irrigation did not occur during the report period, report as "No Irrigation".

Note 5 - Monitor once per year during the months of March through November. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater shall not exceed ten (10) mg/l of nitrate nitrogen as N. If the nitrogen application exceeds a rate of 150 pounds total nitrogen per acre per year, and/or the applied wastewater exceeds ten (10) mg/l of nitrate nitrogen as N, see Special Condition #17 (i) for additional requirements.

**B. STANDARD CONDITIONS**

In addition to specified conditions stated herein, this permit is subject to the attached Parts I, II, & III standard conditions dated August 1, 2014, May 1, 2013, and March 1, 2015, and hereby incorporated as though fully set forth herein.

**C. SPECIAL CONDITIONS**

1. **Emergency Discharge.** An emergency discharge from wastewater storage structures may only occur 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 reported in accordance with Standard Conditions, Part 1, Section B.2.b.** Monitoring shall take place once in the first six (6) hours of discovery of the discharge and then once per day following the initial sampling period until the discharge ceases. The facility shall submit test results, along with the number of days the storage basin(s) has discharged during the month, to the Kasas City Regional Office by the 28<sup>th</sup> day of the month after the discharge ceases. Permittee shall monitor for the following constituents:

Constituent	Units
Flow	MGD
Biochemical Oxygen Demand <sub>5</sub>	mg/L
Total Suspended Solids	mg/l
Ammonia as N	mg/L
pH – Units	SU
Oil & Grease	mg/L
<i>E. coli</i>	#/100mL

2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.
  - (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri’s Water Quality Standards.
  - (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri’s list of waters of the state not fully achieving the state’s water quality standards, also called the 303(d) list.
  - (d) Incorporate the requirement to develop a pretreatment program pursuant to 40 CFR 403.8(a) when the Director of the Water Protection Program determines that a pretreatment program is necessary due to any new introduction of pollutants into the Publically Owned Treatment Works or any substantial change in the volume or character of pollutants being introduced.

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

3. All permitted features must be clearly marked in the field. The permitted features and land application fields shall also be marked on the aerial or topographic site map included with the Operation and Maintenance manual.
4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.

D. SPECIAL CONDITIONS (continued)

5. Water Quality Standards

- (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
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. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Kansas City Regional Office or by using the online Sanitary Sewer Overflow/Facility Bypass Application located at: <http://dnr.mo.gov/modnrcag/> during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.
  10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
  11. A least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department.
  12. At least one (1) warning sign shall be placed on each side of the facility enclosure in such positions as to be clearly visible from all directions of approach. There shall also be one (1) sign placed for every five hundred feet (500') (150 m) of the perimeter fence. A sign shall also be placed on each gate. Minimum wording shall be SEWAGE TREATMENT FACILITY—KEEP OUT. Signs shall be made of durable materials with characters at least two inches (2") high and shall be securely fastened to the fence, equipment or other suitable locations.
  13. 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, including key operating procedures, an aerial or topographic site map with the permitted features, land application fields, and irrigation buffer zones marked, and a brief summary of the operation of the facility. The O & M manual shall be made available to the operator. The O&M Manual shall be reviewed and updated at least every five years.

D. SPECIAL CONDITIONS (continued)

14. An all-weather access road shall be provided to the treatment facility.
15. The berms of the storage basin(s) shall be mowed and kept free of any deep-rooted vegetation, animal dens, or other potential sources of damage to the berms.
16. The facility shall ensure that adequate provisions are provided to prevent surface water intrusion into the storage basin(s) and to divert stormwater runoff around the storage basin(s) and protect embankments from erosion.
17. Wastewater Irrigation System.
  - (a) Discharge Reporting. Any unauthorized discharge from the storage basin(s) 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) Storage Basin Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage basin(s) shall be clearly marked in each of the storage basins where the water levels can be manipulated by valves. Each storage basin shall be operated so that the maximum water elevation does not exceed two feet below the Emergency Spillway except due to exceedances of the 1-in-10 year, 365-day or 25-year, 24-hour storm events according to National Weather Service data. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage basin(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.
  - (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. If the facility determines that night time irrigation is needed, the facility shall submit a night time land application plan to the Department's Water Protection Program for review and approval. Night time irrigation shall only occur when the Department has approved the night time land application plan.
  - (e) Saturated/Frozen Conditions. There shall be no irrigation during ground frost, frozen, snow covered, or saturated soil conditions, or when precipitation is imminent or occurring
  - (f) Slope Restrictions. Wastewater application on slopes exceeding 10%, the hourly application rate shall not exceed one-half (1/2) the design sustained permeability and in no case shall exceed one-half (1/2) inch per hour.
  - (g) Set Backs. There shall be no irrigation within:
    - (1) 300 feet of any sinkhole, losing stream, or any other feature that may provide a connection to the ground water table and the surface;
    - (2) 300 feet from any existing potable water supply well not located on the property
    - (3) 150 feet of dwelling or public use areas
    - (4) 100 feet of any gaining perennial or intermittent streams or tributaries, public or privately owned pond or lake. As a compliance alternative a 35-foot vegetative buffer that is permanently covered with perennial vegetation maybe substituted for the 100 foot set-back requirement.
    - (5) 50 feet of the property line or public road,
  - (h) Public Access Restrictions. Public access shall not be allowed to public use area irrigation sites when application is occurring.
  - (i) Grazing and Harvesting of Forage Crops Restrictions. Grazing of animals shall be deferred as per the following:
    - (1) From May 1 to October 30, the minimum deferment from grazing or forage harvesting shall be 14 days.
    - (2) From November 1 to April 30, the minimum deferment from grazing or forage harvesting shall be 30 days.
  - (j) Irrigated Wastewater Disinfection. Wastewater shall be disinfected prior to land application (not storage) to public use areas.
  - (k) Agronomic Application Rates. Wastewater land applications shall not exceed agronomic rates to ensure agricultural use of nutrients and prevent contamination of surface and groundwater. The agronomic rate is the amount of wastewater applied to a field to meet the fertilizer recommendation.

D. SPECIAL CONDITIONS (continued)

- (l) Nitrogen Loading Rates. Wastewater irrigation rates shall not exceed a nitrogen application rate of 150 pounds total nitrogen per acre per year, and the applied wastewater shall not exceed ten (10) mg/l of nitrate nitrogen as N. 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, along with calculations to show the amount of plant-available nitrogen provided and the amount of nitrogen that will be utilized by the vegetation to be grown. PAN availability factors for surface application are:  $[\text{Ammonia N} \times 0.6] + [\text{Nitrate N} \times 0.9] + [\text{Organic N} \times 0.6] = \text{PAN}$ . If the applied wastewater exceeds ten (10) mg/l of nitrate nitrogen as N, then the facility shall submit a revised permit application to request use of the Plant Available Nitrogen (PAN) method based on crop nitrogen requirements for harvested crops, along with calculations to show the amount of plant-available nitrogen provided and the amount of nitrogen that will be utilized by the vegetation to be grown.
- (m) 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.
18. Land Application Sites. To add additional land application sites or convert any of the land to public use areas, a construction permit and permit modification may be required. The facility shall contact the Department for a written determination. Additionally, the O&M Manual shall be updated to include the additional land application site(s) and a copy of the updated sections of the O&M Manual shall be submitted to the Kansas City Regional Office in accordance with Special Condition #13.
19. Reporting of Non-Detects:
- (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
  - (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
  - (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
  - (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
  - (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

**MISSOURI DEPARTMENT OF NATURAL RESOURCES  
FACT SHEET  
FOR THE PURPOSE OF RENEWAL  
OF  
MO-0126799**

**CLAY COUNTY PARKS, RECREATION, & HISTORIC SITES – BAUMAN PARK AT SMITHVILLE LAKE**

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 stormwater 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: Outfalls #001-008 – No Discharge, Storage Basins and Irrigation Systems

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

- No

Application Date: 09/04/15

Expiration Date: 03/31/15

**PERMITTED FEATURE(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#005	0.023	NA	Domestic
#006	0.009	NA	Domestic
#007	0.028	NA	Domestic
#008	0.006	NA	Domestic
#009	--	Land Application Field	Domestic
#010	--	Land Application Field	Domestic

**Facility Performance History:**

This facility was last inspected on May 25, 2010. The inspection showed the following unsatisfactory features; no certified operator and operation and maintenance problems.

**Comments:**

Changes in this permit include the addition of Total Kjeldahl Nitrogen as N and Nitrate Nitrogen as N. I&I monitoring has also been removed. See Part VII of the Fact Sheet for further information regarding the addition and removal of effluent parameters. Special conditions were updated to include the addition of the reporting of Non-detects, and bypass reporting requirements.

## **Part II – Operator Certification Requirements**

- 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:

Owned or operated by or for a

- Municipalities
- Public Sewer District
- County
- Public Water Supply Districts
- Private Sewer Company regulated by the Public Service Commission
- State agency
- Federal agency

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

The Department requires this facility to retain the services of a certified operator due to: Population Equivalent greater than two hundred (200).

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

<http://www.dnr.mo.gov/operator/index.do>

Operator's Name: Jasen Ballenger  
Certification Number: 11795  
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**

While this facility is no discharge, a receiving stream is listed for the purposes of showing what stream would be affected in the event of an emergency release due to an acute or chronic rain event. 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(4)].

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #005**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Smithville Lake	--	--	General Criteria	10240012-0706	0.1
Smithville Lake	L2	7077	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP		

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

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #006**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Smithville Lake	--	--	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP	10240012-0707	0

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

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #007**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Smithville Lake	--	--	General Criteria	10240012-0707	0.3
Smithville Lake	L2	7077	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP		

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

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #008**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Smithville Lake	--	--	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP	10240012-0707	0

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

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #009**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Smithville Lake	--	--	General Criteria	10240012-0706	0.1
Smithville Lake	--	--	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP		

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

**RECEIVING STREAM(S) TABLE: PERMITTED FEATURE #010**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Smithville Lake	--	--	General Criteria	10240012-0707	0.3
Smithville Lake	--	--	AQL, DWS, IRR, SCR, LWV, WBC-A, HHP		

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

**RECEIVING STREAM 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.

- 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(o); 40 CFR Part 122.44(l)] that requires a reissued permit to be as stringent as the previous permit with some exceptions.

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

**ANTIDegradation:**

In accordance with Missouri’s Water Quality Standard [10 CSR 20-7.031(3)], 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://extension.missouri.edu/main/DisplayCategory.aspx?C=74>, items WQ422 through WQ449.

- Permittee is not authorized to land apply biosolids. Sludge/biosolids are stored in the lagoon. The permittee must submit a sludge management plan for approval that details removal and disposal plans when sludge is to be removed from lagoons.

**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.

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

**DISCHARGE MONITORING REPORTS:**

On July 30, 2013, EPA proposed the Clean Water Act National Pollutant Discharge Elimination System (NPDES) Electronic Reporting Rule, which requires electronic reporting of NPDES information rather than the currently-required paper-based reports from permitted facilities. To comply with the upcoming federal rule, the Department is asking all permittees to begin submitting discharge monitoring data online. For permittees already using the Department's eDMR data reporting system, those permittees will be required to exclusively use the eDMR data reporting system.

- The permittee/facility is not currently using the eDMR data reporting system. To sign up for the eDMR system, visit the Department's eDMR page at <http://dnr.mo.gov/env/wpp/edmr.htm>.

**PRETREATMENT PROGRAM:**

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

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

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

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

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

**REMOVAL EFFICIENCY:**

This facility is subject to the Secondary Treatment standard of 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)]. 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). This is a no-discharge facility, therefore removal efficiency is 100% and influent monitoring is not required.

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

Sanitary Sewer Overflows (SSOs) are defined as untreated sewage releases and are considered bypassing under state regulation [10 CSR 20-2.010(11)] and should not be confused with the federal definition of bypass. SSOs result from a variety of causes including blockages, line breaks, and sewer defects that can either allow wastewater to backup within the collection system during dry weather conditions or allow excess stormwater and groundwater to enter and overload the collection system during wet weather conditions. SSOs can also result from lapses in sewer system operation and maintenance, inadequate sewer design and construction, power failures, and vandalism. SSOs include overflows out of manholes, cleanouts, broken pipes, and other into waters of the state and onto city streets, sidewalks, and other terrestrial locations.

Inflow and Infiltration (I&I) is defined as unwanted intrusion of stormwater or groundwater into a collection system. This can occur from points of direct connection such as sump pumps, roof drain downspouts, foundation drains, and storm drain cross-connections or through cracks, holes, joint failures, faulty line connections, damaged manholes, and other openings in the collection system itself. I&I results from a variety of causes including line breaks, improperly sealed connections, cracks caused by soil erosion/settling, penetration of vegetative roots, and other sewer defects. In addition, excess stormwater and groundwater entering the collection system from line breaks and sewer defects have the potential to negatively impact the treatment facility.

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as

established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

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

#### **SCHEDULE OF COMPLIANCE (SOC):**

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes 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. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(10), compliance must occur as soon as possible. If the permit provides a schedule for meeting new water quality based effluent limits, a SOC must include an enforceable, final effluent limitation in the permit even if the SOC extends beyond the life of the permit.

A SOC is not allowed:

- For effluent limitations based on technology-based standards established in accordance with federal requirements, if the deadline for compliance established in federal regulations has passed. 40 CFR § 125.3.
- For a newly constructed facility in most cases. Newly constructed facilities must meet applicable effluent limitations when discharge begins, because the facility has installed the appropriate control technology as specified in a permit or antidegradation review. A SOC is allowed for a new water quality based effluent limit that was not included in a previously public noticed permit or antidegradation review, which may occur if a regulation changes during construction.
- To develop a TMDL, UAA, or other study associated with development of a site specific criterion. A facility is not prohibited from conducting these activities, but a SOC may not be granted for conducting these activities.

In order to provide guidance to Permit Writers in developing SOCs, and attain a greater level of consistency, on April 9, 2015 the Department issued an updated policy on development of SOCs. This policy provides guidance to Permit Writers on the standard time frames for schedules for common activities, and guidance on factors that may modify the length of the schedule such as a Cost Analysis for Compliance.

- This permit does not contain a SOC.

#### **STORMWATER 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 stormwater 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 Stormwater 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 stormwater discharges.

In lieu of requiring sampling in the site-specific permit, the facility is required to develop and implement a Stormwater Pollution Prevention Plan. A facility can apply for conditional exclusion for “no exposure” of industrial activities and materials to stormwater by submitting to the Department a completed NPDES Form 3510-11 – No Exposure Certification for Exclusion from NPDES Stormwater Permitting. That document and additional information may be found at <http://water.epa.gov/polwaste/npdes/stormwater/Conditional-No-Exposure-Exclusion.cfm>. Upon approval on the “No Exposure”, the permit can be modified to remove the SWPPP requirements. If the facility chooses to retain the conditional exclusion for “no exposure”, the facility is required to renew the “No Exposure” exemption during the permit renewal period by submitting NPDES Form 3510-11 with Form B2.

- 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.

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

**WATER QUALITY STANDARDS:**

Per [10 CSR 20-7.031(4)], 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.

**40 CFR 122.41(M) - BYPASSES:**

The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from “bypassing” untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, 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.

- This facility does not anticipate bypassing.

**Part VI – Permit Limits Determination**

**PERMITTED FEATURE #005 & #007 – IRRIGATION STORAGE BASIN**

- **Freeboard.** Monitoring requirement to verify adequate freeboard is maintained, so as to avoid and overflow of the storage basin.
- **Precipitation.** Monitoring requirement to ensure appropriate land application is conducted to account for accumulated water in the storage basin.
- **Total Kjeldahl Nitrogen.** Monitoring requirement only. Monitoring for Total Kjeldahl Nitrogen as N is included to determine nutrient loading rates on the land application fields. [10 CSR 20-6.015(4)(C)]
- **Nitrate Nitrogen as N.** Monitoring requirement only. Monitoring for Nitrate Nitrogen as N is included to determine nutrient loading rates on the land application fields. [10 CSR 20-6.015(4)(C)]

**PERMITTED FEATURE #006 & #008 – PUMP AND HAUL STORAGE BASIN**

- **Freeboard.** Monitoring requirement to verify adequate freeboard is maintained, so as to avoid and overflow of the storage basin.
- **Precipitation.** Monitoring requirement to ensure appropriate land application is conducted to account for accumulated water in the storage basin.

- **Volume Pumped.** Monitoring requirement to assess the volume pumped and hauled to other permitted features.

**PERMITTED FEATURE #009, #010 – IRRIGATION FIELD**

- **Irrigation Period.** Monitoring requirement only. Monitoring for the Irrigation Period is included to determine if proper application is occurring on the land application fields.
- **Volume Irrigated.** Monitoring requirement only. Monitoring for the Volume Irrigated is included to determine if proper application is occurring on the land application fields.
- **Application Area.** Monitoring requirement only. Monitoring for the Application Area is included to determine if proper application is occurring on the land application fields.
- **Application Rate.** Monitoring requirement only. Monitoring for the Application Rate is included to determine if proper application is occurring on the land application fields.

**Sampling Frequency Justification:**

Sampling frequency has been determined to be appropriate so it has been retained from the previous state operating permit. Otherwise explain why you chose the frequency you did.

**Sampling Type Justification:**

Due to the discharge being from irrigation from a storage basin, a grab sample is a representative and appropriate sample type. Variation in nutrient concentration is not expected over a 24 hour period.

**Part VII – Cost Analysis for Compliance**

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.

- 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.

**Cost Analysis for Compliance** - 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 –Cost Analysis for Compliance**

## **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. Renewal applications must continue to be submitted within 180 days of expiration, however, in instances where effluent data from the previous renewal is less than 4 years old, that data may be re-submitted to meet the requirements of the renewal application. If the permit provides a schedule of compliance for meeting new water quality based effluent limits beyond the expiration date of the permit, the time remaining in the schedule of compliance will be allotted in the renewed permit.

### **PUBLIC NOTICE:**

The Department shall give public notice that a draft permit has been prepared and its issuance is pending. Additionally, public notice will be issued if a public hearing is to be held because of a significant degree of interest in and water quality concerns related to a draft permit. No public notice is required when a request for a permit modification or termination is denied; however, the requester and permittee must be notified of the denial in writing. The Department must issue public notice of a pending operating permit or of a new or reissued statewide general permit. The public comment period is the length of time not less than 30 days following the date of the public notice which interested persons may submit written comments about the proposed permit. For persons wanting to submit comments regarding this proposed operating permit, then please refer to the Public Notice page located at the front of this draft operating permit. The Public Notice page gives direction on how and where to submit appropriate comments.

- The Public Notice period for this operating permit was from December 4, 2015- January 4, 2016. No comments were received.

**DATE OF FACT SHEET:** OCTOBER 9, 2015

### **COMPLETED BY:**

**ADAM PAIGE, ENVIRONMENTAL SPECIALIST**  
**MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**WATER PROTECTION PROGRAM**  
**OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT**  
**(573) 524-2445**  
**adam.paige@dnr.mo.gov**

**Appendices**

**APPENDIX - CLASSIFICATION WORKSHEET:**

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	
<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	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	
<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>		
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	
High rate	5	
Overland flow	4	
<b>Total from page ONE (1)</b>	<b>----</b>	<b>8</b>

**APPENDIX - 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	
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	6
Total from page <b>TWO (2)</b>	----	11
Total from page <b>ONE (1)</b>	---	8
<b>Grand Total</b>	---	25

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

**APPENDIX – COST ANALYSIS FOR COMPLIANCE:**

**Missouri Department of Natural Resources  
Water Protection Program  
Cost Analysis for Compliance  
(In accordance with RSMo 644.145)**

**CLAY COUNTY PARKS, RECREATION, & HISTORIC SITES – BAUMAN PARK AT SMITHVILLE LAKE, Permit Renewal  
U.S. Army Corps of Engineers (ASCOE)  
Missouri State Operating Permit #MO-0126799**

Section 644.145 RSMo requires the Department of Natural Resources (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 for publicly-owned treatment works.”

The Department is required to issue a permit with final effluent limits in accordance with 644.051.1.(1) RSMo, 644.051.1.(2) RSMo, and the Clean Water Act. The practical result of this analysis will be to allow longer compliance schedules to mitigate adverse impact to distressed populations resulting from the costs of upgrading the wastewater treatment facility.

This cost analysis is based on data available to the Department as provided by the permittee and data obtained from readily available sources. For the most accurate analysis, it is essential that the permittee provides the Department with current information about the county’s financial and socioeconomic situation. The financial questionnaire available to permittees on the DNR website (<http://dnr.mo.gov/forms/780-2511-f.pdf>) should have been submitted with the permit renewal application. If it was not received with the renewal application, the Department sent a request to complete it with the welcome letter.

**Facility Description:** No Discharge, Storage Basins and Irrigation Systems

Connections: \_\_\_\_\_ 23 \_\_\_\_\_

**New Permit Requirements:**

The permit requires compliance with new monitoring requirements for Total Kjeldahl Nitrogen as N and Nitrate Nitrogen as N.

**Anticipated Costs Associated with Complying with the New Requirements:**

The total cost estimated for new annual monitoring requirements is \$53 annually. This cost, if financed through user fees, might cost each household an extra \$0.19<sup>1</sup> per month. A community sets their user rates based on several factors. The percentage of the current user rate that is available to cover new debt is unknown to the Department.

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

Due to the minimal cost associated with this new permit requirement, the Department anticipates Clay County Parks, Recreations, & Historic Sites has the means to raise \$53 annually.

**(2) Affordability of pollution control options for the individuals or households at or below the median household income level of the community;**

The total cost estimated for the new annual monitoring requirements is \$53 annually. This cost, if financed through user fees, might cost each household an extra \$0.19 per month. Due to the minimal cost associated with this new requirement, the Department anticipates an extremely low to no rate increase will be necessary that could impact individuals or households of the community.

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

**Nutrient Monitoring**

Nutrients are mineral compounds that are required for organisms to grow and thrive. Of the six (6) elemental macronutrients, Nitrogen and Phosphorus are generally not readily available and limit growth of organisms. Excess nitrogen and phosphorus will cause a shift in the ecosystem’s food web. Once excess nitrogen and phosphorus are introduced into a waterbody, some species’ populations will dramatically increase, while other populations will not be able to sustain life. Competition and productivity are two factors in which nutrients can alter aquatic ecosystems and the designated uses of a waterbody. For example, designated uses, such as drinking water sources and recreational uses become impaired when algal blooms take over a waterbody. These blooms can cause foul tastes and odors in the drinking water, unsightly appearance, and fish mortality in the waterbody. Some algae also produce toxins that may cause serious adverse health conditions such as liver damage, tumor promotion, paralysis, and kidney damage. The monitoring requirements for Nitrogen and Phosphorus have been added to the permit to provide data regarding the health of the receiving stream’s aquatic life. A healthy ecosystem is beneficial as it provides reduced impacts on human and aquatic health as well as recreational opportunities.

**(4) Inclusion of ongoing costs of operating and maintaining the existing wastewater collection and treatment system, including payments on outstanding debts for wastewater collection and treatment systems when calculating projected rates:**

The community did not provide the Department with information, nor could it be found through readily available data.

**(5) 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.
- (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.

**Socioeconomic Data<sup>3-6:</sup>**

Potentially Distressed Populations – Clay County Parks, Recreations, & Historic Sites – Bauman Park at Smithville Lake	
Unemployment	5.0%
Adjusted Median Household Income (MHI)*	\$63,120
Percent Change in MHI (1990-2012)	+1.3%
Percent Population Growth/Decline (1990-2012)	+25.4%
Change in Median Age in Years (1990-2012)	+1.3
Percent of Households in Poverty	9.0%
Percent of Households Relying on Food Stamps	8.1%

**(6) An assessment of other community investments and operating costs relating to environmental improvements and public health protection;**

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

**(7) 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;**

The new sampling requirements associated with this permit will not impose a financial burden on the community, nor will the new requirements require the Clay County Parks, Recreations, & Historic Sites to seek funding from an outside source.

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

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

### **Conclusion and Finding**

As a result of new regulations, the Department is proposing modifications to the current operating permit that may require the permittee to increase monitoring. The Department identified the actions for which cost analysis for compliance is required under Section 644.145 RSMo.

The Department estimates the cost for annual Total Kjeldahl Nitrogen as N and Nitrate Nitrogen as N is \$53 per year.

The Department considered the eight (8) criteria presented in subsection 644.145.3 when evaluating the cost associated with 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 may result in a low burden with regard to the community's overall financial capability and a low financial impact for most individual customers/households; therefore, the new permit requirements are affordable.

### **References:**

1.  $((\$53/23 \text{ connection})/12 \text{ months}) = \$0.19$
2. Unemployment data was obtained from Missouri Department of Economic Development (July 2014) – <http://www.missourieconomy.org/pdfs/ure11407.pdf>
3. Median Household Income data from American Community Survey – Median income in the past 12 months – [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?\\_afpt=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table)
4. Population trend data was obtained from online at: 2012 Census Bureau Population Data - [http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?\\_afpt=table](http://factfinder2.census.gov/faces/tableservices/jsf/pages/productview.xhtml?_afpt=table), 2000 Census Bureau Population Data - <http://www.census.gov/popest/data/cities/totals/2009/tables/SUB-EST2009-04-29.xls>, 1990 Census Bureau Population Data - <http://www.census.gov/prod/cen1990/cp1/cp-1-27.pdf>
5. Poverty data – American Community Survey- <http://factfinder2.census.gov/faces/nav/jsf/pages/searchresults.xhtml?refresh=t>



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

## Part I – General Conditions

### Section A – Sampling, Monitoring, and Recording

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

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

### Section B – Reporting Requirements

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



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- b. The following shall be included as information which must be reported within 24 hours under this paragraph.
    - i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
    - ii. Any upset which exceeds any effluent limitation in the permit.
    - iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
  - c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.
3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.
  4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.
  5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.
  6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.
  7. **Discharge Monitoring Reports.**
    - a. Monitoring results shall be reported at the intervals specified in the permit.
    - b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
    - c. Monitoring results shall be reported to the Department no later than the 28<sup>th</sup> day of the month following the end of the reporting period.
- b. Notice.
    - i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
    - ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
  - c. Prohibition of bypass.
    - i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
      1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
      2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
      3. The permittee submitted notices as required under paragraph 2. b. of this section.
    - ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.
3. **Upset Requirements.**
    - a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
    - b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      - i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      - ii. The permitted facility was at the time being properly operated; and
      - iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      - iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
    - c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

## Section C – Bypass/Upset Requirements

1. **Definitions.**
  - a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
  - b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
  - c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.
2. **Bypass Requirements.**
  - a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.

## Section D – Administrative Requirements

1. **Duty to Comply.** The permittee must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of the Missouri Clean Water Law and Federal Clean Water Act and is grounds for enforcement action; for permit termination, revocation and reissuance, or modification; or denial of a permit renewal application.
  - a. The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the CWA within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
  - b. The Federal Clean Water Act provides that any person who violates section 301, 302, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any such sections in a permit issued under section 402, or any requirement imposed in a pretreatment program approved under sections 402(a)(3) or 402(b)(8) of the Act, is subject to a civil penalty not to exceed \$25,000 per day for each violation. The Federal Clean Water Act provides that any person who negligently violates sections 301, 302, 306, 307, 308, 318, or 405 of the Act, or any condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, or any requirement



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- imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of \$2,500 to \$25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than \$50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of \$5,000 to \$50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than \$100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than \$250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than \$500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than \$1,000,000 and can be fined up to \$2,000,000 for second or subsequent convictions.
- c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed \$10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed \$25,000. Penalties for Class II violations are not to exceed \$10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed \$125,000.
- d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed \$10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than \$2,500 nor more than \$25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than \$50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.
2. **Duty to Reapply.**
- a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
- b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
- c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.
4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.
5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.
6. **Permit Actions.**
- a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
- i. Violations of any terms or conditions of this permit or the law;
- ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
- iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
- iv. Any reason set forth in the Law or Regulations.
- b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.
7. **Permit Transfer.**
- a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
- b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
- c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.
8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.
9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.



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10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.
11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
  - a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
  - b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
  - c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
  - d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.
12. **Closure of Treatment Facilities.**
  - a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
  - b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.
13. **Signatory Requirement.**
  - a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
  - b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than \$10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
  - c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.
14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.



STANDARD CONDITIONS FOR NPDES PERMITS  
ISSUED BY  
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES  
MISSOURI CLEAN WATER COMMISSION  
REVISED  
MAY 1, 2013

PART II - SPECIAL CONDITIONS – PUBLICLY OWNED  
TREATMENT WORKS  
SECTION A – INDUSTRIAL USERS

**1. Definitions**

Definitions as set forth in the Missouri Clean Water Laws and approved by the Missouri Clean Water Commission shall apply to terms used herein.

Significant Industrial User (SIU). Except as provided in the *General Pretreatment Regulation* 10 CSR 20-6.100, the term Significant Industrial User means:

1. All Industrial Users subject to Categorical Pretreatment Standards; and
2. Any other Industrial User that: discharges an average of 25,000 gallons per day or more of process wastewater to the Publicly-Owned Treatment Works (POTW) (excluding sanitary, noncontact cooling and boiler blowdown wastewater); contributes a process wastestream which makes up 5 percent or more of the average dry weather hydraulic or organic capacity of the POTW treatment plant; or is designated as such by the Control Authority on the basis that the Industrial User has a reasonable potential for adversely affecting the POTW's or for violating any Pretreatment Standard or requirement.

Clean Water Act (CWA) is the the federal Clean Water Act of 1972, 33 U.S.C. § 1251 et seq. (2002).

**2. Identification of Industrial Discharges**

Pursuant to 40 CFR 122.44(j)(1), all POTWs shall identify, in terms of character and volume of pollutants, any Significant Industrial Users discharging to the POTW subject to Pretreatment Standards under section 307(b) of the CWA and 40 CFR 403.

**3. Application Information**

Applications for renewal or modification of this permit must contain the information about industrial discharges to the POTW pursuant to 40 CFR 122.21(j)(6)

**4. Notice to the Department**

Pursuant to 40 CFR 122.42(b), all POTWs must provide adequate notice of the following:

1. Any new introduction of pollutants into the POTW from an indirect discharger which would be subject to section 301 or 306 of CWA if it were directly discharging these pollutants; and
2. Any substantial change into the volume or character of pollutants being introduced into that POTW by a source introducing pollutants into the POTW at the time of issuance of the permit.
3. For purposes of this paragraph, adequate notice shall include information on:
  - i. the quality and quantity of effluent introduced into the POTW, and
  - ii. any anticipated impact of the change on the quantity or quality of effluent to be discharged from the POTW.

For POTWs without an approved pretreatment program, the notice of industrial discharges which was not included in the permit application shall be made as soon as practicable. For POTWs with an approved pretreatment program, notice is to be included in the annual pretreatment report required in the special conditions of this permit. Notice may be sent to:

Missouri Department of Natural Resources  
Water Protection Program  
Attn: Pretreatment Coordinator  
P.O. Box 176  
Jefferson City, MO 65102

**STANDARD CONDITIONS FOR NPDES PERMITS**  
**ISSUED BY**  
**THE MISSOURI DEPARTMENT OF NATURAL RESOURCES**  
**MISSOURI CLEAN WATER COMMISSION**  
**March 1, 2015**

**PART III – SLUDGE AND BIOSOLIDS FROM DOMESTIC AND INDUSTRIAL WASTEWATER  
TREATMENT FACILITIES**

**SECTION A – GENERAL REQUIREMENTS**

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

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

  - a. A site specific permit must be obtained for each operating location, including application sites.
  - b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
  - a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
  - b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

## **SECTION B – DEFINITIONS**

1. Best Management Practices include agronomic loading rates, soil conservation practices and other site restrictions.
2. Biosolids means organic fertilizer or soil amendment produced by the treatment of domestic wastewater sludge.
3. Biosolids land application facility is a facility where biosolids are spread onto the land at agronomic rates for production of food or fiber. The facility includes any structures necessary to store the biosolids until soil, weather, and crop conditions are favorable for land application.
4. Class A biosolids means a material that has met the Class A pathogen reduction requirements or equivalent treatment by a Process to Further Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
5. Class B biosolids means a material that has met the Class B pathogen reduction requirements or equivalent treatment by a Process to Significantly Reduce Pathogens (PFRP) in accordance with 40 CFR 503.
6. Domestic wastewater means wastewater originating from the sanitary conveniences of residences, commercial buildings, factories and institutions; or co-mingled sanitary and industrial wastewater processed by a (POTW) or a privately owned facility.
7. Industrial wastewater means any wastewater, also known as process water, not defined as domestic wastewater. Per 40 CFR Part 122, process water means any water which, during manufacturing or processing, comes into direct contact with or results from the production or use of any raw material, intermediate product, finished product, byproduct, or waste product.
8. Mechanical treatment plants are wastewater treatment facilities that use mechanical devices to treat wastewater, including septic tanks, sand filters, extended aeration, activated sludge, contact stabilization, trickling filters, rotating biological discs, and other similar facilities. It does not include wastewater treatment lagoons and constructed wetlands for wastewater treatment.
9. Operating location as defined in 10 CSR 20-2.010 is all contiguous lands owned, operated or controlled by one (1) person or by two (2) or more persons jointly or as tenants in common.
10. Plant Available Nitrogen (PAN) is the nitrogen that will be available to plants during the growing seasons after biosolids application.
11. Public contact site is land with a high potential for contact by the public. This includes, but is not limited to, public parks, ball fields, cemeteries, plant nurseries, turf farms, and golf courses.
12. Sludge is the solid, semisolid, or liquid residue removed during the treatment of wastewater. Sludge includes septage removed from septic tanks or equivalent facilities. Sludge does not include carbon coal byproducts (CCBs)
13. Sludge lagoon is part of a mechanical wastewater treatment facility. A sludge lagoon is an earthen basin that receives sludge that has been removed from a wastewater treatment facility. It does not include a wastewater treatment lagoon or sludge treatment units that are not a part of a mechanical wastewater treatment facility.
14. Septage is the material pumped from residential septic tanks and similar treatment works (with a design population of less than 150 people). The standard for biosolids from septage is different from other sludges.

## **SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES**

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

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

1. This section applies to permittees that haul sludge to another treatment facility for disposal or use contract haulers to remove and dispose of sludge.
2. Permittees that use contract haulers are responsible for compliance with all the terms of this permit including final disposal, unless the hauler has a separate permit for sludge or biosolids disposal issued by the Department; or the hauler transports the sludge to another permitted treatment facility.
3. Haulers who land apply septage must obtain a state permit.
4. Testing of sludge, other than total solids content, is not required if sludge is hauled to a municipal wastewater treatment facility or other permitted wastewater treatment facility, unless it is required by the accepting facility.

## **SECTION E – INCINERATION OF SLUDGE**

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

## **SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS**

1. Surface disposal sites of domestic facilities shall comply with the requirements in 40 CFR 503 Subpart C; air pollution control regulations under 10 CSR 10; and solid waste management regulations under 10 CSR 80.
2. Sludge storage lagoons are temporary facilities and are not required to obtain a permit as a solid waste management facility under 10 CSR 80. In order to maintain sludge storage lagoons as storage facilities, accumulated sludge must be removed routinely, but not less than once every two years unless an alternate schedule is approved in the permit. The amount of sludge removed will be dependent on sludge generation and accumulation in the facility. Enough sludge must be removed to maintain adequate storage capacity in the facility.
  - a. In order to avoid damage to the lagoon seal during cleaning, the permittee may leave a layer of sludge on the bottom of the lagoon, upon prior approval of the Department; or
  - b. Permittee shall close the lagoon in accordance with Section H.

## **SECTION G – LAND APPLICATION**

1. The permittee shall not land apply sludge or biosolids unless land application is authorized in the facility description or the special conditions of the issued NPDES permit.
2. Land application sites within a 20 miles radius of the wastewater treatment facility are authorized under this permit when biosolids are applied for beneficial use in accordance with these standard conditions unless otherwise specified in a site specific permit. If the permittee's land application site is greater than a 20 mile radius of the wastewater treatment facility, approval must be granted from the Department.
3. Land application shall not adversely affect a threatened or endangered species or its designated critical habitat.
4. Biosolids shall not be applied unless authorized in this permit or exempted under 10 CSR 20, Chapter 6.
  - a. This permit does not authorize the land application of domestic sludge except for when sludge meets the definition of biosolids.
  - b. This permit authorizes "Class A or B" biosolids derived from domestic wastewater and/or process water sludge to be land applied onto grass land, crop land, timber or other similar agricultural or silviculture lands at rates suitable for beneficial use as organic fertilizer and soil conditioner.
5. Public Contact Sites:

Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.

  - a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
  - b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.
6. Agricultural and Silvicultural Sites:

Septage – Based on Water Quality guide 422 (WQ422) published by the University of Missouri

  - a. Haulers that land apply septage must obtain a state permit
  - b. Do not apply more than 30,000 gallons of septage per acre per year.
  - c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.
  - d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.
  - e. Lime is to be added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

Biosolids - Based on Water Quality guide 423, 424, and 425 (WQ423, WQ424, WQ425) published by the University of Missouri;

- a. Biosolids shall be monitored to determine the quality for regulated pollutants
- b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable Department approved material to reach the maximum concentration of pollutants allowed.
- c. Table 1 gives the maximum concentration allowable to protect water quality standards

**TABLE 1**

Biosolids ceiling concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

<sup>1</sup> Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

- d. The low metal concentration biosolids has reduced requirements because of its higher quality and can safely be applied for 100 years or longer at typical agronomic loading rates. (See Table 2)

**TABLE 2**

Biosolids Low Metal Concentration <sup>1</sup>	
Pollutant	Milligrams per kilogram dry weight
Arsenic	41
Cadmium	39
Copper	1,500
Lead	300
Mercury	17
Nickel	420
Selenium	36
Zinc	2,800

<sup>1</sup> You may apply low metal biosolids without tracking cumulative metal limits, provided the cumulative application of biosolids does not exceed 500 dry tons per acre.

- e. Each pollutant in Table 3 has an annual and a total cumulative loading limit, based on the allowable pounds per acre for various soil categories.

**TABLE 3**

Pollutant	CEC 15+		CEC 5 to 15		CEC 0 to 5	
	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>	Annual	Total <sup>1</sup>
Arsenic	1.8	36.0	1.8	36.0	1.8	36.0
Cadmium	1.7	35.0	0.9	9.0	0.4	4.5
Copper	66.0	1,335.0	25.0	250.0	12.0	125.0
Lead	13.0	267.0	13.0	267.0	13.0	133.0
Mercury	0.7	15.0	0.7	15.0	0.7	15.0
Nickel	19.0	347.0	19.0	250.0	12.0	125.0
Selenium	4.5	89.0	4.5	44.0	1.6	16.0
Zinc	124.0	2,492.0	50.0	500.0	25.0	250.0

<sup>1</sup> Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

**TABLE 4** - Guidelines for land application of other trace substances <sup>1</sup>

Cumulative Loading	
Pollutant	Pounds per acre
Aluminum	4,000 <sup>2</sup>
Beryllium	100
Cobalt	50
Fluoride	800
Manganese	500
Silver	200
Tin	1,000
Dioxin	(10 ppt in soil) <sup>3</sup>
Other	<sup>4</sup>

<sup>1</sup> Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)

<sup>2</sup> This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

<sup>3</sup> Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

<sup>4</sup> Case by case review. Concentrations in sludge should not exceed the 95<sup>th</sup> percentile of the National Sewage Sludge Survey, EPA, January 2009.

Best Management Practices – Based on Water Quality guide 426 (WQ426) published by the University of Missouri

- a. Use best management practices when applying biosolids.
- b. Biosolids cannot discharge from the land application site
- c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
- d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
- e. Do not apply more than the agronomic rate of nitrogen needed.
- f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil, and crop removal when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) When biosolids are land applied at an application rate greater than two dry tons per acre per year.
  - i. PAN can be determined as follows and is in accordance with WQ426  
(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor<sup>1</sup>).  
<sup>1</sup>Volatilization factor is 0.7 for surface application and 1 for subsurface application.
- g. Buffer zones are as follows:
  - i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
  - ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
  - iii. 150 feet if dwellings;
  - iv. 100 feet of wetlands or permanent flowing streams;
  - v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
- h. Slope limitation for application sites are as follows;
  - i. A slope 0 to 6 percent has no rate limitation
  - ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
  - iii. Slopes > 12 percent, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
- i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
- j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.
- k. Biosolids / sludge applicators must keep detailed records up to five years.

## SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
  - a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
  - b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
  - c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    - i. PAN can be determined as follows:
$$(\text{Nitrate} + \text{nitrite nitrogen}) + (\text{organic nitrogen} \times 0.2) + (\text{ammonia nitrogen} \times \text{volatilization factor}^1).$$

<sup>1</sup> Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered “septage” under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
  - a. Testing for metals or fecal coliform is not required
  - b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
  - c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.
5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
  - a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain  $\geq 70\%$  vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
  - b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
  - c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

## SECTION I – MONITORING FREQUENCY

- At a minimum, sludge or biosolids shall be tested for volume and percent total solids on a frequency that will accurately represent sludge quantities produced and disposed. Please see the table below.

**TABLE 5**

Design Sludge Production (dry tons per year)	Monitoring Frequency (See Notes 1, 2 and 3)			
	Metals, Pathogens and Vectors	Nitrogen TKN <sup>1</sup>	Nitrogen PAN <sup>2</sup>	Priority Pollutants and TCLP <sup>3</sup>
0 to 100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	-- <sup>4</sup>
10,001 +	1 per week	1 per week	1 per day	-- <sup>4</sup>

<sup>1</sup> Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less.

<sup>2</sup> Calculate plant available nitrogen (PAN) when either of the following occurs: 1) when biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.

<sup>3</sup> Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.

<sup>4</sup> One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids.

This data shall be used to calculate the dry tons of sludge applied per acre.

Note 2: Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

Note 3: Table 5 is not applicable for incineration

- If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.
- Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the Department.
- At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

## SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

- The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
- Reporting period
  - By January 28<sup>th</sup> of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
  - Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
- Report Forms. The annual report shall be submitted on report forms provided by the Department or equivalent forms approved by the Department.
- Reports shall be submitted as follows:

Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the Department and EPA. Other facilities need to report only to the Department. Reports shall be submitted to the addresses listed as follows:

DNR regional office listed in your permit  
(see cover letter of permit)  
ATTN: Sludge Coordinator

EPA Region VII  
Water Compliance Branch (WACM)  
Sludge Coordinator  
11201 Renner Blvd.  
Lenexa, KS 66219

5. Annual report contents. The annual report shall include the following:
- a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
  - b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
  - c. Gallons and % solids data used to calculate the dry ton amounts.
  - d. Description of any unusual operating conditions.
  - e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
    - i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
    - ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
  - f. Contract Hauler Activities:

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
  - g. Land Application Sites:
    - i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. The facility shall report PAN when either of the following occurs: 1) When biosolids are greater than 50,000 mg/kg TN; or 2) when biosolids are land applied at an application rate greater than two dry tons per acre per year.
    - ii. If the “Low Metals” criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
    - iii. Report the method used for compliance with pathogen and vector attraction requirements.
    - iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.



# Clay County, Missouri

Clay County Department of Parks, Recreation & Historic Sites  
17201 Paradesian, Smithville, MO 64089

Karl Walters  
Asst. Admin. To Commission

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WATER PROTECTION PROGRAM

December 18<sup>th</sup>, 2014

Missouri Department of Natural Resources  
Kansas City Regional Office  
500 Northeast Colbern Road  
Lee's Summit, MO 64086-4710

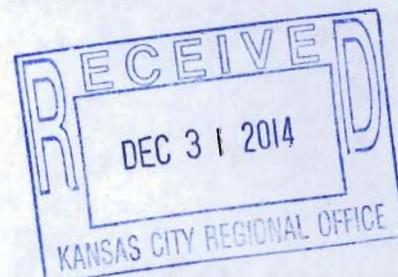
Enclosed is Clay County Parks – Bauman Park at Smithville Lake (MSOP MO-0126799)  
Renewal NPDES Operations Report for Non-Municipal Wastewater Discharges.  
Please find the enclosed documents satisfactory with regards to the permit renewal  
requirements.  
Thank You.

Sincerely,

Aaron Kagay  
Grasslands Technician  
Wastewater Operator # 12355

Jason Ballenger  
Natural Resources Manager  
Wastewater Operator # 11795

c: Karl Walters, Assistant Administrator to Commission; Steve Galamore, Operations  
Manager; Mike Driskell, Park Operations Maintenance Administrator



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JAN 08 2015

**Clay County Parks, Recreation & Historic Sites  
Operating Permit # MO-0126799**

WATER PROTECTION PROGRAM

Attachment to Form B

Additional Facility Information

7.3 – Commercial Establishment: Daily number of employees working/Daily guests

**Outfall #005** - April 15-September 15: Daily number of employees working = approx. 39  
September 15-April 15: Daily number of employees working = approx. 21

**Outfall #006** - April 15-September 15: Daily number of employees working = 0  
September 15-April 15: Daily number of employees working = 0

**Outfall #007** - April 15-September 15: Daily number of employees working = approx. 4  
September 15-April 15: Daily number of employees working = approx. 0  
\* November 1 – April 15 water is shut-off to facility; dump station is open but receives very low use

**Outfall #008** - April 15-September 15: Daily number of employees working = 0  
September 15-April 15: Daily number of employees working = 0  
\* November 1 – April 15 water is shut-off to facility

**Daily Guests** - Due to the seasonal nature of our facilities, determining daily number of guests is difficult to estimate. There are approximately 1.4 million visitors annually to Smithville Lake, many of which do not use the water/wastewater facilities available. As further or more accurate data becomes available, it will be included in future reports.

**Clay County Parks, Recreation & Historic Sites  
Operating Permit # MO-0126799**

Attachment to Form B  
Additional Facility Information

7.14 – List all permit violations, including effluent limit exceedances in the last five years.

**Outfall #007-** In May of 2014 the outfall of lagoon #007 began to leak resulting in an unauthorized discharge. DNR was contacted by Clay County and a Kevin Thomeczek visited the discharge site. Mr. Thomeczek collected samples from the location to be processed by DNR. Clay County collected additional samples and had them sent to Keystone Labs. The leak was repaired by Clay County and lab results were sent to DNR on the 28<sup>th</sup> of May 2014.

**Clay County Parks, Recreation & Historic Sites  
Operating Permit # MO-0126799**

Attachment to Form I  
Land Application System

3.20 – Wastewater flow (dry weather) gallons/day:

**Outfall #005 - Data not available**

Permit Design: Average Annual = 14,500 gpd  
May – September = 34,000 gpd  
October – April = 1,000 gpd  
P.E. = 340

**Outfall #007 - Data not available**

Permit Design: Average Annual = 14,800 gpd  
May – September = 34,800 gpd  
October – April = 1,000 gpd  
P.E. = 348

**Outfall #008 - Data not available**

Permit Design: Average Annual = 3,600 gpd  
May – September = 8,600 gpd  
October – April = 100 gpd  
P.E. = 86

\*As further or more accurate flow data becomes available, it will be included in future reports.

**Clay County Parks, Recreation & Historic Sites  
Operating Permit # MO-0126799**

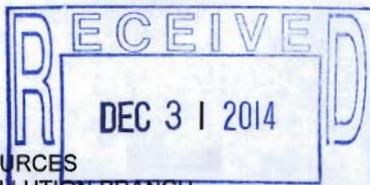
Attachment to Form I  
Land Application System  
3.21 – Land Application rate per acre

**Outfall #005** – Actual rate per acre, Total Irrigation per year, and Actual months used for  
Irrigation data not available  
Total Irrigation per year: Design = 6,172,150 gallons

**Outfall #007** – Actual rate per acre, Total Irrigation per year, and Actual months used for  
Irrigation data not available  
Total Irrigation per year: Design = 6,526,200 gallons

**Outfall #008** – Actual rate per acre, Total Irrigation per year, and Actual months used for  
Irrigation data not available  
Total Irrigation per year: Design = 1,481,900 gallons

\*As further or more accurate irrigation data becomes available, it will be included in  
future reports.



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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED
P815	-0-

JS

NOTE ► PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1. This application is for:

An operating permit and antidegradation review public notice. **AP20421**

A construction permit following an appropriate operating permit and antidegradation review public notice.

A construction permit and a concurrent operating permit and antidegradation review public notice.

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).

An operating permit for a new or unpermitted facility. Construction Permit # N/A

An operating permit renewal: Permit #MO- 0126799 Expiration Date 03/31/2015

An operating permit modification: Permit #MO- N/A Reason: N/A

1.1 Is this a Federal/State Funded Project?  YES  NO Funding Agency/Project #: N/A

1.2 Is the appropriate fee included with the application (See instructions for appropriate fee)?  YES  NO

2. FACILITY (Outfall 5 of 4)

NAME Camp Branch		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS (PHYSICAL) 6600 NE 176th St	CITY Smithville	STATE MO	ZIP CODE 64089

2.1 LEGAL DESCRIPTION: NW ¼, NE ¼, ¼, Sec. 17, T 53N, R 32W Clay County

2.2 UTM Coordinates Easting (X): 369275 Northing (Y): 4363195  
For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: Smithville Lake

3. OWNER

NAME US Army Corp of Engineers		E-MAIL ADDRESS smithville@usace.army.mil	TELEPHONE WITH AREA CODE (816) 532-0174
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

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 Clay County Department of Parks, Recreation & Historic Sites		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS 17201 Paradesian	CITY Smithville	STATE MO	ZIP CODE 64089

5. OPERATOR

NAME Jasen B. Ballenger	CERTIFICATE NUMBER 11795	TELEPHONE WITH AREA CODE (816) 407-3400
----------------------------	-----------------------------	--

6. FACILITY CONTACT

NAME Mike Driskell	TITLE Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
-----------------------	----------------------------------	--

7.0 ADDITIONAL FACILITY INFORMATION

7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)

7.2 Facility SIC code: 4952; Discharge SIC code: N/A; Facility NAICS code: N/A; Discharge NAICS code: N/A.

7.3 Number of people presently connected or population equivalent (P.E.) N/A Design P.E. 340  
 Number of units presently connected: Homes N/A Trailers N/A Apartments N/A Other N/A  
 Design flow for this outfall: 14550 Total design flow for the facility: 16910 Actual flow for this outfall: N/A  
 Commercial Establishment: Daily number of employees working attached Daily number of customers/guests attach.

7.4 Length of pipe in the sewer collection system? 1.95 feet/miles (Please denote which unit is appropriate.)

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

7.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, attach explanation and proposed repair.)

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

7.8 Will the discharge be continuous through the year?  Yes  No  
 a. Discharge will occur during the following months: N/A  
 b. How many days of the week will the discharge occur? N/A

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

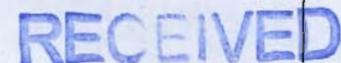
7.10 Will chlorine be added to the effluent?  Yes  No  
 a. If chlorine is added, what is the resulting residual? N/A µg/l (micrograms per liter)

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

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

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

7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary.  
 If none, write none. NOV#KCR2009122409143324 Jan. 25, 2010



JAN 08 2015

WATER PROTECTION PROGRAM

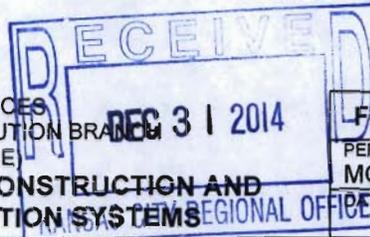
KC clay

<b>8. SLUDGE HANDLING, USE AND DISPOSAL</b>			
8.1	Is the sludge a hazardous waste as defined by 10 CSR 25? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No		
8.2	Sludge Production, including sludge received from others: <u>0</u> Design Dry Tons/Year <u>0</u> Actual Dry Tons/Year		
8.3	Capacity of sludge holding structures: Sludge storage provided: <u>N/A</u> cubic feet; <u>N/A</u> days of storage; <u>N/A</u> average percent solids of sludge; <input checked="" type="checkbox"/> No sludge storage is provided.		
8.4	Type of Storage:	<input type="checkbox"/> Holding tank <input type="checkbox"/> Building <input type="checkbox"/> Basin <input type="checkbox"/> Other (Please describe) <u>N/A</u> <input type="checkbox"/> Concrete Pad	
8.5	Sludge Treatment: <input type="checkbox"/> Anaerobic Digester <input checked="" type="checkbox"/> Lagoon <input type="checkbox"/> Composting <input type="checkbox"/> Storage Tank <input type="checkbox"/> Aerobic Digester <input type="checkbox"/> Other (Attach description) <input type="checkbox"/> Lime Stabilization <input type="checkbox"/> Air or Heat Drying		
8.6	Sludge Use or Disposal: <input type="checkbox"/> Land Application <input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years) <input type="checkbox"/> Contract Hauler <input type="checkbox"/> Incineration <input type="checkbox"/> Hauled to Another Treatment Facility <input checked="" type="checkbox"/> Sludge Retained in Wastewater treatment lagoon <input type="checkbox"/> Solid Waste Landfill <input type="checkbox"/> Other _____ Attach explanation sheet.		
8.7	<b>PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY</b> <input type="checkbox"/> By Applicant <input type="checkbox"/> By Others (complete below)		
NAME N/A			
ADDRESS N/A		CITY N/A	STATE    ZIP CODE N/A    N/A
CONTACT PERSON N/A		TELEPHONE WITH AREA CODE N/A	PERMIT NO. MO- N/A
8.8	<b>SLUDGE USE OR DISPOSAL FACILITY</b> <input type="checkbox"/> By Applicant <input type="checkbox"/> By Others (Please complete below.)		
NAME N/A			
ADDRESS N/A		CITY N/A	STATE    ZIP CODE N/A    N/A
CONTACT PERSON N/A		TELEPHONE WITH AREA CODE N/A	PERMIT NO. MO- N/A
8.9	Does the sludge or biosolids disposal comply with federal sludge regulations under 40 CFR 503? <input type="checkbox"/> Yes <input type="checkbox"/> No (Please attach explanation)		
<b>9. DOWNSTREAM LANDOWNER (S). ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.</b>			
NAME US Army Corp of Engineers			
ADDRESS 16311 DD Hwy		CITY Smithville	STATE    ZIP CODE MO    64089
<b>10. DRINKING WATER SUPPLY INFORMATION</b>			
10.1	WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY: A. Public supply (municipal or water district water) <u>WD#4</u> If public, please give name of the public supply <u>Smithville</u> B. Private well <u>N/A</u> C. Surface water (lake, pond or stream) <u>N/A</u>		
10.2	Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
10.3	Does your supply serve housing which is occupied year round by the same people? This does not include housing which is occupied seasonally? <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No		
11.	I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.		
NAME AND OFFICIAL TITLE (TYPE OR PRINT) Mike Driskell, Superintendent of Parks		TELEPHONE WITH AREA CODE (816) 407-3400	
SIGNATURE <i>Mike Driskell</i>		DATE SIGNED <u>12/18/14</u>	



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

**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND  
 OPERATION OF WASTEWATER IRRIGATION SYSTEMS**



<b>FOR AGENCY USE ONLY</b>	
PERMIT NUMBER	MC -
DATE RECEIVED	

**INSTRUCTIONS:** The following forms must be submitted with Form I: **FORM B** for domestic wastewater. **Submit FORMS E and G** for land disturbance permit if construction areas total one acre or more.

**1.00 FACILITY INFORMATION**

1.10 Facility Name

Clay County Parks - Bauman Park, Smithville Lake - Camp Branch

1.20 Application for:  Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)

Operating Permit (if no construction permit, attach engineering documents)

Date Irrigation System Began Operation: \_\_\_\_\_

Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business

Municipal with Pretreatment Program or Significant Industrial Users  Other (explain) \_\_\_\_\_

SIC Codes (list all that apply, in order of importance) 4952

1.40 Months when the business or enterprise will operate or generate wastewater:

12 months per year  Part of year (list Months): \_\_\_\_\_

1.50 This system is designed for:

No-discharge  Partial irrigation when feasible and discharge rest of time.

Irrigation during recreation season (April - October) and discharge during November - March.

Other (explain) \_\_\_\_\_

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.

Outfall Nos. 005 \_ \_ \_ \_ \_

**2.00 STORAGE BASINS**

2.10 Number of storage basins: 1 Type of basin:  Steel  Concrete  Fiberglass  Earthen

Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

(Complete Attachment A: Profile Sketch)

Basin #1: Length 285ft Width 130ft Depth 7ft Freeboard 2ft Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

Basin #2: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Freeboard \_\_\_\_\_ Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

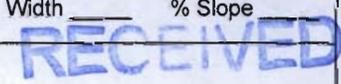
2.30 Storage Basin operating levels (report as feet below emergency overflow level)

Basin #1: Maximum water level 2 ft. Minimum operating water level 4 ft.

Basin #2: Maximum water level 2 ft. Minimum operating water level 4 ft.

2.40 Depth of sludge in lagoons and storage basins .33 ft.

Total sludge stored N/A dry tons N/A cu. ft.



JAN 08 2015

WATER PROTECTION PROGRAM

**3.00 LAND APPLICATION SYSTEM**

3.10 Number of irrigation sites 1 Total Acres 6 Maximum % field slopes <.06

Location: NW 1/4, NE 1/4, \_\_\_\_\_ 1/4, 17 Sec. 53 T 32 R Clay County 6 Acres

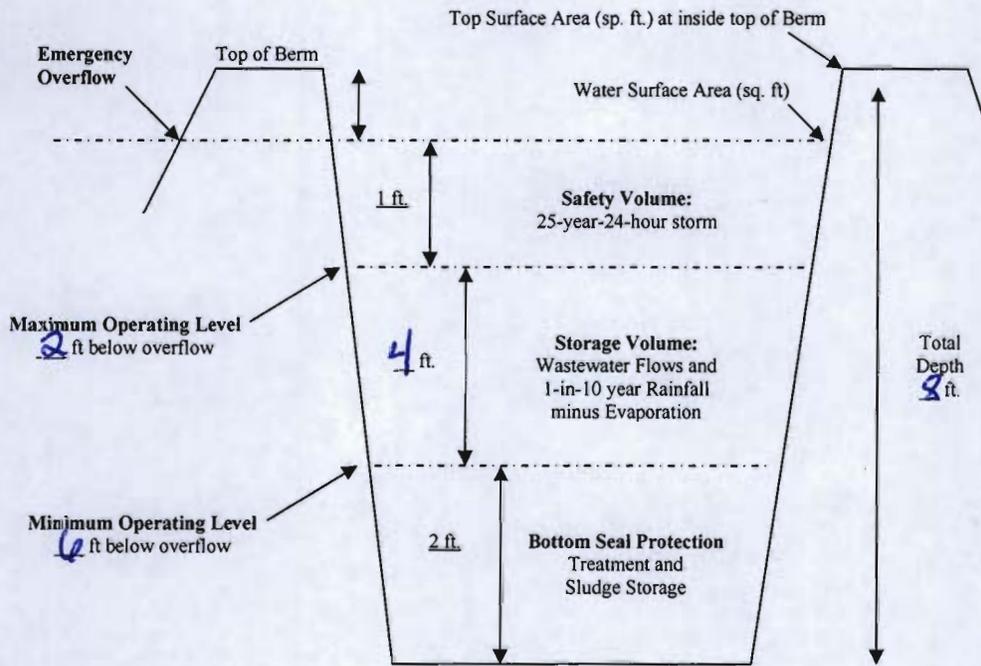
Location: \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, \_\_\_\_\_ 1/4, \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres

3.11	Type of vegetation: <input type="checkbox"/> Grass hay <input type="checkbox"/> Pasture <input type="checkbox"/> Timber <input type="checkbox"/> Row crops <input checked="" type="checkbox"/> Other (describe) <u>grass land</u>
3.20	Wastewater flow (dry weather) gallons/day: Average annual: <u>attch</u> Seasonal <u>attch</u> Off-season <u>attch</u> Months of seasonal flow: <u>5</u> Human Population Equivalent: <u>attch</u>
3.21	Land Application rate per acre (design flow including 1 in 10 year storm water flows): Design: <u>28</u> inches/year <u>.12</u> inches/hour <u>1.0</u> inches/day <u>4.0</u> inches/week Actual: <u>   </u> inches/year <u>   </u> inches/hour <u>   </u> inches/day <u>   </u> inches/week Total Irrigation per year (gallons): <u>6.1m</u> Design <u>   </u> Actual Actual months used for Irrigation (check): <input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
3.22	Land Application Rate is based on: <input type="checkbox"/> Nutrient Management Plan (N&P) <input checked="" type="checkbox"/> Hydraulic Loading <input type="checkbox"/> Other (describe) <u>   </u>
3.30	Equipment type: <input type="checkbox"/> Sprinklers <input type="checkbox"/> Gated pipe <input type="checkbox"/> Center pivot <input checked="" type="checkbox"/> Traveling gun <input type="checkbox"/> Other (describe) <u>   </u> Equipment Flow Capacity: <u>8820</u> Gallons per hour <u>   </u> Total hours of operation per year
3.40	Public Access Restrictions for irrigation sites: <input checked="" type="checkbox"/> Site is Fenced <input type="checkbox"/> Wastewater disinfection prior to irrigation <input type="checkbox"/> Other (describe): <u>   </u>
3.50	Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features: <u>N/A</u> Permanent flowing stream <u>N/A</u> Losing Stream <u>N/A</u> Intermittent (wet weather) stream <u>   </u> Lake or pond <u>N/A</u> Property boundary <u>N/A</u> Dwellings <u>N/A</u> Water supply well <u>450</u> Other (describe) <u>Trail</u>
3.60	SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist. Soil Series Name <u>   </u> Depth of bedrock <u>   </u> Feet Depth of water table <u>   </u> Feet Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges: <u>   </u> In/hr for 0-12 in soil depth <u>   </u> In/hr for 12-24 inch soil depth <u>   </u> In/hr for 24-60 inch soil depth
3.70	Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit.
3.80	Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan: <u>06/11</u>
3.81	Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features.
3.82	Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features.
<b>4.00 CERTIFICATION</b>	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.	
CONSULTING ENGINEER – Name, Official Title and Engineering Firm (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
SIGNATURE	DATE SIGNED
OWNER OR AUTHORIZED REPRESENTATIVE – Name and Official Title (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
Mike Driskell, Superintendent of Parks	(816) 407-3400
SIGNATURE <i>Mike Driskell</i>	DATE SIGNED <u>12/18/14</u>

**ATTACHMENT A**

(To be included with Form I)

**Lagoon or Storage Basin  
PROFILE SKETCH**

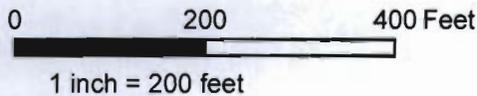
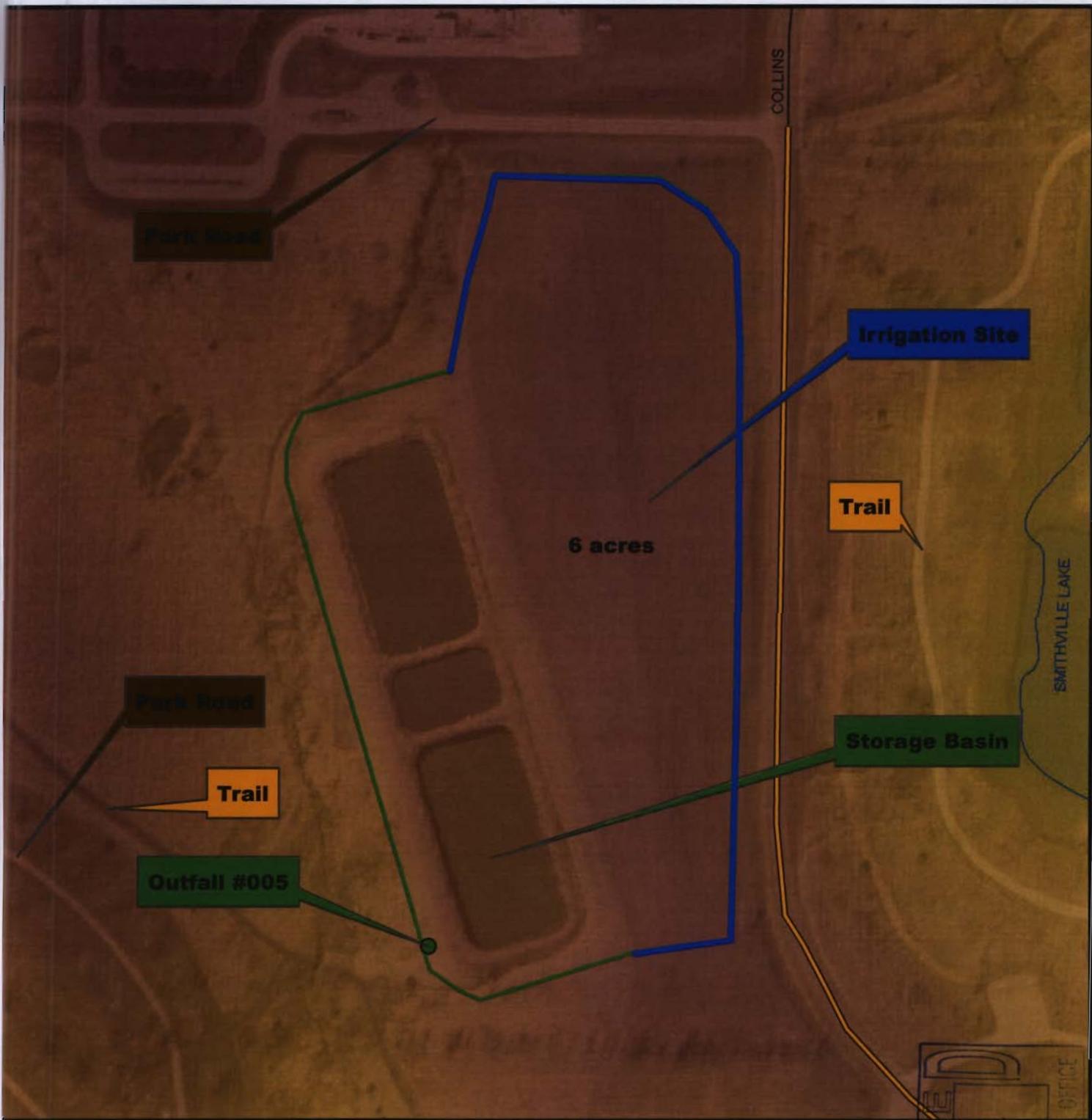


**DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).**

- a. Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- b. Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- c. Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- d. Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.  
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- e. Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- f. Total Depth is from top of berm to bottom of basin including freeboard.

# Clay County Parks - Bauman Park at Smithville Lake

## Outfall #005 Storage Basin and Irrigation Site



Aerial Photography provided by:  
GIS/Mapping, Cathy Rinehart, Assessor  
(Current as of 2010)

### LEGEND

Roads CLASS	
	Interstates
	State Highways
	Local Roads
	Highway Ramps
	Stream
	Lake
	LiDAR (Hillshade) Value
	LiDAR (Color) Value





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



FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

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

1. This application is for:

- An operating permit and antidegradation review public notice.
- A construction permit following an appropriate operating permit and antidegradation review public notice.
- A construction permit and a concurrent operating permit and antidegradation review public notice.
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).
- An operating permit for a new or unpermitted facility. Construction Permit # N/A
- An operating permit renewal: Permit #MO- 0126799 Expiration Date 03/31/2015
- An operating permit modification: Permit #MO- N/A Reason: N/A

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

**2. FACILITY (Outfall 6 of 4 )**

NAME Sailboat Cove		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS (PHYSICAL) 4619 Paradise Rd	CITY Smithville	STATE MO	ZIP CODE 64089

2.1 LEGAL DESCRIPTION: NE ¼, SW ¼, ¼, Sec. 5, T 53 W R 32 W Clay County  
 2.2 UTM Coordinates Easting (X): 368885 Northing (Y): 436563  
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)  
 2.3 Name of receiving stream: Smithville Lake

**3. OWNER**

NAME US Army Corp of Engineers		E-MAIL ADDRESS smithville@usace.army.mil	TELEPHONE WITH AREA CODE (816) 532-0174
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

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 Clay County Department of Parks, Recreation & Historic Sites		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS 17201 Paradesian	CITY Smithville	STATE MO	ZIP CODE 64089

**5. OPERATOR**

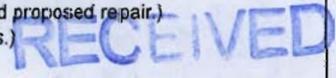
NAME Jasen B. Ballenger	CERTIFICATE NUMBER 11795	TELEPHONE WITH AREA CODE (816) 407-3400
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**6. FACILITY CONTACT**

NAME Mike Driskell	TITLE Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
-----------------------	----------------------------------	--

**7.0 ADDITIONAL FACILITY INFORMATION**

7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)  
 7.2 Facility SIC code: 4952; Discharge SIC code: N/A; Facility NAICS code: N/A; Discharge NAICS code: N/A.  
 7.3 Number of people presently connected or population equivalent (P.E.) N/A Design P.E. ???  
 Number of units presently connected: Homes N/A Trailers N/A Apartments N/A Other N/A  
 Design flow for this outfall: 5850 Total design flow for the facility: 6200 Actual flow for this outfall: N/A  
 Commercial Establishment: Daily number of employees working attached Daily number of customers/guests attach.  
 7.4 Length of pipe in the sewer collection system? 23 feet/miles (Please denote which unit is appropriate.)  
 7.5 Does any bypassing occur in the collection system or at the treatment facility?  Yes  No (If yes, attach explanation.)  
 7.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, attach explanation and proposed repair.)  
 7.7 Is industrial waste discharged to the facility identified in Item 2?  Yes  No (If yes, see instructions.)  
 7.8 Will the discharge be continuous through the year?  Yes  No  
 a. Discharge will occur during the following months: N/A  
 b. How many days of the week will the discharge occur? N/A  
 7.9 Is wastewater land applied?  Yes  No (If yes, attach Form I.)  
 7.10 Will chlorine be added to the effluent?  Yes  No  
 a. If chlorine is added, what is the resulting residual? N/A µg/l (micrograms per liter)  
 7.11 Does this facility discharge to a losing stream or sinkhole?  Yes  No  
 7.12 Attach a flow chart showing all influents, treatment facilities and outfalls.  
 7.13 Has a waste load allocation study been completed for this facility?  Yes  No  
 7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary.  
 If none, write none. NOV#KCR2009122409143324 Jan. 25, 2010



JAN 08 2015

WATER PROTECTION PROGRAM

**8. SLUDGE HANDLING, USE AND DISPOSAL**

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

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

8.3 Capacity of sludge holding structures:  
 Sludge storage provided: N/A cubic feet; N/A days of storage; N/A average percent solids of sludge;  
 No sludge storage is provided.

8.4 Type of Storage:  Holding tank  Building  
 Basin  Other (Please describe) N/A  
 Concrete Pad

8.5 Sludge Treatment:  
 Anaerobic Digester  Lagoon  Composting  
 Storage Tank  Aerobic Digester  Other (Attach description)  
 Lime Stabilization  Air or Heat Drying

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

8.7 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY  
 By Applicant  By Others (complete below)

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

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

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

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

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

NAME US Army Corp of Engineers			
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

**10. DRINKING WATER SUPPLY INFORMATION**

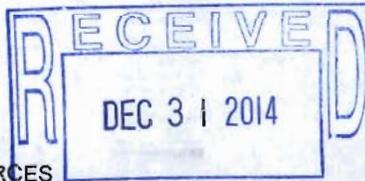
10.1 WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY:  
 A. Public supply (municipal or water district water) WD#4  
 If public, please give name of the public supply Smithville  
 B. Private well N/A  
 C. Surface water (lake, pond or stream) N/A

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

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

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

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Mike Driskell, Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
SIGNATURE <i>Mike Driskell</i>	DATE SIGNED <u>12/18/14</u>



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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

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

1. This application is for:

An operating permit and antidegradation review public notice.

A construction permit following an appropriate operating permit and antidegradation review public notice.

A construction permit and a concurrent operating permit and antidegradation review public notice.

A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).

An operating permit for a new or unpermitted facility. Construction Permit # N/A

An operating permit renewal: Permit #MO- 0126799 Expiration Date 03/31/2015

An operating permit modification: Permit #MO- N/A Reason: N/A

1.1 Is this a Federal/State Funded Project?  YES  NO Funding Agency/Project #: N/A

1.2 Is the appropriate fee included with the application (See instructions for appropriate fee)?  YES  NO

**2. FACILITY (Outfall 7 of 4 )**

NAME Crows Creek Campground		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS (PHYSICAL) 5612 Crows Creek Rd	CITY Smithville	STATE MO	ZIP CODE 64089

2.1 LEGAL DESCRIPTION: SE ¼, NW ¼, ¼, Sec. 20, T 53N, R 32W Clay County

2.2 UTM Coordinates Easting (X): 369103 Northing (Y): 436118  
 For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)

2.3 Name of receiving stream: Smithville Lake

**3. OWNER**

NAME US Army Corp of Engineers		E-MAIL ADDRESS smithville@usace.army.mil	TELEPHONE WITH AREA CODE (816) 532-0174
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

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 Clay County Department of Parks, Recreation & Historic Sites		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS 17201 Paradesian	CITY Smithville	STATE MO	ZIP CODE 64089

**5. OPERATOR**

NAME Jasen B. Ballenger	CERTIFICATE NUMBER 11795	TELEPHONE WITH AREA CODE (816) 407-3400
----------------------------	-----------------------------	--

**6. FACILITY CONTACT**

NAME Mike Driskell	TITLE Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
-----------------------	----------------------------------	--

**7.0 ADDITIONAL FACILITY INFORMATION**

7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)

7.2 Facility SIC code: 4952; Discharge SIC code: N/A; Facility NAICS code: N/A; Discharge NAICS code: N/A.

7.3 Number of people presently connected or population equivalent (P.E.) N/A Design P.E. 348  
 Number of units presently connected: Homes N/A Trailers N/A Apartments N/A Other N/A  
 Design flow for this outfall: 14880 Total design flow for the facility: 17880 Actual flow for this outfall: N/A  
 Commercial Establishment: Daily number of employees working attached Daily number of customers/guests attach.

7.4 Length of pipe in the sewer collection system? 2.52 feet/miles (Please denote which unit is appropriate.)

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

7.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, attach explanation and proposed repair.)

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

7.8 Will the discharge be continuous through the year?  Yes  No  
 a. Discharge will occur during the following months: N/A  
 b. How many days of the week will the discharge occur? N/A

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

7.10 Will chlorine be added to the effluent?  Yes  No  
 a. If chlorine is added, what is the resulting residual? N/A µg/l (micrograms per liter)

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

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

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

7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary. If none, write none. NW# KCR 2009122409143324 Jan. 25, 2010

WATER PROTECTION PROGRAM

JAN 08 2015

RECEIVED





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



<b>FOR AGENCY USE ONLY</b>	
PERMIT NUMBER	MO -
DATE RECEIVED	

**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

**INSTRUCTIONS:** The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.

**1.00 FACILITY INFORMATION**

1.10 Facility Name

Clay County Parks - Bauman Park, Smithville Lake - Crow's Creek Campground

1.20 Application for:  Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)

Operating Permit (if no construction permit, attach engineering documents)

Date Irrigation System Began Operation: \_\_\_\_\_

Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business

Municipal with Pretreatment Program or Significant Industrial Users  Other (explain) \_\_\_\_\_

SIC Codes (list all that apply, in order of importance) 4952

1.40 Months when the business or enterprise will operate or generate wastewater:

12 months per year  Part of year (list Months): \_\_\_\_\_

1.50 This system is designed for:

No-discharge  Partial irrigation when feasible and discharge rest of time.

Irrigation during recreation season (April - October) and discharge during November - March.

Other (explain) \_\_\_\_\_

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.

Outfall Nos. 007 \_ \_ \_ \_ \_

**2.00 STORAGE BASINS**

2.10 Number of storage basins: 1 Type of basin:  Steel  Concrete  Fiberglass  Earthen

Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

(Complete Attachment A: Profile Sketch)

Basin #1: Length 288ft Width 211ft Depth 7ft Freeboard 2ft Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

Basin #2: Length \_\_\_\_\_ Width \_\_\_\_\_ Depth \_\_\_\_\_ Freeboard \_\_\_\_\_ Berm Width \_\_\_\_\_ % Slope \_\_\_\_\_

2.30 Storage Basin operating levels (report as feet below emergency overflow level)

Basin #1: Maximum water level 2 ft. Minimum operating water level 4 ft.

Basin #2: Maximum water level 2 ft. Minimum operating water level 4 ft.

2.40 Depth of sludge in lagoons and storage basins .25 ft.

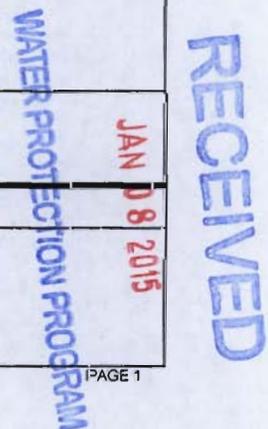
Total sludge stored N/A dry tons N/A cu. ft.

**3.00 LAND APPLICATION SYSTEM**

3.10 Number of irrigation sites 1 Total Acres 8 Maximum % field slopes <06

Location: SE  $\frac{1}{4}$ , NW  $\frac{1}{4}$ , \_\_\_\_\_  $\frac{1}{4}$ , 20 Sec. 53 T 32 R Clay County 8 Acres

Location: \_\_\_\_\_  $\frac{1}{4}$ , \_\_\_\_\_  $\frac{1}{4}$ , \_\_\_\_\_  $\frac{1}{4}$ , \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres



3.11 Type of vegetation:  Grass hay  Pasture  Timber  Row crops  Other (describe) grass land

3.20 Wastewater flow (dry weather) gallons/day:  
 Average annual: attch Seasonal attch Off-season attch  
 Months of seasonal flow: 5  
 Human Population Equivalent: attch

3.21 Land Application rate per acre (design flow including 1 in 10 year storm water flows):  
 Design: 30 inches/year .12 inches/hour 1.0 inches/day 4.0 inches/week  
 Actual:      inches/year      inches/hour      inches/day      inches/week  
 Total Irrigation per year (gallons): 6.5m Design      Actual  
 Actual months used for Irrigation (check):  Jan  Feb  Mar  Apr  May  Jun  Jul  Aug  Sep  
 Oct  Nov  Dec

3.22 Land Application Rate is based on:  
 Nutrient Management Plan (N&P)  
 Hydraulic Loading  
 Other (describe)     

3.30 Equipment type:  Sprinklers  Gated pipe  Center pivot  Traveling gun  Other (describe)       
 Equipment Flow Capacity: 8820 Gallons per hour      Total hours of operation per year

3.40 Public Access Restrictions for irrigation sites:  Site is Fenced  Wastewater disinfection prior to irrigation  
 Other (describe): temporary fence installed when irrigation is needed

3.50 Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features:  
N/A Permanent flowing stream N/A Losing Stream N/A Intermittent (wet weather) stream      Lake or pond  
N/A Property boundary N/A Dwellings N/A Water supply well 80 Other (describe)     

3.60 SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist.  
 Soil Series Name      Depth of bedrock      Feet Depth of water table      Feet  
 Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges:  
     in/hr for 0-12 in soil depth      in/hr for 12-24 inch soil depth      in/hr for 24-60 inch soil depth

3.70 Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit.

3.80 Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan: 06/11

3.81 Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features.

3.82 Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features.

**4.00 CERTIFICATION**

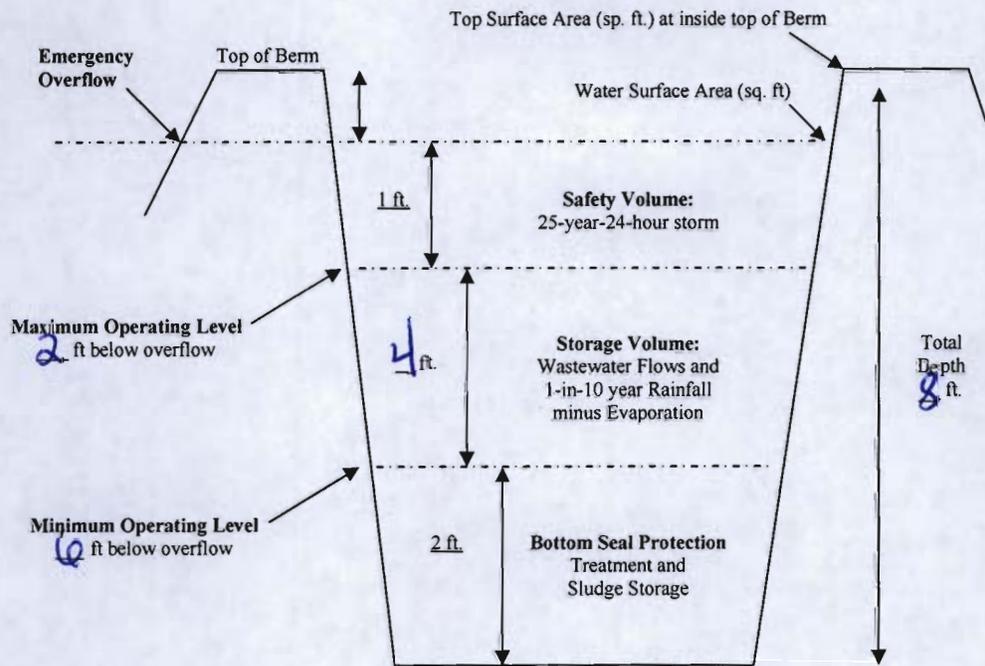
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.

CONSULTING ENGINEER – Name, Official Title and Engineering Firm (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
SIGNATURE	DATE SIGNED
OWNER OR AUTHORIZED REPRESENTATIVE – Name and Official Title (TYPE OR PRINT)	TELEPHONE NUMBER (area code and number)
Mike Driskell, Superintendent of Parks	(816) 407-3400
SIGNATURE <i>Mike Driskell</i>	DATE SIGNED <u>12/18/14</u>

**ATTACHMENT A**

(To be included with Form I)

**Lagoon or Storage Basin  
PROFILE SKETCH**



**DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).**

- Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.  
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- Total Depth is from top of berm to bottom of basin including freeboard.

# Clay County Parks - Bauman Park at Smithville Lake

## Outfall #007 Storage Basin and Irrigation Site



0 150 300 Feet  
1 inch = 250 feet

Aerial Photography provided by:  
GIS/Mapping, Cathy Rinehart, Assessor  
(Current as of 2010)

### LEGEND

Roads CLASS	
Interstates	Thick blue line
State Highways	Thin blue line
Local Roads	Thin grey line
Highway Ramps	Thin red line
Stream	Blue wavy line
Lake	Blue outline
LIDAR (Hillshade)	Value 0-255
LIDAR (Color)	Value 0-255





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

FOR AGENCY USE ONLY	
CHECK NUMBER	
DATE RECEIVED	FEE SUBMITTED

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

1. This application is for:

- An operating permit and antidegradation review public notice.
- A construction permit following an appropriate operating permit and antidegradation review public notice.
- A construction permit and a concurrent operating permit and antidegradation review public notice.
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).
- An operating permit for a new or unpermitted facility. Construction Permit # N/A
- An operating permit renewal: Permit #MO- 0126799 Expiration Date 03/31/2015
- An operating permit modification: Permit #MO- N/A Reason: N/A

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

**2. FACILITY (Outfall 8 of 4 )**

NAME Crows Creek Picnic Area		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS (PHYSICAL) 5612 Crows Creek Rd	CITY Smithville	STATE MO	ZIP CODE 64089
2.1 LEGAL DESCRIPTION: NW ¼, SW ¼, ¼, Sec. 20, T 53 N, R 32 W Clay County			
2.2 UTM Coordinates Easting (X): <u>368497</u> Northing (Y): <u>436101</u> For Universal Transverse Mercator (UTM), Zone 15 North referenced to North American Datum 1983 (NAD83)			
2.3 Name of receiving stream: <u>Smithville Lake</u>			

**3. OWNER**

NAME US Army Corp of Engineers		E-MAIL ADDRESS smithville@usace.army.mil	TELEPHONE WITH AREA CODE (816) 532-0174
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

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 Clay County Department of Parks, Recreation & Historic Sites		TELEPHONE WITH AREA CODE (816) 407-3400	
ADDRESS 17201 Paradesian	CITY Smithville	STATE MO	ZIP CODE 64089

**5. OPERATOR**

NAME Jasen B. Ballenger	CERTIFICATE NUMBER 11795	TELEPHONE WITH AREA CODE (816) 407-3400
----------------------------	-----------------------------	--

**6. FACILITY CONTACT**

NAME Mike Driskell	TITLE Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
-----------------------	----------------------------------	--

**7.0 ADDITIONAL FACILITY INFORMATION**

7.1 Description of facilities (Attach additional sheet if required). Attach a 1" = 2,000' scale U.S. Geological Survey topographic map showing location of all outfalls and downstream landowners. (See Item 9.)

7.2 Facility SIC code: 4952; Discharge SIC code: N/A; Facility NAICS code: N/A; Discharge NAICS code: N/A.

7.3 Number of people presently connected or population equivalent (P.E.) N/A Design P.E. 86  
 Number of units presently connected: Homes N/A Trailers N/A Apartments N/A Other N/A  
 Design flow for this outfall: 3600 Total design flow for the facility: 4060 Actual flow for this outfall: N/A  
 Commercial Establishment: Daily number of employees working attached Daily number of customers/guests attach.

7.4 Length of pipe in the sewer collection system? .89 feet/miles (Please denote which unit is appropriate.)

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

7.6 Does significant infiltration occur in the collection system?  Yes  No (If yes, attach explanation and proposed repair.)

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

7.8 Will the discharge be continuous through the year?  Yes  No  
 a. Discharge will occur during the following months: N/A  
 b. How many days of the week will the discharge occur? N/A

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

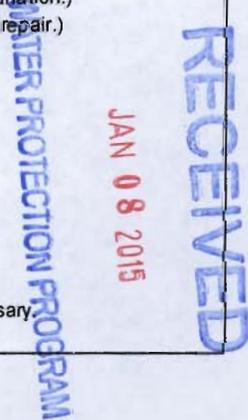
7.10 Will chlorine be added to the effluent?  Yes  No  
 a. If chlorine is added, what is the resulting residual? N/A µg/l (micrograms per liter)

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

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

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

7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary. If none, write none. NOV#KCR2009122409143324 Jan. 25, 2010



**8. SLUDGE HANDLING, USE AND DISPOSAL**

- 8.1 Is the sludge a hazardous waste as defined by 10 CSR 25?  Yes  No
- 8.2 Sludge Production, including sludge received from others: 0 Design Dry Tons/Year 0 Actual Dry Tons/Year
- 8.3 Capacity of sludge holding structures:  
 Sludge storage provided: N/A cubic feet; N/A days of storage; N/A average percent solids of sludge;  
 No sludge storage is provided.
- 8.4 Type of Storage:  Holding tank  Building  
 Basin  Other (Please describe) N/A  
 Concrete Pad
- 8.5 Sludge Treatment:  
 Anaerobic Digester  Lagoon  Composting  
 Storage Tank  Aerobic Digester  Other (Attach description)  
 Lime Stabilization  Air or Heat Drying
- 8.6 Sludge Use or Disposal:  
 Land Application  Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years)  
 Contract Hauler  Incineration  
 Hauled to Another Treatment Facility  Sludge Retained in Wastewater treatment lagoon  
 Solid Waste Landfill  Other        Attach explanation sheet.
- 8.7 **PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY**  
 By Applicant  By Others (complete below)

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

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

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

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

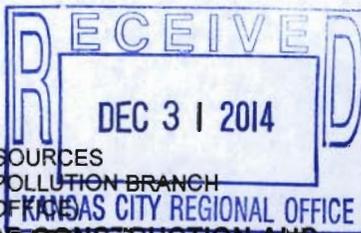
**9. DOWNSTREAM LANDOWNER (S). ATTACH ADDITIONAL SHEETS AS NECESSARY. SEE INSTRUCTIONS.**

NAME US Army Corp of Engineers			
ADDRESS 16311 DD Hwy	CITY Smithville	STATE MO	ZIP CODE 64089

**10. DRINKING WATER SUPPLY INFORMATION**

- 10.1 WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY:  
 A. Public supply (municipal or water district water) WD#4  
 If public, please give name of the public supply Smithville  
 B. Private well N/A  
 C. Surface water (lake, pond or stream) N/A
- 10.2 Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)?  
 Yes  No
- 10.3 Does your supply serve housing which is occupied year round by the same people? This does not include housing which is occupied seasonally?  
 Yes  No
11. I certify that I am familiar with the information contained in the application, that to the best of my knowledge and belief such information is true, complete and accurate, and if granted this permit, I agree to abide by the Missouri Clean Water Law and all rules, regulations, orders and decisions, subject to any legitimate appeal available to applicant under the Missouri Clean Water Law.

NAME AND OFFICIAL TITLE (TYPE OR PRINT) Mike Driskell, Superintendent of Parks	TELEPHONE WITH AREA CODE (816) 407-3400
SIGNATURE <i>Mike Driskell</i>	DATE SIGNED 12/18/14



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
 (SEE MAP FOR APPROPRIATE REGIONAL OFFICE)  
**FORM I - PERMIT APPLICATION FOR CONSTRUCTION AND  
 OPERATION OF WASTEWATER IRRIGATION SYSTEMS**

<b>FOR AGENCY USE ONLY</b>	
PERMIT NUMBER	
MO -	
DATE RECEIVED	

**INSTRUCTIONS:** The following forms must be submitted with Form I: FORM B for domestic wastewater. Submit FORMS E and G for land disturbance permit if construction areas total one acre or more.

**1.00 FACILITY INFORMATION**

1.10 Facility Name

Clay County Parks - Bauman Park, Smithville Lake - Crow's Creek Picnic Area

1.20 Application for:  Construction Permit (attach Engineering report, Plans and Specifications per 10 CSR 20-8)  
 Operating Permit (if no construction permit, attach engineering documents)  
 Date Irrigation System Began Operation: \_\_\_\_\_  
 Operating Permit Renewal

1.30 Type of wastewater to be irrigated:  Domestic  Municipal  State/National Park  Seasonal business  
 Municipal with Pretreatment Program or Significant Industrial Users  Other (explain) \_\_\_\_\_  
 SIC Codes (list all that apply, in order of importance) 4952

1.40 Months when the business or enterprise will operate or generate wastewater:  
 12 months per year  Part of year (list Months): April thru October

1.50 This system is designed for:  
 No-discharge  Partial irrigation when feasible and discharge rest of time.  
 Irrigation during recreation season (April - October) and discharge during November - March.  
 Other (explain) \_\_\_\_\_

1.60 List the Facility outfalls which will be applicable to the irrigation system from outfalls listed on Form B.  
 Outfall Nos. 008 \_ \_ \_ \_ \_

**2.00 STORAGE BASINS**

2.10 Number of storage basins: 1 Type of basin:  Steel  Concrete  Fiberglass  Earthen  
 Earthen with membrane liner

2.20 Storage basin dimensions at inside top of berm (feet): Report freeboard as feet from top of berm to emergency spillway or overflow pipe.

(Complete Attachment A: Profile Sketch)

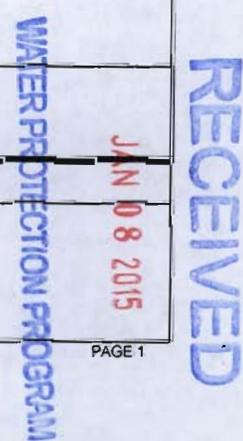
Basin #1: Length <u>273ft</u>	Width <u>52ft</u>	Depth <u>7ft</u>	Freeboard <u>2ft</u>	Berm Width _____	% Slope _____
Basin #2: Length _____	Width _____	Depth _____	Freeboard _____	Berm Width _____	% Slope _____

2.30 Storage Basin operating levels (report as feet below emergency overflow level)  
 Basin #1: Maximum water level 2 ft. Minimum operating water level 4 ft.  
 Basin #2: Maximum water level 2 ft. Minimum operating water level 4 ft.

2.40 Depth of sludge in lagoons and storage basins .15 ft.  
 Total sludge stored N/A dry tons N/A cu. ft.

**3.00 LAND APPLICATION SYSTEM**

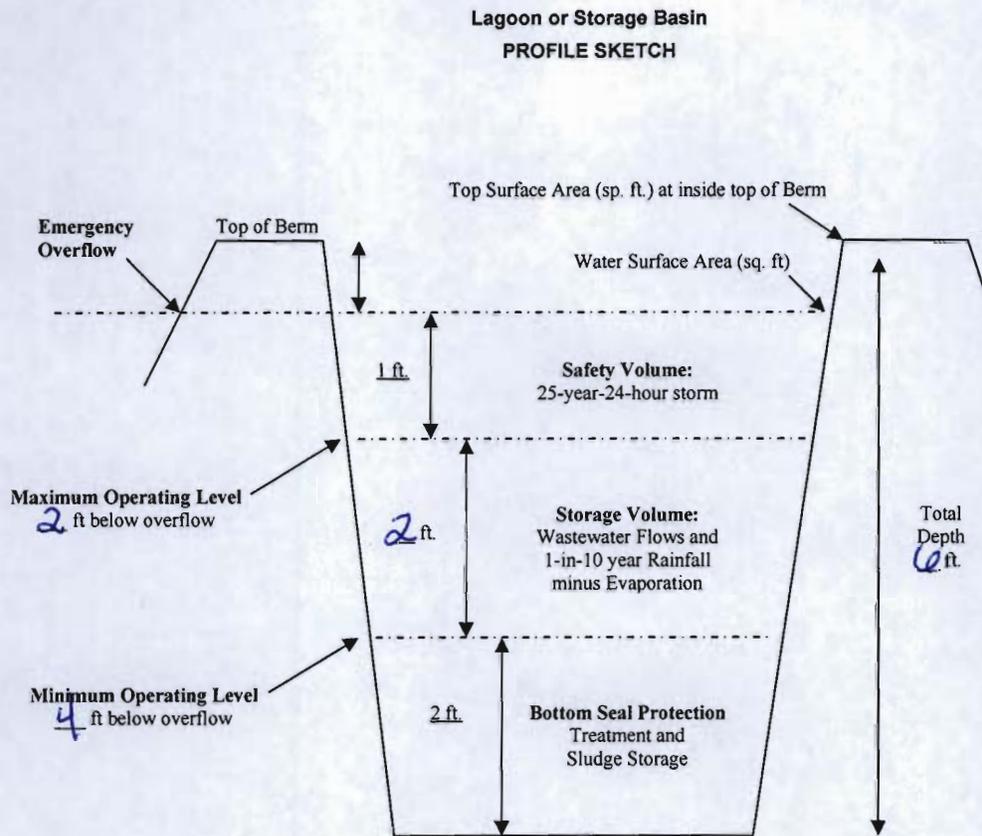
3.10 Number of irrigation sites 1 Total Acres 2 Maximum % field slopes <06  
 Location: NW ¼, SW ¼, \_\_\_\_\_ ¼, 20 Sec. 53 T 32 R Clay County 2 Acres  
 Location: \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ ¼, \_\_\_\_\_ Sec. \_\_\_\_\_ T \_\_\_\_\_ R \_\_\_\_\_ County \_\_\_\_\_ Acres



3.11	Type of vegetation: <input type="checkbox"/> Grass hay <input type="checkbox"/> Pasture <input type="checkbox"/> Timber <input type="checkbox"/> Row crops <input checked="" type="checkbox"/> Other (describe) <u>grass land</u>
3.20	Wastewater flow (dry weather) gallons/day: Average annual: <u>attach</u> Seasonal <u>attach</u> Off-season <u>attach</u> Months of seasonal flow: <u>5</u> Human Population Equivalent: <u>attach</u>
3.21	Land Application rate per acre (design flow including 1 in 10 year storm water flows): Design: <u>27</u> inches/year <u>.12</u> inches/hour <u>1.0</u> inches/day <u>4.0</u> inches/week Actual: <u>    </u> inches/year <u>    </u> inches/hour <u>    </u> inches/day <u>    </u> inches/week Total Irrigation per year (gallons): <u>1.5m</u> Design <u>    </u> Actual Actual months used for Irrigation (check): <input type="checkbox"/> Jan <input type="checkbox"/> Feb <input type="checkbox"/> Mar <input type="checkbox"/> Apr <input type="checkbox"/> May <input type="checkbox"/> Jun <input type="checkbox"/> Jul <input type="checkbox"/> Aug <input type="checkbox"/> Sep <input type="checkbox"/> Oct <input type="checkbox"/> Nov <input type="checkbox"/> Dec
3.22	Land Application Rate is based on: <input type="checkbox"/> Nutrient Management Plan (N&P) <input checked="" type="checkbox"/> Hydraulic Loading <input type="checkbox"/> Other (describe) <u>    </u>
3.30	Equipment type: <input type="checkbox"/> Sprinklers <input type="checkbox"/> Gated pipe <input type="checkbox"/> Center pivot <input checked="" type="checkbox"/> Traveling gun <input type="checkbox"/> Other (describe) <u>    </u> Equipment Flow Capacity: <u>8820</u> Gallons per hour <u>    </u> Total hours of operation per year
3.40	Public Access Restrictions for irrigation sites: <input type="checkbox"/> Site is Fenced <input type="checkbox"/> Wastewater disinfection prior to irrigation <input checked="" type="checkbox"/> Other (describe): <u>temporary fence installed when irrigation is needed</u>
3.50	Separation distance (in feet) from the outside edge of the wetted irrigation area to down gradient features: <u>N/A</u> Permanent flowing stream <u>N/A</u> Losing Stream <u>N/A</u> Intermittent (wet weather) stream <u>    </u> Lake or pond <u>N/A</u> Property boundary <u>N/A</u> Dwellings <u>N/A</u> Water supply well <u>40</u> Other (describe) <u>Trail</u>
3.60	SOILS INFORMATION: Use information from the County Soil Survey, NRCS, or professional soil scientist. Soil Series Name <u>    </u> Depth of bedrock <u>    </u> Feet Depth of water table <u>    </u> Feet Soil Infiltration rate in inches/hour (in/hr) for most restrictive layer within the following soil depth ranges: <u>    </u> in/hr for 0-12 in soil depth <u>    </u> in/hr for 12-24 inch soil depth <u>    </u> in/hr for 24-60 inch soil depth
3.70	Include a recent Geologic Report by the Department's Geological Survey and Resource Assessment Division with your construction permit.
3.80	Attach a current copy of the Operation and Maintenance (O&M) Plan for the irrigation system. Date of O&M Plan: <u>06/11</u>
3.81	Attach a site map showing topography, storage basins, irrigation sites, property boundary, streams, wells, roads, dwellings and other pertinent features.
3.82	Attach a facility sketch showing treatment units, storage basins, pipelines, irrigation equipment, application sites and other features.
<b>4.00 CERTIFICATION</b>	
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that based on my inquiry of those individuals immediately responsible for obtaining this information, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information including the possibility of fine or imprisonment.	
CONSULTING ENGINEER - Name, Official Title and Engineering Firm (TYPE OR PRINT) TELEPHONE NUMBER (area code and number)	
SIGNATURE DATE SIGNED	
OWNER OR AUTHORIZED REPRESENTATIVE - Name and Official Title (TYPE OR PRINT) TELEPHONE NUMBER (area code and number)	
Mike Driskell, Superintendent of Parks (816) 407-3400	
SIGNATURE DATE SIGNED	
<i>Mike Driskell</i> 12/18/14	

## ATTACHMENT A

(To be included with Form I)

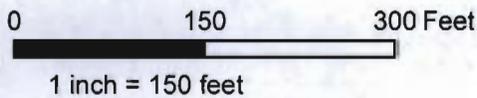
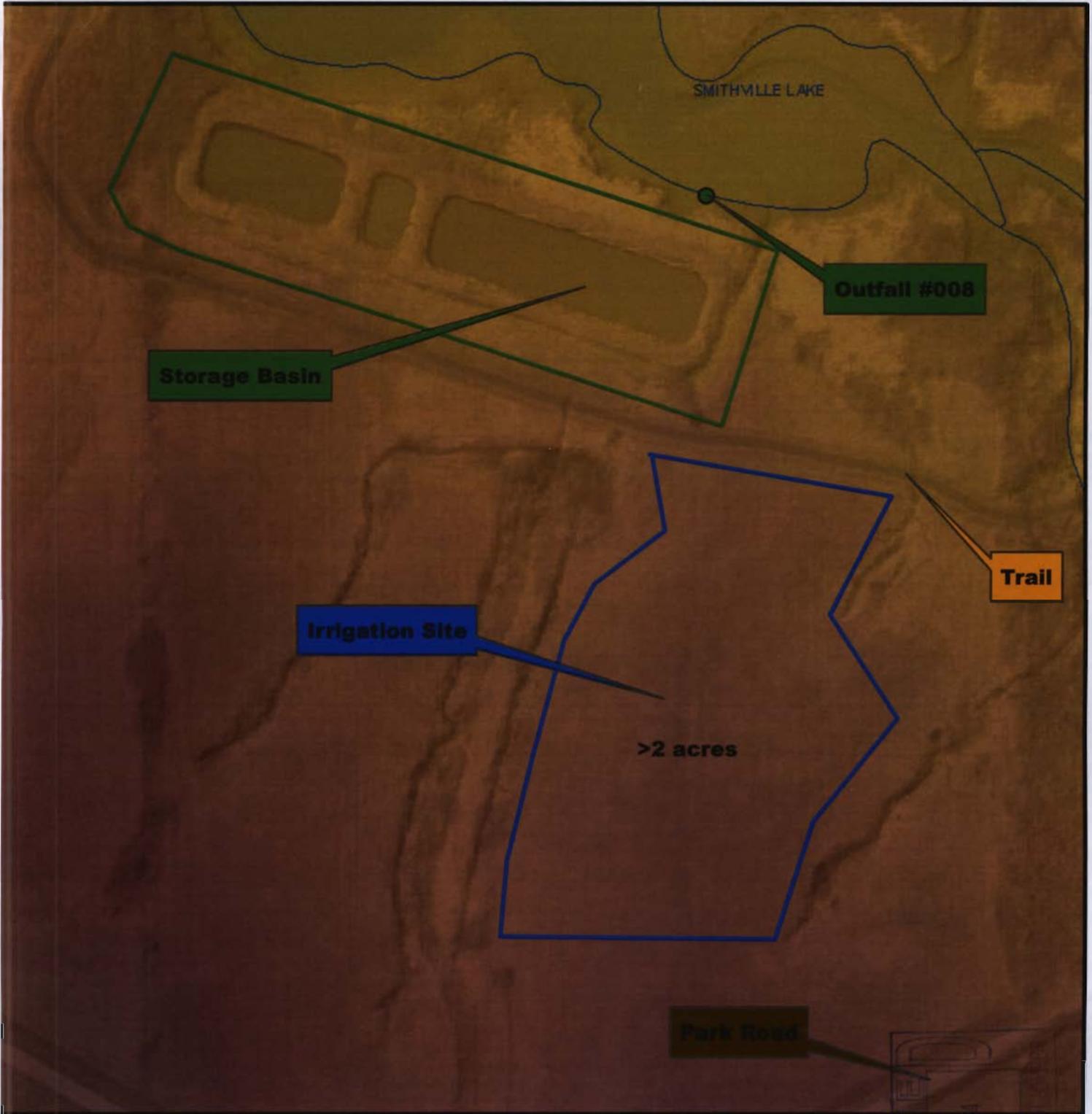


### DEFINITION OF TERMS (REFER TO THE PROFILE SKETCH ABOVE).

- a. Freeboard is depth from top of berm to emergency spillway (minimum 1 foot);
- b. Safety Volume is depth for 25-year, 24-hour storm (minimum of 1 foot);
- c. Maximum Operating Level is at bottom of the safety volume (minimum of 2 feet below top of berm).
- d. Minimum Operating Level is 2 feet above bottom of lagoon for seal protection per 10 CSR 20-8.  
The minimum operating level may be greater than 2 feet when additional treatment volume is included.
- e. Storage Volume and days storage are based on the volume between Minimum and Maximum Operating Levels.
- f. Total Depth is from top of berm to bottom of basin including freeboard.

# Clay County Parks - Bauman Park at Smithville Lake

## Outfalls #008 Storage Basin and Irrigation Site



Aerial Photography provided by:  
GIS/Mapping, Cathy Rinehart, Assessor  
(Current as of 2010)

### LEGEND

Roads CLASS	
	Interstates
	State Highways
	Local Roads
	Highway Ramps
	Stream
	Lake
	LIDAR (Hillshade) Value
	LIDAR (Color) Value

