

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-0049280

Owner: Fawn Meadows Improvement Association  
Address: 99 Towerview Dr., Hillboro, MO 63050

Continuing Authority: same as above  
Address: same as above

Facility Name: Fawn Meadows Subdivision  
Facility Address: 99 Towerview Dr., Hillsboro, MO 63050

Legal Description: NW¼, SW¼, Sec. 28, T41N, R5E, Jefferson County  
UTM Coordinates: X = 720763, Y= 4237205

Receiving Stream: Unnamed tributary to Sandy Creek (U)  
First Classified Stream and ID: Sandy Creek (C) (1720)  
USGS Basin & Sub-watershed No.: (07140101-0803)

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 - Subdivision – SIC # 6552  
No Certified Operator Required.  
Extended aeration/sludge holding tank/sludge disposal is contract hauler  
Design population equivalent is 74 PE.  
Design flow is 7,400 gallons per day.  
Actual flow is 5,000 gallons per day.  
Design sludge production is 1.332 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 1, 2013  
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

December 31, 2016  
Expiration Date

John Madras, Director, Water Protection Program

<b>OUTFALL #001</b>	<b>TABLE A-1. INTERIM EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS</b>
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The permittee is authorized to discharge from outfall(s) with serial number(s) as specified in the application for this permit. The interim effluent limitations shall become effective upon issuance and remain in effect through **October 31, 2014**. Such discharges shall be controlled, limited and monitored by the permittee as specified below:

EFFLUENT PARAMETER(S)	UNITS	INTERIM EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/ quarter****	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		45	30	once/quarter****	composite**
Total Suspended Solids	mg/L		45	30	once/quarter****	composite**
Ammonia as N	mg/L	*		*	once/quarter****	grab
pH – Units	SU	***		***	once/quarter****	grab

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

\* Monitoring requirement only.

\*\* A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

\*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

\*\*\*\* Quarterly sampling is required and samples shall be collected and tested for the parameters listed in Table A-1 if a discharge occurs during the reporting period. If the facility serves a part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. See table below for quarterly sampling schedule.

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

EFFLUENT PARAMETER(S)	UNITS	FINAL EFFLUENT LIMITATIONS			MONITORING REQUIREMENTS	
		DAILY MAXIMUM	WEEKLY AVERAGE	MONTHLY AVERAGE	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	MGD	*		*	once/quarter****	24 hr. estimate
Biochemical Oxygen Demand <sub>5</sub>	mg/L		45	30	once/quarter****	composite**
Total Suspended Solids	mg/L		45	30	once/quarter****	composite**
pH – Units	SU	***		***	once/quarter****	grab
Ammonia as N (April 1 – Sept 30)	mg/L	3.6		1.4	once/quarter****	grab
(Oct 1 – March 31)		7.5		2.9		

MONITORING REPORTS SHALL BE SUBMITTED **QUARTERLY**; THE FIRST REPORT IS DUE **JANUARY 28, 2015**. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

\* Monitoring requirement only.

\*\* A composite sample made up from a minimum of four grab samples collected within a 24 hour period with a minimum of two hours between each grab sample.

\*\*\* pH is measured in pH units and is not to be averaged. The pH is limited to the range of 6.5-9.0 pH units.

\*\*\*\* Quarterly sampling is required and samples shall be collected and tested for the parameters listed in Table A-1 if a discharge occurs during the reporting period. If the facility serves a part-time or seasonal establishment/residence(s), then sampling shall occur while the treatment facility is operating and after a discharge begins. See table on Page 3 for quarterly sampling schedule.

**B. STANDARD CONDITIONS**

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

**C. SPECIAL CONDITIONS**

1. This permit establishes final ammonia limitations based on Missouri’s current Water Quality Standard. On August 22, 2013, the Environmental Protection Agency (EPA) published a notice in the Federal Register announcing the final national recommended ambient water quality criteria for protection of aquatic life from the effects of ammonia in freshwater. The EPA’s guidance, Final Aquatic Life Ambient Water Quality Criteria for Ammonia – Fresh Water 2013, is not a rule, nor automatically part of a state’s water quality standards. States must adopt new ammonia criteria consistent with EPA’s published ammonia criteria into their water quality standards that protect the designated uses of the water bodies. The Department of Natural Resources intends to adopt the new ammonia criteria during the next review. Information on this topic can be obtained by viewing the Department’s 2013 EPA criteria Factsheet located at <http://dnr.mo.gov/pubs/pub2481.pdf>.
2. This permit may be reopened and modified, or alternatively revoked and reissued, to:
  - (a) Comply with any applicable effluent standard or limitation issued or approved under Sections 301(b)(2)(C) and (D), 304(b)(2), and 307(a) (2) of the Clean Water Act, if the effluent standard or limitation so issued or approved:
    - (1) contains different conditions or is otherwise more stringent than any effluent limitation in the permit; or
    - (2) controls any pollutant not limited in the permit.

- (b) Incorporate new or modified effluent limitations or other conditions, if the result of a waste load allocation study, toxicity test or other information indicates changes are necessary to assure compliance with Missouri's Water Quality Standards.
- (c) Incorporate new or modified effluent limitations or other conditions if, as the result of a watershed analysis, a Total Maximum Daily Load (TMDL) limitation is developed for the receiving waters which are currently included in Missouri's list of waters of the state not fully achieving the state's water quality standards, also called the 303(d) list.
- (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 outfalls must be clearly marked in the field.
- 4. Permittee will cease discharge by connection to a facility with an area-wide management plan per 10 CSR 20-6.010(3)(B) within 90 days of notice of its availability.
- 5. Water Quality Standards
  - (a) To the extent required by law, discharges to waters of the state shall not cause a violation of water quality standards rule under 10 CSR 20-7.031, including both specific and general criteria.
  - (b) General Criteria. The following general water quality criteria shall be applicable to all waters of the state at all times including mixing zones. No water contaminant, by itself or in combination with other substances, shall prevent the waters of the state from meeting the following conditions:
    - (1) Waters shall be free from substances in sufficient amounts to cause the formation of putrescent, unsightly or harmful bottom deposits or prevent full maintenance of beneficial uses;
    - (2) Waters shall be free from oil, scum and floating debris in sufficient amounts to be unsightly or prevent full maintenance of beneficial uses;
    - (3) Waters shall be free from substances in sufficient amounts to cause unsightly color or turbidity, offensive odor or prevent full maintenance of beneficial uses;
    - (4) Waters shall be free from substances or conditions in sufficient amounts to result in toxicity to human, animal or aquatic life;
    - (5) There shall be no significant human health hazard from incidental contact with the water;
    - (6) There shall be no acute toxicity to livestock or wildlife watering;
    - (7) Waters shall be free from physical, chemical or hydrologic changes that would impair the natural biological community;
    - (8) Waters shall be free from used tires, car bodies, appliances, demolition debris, used vehicles or equipment and solid waste as defined in Missouri's Solid Waste Law, section 260.200, RSMo, except as the use of such materials is specifically permitted pursuant to section 260.200-260.247.
- 6. Changes in Discharges of Toxic Substances  
The permittee shall notify the Director as soon as it knows or has reason to believe:
  - (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
    - (1) One hundred micrograms per liter (100 µg/L);
    - (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
    - (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
    - (4) The level established by the Director in accordance with 40 CFR 122.44(f).
  - (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.
- 7. Report as no-discharge when a discharge does not occur during the report period.
- 8. It is a violation of the Missouri Clean Water Law to fail to pay fees associated with this permit (644.055 RSMo).

9. Bypasses are not authorized at this facility and are subject to 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the appropriate Regional Office.
10. The facility must be sufficiently secured to restrict entry by children, livestock and unauthorized persons as well as to protect the facility from vandalism.
11. At 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. An Operation and Maintenance (O & M) manual shall be maintained by the permittee and made available to the operator. The O & M manual shall include key operating procedures and a brief summary of the operation of the facility.
14. An all-weather access road shall be provided to the treatment facility.
15. The discharge from the wastewater treatment facility shall be conveyed to the receiving stream via a closed pipe or a paved or rip-rapped open channel. Sheet or meandering drainage is not acceptable. The outfall sewer shall be protected against the effects of floodwater, ice or other hazards as to reasonably insure its structural stability and freedom from stoppage. The outfall shall be maintained so that a sample of the effluent can be obtained at a point after the final treatment process and before the discharge mixes with the receiving waters.

#### D. SCHEDULE OF COMPLIANCE

This permit contains new limits for ammonia, extended aeration technology has proven that it can efficiently remove ammonia in order to meet water quality standards. The facility if, operated and maintained properly, should meet the new ammonia limits. Therefore, the Department is allowing one year for the permittee to conduct operational and maintenance adjustments in order to meet new ammonia limits.

**Missouri Department of Natural Resources**  
**Statement of Basis**  
**#MO-0049280**  
**Fawn Meadows Subdivision**

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

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

**Part I – Facility Information**

Facility Type: Subdivision – SIC # 6552

**Part II – Modification Rationale**

This operating permit is hereby modified to revise Special Condition #1. The requirement to submit a report has been removed. No other changes were made at this time.

**Part III – Administrative Requirements**

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

**Date of Statement of Basis:** 10-24-2013

Submitted by

Curt Gateley, Chief  
Domestic Wastewater Unit  
Operating Permits Section  
Water Protection Program

**Missouri Department of Natural Resources**  
**FACT SHEET**  
**FOR RENEWAL OF**  
**FAWN MEADOWS SUBDIVISION**  
**MO-0049280**

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

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

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

This Factsheet is for a Minor Operating Permit covering non-POTW domestic Wastewater Treatment Plants (WWTP).

**Part I – Facility Information**

Facility Type: Subdivision SIC# - 6552

Facility Description:

Extended aeration/sludge holding tank/sludge disposal is contract hauler

**OUTFALL(S) TABLE:**

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.01	Secondary	Domestic (sanitary)

**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 20-9.020(2)(A)], requirements for operation by certified personnel shall apply to all wastewater treatment systems, if applicable, as listed below:

This facility is not required to have a certified operator.

**Part III– Operational Monitoring**

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

**Part IV – Receiving Stream Information**

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

**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 seven (7) categories. Each category lists effluent limitations for specific parameters, which are presented in each outfall's Effluent Limitation Table and further discussed in the Derivation & Discussion of Limits section. This permit only applies to facilities discharging to the following categories of water body.

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

**RECEIVING STREAM(S) TABLE:**

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Unnamed tributary to Sandy Creek	(U)	--	General Criteria	07140101-0803	2.8
Sandy Creek	(C)	1720	LWW, AQL, WBC(B)		

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

**NOTES:**

Stream Survey 360 was conducted on July 19, 2012. This survey reported that the unnamed tributary to Sandy Creek was impaired by sludge deposits. According to the survey "No upstream flow. Effluent flow 0.02 cfs, SC 1231, C 24.1, discolored water, sludge." This study was conducted approximately 80 yards below the outfall of this facility.

Additionally, the same survey reported "Flow 0.07 cfs, black rocks, duckweed, sparse mayfly and caddisfly larva, SC 987, C 25.2. Eight small WWTPs upstream of this point." This survey was conducted approximately 1 mile downstream from this facility and reported no impairment of the stream.

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

**ALTERNATIVE EVALUATIONS FOR NEW FACILITIES:**

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

Not Applicable; permit renewal.

**ANTI-BACKSLIDING:**

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

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

**ANTIDegradation:**

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

Antidegradation reviews are performed at the time of construction. No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

**AREA-WIDE WASTE TREATMENT MANAGEMENT & CONTINUING AUTHORITY:**

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

**BIOSOLIDS & SEWAGE SLUDGE:**

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

With prior approval from the Department, permittees are authorized to land apply biosolids, or utilize other methods of sludge disposal contained in Standard Conditions Part III.

**CONSERVATIVE ASSUMPTIONS:**

In order to ensure efficient processing of permit applications domestic wastewater treatment facilities under 50,000 receive an expedited permit renewal. If the permittee would prefer to have additional review conducted, such as reasonable potential analysis, or wish to submit time of travel calculations for the Department to consider ammonia degradation, the Department will accommodate such a request. The following conservative assumptions have been made regarding the facility:

- Ammonia is a constituent of domestic wastewater. Unless the facility is entitled to a large mixing zone/zone of initial dilution relative to the discharge volume, reasonable potential to violate water quality standards is assumed. If the facility is legally entitled to a mixing zone and zone of initial dilution, such dilution is documented in the effluent limit calculations.
- Reasonable Potential Analysis [statistical analysis] using facility data was not conducted. Default multipliers from EPA guidance utilized to calculate effluent limits.
- Where discharges are to an unclassified stream, no degradation of ammonia has been calculated.
- This facility was determined not to have other sources of wastewater which would introduce other pollutants. Only domestic wastewater is included in the influent to this facility.

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

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

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

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.

**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.

**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 October 25, 2012 the Department issued a 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 an affordability analysis.

Applicable : The time given for effluent limitations of this permit listed under Interim Effluent Limitation and Final Effluent Limitations were established in accordance with [10 CSR 20-7.031(10)]. The facility has been given a schedule of compliance to meet final effluent limits for Ammonia as N. The facility may not be able to meet final effluent limitations and may require construction upgrades. The Department feels that the SOC granted in the permit provides sufficient time for the permittee to acquire necessary funding, submit any necessary applications and engineering design and specifications, and complete construction. If the permittee feels that a longer SOC is required, then the permittee must submit justification as to why more time is needed.

**WATER QUALITY STANDARDS:**

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

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

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

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

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

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

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

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

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

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

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

Number of Samples "n":

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

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

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

This facility does not anticipate bypassing.

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

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

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

This permit does not apply within a watershed for which an approved Total Maximum Daily Load includes wasteload allocations for oxygen demand, nitrogen, phosphorus, or ammonia. These pollutants are discharged by domestic wastewater treatment facilities, and therefore it may be necessary to apply a lower wasteload allocation than appears in this permit to any new or existing discharge in order to protect water quality.

**Part VI – Effluent Limits Determination**

**EFFLUENT LIMITATIONS TABLE FOR RIVERS AND STREAMS:**

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average
Flow	MGD	1	*		*
BOD <sub>5</sub>	mg/L	1, 2		45	30
TSS	mg/L	1, 2		45	30
pH	SU	1, 2	6.5-9.0		6.5-9.0
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	2, 3, 5	3.6 7.5		1.4 2.9

\* - Monitoring requirement only.

**Basis for Limitations Codes:**

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

**OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:**

- **Flow.** In accordance with [40 CFR Part 122.44(i)(1)(ii)], the volume of effluent discharged from each outfall is needed to assure compliance with permitted effluent limitations. If the permittee is unable to obtain effluent flow, then it is the responsibility of the permittee to inform the Department, which may require the submittal of an operating permit modification.
- **Biochemical Oxygen Demand (BOD<sub>5</sub>).** Effluents limits for each type of receiving water body were set according to 10 CSR 20-7.015(2)-(8).
- **Total Suspended Solids (TSS).** Effluents limits for each type of receiving water body were set according to 10 CSR 20-7.015(2)-(8).
- **pH.** Effluent limitation range is 6.5 – 9.0 Standard pH Units (SU), as per the applicable section of 10 CSR 20-7.015. pH is not to be averaged.

- **Total Ammonia Nitrogen.** Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(4)(B)7.C. & Table B3] default pH 7.8 SU. No mixing considerations allowed; therefore, WLA = appropriate criterion.

Season	Temp (°C)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: April 1 – September 30

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

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

$LTA_c = 1.5 \text{ mg/L} (0.780) = 1.17 \text{ mg/L}$   
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.89 \text{ mg/L}$

[CV = 0.6, 99<sup>th</sup> Percentile, 30 day avg.]  
 [CV = 0.6, 99<sup>th</sup> Percentile]

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 1.17 mg/L (3.11) = **3.6 mg/L**  
 AML = 1.17 mg/L (1.19) = **1.4 mg/L**

[CV = 0.6, 99<sup>th</sup> Percentile]  
 [CV = 0.6, 95<sup>th</sup> Percentile, n = 30]

Winter: October 1 – March 31

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

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

$LTA_c = 3.1 \text{ mg/L} (0.780) = 2.42 \text{ mg/L}$   
 $LTA_a = 12.1 \text{ mg/L} (0.321) = 3.89 \text{ mg/L}$

[CV = 0.6, 99<sup>th</sup> Percentile, 30 day avg.]  
 [CV = 0.6, 99<sup>th</sup> Percentile]

Use most protective number of  $LTA_c$  or  $LTA_a$ .

MDL = 2.42 mg/L (3.11) = **7.5 mg/L**  
 AML = 2.42 mg/L (1.19) = **2.9 mg/L**

[CV = 0.6, 99<sup>th</sup> Percentile]  
 [CV = 0.6, 95<sup>th</sup> Percentile, n = 30]

- **Temperature.** The Department has determined that there is no reasonable potential for this facility to exceed Water Quality Standards for temperature. Therefore, the monitoring requirement has been removed from the permit.

## **Part VII – 2013 Water Quality Criteria for Ammonia**

Upcoming changes to the Water Quality Standard for ammonia may require significant upgrades to wastewater treatment facilities.

On August 22, 2013, the U.S. Environmental Protection Agency (EPA) finalized new water quality criteria for ammonia, based on toxicity studies of mussels. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels. Missouri is home to 65 of North America's mussel species, spread across the state. According to the Missouri Department of Conservation nearly two-thirds are considered to be "of conservation concern". Nine are listed as federally endangered, with one more currently proposed as endangered and another proposed as threatened.

The adult forms of mussels seen in rivers, lakes, and streams are sensitive to pollutants because they are sedentary filter feeders. They vacuum up many pollutants with the food they bring in and cannot escape to new habitats, so they can accumulate toxins in their bodies and die. However, very young mussels, called glochidia, are exceptionally sensitive to ammonia in water. As a result of a citizen suit, the EPA was compelled to conduct toxicity testing and develop ammonia water quality criteria that would be protective if young mussels may be present in a waterbody. These new criteria will apply to any discharge with ammonia levels that may pose a reasonable potential to violate the standards. Nearly all discharging domestic wastewater treatment facilities (cities, subdivisions, mobile home parks, etc.), as well as certain industrial and stormwater dischargers with ammonia in their effluent, will be affected by this change in the regulations.

When new water quality criteria are established by the EPA, states must adopt them into their regulations in order to keep their authorization to issue permits under the National Pollutant Discharge Elimination System (NPDES). States are required to review their water quality standards every three years, and if new criteria have been developed they must be adopted. States may be more protective than the Federal requirements, but not less protective. Missouri does not have the resources to conduct the studies necessary for developing new water quality standards, and therefore our standards mirror those developed by the EPA. However we will utilize any available flexibility based on actual species of mussels native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded so as to comply with the current water quality standards. But these new standards may require a different treatment technology than the one being considered by the permittee. It is important that permittees discuss any new and upcoming requirements with their consulting engineers to ensure that their treatment systems are capable of complying with the new requirements. The Department encourages permittees to construct treatment technologies that can attain effluent quality that supports the EPA ammonia criteria.

Ammonia toxicity varies by temperature and by pH of the water. Assuming a stable pH value, but taking into account winter and summer temperatures, Missouri includes two seasons of ammonia effluent limitations. Typical ammonia effluent limitations for a facility discharging to a stream with no dilution allowances, under the current water quality standard (WQS), are:

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

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

Under the new EPA criteria, where mussels are present or expected to be present, typical effluent limitations for a facility discharging to a stream with no dilution allowance would be:

Summer – 1.7 mg/L daily maximum, 0.6 mg/L monthly average.

Winter – 5.6 mg/L daily maximum, 2.1 mg/L monthly average.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. It is expected that the new WQS will be adopted in the next review of our standards. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. When setting schedules of compliance for ammonia effluent limitations, consideration will be given to facilities that have recently constructed upgraded facilities to meet the current ammonia limitations.

For more information on this topic feel free to contact the Missouri Department of Natural Resources, Water Protection Program, Water Pollution Control Branch, Operating Permits Section at (573) 751-1300.

## **Part VIII – Finding of Affordability**

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

The Department is not required to determine findings of affordability because the facility is not a combined or separate sanitary sewer system for a publically-owned treatment works.

## **Part IX – Administrative Requirements**

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

### **PERMIT SYNCHRONIZATION:**

The Department of Natural Resources is currently undergoing a synchronization process for operating permits. Permits are normally issued on a five-year term, but to achieve synchronization many permits will need to be issued for less than the full five years allowed by regulation. The intent is that all permits within a watershed will move through the Watershed Based Management (WBM) cycle together will all expire in the same fiscal year. This will allow further streamlining by placing multiple permits within a smaller geographic area on public notice simultaneously, thereby reducing repeated administrative efforts. This will also allow the Department to explore a watershed based permitting effort at some point in the future. 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 between August 2, 2013, and September 3, 2013. No comments were received.

**DATE OF FACT SHEET:** JULY 17, 2013

### **COMPLETED BY:**

**JEREMY PAYNE, ENVIRONMENTAL SPECIALIST  
FINANCIAL ASSISTANCE CENTER  
WATER PROTECTION PROGRAM  
MISSOURI DEPARTMENT OF NATURAL RESOURCES  
573-751-6823  
[jeremy.payne@dnr.mo.gov](mailto:jeremy.payne@dnr.mo.gov)**

AP 13814



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	1119112
FEE SUBMITTED	0 80

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

1. This application is for:

- An operating permit and antidegradation review public notice.
- A construction permit following an appropriate operating permit and antidegradation review public notice.
- A construction permit and a concurrent operating permit and antidegradation review public notice.
- A construction permit (submitted before Aug. 30, 2008 or antidegradation review is not required).
- An operating permit for a new or unpermitted facility. Construction Permit # \_\_\_\_\_
- An operating permit renewal: Permit #MO- 0049280 Expiration Date 04/17/13
- An operating permit modification: Permit #MO- Reason: \_\_\_\_\_

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

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

2. FACILITY (Outfall / of / )

NAME	FAWN MEADOWS SUBDIVISION		TELEPHONE WITH AREA CODE	314-660-6663	
ADDRESS (PHYSICAL)	CITY	STATE	ZIP CODE		
99 TOWERVIEW DR	HILLSBORO	MO	63050		

2.1 LEGAL DESCRIPTION: \_\_\_\_\_, \_\_\_\_\_, \_\_\_\_\_, Sec. \_\_\_\_\_, T \_\_\_\_\_, R \_\_\_\_\_ County \_\_\_\_\_

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

2.3 Name of receiving stream: \_\_\_\_\_

3. OWNER FAWN MEADOWS SUBDIVISION

NAME	Rick York		E-MAIL ADDRESS	TELEPHONE WITH AREA CODE
ADDRESS	CITY	STATE	ZIP CODE	
99 TOWERVIEW DR	HILLSBORO	MO	63050	

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	Rick York		TELEPHONE WITH AREA CODE
ADDRESS	CITY	STATE	ZIP CODE
99 TOWERVIEW DR	HILLSBORO	MO	63050

5. OPERATOR

NAME	CERTIFICATE NUMBER	TELEPHONE WITH AREA CODE
Rick York		314-660-6663

6. FACILITY CONTACT

NAME	TITLE	TELEPHONE WITH AREA CODE
Rick York	TRUSTEE/MANAGER	314-660-6663

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: 4952; Facility NAICS code: 221320; Discharge NAICS code: 221320

7.3 Number of people presently connected or population equivalent (P.E.) 40; Design P.E. 74

Number of units presently connected: Homes 19 Trailers \_\_\_\_\_ Apartments \_\_\_\_\_ Other \_\_\_\_\_

Design flow for this outfall: \_\_\_\_\_ Total design flow for the facility: \_\_\_\_\_ Actual flow for this outfall: \_\_\_\_\_

Commercial Establishment: Daily number of employees working \_\_\_\_\_ Daily number of customers/guests \_\_\_\_\_

7.4 Length of pipe in the sewer collection system? 8 (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: \_\_\_\_\_

b. How many days of the week will the discharge occur? \_\_\_\_\_

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

7.10 Will chlorine be added to the effluent?  Yes  No

a. If chlorine is added, what is the resulting residual? \_\_\_\_\_ µg/l (micrograms per liter)

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

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

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

7.14 List all permit violations, including effluent limit exceedances in the last five years. Attach a separate sheet if necessary.  
If none, write none. NONE

NOV 09 2012

<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 type="checkbox"/> No		
8.2	Sludge Production, including sludge received from others: _____ Design Dry Tons/Year _____ Actual Dry Tons/Year		
8.3	Capacity of sludge holding structures: <u>2400 G<sup>L</sup></u> Sludge storage provided: _____ cubic feet; _____ days of storage; <u>365</u> average percent solids of sludge; <input type="checkbox"/> No sludge storage is provided.		
8.4	Type of Storage:	<input checked="" type="checkbox"/> Holding tank <input type="checkbox"/> Basin <input type="checkbox"/> Concrete Pad	<input type="checkbox"/> Building <input type="checkbox"/> Other (Please describe) _____
8.5	Sludge Treatment:	<input type="checkbox"/> Anaerobic Digester <input type="checkbox"/> Storage Tank <input type="checkbox"/> Lime Stabilization	<input type="checkbox"/> Lagoon <input checked="" type="checkbox"/> Aerobic Digester <input type="checkbox"/> Air or Heat Drying <input type="checkbox"/> Composting <input type="checkbox"/> Other (Attach description)
8.6	Sludge Use or Disposal:	<input type="checkbox"/> Land Application <input checked="" type="checkbox"/> Contract Hauler <input type="checkbox"/> Hauled to Another Treatment Facility <input type="checkbox"/> Solid Waste Landfill	<input type="checkbox"/> Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than two years) <input type="checkbox"/> Incineration <input type="checkbox"/> Sludge Retained in Wastewater treatment lagoon <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 <u>KING SEPTIC SERVICE</u>			
ADDRESS		CITY <u>FENTON</u>	STATE <u>MO</u> ZIP CODE <u>63122</u>
CONTACT PERSON		TELEPHONE WITH AREA CODE <u>314-822-1212</u>	PERMIT NO. MO-
8.8	<b>SLUDGE USE OR DISPOSAL FACILITY</b> <input type="checkbox"/> By Applicant <input type="checkbox"/> By Others (Please complete below.)		
NAME <u>KING SEPTIC SERVICE</u>			
ADDRESS		CITY <u>FENTON</u>	STATE <u>MO</u> ZIP CODE <u>63122</u>
CONTACT PERSON		TELEPHONE WITH AREA CODE <u>314-822-1212</u>	PERMIT NO. MO-
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 <u>LAST HOUSE ON REDECKER DR (NOT FRIENDLY PEOPLE)</u>			
ADDRESS <u>REDECKER RD</u>		CITY <u>HILLSBORO</u>	STATE <u>MO</u> ZIP CODE <u>63050</u>
<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) <input checked="" type="checkbox"/> <u>X</u> If public, please give name of the public supply _____ B. Private well _____ C. Surface water (lake, pond or stream) _____		
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) <u>Rich York TRUSTEE/MANAGER</u>		TELEPHONE WITH AREA CODE <u>314-660-6663</u>	
SIGNATURE <u>Richard York</u>		DATE SIGNED <u>10/10/12</u>	

Home > Local Business > Septic Tanks & Systems > King Septic Service

**king septic service**  
 Enter name or type of business  
 Add Your Business /  
 Enter Local Business Category: Septic Tanks & Systems Clear

**King Septic Service**  
 (314) 822-1212  
 Serving In  
 Saint Louis, MO 63122  
 View Website

More

Near **Fenton, MO**

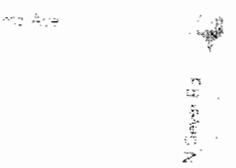
Submit Query

KING SEPTIC SERVICE  
 PUMPS OUR WASTE IN  
 HOLDING TANK. I'M NOT  
 SURE IF IT IS LAND APPLIED  
 OR TREATED BY MSD

**\$25 Off Any Repair**  
 Call the Expert Plumbers  
 at Hoffmann Brothers Plumbing



**Hoffmann Brothers Plumbing**  
 1639 Tower Grove Avenue, St. Louis  
 (314) 694-9705



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 yellowpages.com  
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Some data provided by MapQuest

7.3

DESIGN SUMMARY

20 Single family residences

74 people

12.58# - BOD<sub>5</sub> per day

14.80 # - S.S. per day

7400 gallons of wastewater per day

Extended Aeration Process

Aeration Tank:

Volume  $\geq$  7400 gallons

Detention Time  $\geq$  24 hours

Organic Loading  $\leq$   $\frac{12.72\# - \text{BOD}_5}{1000 \text{ cu. ft. aeration capacity}}$

Air Required  $\geq$  17.47 cfm

Clarifier:

Volume  $\geq$  1850 gallons

Detention Time  $\geq$  4 hours

Surface Settling Rate  $\leq$  300 gpd/sq.ft.

Weir loading rate  $\leq$  5000 gpd/ft.

Aerobic Digester

Digester Capacity  $\geq$  148 cu. ft.

Air Required  $\geq$  2.96 cfm

7.1

GENERAL INFORMATION

Fawn Meadows Subdivision is located along the North Right-of Way line of Missouri State Highway Z, approximately three quarters (3/4) of a mile East of the intersection of Highways Z and A and is situated in part of the Southwest quarter of Section 28, Township 41 North, Range 5 East of the 5th Principal Meridian, Jefferson County, Missouri.

The subdivision's present wastewater works consists of a gravity type sewer system and a single cell waste stabilization lagoon. Said wastewater works has been designed to accommodate twenty (20) single family residences.

According to the National Pollutant Discharge Elimination Systems (NPDES) Permit (MO-0049280) that has been issued for the Fawn Meadows Subdivision wastewater treatment facility, said treatment facility discharges to a gaining stream and has the following treated wastewater effluent limitations:

- Biochemical Oxygen Demand (BOD)<sub>5</sub> ----- 30 mg/l
- Suspended Solids (SS) ----- 30 mg/l
- pH ----- 6.0 -- 9.0

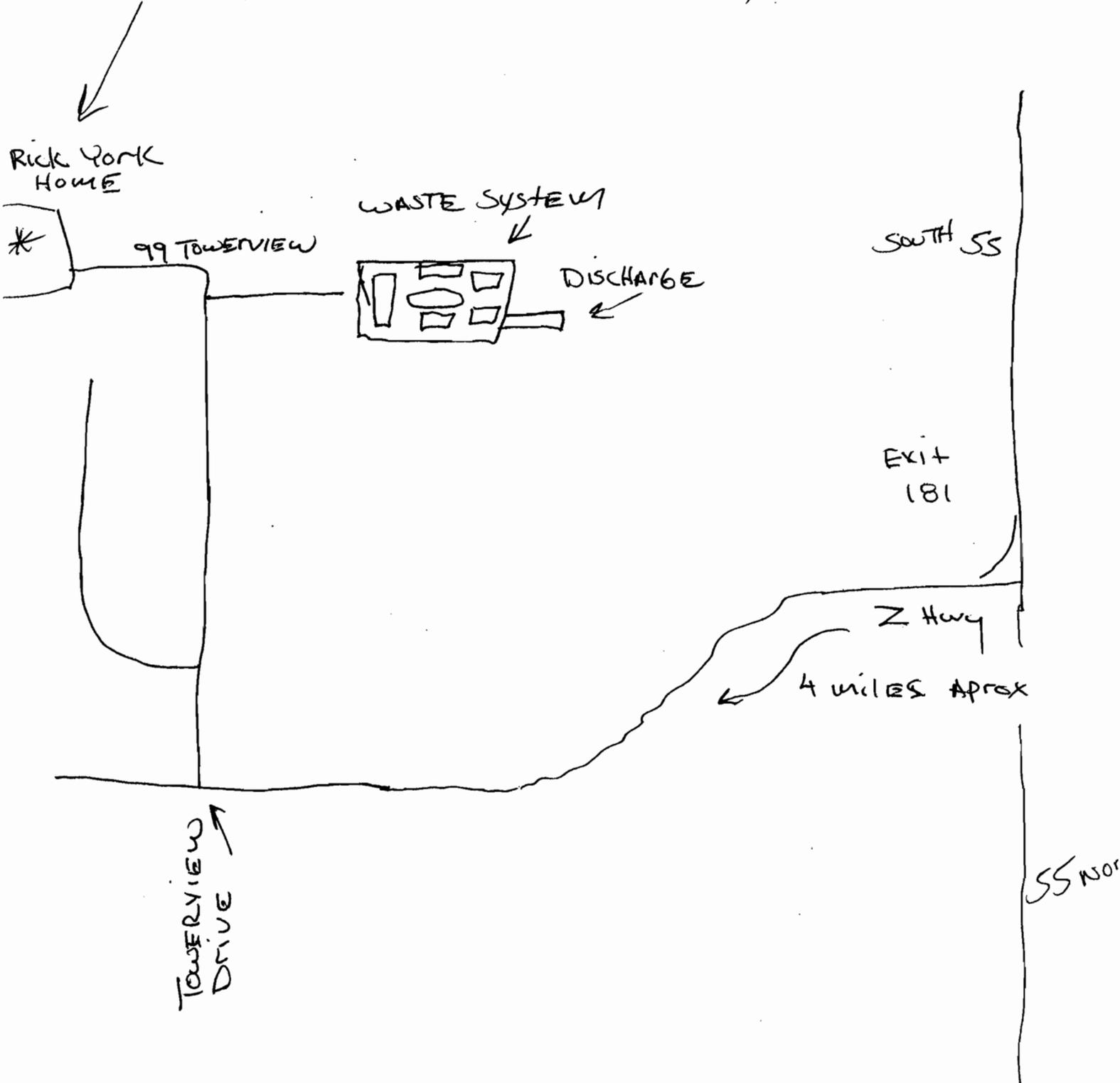
Past analytical laboratory analyses of treated wastewater being discharged from the subdivision's single cell waste stabilization lagoon have indicated that the lagoon's effluent is not

7.1

# FAWN MEADOWS SUBDIVISION

## WASTE FACILITY LOCATION

Rick York 314-660-6663 TRUSTEE/MANAGER



7.5

SYSTEM HAS HOLDING TANK 2400 GLS  
WITH ONE BYPASS PIPE OPEN TOP  
RAIN WATER WILL NOT OVERFLOW HOLDING TANK  
DUE TO THIS BYPASS PIPE FACTORY DESIGN.

2.1

POINT OF DISCHARGE IS APPROX. 10 FT BEHIND  
TREATMENT PLANT. ONLY ONE OUTFALL.

## TREATMENT PLANT DESIGN CRITERIA

Design criteria is based upon the following data:

3.7 people per residence

0.17 pounds of BOD<sub>5</sub> per person per day

0.20 pounds of suspended solids (SS) per person per day

100 gallons per person per residence per day

## TREATMENT PLANT DESIGN BASIS

a. 20 single family residences

b. 20 residences @ 3.7 people per residence = 74 people

c. 74 people @ 0.17# - BOD<sub>5</sub> = 12.58# - BOD<sub>5</sub> per day

d. 74 people @ 0.20# - SS = 14.80# - SS per day

e. 74 people @ 100 gpcd = 7400 gpd

### RECOMMENDED TREATMENT METHOD

It is recommended that the "packaged" wastewater treatment plant be utilized in the upgrading of Fawn Meadows Subdivision's existing wastewater works. Said treatment plant appears to be the most cost effective and, of the three treatment methods considered herein, the "packaged" treatment plant is the most reliable in producing a treated wastewater effluent that will consistently comply with the 30 mg/l - BOD and 30 mg/l SS effluent limitation, as delineated in the aforementioned NPDES permit.

### TREATMENT PLANT DESIGN CRITERIA

Design criteria is based upon the following data:

3.7 people per residence

0.17 pounds of BOD<sub>5</sub> per person per day

0.20 pounds of suspended solids (SS) per person per day

100 gallons per person per residence per day

### TREATMENT PLANT DESIGN BASIS

- a. 20 single family residences
- b. 20 residences @ 3.7 people per residence = 74 people
- c. 74 people @ 0.17# - BOD<sub>5</sub> = 12.58# - BOD<sub>5</sub> per day
- d. 74 people @ 0.20# - SS = 14.80# - SS per day
- e. 74 people @ 100 gpcd = 7400 gpd

Fawn Meadows Subdivision

DEAR DNR.

I FIND YOUR RENEWAL APPLICATION A BIT HARD TO UNDERSTAND. I HAVE TRIED MY BEST TO GIVE YOU ALL THE INFORMATION NEEDED. PLEASE CONTACT ME ON ANY INFO. I MISSED AND I WILL TRY MY BEST TO GET WHAT IS NEEDED FOR OUR RENEWAL.

THANK YOU FOR YOUR HELP AND CONSIDERATION

RICK YONK 314-660-6663

STATE OF MISSOURI  
DEPARTMENT OF NATURAL RESOURCES

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director

www.dnr.mo.gov

August 29, 2012

FAWN MEADOWS IMPROV ASSOC  
82 VALLEY VIEW  
HILLSBORO, MO 63050

FACILITY NAME: FAWN MEADOWS SUBD WWTF COUNTY: Jefferson  
PERMIT NUMBER: MO0049280  
FORM(S) NEEDED TO RENEW: B

Dear Permittee:

Your NPDES permit for the above facility will be expiring on April 17, 2013. A renewal application must be filed 180 days before your current permit expires. Failure to submit a renewal application for a facility that is still in operation is a violation of the Missouri Clean Water Law [644.051 RSMo]. If a complete renewal application is submitted in a timely manner and the Missouri Department of Natural Resources' Water Protection Program (Department) does not issue a new permit before the expiration date of the current permit, the expired permit is administratively continued until the new permit is issued [10 CSR 20-6.010(10)E]. You must submit information on the current nature of the discharge and the status of compliance with the renewal application. You should also forward any information regarding abandonment, non-use, or change in ownership of the facility. Annual fees are the responsibility of the permit holder [10 CSR 20-6.011(1)(G)].

In order to process the application, the appropriate form(s) must be completed, have original signature(s) and include an updated location map. Please be aware that a renewal application must be submitted unless the permit has been terminated. Failure to have a valid permit is a violation of the Missouri Clean Water Law and Regulations.

If the activity covered by this permit has ceased, you must request the termination of your permit by completing a Request for Termination Form H.

The form(s) needed to renew the current permit are listed above. The form(s) can be found at:  
[www.dnr.mo.gov/forms/index.html#WaterPollution](http://www.dnr.mo.gov/forms/index.html#WaterPollution) under the 'Discharge (Water Pollution)' or 'Termination' heading.

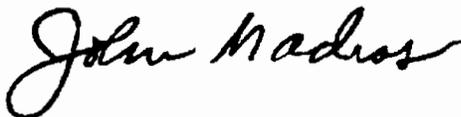
Please send the appropriate completed forms to the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102. Additional information may be obtained at the Department's web site: [www.dnr.mo.gov](http://www.dnr.mo.gov).

Please note that Form I may be required if Wastewater is land applied or irrigated. Please refer to the Department's website for additional information.

If you have any questions pertaining to your permit or need assistance obtaining a form, please contact our office at (573) 751-1300. Thank you for protecting Missouri's natural resources by helping us keep your permit up to date.

Sincerely,

WATER PROTECTION PROGRAM



John Madras  
Director

JM/pc



NOV 09 2012

WATER PROTECTION PROGRAM