

STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES

MISSOURI CLEAN WATER COMMISSION



MISSOURI STATE OPERATING PERMIT

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

Permit No. MO-0125687

Owner: U.S. National Park Service – ONSR (USNPS)
Address: PO Box 490, Van Buren, MO 63965

Continuing Authority: Same as above
Address: Same as above

Facility Name: USNPS, Alley Spring Wastewater Treatment Plant
Facility Address: HCR 3, Box 20F, Eminence, MO 65466

Legal Description: SE ¼, NW ¼, Sec. 36, T29N, R5W, Shannon County
UTM Coordinates: X=637955; Y=4111840

Receiving Stream: Unnamed Tributary to Jacks Fork River (u)
First Classified Stream and ID: Jacks Fork River (P)(02681)(303 d)
USGS Basin & Sub-watershed No.: (11010008-050002)

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

FACILITY DESCRIPTION

Outfall #001 – Domestic Wastewater - SIC #4953 **Class D Operator Required**

No-discharge System

Two cell storage lagoon/wastewater irrigation/sludge is retained in lagoon.

Design population equivalent is 312.

Design flow is 6,800 gallons per day (1-in-10 year design including net rainfall minus evaporation). Average design flow is 3,300 gallons per day (dry weather flows).

Actual flow is 6,800 gallons per day. Design sludge production is 4.7 dry tons/year.

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

November 18, 2010

Effective Date

Kip A. Stetzler, Acting Director, Department of Natural Resources

November 17, 2015

Expiration Date

Gary L. Gaines, P.E., Director, Southeast Regional Office

FACILITY DESCRIPTION (continued)

Outfall #001 – Irrigation System Design

Receiving Stream Watershed: Within Ozark National Scenic Riverways.

Facility Type: No-discharge Storage and Irrigation System for year round flows into lagoon.

Design Basis:	Average Annual	Recreational Season (Mar –Oct)	Winter (Nov –Feb)
Design dry weather flow	<u>4,630</u> gpd	<u>7,800</u> gpd	<u>350</u> gpd
Design with 1-in-10 year flow	<u>6,800</u> gpd	<u>10,200</u> gpd	<u>2,400</u> gpd
Design PE <u>312</u>			

Storm Water Flows: (Shannon County)

Average annual rainfall	<u>44.0</u> inches	
1-in-10 year annual rainfall	<u>57.2</u> inches	
25-year-24-hour storm	<u>6.0</u> inches	
1-in-10 year Flows:		<u>Annual</u>
Runoff concrete and roof areas		<u>3.8</u> ft.
Runoff earth areas (lagoon berm, lots, etc)		<u>2.7</u> ft.
Rainfall minus Evaporation (R-E) on lagoon water surface		<u>2.1</u> ft.

Lagoon Dimensions:	Surface Area	Depth from Bottom	Pump down depth (from spillway)
Center Line Top Berm (Basin 1):	<u>63,200</u> sq.ft. by	<u>15.0</u> ft. depth	
Center Line Top Berm (Basin 2):	<u>31,230</u> sq.ft. by	<u>9.5</u> ft. depth	
Inside Top Berm (Basin 1):	<u>57,720</u> sq.ft. by	<u>15.0</u> ft. depth	
Inside Top Berm (Basin 2):	<u>29,430</u> sq.ft. by	<u>9.5</u> ft. depth	
Freeboard: (top berm to spillway (Basin 1))	<u>2.0</u> ft. depth		
Freeboard: (top berm to spillway (Basin 2))	<u>2.0</u> ft. depth		
Emergency Spillway (Basin 1):	<u>47,200</u> sq.ft. by	<u>13.0</u> ft. depth	<u>0.0</u>
Emergency Spillway (Basin 2):	<u>29,430</u> sq.ft. by	<u>9.5</u> ft. depth	<u>0.0</u>
Maximum operating level (Basin 1)	<u>13.0</u> ft. depth	<u>0.0</u> feet	
Maximum operating level (Basin 2)	<u>6.0</u> ft. depth	<u>3.5</u> feet	
Minimum operating level (Basin 1)	<u>10.0</u> ft. depth	<u>3.0</u> feet	
Minimum operating level (Basin 2)	<u>1.0</u> ft. depth	<u>8.5</u> feet	
Aerobic BOD design basis		<u>3.0</u> ft. depth	
Storage volume (minimum to maximum water levels)		<u>830,877</u> gallons	
Storage volume (minimum to maximum water levels)		<u>959,624</u> gallons	
Berm top width: <u>10.0</u> feet.			
Berm runoff area (Centerline to emergency spillway) <u>16,000</u> sq.ft.			
Berm top width: <u>10.0</u> feet.			
Berm runoff area (Centerline to emergency spillway) <u>9,630</u> sq.ft.			
1-in-10 year annual stormwater flows into lagoon (R-E): <u>159,764</u> cu.ft. (<u>1,195,117</u> gal.)			

Storage Capacity:	Days of Storage		
	Average Annual	April-October	Winter
Design for Dry weather Flows:	<u>208</u> days	<u>123</u> days	<u>--</u>
Design with 1-in 10 year flows:	<u>142*</u> days	<u>94*</u> days	<u>400*</u> days
Design with 1-in 10 year flows:	<u>264**</u> days	<u>176**</u> days	<u>746**</u> days

* Basin 2 Storage Only

** Basin 1 & 2 Storage (1,790,500 gallons)

FACILITY DESCRIPTION (continued)

Land Application:

Irrigation Volume/year: 2,500,000 gallons (including 1-in-10 year flows)

Irrigation areas: 13.5 acres at design loading (13.5 acres total available)

Application rates/acre: 0.1 inch/hour; 1.5 inches/week; 7.0 inches/year

Field slopes: less than 30 percent

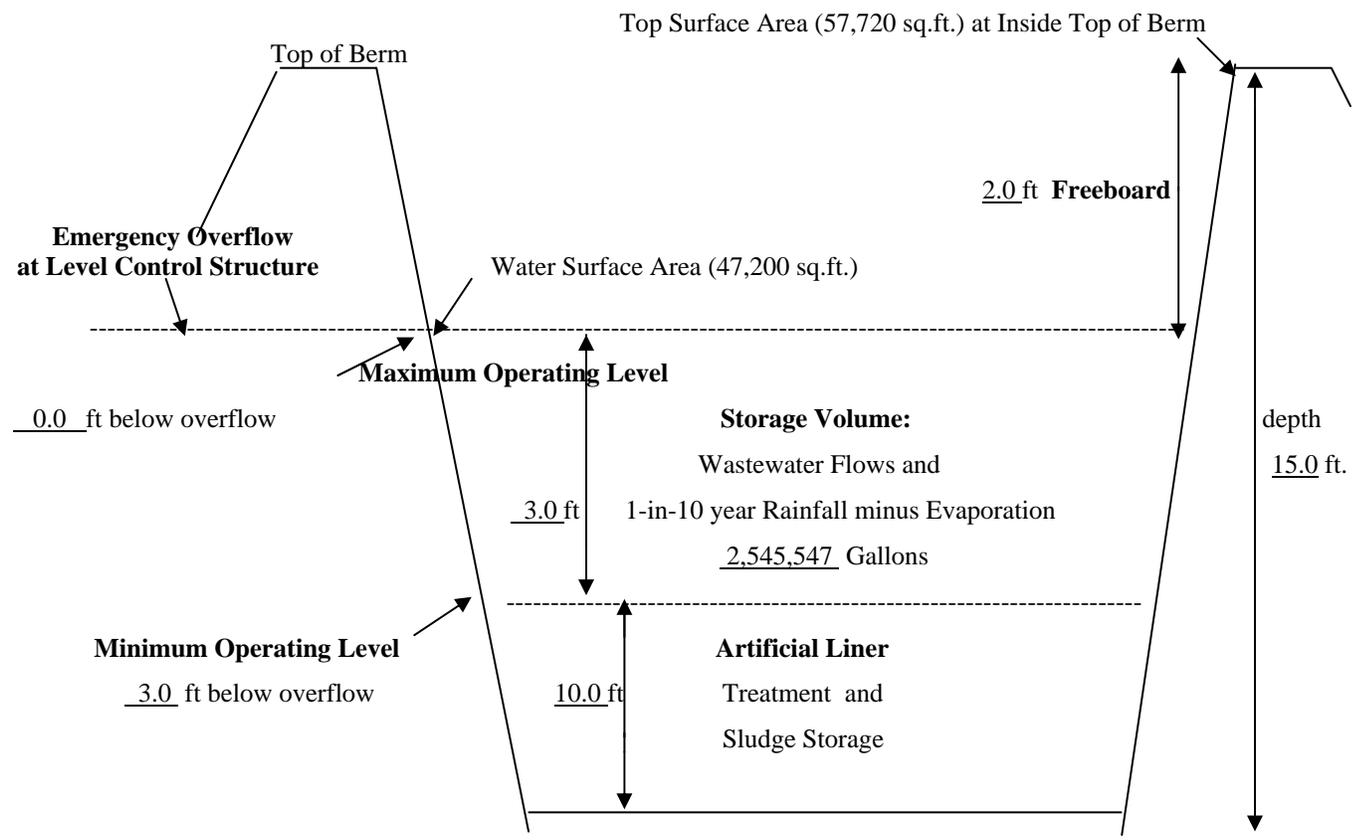
Equipment type: sprinklers

Vegetation: grass hay

Application rate is based on: hydraulic loading rate

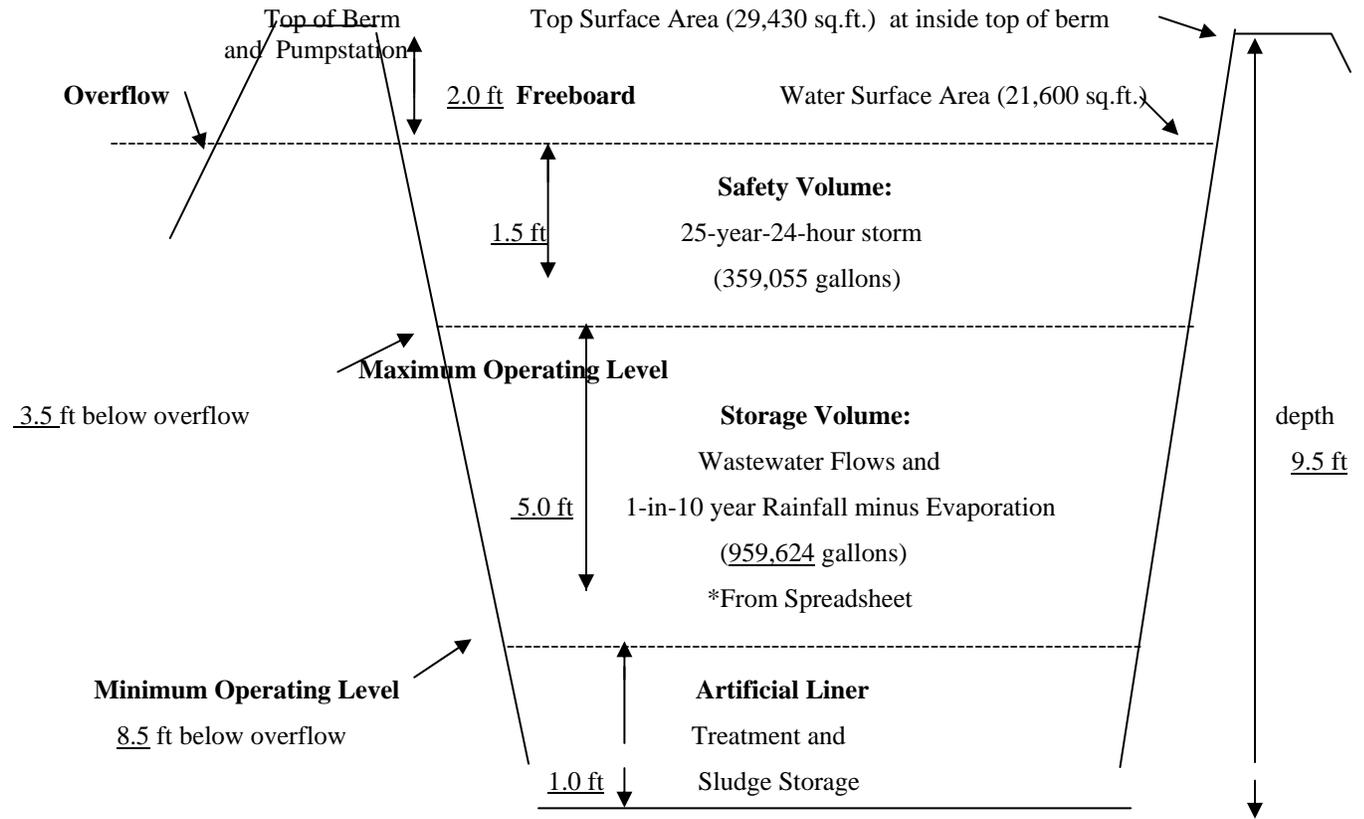
Basin 1 (Aeration Lagoon)

LAGOON PROFILE



Basin 2 (Quiet Pond)

LAGOON PROFILE



A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS						PAGE NUMBER 5 of 8	
						PERMIT NUMBER MO-0125687	
The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The final effluent limitations shall become effective upon issuance and remain in effect until expiration of the permit. Such discharges shall be controlled, limited and monitored by the permittee as specified below:							
OUTFALL NUMBER AND EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS		
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE	
<u>Outfall #001</u> – Emergency discharge from lagoon (Note 1, 2, &3)							
Lagoon Freeboard	feet	*			once/month	measured	
Rainfall	inches	*			daily	total	
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2011</u> .							
<u>Outfall #001</u> – Land Application Operational Monitoring (Notes 2 & 3)							
Irrigation Period	hours	*			daily	total	
Volume Irrigated	gallons	*			daily	total	
Application Area	acres	*			daily	total	
Application Rate	gallons/acre	*			daily	total	
MONITORING REPORTS SHALL BE SUBMITTED <u>ANNUALLY</u> ; THE FIRST REPORT IS DUE <u>January 28, 2011</u> . THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.							
B. STANDARD CONDITIONS							
IN ADDITION TO SPECIFIED CONDITIONS STATED HEREIN, THIS PERMIT IS SUBJECT TO THE ATTACHED <u>Parts I & III</u> STANDARD CONDITIONS DATED <u>October 1, 1980 and August 15, 1994</u> , AND HEREBY INCORPORATED AS THOUGH FULLY SET FORTH HEREIN.							

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS (continued)

* Monitor and report.

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

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

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

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

C. SPECIAL CONDITIONS

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

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

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

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

3. All outfalls must be clearly marked in the field.
4. Permittee will cease discharge by connection to area-wide wastewater treatment system within 90 days of notice of its availability.
5. Changes in Discharges of Toxic Substances

The permittee shall notify the Director as soon as it knows or has reason to believe:

- (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
 - (1) One hundred micrograms per liter (100 µg/L);
 - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
 - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
 - (4) The level established in Part A of the permit by the Director.
 - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
6. Report as no-discharge when a discharge does not occur during the report period.
7. Lagoons and earthen basins shall have a liner that is designed, constructed and maintained in accordance with 10 CSR 20-8.020(13)(A)4. If operating records indicate, excessive percolation, the department may require a water balance test in accordance with 10 CSR 20-8.020(16) or other investigations to evaluate adequacy of the lagoon seal. The department may require corrective action as necessary to eliminate excess leakage.

C. SPECIAL CONDITIONS (continued)

8. Water Quality Standards

- (a) Discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
- (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
 - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
 - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
 - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
 - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
 - (5) There shall be no significant human health hazard from incidental contact with the water;
 - (6) There shall be no acute toxicity to livestock or wildlife watering;
 - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
 - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.

9. Wastewater Irrigation System.

- a. Discharge Reporting. Any unauthorized discharge from the lagoon or irrigation system shall be reported to the department as soon as possible but always within 24 hours. Discharge is allowed only as described in the Facility Description and Effluent Limitations sections of this permit.
- b. Irrigation Design. Permittee shall operate the land application system in accordance with the design parameters listed in the Facility Description section of this permit:
 - (1) No-Discharge System. When the Facility Description is "No-Discharge", wastewater must be stored and irrigated at appropriate times. There shall be no-discharge from the irrigation site or storage lagoon except due to precipitation exceeding either the 1-in-10 year rainfall event for the design storage period or the 25-year-24-hour rainfall event.
- c. Lagoon Operating Levels - No-discharge Systems. The minimum and maximum operating water levels for the storage lagoon shall be clearly marked. Each lagoon shall be operated so that the maximum water elevation does not exceed one foot below the overflow point except due to exceedances of the 1-in-10 year or 25-year-24 hour storm events. Wastewater shall be land applied whenever feasible based on soil and weather conditions and permit requirements. Storage lagoon(s) shall be lowered to the minimum operating level prior to each winter by November 30.
- d. 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 department may waive the requirement for overflow structures on small existing basins.
- e. 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. Wastewater shall be land applied only during daylight hours. 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.
- f. Saturated/Frozen Conditions. There shall be no irrigation during frozen, snow covered, or saturated soil conditions. There shall be no irrigation on days when more than 0.2 inches of precipitation is received or when there is observation by the operator of an imminent or impending rainfall event.

C. SPECIAL CONDITIONS (continued)

- g. Buffer Zones. There shall be no irrigation within 300 feet of any down gradient pond, lake, sinkhole, losing stream or water supply withdrawal; 100 feet of gaining streams or tributaries; 150 feet of dwelling; or 50 feet of the property line.
- h. Public Access Restrictions. Public access shall not be allowed to the irrigation site(s).
- i. 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.

Part II – Operator Certification Requirements

As per [10 CSR 20-6.010(8) Terms and Conditions of a Permit], permittees shall operate and maintain facilities to comply with the Missouri Clean Water Law and applicable permit conditions and regulations. Operators or supervisors of operations at regulated wastewater treatment facilities shall be certified in accordance with [10 CSR 20-9.020(2)] and any other applicable state law or regulation. As per [10 CSR 20-9.010(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

Check boxes below that are applicable to the facility;

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

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

This facility currently requires an operator with a D Certification Level. Modifications made to the wastewater treatment facility may cause the classification to be modified.

Part III – Receiving Stream Information

APPLICABLE DESIGNATIONS OF WATERS OF THE STATE:

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

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

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

RECEIVING STREAM(S) TABLE:

WATERBODY NAME	CLASS	WBID	DESIGNATED USES*	8-DIGIT HUC	EDU**
Unnamed Trib to Jack’s Fork River	U	---	General	11010008	Ozark/Current/Black Drainages
Jack’s Fork River	P	2681	AQL, LWW, CLF, SCR, WBC(A)***		

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

** - Ecological Drainage Unit

*** - UAA has not been conducted.

RECEIVING STREAM(S) LOW-FLOW VALUES TABLE:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed Trib to Jacks Fork River (U)	0	0	0

MIXING CONSIDERATIONS TABLE:

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

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

RECEIVING STREAM MONITORING REQUIREMENTS:

No receiving water monitoring requirements recommended at this time.

Part IV – Rationale and Derivation of Effluent Limitations & Permit Conditions**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

Not Applicable ;

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

ANTI-BACKSLIDING:

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

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

ANTIDegradation:

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

- Renewal no degradation proposed and no further review necessary.

APPLICABLE PERMIT PARAMETERS:

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

BIO-SOLIDS, SLUDGE, & SEWAGE SLUDGE:

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

Applicable (renewal and modifications to existing operating permits) ;

This facility has been approved to land apply as per Permit Standard Conditions III and a department approved bio-solids management plan.

COMPLIANCE AND ENFORCEMENT:

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

Not Applicable ;

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

PRETREATMENT PROGRAM:

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

Not Applicable ;

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

REASONABLE POTENTIAL ANALYSIS (RPA):

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

Not Applicable ;

A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:

Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD₅) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs). Please see the United States Environmental Protection Agency's (EPA) website for interpretation of percent removal requirements for National Pollutant Discharge Elimination System Permit Application Requirements for Publicly Owned Treatment Works and Other Treatment Works Treating Domestic Sewage @ www.epa.gov/fedrgstr/EPA-WATER/1999/August/Day-04/w18866.htm

Not Applicable ;

This wastewater treatment facility is not a POTW. Influent monitoring is not being required to determine percent removal.

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

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

Not Applicable ;

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

SCHEDULE OF COMPLIANCE (SOC):

A schedule of remedial measures included in a permit, including an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit.

Not Applicable ;

This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):

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

Not Applicable ;

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

VARIANCE:

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

Not Applicable ;

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

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:

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

Not Applicable ;

Wasteload allocations were not calculated.

WLA MODELING:Not Applicable ;

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

WHOLE EFFLUENT TOXICITY (WET) TEST:

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

Not Applicable ;

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

WATER QUALITY STANDARDS:

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

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

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

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

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

Not Applicable ; This facility does not discharge to a 303(d) listed stream.The Jacks Fork River was listed on the 1998 and 2002 303d lists as an impaired water body for bacteria. The Jacks Fork River is no longer on the state 303d list because a TMDL has been written and approved by EPA. The TMDL can be viewed at <http://dnr.mo.gov/env/wpp/tmdl/2681-jacks-fork-r-tmdl.pdf>. Once an impaired water body has an approved TMDL it is removed from the next 303d list. The Jacks Fork is still assessed as impaired by bacteria and does appear as an impaired water in the most recent 2008 305b report. This facility was not identified as a major contributing source to the impairment.**Part V – Effluent Limits Determination****Outfall #001 – Storage Basin****EFFLUENT LIMITATIONS TABLE:**

PARAMETER	UNIT	BASIS FOR LIMITS	DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MODIFIED	PREVIOUS PERMIT LIMITATIONS
FLOW	GPD	1	*		*	NO	
BOD ₅	MG/L	1	*		*	YES	45/45
TSS	MG/L	1	*		*	YES	45/45
PH	SU	1	*		*	YES	6-9
AMMONIA AS N	MG/L	5	*		*	NO	
TEMPERATURE	°C	5/9	*		*	NO	
LAGOON FREEBOARD	FEET	9	*		*	NO	
RAINFALL	INCHES	9	*		*	NO	
IRRIGATION PERIOD	HOURS	9	*		*	NO	
VOLUME IRRIGATED	GALLONS	9	*		*	NO	
APPLICATION AREA	ACRES	9	*		*	NO	
APPLICATION RATE	GALLONS /ACRE	9	*		*	NO	
MONITORING FREQUENCY	Please see Minimum Sampling and Reporting Frequency Requirements in the Derivation and Discussion Section below.						

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

N/A - Not applicable

*** - Parameter not previously established in previous state operating permit.

N/A – Not applicable

Basis for Limitations Codes:

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)] the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD₅).** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Total Suspended Solids (TSS).** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **pH.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Temperature.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Total Ammonia Nitrogen.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Fecal Coliform.** No-Discharge Facility. Overflows shall be in accordance with 10 CSR 20-6.015. Please see the **APPLICABLE DESIGNATION OF WATERS OF THE STATE** sub-section of the **Receiving Stream Information.**
- **Rainfall, Lagoon Freeboard, Irrigation Period, Volume Irrigated, Irrigation Area. No-Discharge Facility.** Necessary parameters to determine compliance with No-Discharge Requirements in 10 CSR 20-6.015.
- **Minimum Sampling and Reporting Frequency Requirements** Sampling and reporting frequency requirements have been retained from previous state operating permit. Monitoring frequencies has been established in accordance with best professional judgement and knowledge of understanding operation of a no-discharge system. Daily flow and rainfall frequency has been established to determine compliance with meeting the definition of no discharge. No discharge facilities are designed, constructed and operated to hold or irrigate , or otherwise dispose without discharge to surface or subsurface waters of the state, all process wastes and associated storm water flows except for discharges that are caused by catastrophic and chronic storm events. These storm events are the 1-in-10 year storm event and the 25 year 24 hour storm event. No discharge facilities are allowed to discharge excess water caused by these storm events in accordance with the emergency discharge limits when these storm events are exceeded. Daily records for land application are being required to determine if wastewater is being properly land applied. Reports are summarized and submitted annually for review. The monitoring frequencies are being retained from the previous permit.

Part VI – Administrative Requirements

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

PUBLIC NOTICE:

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

DATE OF FACT SHEET: MAY 13, 2010

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