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-0120600
Owner:	St. Martins United Church of Christ
Address:	7890 Dittmer Rd, Dittmer, MO 63023
Continuing Authority:	same as above
Address:	same as above
Facility Name:	St. Martin's United Church of Christ
Facility Address:	7890 Dittmer Rd, Dittmer, MO 63023
Legal Description:	SE¼, SE¼, Sec. 33, T42, R3E, Jefferson County
UTM Coordinates:	X = 701952, Y= 4244919
Receiving Stream:	Unnamed tributary to Skullbones Creek (U)
First Classified Stream and ID:	Skullbones Creek (C) (3762) losing
USGS Basin & Sub-watershed No.:	(07140104-0407)

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 – Non-POTW WWTF – SIC #4952
No Certified Operator Required.
Septic tank/dual sand filter/chlorination/dechlorination/sludge disposal is by contract hauler.
Design population equivalent is 11.
Design flow is 1,100 gallons per day.
Actual flow is 770 gallons per day.
Design sludge production is 0.077 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.

June 1, 2013
Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

May 31, 2018
Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A. FINAL EFFLUENT LIMITATIONS and MONITORING REQUIREMENTS for LOSING STREAMS 10 CSR 20-7.015(4)

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:

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. total
Biochemical Oxygen Demand$_5$	mg/L		15	10	once/quarter****	composite**
Total Suspended Solids	mg/L		20	15	once/quarter****	composite**
pH – Units	SU	***		***	once/quarter****	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	 3.6 7.5		 1.4 2.9	once/quarter****	grab
E. coli[1]	#/100 ml	126		126	once/quarter****	grab
Total Residual Chlorine[2]	µg/L	17 (130ML)		8 (130ML)	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE OCTOBER 28, 2013. THERE SHALL BE NO DISCHARGE OF FLOATING SOLIDS OR VISIBLE FOAM IN OTHER THAN TRACE AMOUNTS.

EFFLUENT PARAMETER(S)	UNITS	DAILY MINIMUM	WEEKLY AVERAGE MINIMUM	MONTHLY AVERAGE MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Dissolved Oxygen[2]	mg/L	*		*	once/quarter****	grab

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

* 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.

[1] Effluent limits of 126 cfu per 100 ml daily maximum and monthly average for *E. coli* are applicable year round due to losing stream designation.

[2] Effluent limitations and monitoring requirements for Total Residual Chlorine (TRC) and Dissolved Oxygen (DO) only apply to facilities using the chlorine method of disinfection.

- This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CLTRC methods. The department has determined the current acceptable ML for total residual chlorine to be 130 µg/L when using the DPD Colorimetric Method #4500 – CL G. from Standard Methods for the Examination of Waters and Wastewater. The permittee will conduct analyses in accordance with this method, or equivalent, and report actual analytical values. Measured values greater than or equal to the minimum quantification level of 130 µg/L will be considered violations of the permit and values less than the minimum quantification level of 130 µg/L will be considered to be in compliance with the permit limitation. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit.
- Do not chemically de-chlorinate **if it is not needed to meet the limits in your permit.**
- If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as “0 µg/L” TRC.
- Disinfection is required year-round.

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

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

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

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

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

4. Water Quality Standards
   (a) 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.

C. SPECIAL CONDITIONS (continued)

5. Changes in Discharges of Toxic Substances
   The permittee shall notify the Director as soon as it knows or has reason to believe:
   (a) That any activity has occurred or will occur which would result in the discharge of any toxic pollutant which is not limited in the permit, if that discharge will exceed the highest of the following "notification levels:"
      (1) One hundred micrograms per liter (100 µg/L);
      (2) Two hundred micrograms per liter (200 µg/L) for acrolein and acrylonitrile; five hundred micrograms per liter (500 µg/L) for 2,5 dinitrophenol and for 2-methyl-4, 6-dinitrophenol; and one milligram per liter (1 mg/L) for antimony;
      (3) Five (5) times the maximum concentration value reported for the pollutant in the permit application;
      (4) The level established by the Director in accordance with 40 CFR 122.44(f).
   (b) That they have begun or expect to begin to use or manufacture as an intermediate or final product or byproduct any toxic pollutant, which was not reported in the permit application.

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

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

8. 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.

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

10. A least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain locked except when opened by the permittee to perform operational monitoring, sampling, maintenance, mowing, or for inspections by the department.

11. 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.

12. 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.

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

14. 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.

Missouri Department of Natural Resources
FACT SHEET
FOR RENEWAL OF
ST. MARTIN'S UNITED CHURCH OF CHRIST
MO-0120600

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: NON-POTW (domestic wastewater only)

Facility Description:
Septic tank/dual sand filter/chlorination/dechlorination/sludge disposal is by contract hauler.

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	.002	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:

☒ Not Applicable; 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

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)]:

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:

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Unnamed tributary to Skullbones Creek	(U)	--	General Criteria	07140104-0407	1.75
Skullbones Creek	(C)	3762	LWW, AQL, WBC(B)		

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

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (U, C, P)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Unnamed tributary to Skullbones Creek (U)	0.0	0.0	0.0

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.

☒ - 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.

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 total amount of pollutant that may be discharged into that stream without endangering its water quality.

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

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

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

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

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

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

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.

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

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

☒ Not Applicable; This facility does not anticipate bypassing.

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

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

☒ Not Applicable; This 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 (ALL OUTFALLS)

EFFLUENT LIMITATIONS TABLE FOR LOSING STREAMS:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average
Flow	MGD	1	*		*
BOD_5	mg/L	1, 12		20	15
TSS	mg/L	1, 12		20	15
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	2, 3, 5	3.6 7.5		1.4 2.9
pH	SU	1, 2	6.5-9.0		
Escherichia coli	***	1, 2, 3	126		126
Chlorine, Total Residual	µg/L	1, 3	17		8
Dissolved Oxygen**	mg/L	1, 3	*		*

* - Monitoring requirement only.
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
*** - # of colonies/100mL; the Monthly Average for *E. coli* is a geometric mean.

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

OUTFALL #001 – DERIVATION AND DISCUSSION OF LIMITS:

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

- **Biochemical Oxygen Demand (BOD_5).** Effluents limits for each type of receiving water body were set according to 10 CSR 20-70.015(2)-(8).

- **Total Suspended Solids (TSS).** Effluents limits for each type of receiving water body were set according to 10 CSR 20-70.015(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 (^oC)	pH (SU)	Total Ammonia Nitrogen CCC (mg/L)	Total Ammonia Nitrogen CMC (mg/L)
Summer	26	7.8	1.5	12.1
Winter	6	7.8	3.1	12.1

Summer: April 1 – September 30
Chronic WLA: C_e = ((.002+ 0.0)1.5 – (0.0 * 0.01))/.002
C_e = 1.5 mg/L

Acute WLA: C_e = ((.002+ 0.0)12.1 – (0.0 * 0.01))/.002
C_e = 12.1 mg/L

LTA_c = 1.5 mg/L (0.780) = 1.17 mg/L [CV =0.6, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.321) = 3.89 mg/L [CV =0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.17 mg/L (3.11) = 3.6 mg/L [CV =0.6, 99th Percentile]
AML = 1.17 mg/L (1.19) = 1.4 mg/L [CV =0.6, 95th Percentile, n =30]

Winter: October 1 – March 31
Chronic WLA: C_e = ((.002+ 0.0)3.1 – (0.0 * 0.01))/.002
C_e = 3.1 mg/L

Acute WLA: C_e = ((.002+ 0.0)12.1 – (0.0 * 0.01))/.002
C_e = 12.1 mg/L

LTA_c = 3.1 mg/L (0.780) = 2.42 mg/L [CV =0.6, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.321) = 3.89 mg/L [CV =0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 2.42 mg/L (3.11) = 7.5 mg/L [CV =0.6, 99th Percentile]
AML = 2.42 mg/L (1.19) = 2.9 mg/L [CV =0.6, 95th Percentile, n =30]

- ***Escherichia coli (E. coli)***.
Discharges to losing streams shall not exceed 126 per 100 ml as a Daily Maximum and Monthly Average at any time, as per 10 CSR 20-7.031(4)(C).

- **Total Residual Chlorine (TRC)**. Warm-water Protection of Aquatic Life CCC = 10 µg/L, CMC = 19 µg/L [10 CSR 20-7.031, Table A]. Background TRC = 0.0 µg/L. Due to minimum detection limits, TRC effluent limits of 17 µg/L daily maximum, 8 µg/L monthly average are recommended if chlorine is used as a disinfectant.

- **Dissolved Oxygen**. Monitoring included to determine if the facility has the reasonable potential to cause a violation of water quality standards in the receiving stream. Dechlorination chemicals have the potential to reduce dissolved oxygen concentrations in the discharge, resulting in an anoxic discharge, unless carefully controlled. Data will be reviewed upon renewal to determine if an effluent limitation is necessary to protect water quality.

Part VII – Finding of Affordability

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

☒ Not Applicable; 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 VIII – Administrative Requirements

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

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

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

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

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

☒ - The Public Notice period for this operating permit was between March 29 and April 29, 2013. No comments were received.

DATE OF FACT SHEET: FEBRUARY 21, 2013

COMPLETED BY:

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

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

FORM B — APPLICATION FOR CONSTRUCTION OR OPERATING PERMIT FOR FACILITIES WHICH RECEIVE PRIMARILY DOMESTIC WASTE

UNDER MISSOURI CLEAN WATER LAW

APR 16 2012

FOR AGENCY USE ONLY	
CHECK NUMBER: No Fee Required	
DATE RECEIVED: 4/16/12	FEE SUBMITTED: Ø

NOTE ▶ PLEASE READ THE ACCOMPANYING INSTRUCTIONS BEFORE COMPLETING THIS FORM

1.00 This application is for:
- ☐ a construction permit
- ☐ an operating permit for a new or unpermitted facility
- ☐ Federal/State Funded Project
- ☒ an operating permit renewal: permit # MO-0120160
  Expiration date: 9-27-2012
- ☐ an operating permit modification
  Reason: _____

(See instructions for appropriate fee to be submitted with application)

2.00 FACILITY

NAME		PHONE
St Martin's United Church of Christ		636-285-4797
ADDRESS (PHYSICAL) 7890 Dittmer Ridge Rd	CITY Dittmer	STATE MO / ZIP 63023

2.10 LEGAL DESCRIPTION: SW ¼, SE ¼, SE ¼, Sec. 33, T42N R 3E Jefferson County

2.20 Is this a new facility constructed under a Missouri Construction Permit? ☐ YES ☒ NO
If yes, please provide Missouri Construction Permit Number: _____.

2.30 Name of receiving stream(s) Unnamed tributary to Skullbone Creek

3.00 OWNER

NAME	EMAIL ADDRESS	PHONE
St Martin's United Church of Christ	geristmc@hughes.net	636-285-4797
ADDRESS 7890 Dittmer Ridge Rd	CITY Dittmer	STATE MO / ZIP 63023

3.10 Request review of draft permit prior to Public Notice? ☐ YES ☒ NO

4.00 CONTINUING AUTHORITY: permanent organization which will serve as the continuing authority for the operation, maintenance and modernization of the facility.

NAME		PHONE
St Martin's United Church of Christ		636-285-4797
ADDRESS 7890 Dittmer Ridge Rd	CITY Dittmer	STATE MO / ZIP 63023

5.00 OPERATOR

NAME	CERTIFICATE NUMBER	PHONE
St Martin's United Church of Christ	none	

6.00 FACILITY CONTACT

NAME	TITLE	PHONE
Mike Vandaveer	none	314-808-1170

7.00 ADDITIONAL FACILITY INFORMATION

7.10 Description of facilities (attach additional sheet if required). Attach a 1" = 2000' scale USGS topographic map showing location of all outfalls. – attached pg. 4

7.15 Facility SIC code: 4952; Discharge SIC code: _____

7.20 Number of separate discharge points 1.

7.30 Number of persons presently connected or population equivalent 11. Design P.E. 11
Number of units presently connected: Homes Ø Trailers Ø
Apartments Ø Other 1 - church building
Design flow: 1,100 gpm per day Actual flow: 770 gpm per day

7.40 Does any bypassing occur anywhere in the collection system or at the treatment facility?
☐ Yes ☒ No (If yes, attach explanation)

7.50 Is industrial waste discharged to the facility identified in item 2? ☐ Yes ☒ No (If yes, see instructions.)

7.60 Will the discharge be continuous through the year? ☒ Yes ☐ No
a. Discharge will occur during the following months: All
b. How many days of the week will the discharge occur? 7

7.65 Is wastewater land applied? ☐ Yes ☒ No (If yes, attach Form I)

7.70 Will chlorine be added to the effluent? ☒ Yes ☐ No
a. If chlorine is added, what is the resulting residual? 0.00 – after Dechlorinator

7.80 Does this facility discharge to a losing stream or sinkhole? ☒ Yes ☐ No

7.85 Attach a flow chart showing all influents, treatment facilities and outfalls. – attached – pg 3

7.90 Has a waste load allocation study been completed for this facility? ☐ Yes ☒ No

7.95 List all permit violations, including effluent limit exceedances in the last 5 years. Attach a separate sheet if necessary.
If none, write none. na

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8.00 SLUDGE HANDLING, USE AND DISPOSAL

8.10 Is the sludge a hazardous waste as defined by 10 CSR 25? ☐ Yes ☒ No

8.20 Sludge Production, including sludge received from others: 0.000 Design Dry Tons/Year _____ Actual Dry Tons/Year

8.30 Capacity of sludge holding structures:

7.31 Sludge storage provided: _____ cubic feet; _____ days of storage _____ average percent solids of sludge. ☐ No sludge storage is provided.

7.32 Type of storage: ☐ Holding tank ☐ Building ☐ Basin ☒ Other (describe) Septic Tank ☐ Concrete Pad

8.40 Sludge Treatment:

☐ Anaerobic Digester ☐ Lagoon ☐ Composting
☐ Storage Tank ☐ Aerobic Digester ☐ Other (attach description)
☐ Lime Stabilization ☐ Air or Heat Drying

8.50 Sludge Use or Disposal:

☐ Land Application ☐ Surface Disposal (Sludge Disposal Lagoon, Sludge held for more than 2 years)
☒ Contract Hauler ☐ Incineration
☐ Hauled to Another Treatment Facility ☐ Sludge Retained in Wastewater treatment lagoon
☐ Other _____
☐ Solid Waste Landfill _____ Attach explanation sheet.

8.60 PERSON RESPONSIBLE FOR HAULING SLUDGE TO DISPOSAL FACILITY

☐ By Applicant ☒ By Others (complete below)

NAME			
King Septic Tank & Sewer Service			
ADDRESS: 8739 Byrnesville Road	CITY: Cedar Hill	STATE: MO	ZIP: 63016
CONTACT PERSON: John Ganey	PHONE: 636-274-4589	PERMIT NO. MO- G821017	

8.70 SLUDGE USE OR DISPOSAL FACILITY

☐ By Applicant ☒ By Others (complete below)

NAME			
ADDRESS	CITY	STATE	ZIP
CONTACT PERSON	PHONE	PERMIT NO. MO-	

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

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

NAME			
Tony Glacken			
ADDRESS: 7728 Hwy 30	CITY: Dittmer	STATE: MO	ZIP: 63023

10.00 DRINKING WATER SUPPLY INFORMATION

10.10 WHAT IS THE SOURCE OF YOUR DRINKING WATER SUPPLY:

A. Public supply (municipal or water district water) _____
If public, please give name of the public supply _____

B. Private well Yes - On site well

C. Surface water (lake, pond, or stream) _____

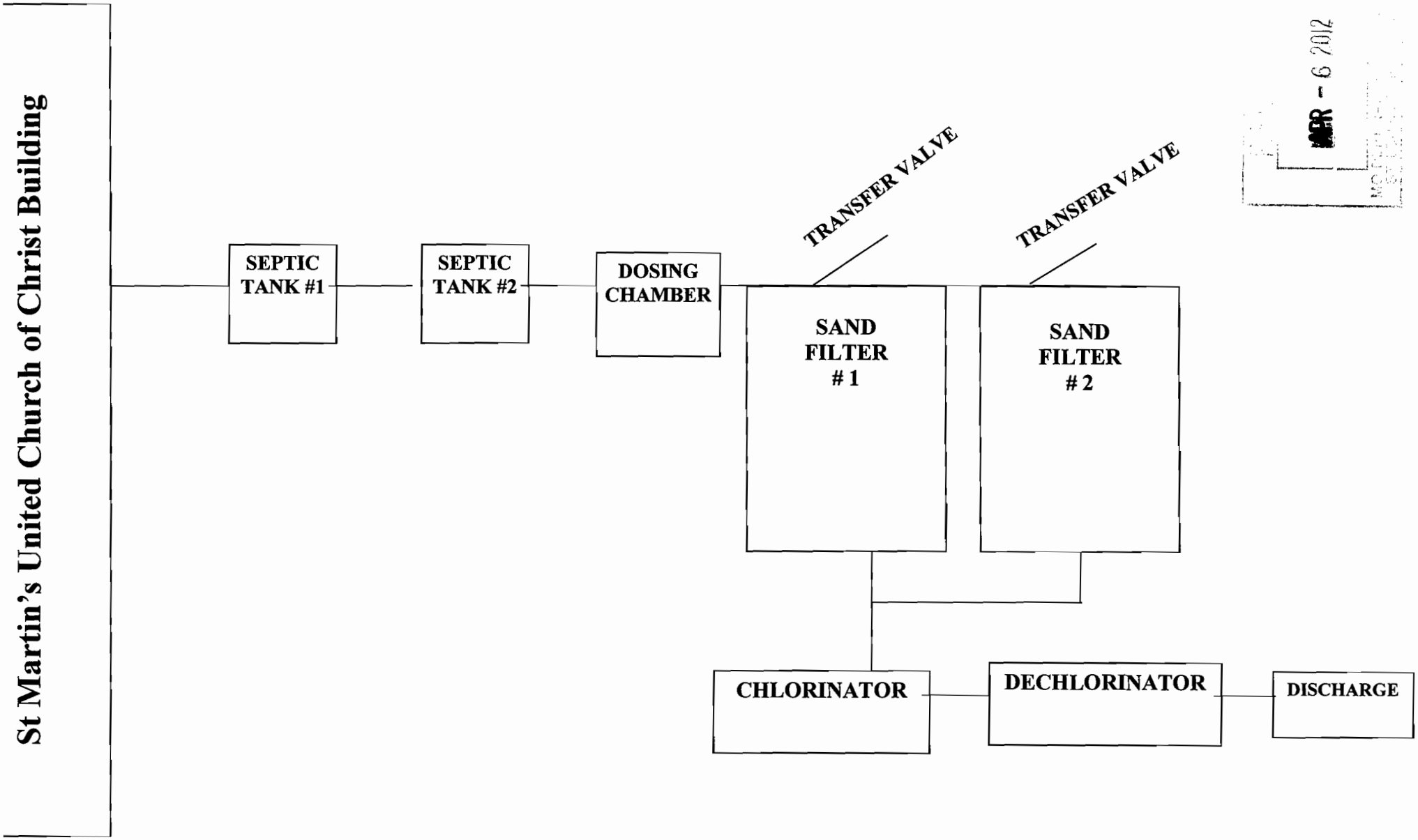
10.20 Does your drinking water source serve at least 25 people at least 60 days per year (not necessarily consecutive days)?
☒ Yes ☐ No

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

11.00 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)	PHONE NO. (AREA CODE & NO.) 636 274 7028
SIGNATURE W. M. Vandamme	DATE SIGNED 4-4-12

Flow-Chart for Water Treatment Permit # MO-0120600
St Martin's United Church of Christ - 7890 Dittmer Ridge Rd, Dittmer, MO 63023



MAR - 6 2012