STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
www.dnr.mo.gov

CIE
Camden Co. PWSD #5
Review No. 54767-11
PWS ID No. MO4202639

January 2, 2014

CERTIFIED MAIL # 7009 0080 0000 1913 9667
RETURN RECEIPT REQUESTED

Mr. Kristina Henry, President
Camden County Public Water Supply
District No. 5
P.O. Box 556
Camdenton, MO 65020

Dear Ms. Henry:

Thank you for keeping us informed on the status of the construction permit, Review No. 54767-11, for Mission Hills Water & Sewer Project to serve Public Water Supply District No. 5, Camden County, Missouri. We have received your request for an extension due to funding delays. Your request for an extension is hereby granted until October 10, 2014.

If you have any questions, or if we could be of assistance to you, feel free to call us.

Sincerely,

WATER PROTECTION PROGRAM

Maher Jaafari, P. E., Chief
Infrastructure Permits and Engineering Section
Public Drinking Water Branch

MJ:kbk

c: Olsson Associates
Southwest Regional Office
File

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
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LABORATORY SERVICES AND PROGRAM ADMINISTRATION FEE – INVOICE

The Department of Natural Resources has a fee to help off-set the cost of providing laboratory services and administering the monitoring program for public water systems. The amount billed is based on the fee schedule in State Regulation 10 CSR 60-16.030, a copy of which is enclosed.

AMOUNT DUE: $200.00
BILLING PERIOD: 2014
DUE DATE: February 28, 2014

Failure to remit the fee by the due date may result in interest to accrue on the amount due at a rate of twelve percent (12%) per year.

Thank you for your attention and cooperation in the collection of this fee. If you have any questions, please contact the Department of Natural Resources, Water Protection Program, Public Drinking Water Branch at (573) 751-6723.

Please notify us of any name and/or address changes.

(RETAIN THE UPPER PORTION OF THIS FORM FOR YOUR RECORDS)

(DETACH AND RETURN THIS PORTION WITH PAYMENT TO INSURE PROPER CREDIT)

Missouri Department of Natural Resources
Division of Administrative Support
Accounting Program
P.O. Box 477
Jefferson City, MO 65102

CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA, **MO3031383**
ATTN: BONNIE BURTON
PO BOX 556
CAMDENTON, MO 65020-0000

Laboratory Services and Program Administration Fee
Billing Period: **2014** Amount Due: **$200.00**

***FOR PROPER IDENTIFICATION, PLEASE WRITE YOUR PWS ID # ON YOUR CHECK**

PLEASE MAKE YOUR CHECK PAYABLE TO: **Missouri Department of Natural Resources
Division of Administrative Support
Accounting Program
P.O. Box 477
Jefferson City, MO 65102

Recycled Paper

10 CSR 60-16.020 Laboratory Certification Fee

PURPOSE: This rule establishes fees for certification of laboratories to conduct chemical testing of drinking water.

(1) The following laboratory certification fees shall be paid before a certification will be issued for chemical testing of drinking water under 10 CSR 60-5.020(2), (3), (4) or (5).

(A) The fee for certification to analyze organic chemicals in drinking water shall be two thousand seven hundred dollars ($2700) for each three (3)-year certification period.

(B) The fee for certification to analyze inorganic chemicals in drinking water shall be one thousand five hundred dollars ($1500) for each three (3)-year certification period.

(C) The fee for a laboratory audit shall be two thousand five hundred dollars ($2500).

AUTHORITY: section 640.100, RSMo Supp 1993. Original rule filed Dec. 14, 1992 effective Aug. 9, 1993.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993.*

10 CSR 60-16.030 Laboratory Services and Program Administration Fees

PURPOSE: This rule levies and sets the amount of the annual laboratory services and program administration fees and describes the method of remitting the fee to the department.

(1) This rule applies to all public water systems.

(2) This rule establishes the laboratory services and program administration fees authorized by section 640.100.4., RSMo. The fees cover the reasonable costs of laboratory services, both within the Department of Natural Resources and the Department of Health, and program administration, not to exceed the statutory limits of two hundred dollars ($200) for a supplier servicing less than four thousand one hundred (4100) service connections, three hundred dollars ($300) for a supplier servicing less than seven thousand six hundred service connections, five hundred dollars ($500) for a supplier serving seven thousand six hundred (7600) or more service connections and five hundred dollars ($500) for a supplier that uses surface water.

The laboratory services and program administration fees are established at the following amounts. The fees are based on the estimated annual costs for laboratory services and program administration incurred by the state per public water system not to exceed the statutory limits shown in section (2) of this rule.

(A) The annual fees for a transient noncommunity water system shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
(any)	$100

(B) The annual fees for all secondary public water systems and for public water systems, except transient noncommunity water systems, that use groundwater, including groundwater under the direct influence of surface water, shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
less than 4100	$200
4100 to 7599	$300
7600 or more	$500

(C) The annual fees for public water systems, except transient noncommunity water systems, that use surface water, including systems using both surface water and groundwater, shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
(any)	$500

(4) Remission of Fees to the State.

(A) All systems listed in the public water system inventory as of January 1 of each year shall remit the annual laboratory services and program administration fees for that calendar year by February 28 of the same year.

(B) Failure to remit the fees as required will result in the following actions by the department:

1. Department of Natural Resources and Department of Health laboratory services shall be terminated for that water system for that calendar year;

2. Interest shall accrue on the entire amount from the original date payment was due at a rate of twelve percent (12%) per anum until payment is remitted;

3. The department may take action in accordance with section 640.130, RSMo and may revoke the system's permit to dispense water to the public; and

4. The department may grant an extension of time, not to exceed two (2) months, to remit the fees or may waive interest on fees.

AUTHORITY: section 640.100, RSMo Supp. 1993. Original rule filed April 14, 1994, effective Nov. 30, 1994.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993.*

Gmail by Google

Bonnie Burton <bonniejburton@gmail.com>

Annual Inspection Information for Camden Co PWSD #5 Cedar Heights

1 message

Penny Treadway <tankpainters@yahoo.com> Mon, Jan 13, 2014 at 1:44 PM
Reply-To: Penny Treadway <tankpainters@yahoo.com>
To: Bonnie Burton <bonniejburton@gmail.com>

January 13, 2014

Bonnie Burton
P. O. Box 189
Osage Beach, MO 65065

Dear Bonnie

We have a great program, that our customers love, called the Annual Inspection Program. Our Annual Inspection Program offers yearly water tower monitoring at an affordable price. We perform our annual inspections each spring so that we can check such things as vents, screens, and gaskets that can be damaged during winter weather. Damaged screens allow bugs & birds entryway to water systems which can create a boil order situation. During the inspections we replace any screens and gaskets that are damaged and standard aviation light bulbs. Every 5 years of our Annual Inspection Program, per DNR recommendations, we provide a Complete Inspection with a wash out. We power wash the interior as high as can be reached without rigging the tank and sanitize the tank's interior per AWWA standards. Once each inspection is complete you will receive an inspection report documenting our observations, recommendations, and pictures of the tank.

Enclosed is a detailed checklist of the services that we provide each year of the Annual Inspection Program, pricing, a scheduling example, and a contract. Our customers love the ease and affordability of our Annual Inspection Program. Our program helps provide the cleanest water possible and is instrumental in helping water companies fulfill DNR guidelines while promoting AWWA standards.

If you would like to have your tower added to our Annual Inspection Program just sign and return a copy of the attached contract as soon as possible and before March 1st. Please contact me if you have additional questions.

Thank you,

Liz Orr
Inspection Program Coordinator
Ozark Applicators, LLC
573-323-6450

3 attachments

- **Camden Co PWSD #5 AIP Outline 2012.pdf**
  211K
- **Camden Co PWSD #5 AIP Schedule 2013 copy.pdf**
  31K
- **Camden Co PWSD 5 AIP Contract lo:2013 copy.pdf**
  482K

Ozark Applicators, LLC
Sandblasting & Painting
HCR 2 Box 2259A • Van Buren, MO 63965

Annual Inspection Program Outline

During a Visual Inspection We:

Inspect the security fence and gate surrounding the tank site
Inspect the tank site
Inspect the overall structural condition of the tank
Inspect the foundation
Inspect the anchor bolts
Inspect the windrods to make sure they are tight
Inspect the riser to make sure it is stable
Inspect the overflow screen and replace it if necessary
Inspect the manway
Inspect the exterior ladders
Inspect the exterior safety climb systems
Climb the tank
Inspect the vent
Inspect the vent screen and replace if necessary
Inspect the upper hatch
Inspect the upper hatch gasket and replace if necessary
Inspect the aviation light and replace standard bulbs, once a year, during the inspection
Inspect the antennas and cables that are attached to the tower
Inspect the catwalk and catwalk railing

During Wash Out & Initial Inspections We:

Inspect the security fence and gate surrounding the tank site
Inspect the tank site
Inspect the overall structural condition of the tank
Inspect the foundation
Inspect the anchor bolts
Inspect the x bracing, struts, and windrods to make sure they are tight
Inspect the riser to make sure it is stable
Inspect the overflow, flap gate, and splash pad
Inspect the overflow screen and replace it if necessary
Inspect the manways, door, and gaskets
Inspect the ladders
Inspect the safety climb systems
Inspect the ladder gate
Climb the tank
Inspect the vent

Inspect the vent screen and replace it if necessary
Inspect the upper hatch
Inspect the upper hatch gasket and replace it if necessary
Inspect the aviation light and replace standard bulbs, once a year, during the inspection
Inspect the antennas and cables that are attached to the tower
Inspect the catwalk and catwalk railing
Inspect the interior and exterior coatings

Once the tank has been inspected we will power wash the interior of it with a minimum 3,000 psi pressure washer. The interior of the tank will not be rigged; it will be washed as high as can be reached. The sediment will be removed and the facility will be sanitized per AWWA standards.

After the inspection we will provide a written summary of the inspection observations, recommendations, and pictures.

To qualify for the Annual Inspection Program a tank must be new, renovated, or have had an Initial Inspection within the last 12 months.

Annual Inspections are scheduled after the winter months as freezing and thawing can create rips or tears in screens. Damaged screens allow birds and bugs entry into the water supply thus contaminating the water system. Our spring schedule is designed so that we can replace damaged screens before problems occur. This strategy helps provide the cleanest water possible and helps to avoid boil orders.

If it is evident during a visit that items need repair these services can be provided for a negotiated fee based on the extent of repair or hourly welding rates as established in the Annual Inspection Program Contract. The hourly rate is discounted 10% to all Annual Inspection Program Customers. The hourly rate starts when our crew arrives on the job site and ends when the job is complete. If an additional trip is needed to complete a repair mileage is charged at the rate of $1.50 per mile, one way, from Van Buren, MO.

An advantage to being an Annual Inspection customer is the benefit of being able to obtain budget pricing for your tanks. This assists our customers in making the most informed decisions for their water storage facilities. Our motto is "If we don't have the answer to your question we will find someone that does". Just let us know how we can be of service, that's what we are here for!

Our Annual Inspections are completed by Ozark Applicators employees. We currently have five employees on staff that are certified NACE Coating Inspectors. We do not sub-contract our inspections.

Office (573) 323-6450 Fax (573) 323-0055
Owners: Darrin & Penny S. Treadway
www.watertowerpainting.com
tankpainters@yahoo.com

Camden County PWSD #5, Cedar Heights Condominiums, near Camdenton, MO

Tank Size	Tank Type	2014	2015	2016	2017	2018	Annual Cost per Tank 2014-2018
10' x 100'	Cedar Heights Condominiums Standpipe	V1	V2	V3	V4	WO	$800

Key	
II	Initial Inspection
V1	Visual 1st year
V2	Visual 2nd year
V3	Visual 3rd year
V4	Visual 4th year
WO	Wash Out
ST	Standpipe Tank

Here is a tentative schedule for your water storage facility for the next 5 years.

Ozark Applicators, LLC
Sandblasting & Painting
HCR 2 Box 2259A • Van Buren, MO 63965

ANNUAL INSPECTION PROGRAM CONTRACT

This agreement, made this ____day of _____, 2014, by and between Camden County PWSD #5, Cedar Heights Condominiums, Camdenton, MO, Hereinafter referred to as the Owner, and Ozark Applicators, LLC, Hereinafter referred to as the Contractor.

For the consideration hereinafter named, the said Contractor covenants and agrees with the Owner, as follows: Annual Inspection Program, renewable every five years, on the 10' X 100' Standpipe Water Tower located in the Cedar Heights Condominiums Development near Camdenton, MO. This contract covers the years of 2014-2018.

The Contractor agrees to furnish labor and equipment to perform all work necessary to complete the following: To inspect the tower yearly per the annual inspection program outline. The water tower will be inspected during the spring months of March or April.

If there is any additional work that is necessary during the period of the contract agreement there would be an additional charge of $315.00 hourly rate, per two man crew, plus materials. This hourly rate begins at the time the project starts and ends when the project is completed. There is also a travel charge of $1.50 per mile one way from Van Buren, MO, to the place of repair if the repair is done other than during the annual inspection.

The Contractor shall take out and pay for the Workman's Compensation, Liability Insurance, Property Damage Insurance, and all other necessary insurance as required by the Owner or by the State in which this work is performed.

IN CONSIDERATION WHEREOF, the said Owner agrees that he will pay to the said Contractor ONE PAYMENT OF $800.00 PER YEAR. EACH PAYMENT IS DUE WHEN THE INSPECTION HAS BEEN COMPLETED. The Owner and the Contractor for themselves, their successors' executors, administrators, and assigns, hereby agree to the full performance of the covenants of this agreement.

IN WITNESS WHEREOF, they have executed this agreement the day and date written above.

Ozark Applicators, LLC	Camden County PWSD #5, Cedar Heights Condominiums
Contractor	Owner
By: _____	By: _____
Date: _____	Date: _____
Witness: _____	Witness: _____

Office (573) 323-6450 Fax (573) 323-0055
Owners: Darrin & Penny S. Treadway
www.watertowerpainting.com
tankpainters@yahoo.com

STATE OF MISSOURI

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

DEPARTMENT OF NATURAL RESOURCES

dnr.mo.gov

April 24, 2014

Cedar Heights Condominiums
P.O. Box 556
Camdenton, MO 65020

RE: MISSOURI STATE OPERATING PERMIT MO0129038

Dear Permittee:

Your state operating permit for wastewater discharge referenced above contains a requirement for an **Operation and Maintenance Report** due **January 28, 2013**. This may or may not be in addition to other reporting on parameters or outfalls due on a more frequent basis. **Our records indicate that this report is past due.** Non-receipt of this report constitutes a violation and may show up on the Annual Non-Compliance Report (ANCR) that is reported to the Environmental Protection Agency (EPA).

Please review your permit, including any requirements of the Special Conditions section or Schedule of Compliance. If you are unable, after your review, to determine the nature of the annual reporting requirement please contact the Southwest Regional Office, Water Pollution Control Branch at 417-891-4300.

If you have already sent this report we commend you. If you have questions please contact me by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Lana Cypret

Lana Cypret
Technical Assistant II

LGC/ryc

Enclosure

029.wpcp.CedarHeightsCondos.mo0129038.x.2014.24.25.fy14.romit.x.lgc.doc

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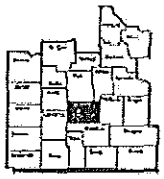
Annual Operating and Maintenance Report
Due January 28th



PART I: FACILITY INFORMATION		
Cedar Heights Condominiums MO0129038 Camden COUNTY	Owner & Billing Address: P.O. Box 556 Camdenton, MO 65020	If Address Change is Requested: Owner ☐ Billing ☐ _____ _____

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

1. Record of maintenance and repairs performed during the year.

2. Average number of times per month the facility is checked to see if it is operating properly.

3. Average number of times per month the facility is checked to see if it is operating properly.

4. Description of any unusual operating conditions encountered during the year.

5. The number of days the lagoon has discharged during the year, discharge flow, the reasons discharge occurred and effluent analysis performed.

Clearwater Condominiums
MO-0126985, Camden County

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

DEC 3 2014

Camden County Water Supply No. 5
P.O. Box 556
Camdenton, MO 65020

Dear Permittee:

Pursuant to the Federal Water Pollution Control Act, under the authority granted to the State of Missouri and in compliance with the Missouri Clean Water Law, we have issued and are enclosing your State Operating Permit to discharge from Clearwater Condominiums.

Please read your permit and attached Standard Conditions. They contain important information on monitoring requirements, effluent limitations, sampling frequencies and reporting requirements.

Monitoring reports required by the special conditions must be submitted on a periodic basis. Copies of the necessary report forms are enclosed and should be mailed to your regional office. Please contact that office for additional forms.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to satisfy the permit requirements, an appointment can be set up by contacting your local regional office at 417-891-4300. These visits are called Compliance Assistance Visits and focus on explaining the requirements to the permit holder.

This permit is both your Federal NPDES Permit and your new Missouri State Operating Permit and replaces all previous State Operating Permits issued for this facility under this permit number. In all future correspondence regarding this facility, please refer to your State Operating Permit number and facility name as shown on page one of the permit.

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (ACH) pursuant to 10 CSR 20-1.020 and Section 621.250, RSMo. To appeal, you must file a petition with the ACH within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the ACH. Contact information for the AHC is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, Phone: 573-751-2422, Fax: 573-751-5018, and Website: www.oa.mo.gov/ahc.

Please be aware that this facility may also be subject to any applicable county or other local ordinances or restrictions.

If you have any questions concerning this permit, please do not hesitate to contact the Water Protection Program at P.O. Box 176, Jefferson City, MO 65102, 573-751-1300.

Sincerely,

WATER PROTECTION PROGRAM

John Madras

John Madras
Director

JM/sm

Enclosure

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-0126985
Owner:	Camden County Water Supply No. 5
Address:	P.O. Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Clearwater Condominiums
Facility Address:	Lake Rd. 54-82, Camdenton, MO 65020
Legal Description:	NW¼, SE¼, Sec. 20, T38N, R17W, Camden County
UTM Coordinates:	X= 515819, Y= 4207626
Receiving Stream:	Lake of the Ozarks (L2)
First Classified Stream and ID:	Lake of the Ozarks (L2)
USGS Basin & Sub-watershed No.:	10290110-0403

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
This facility is not required to have a certified operator.
Flow equalization / extended aeration / chlorination / dechlorination / sludge holding / post aeration / sludge disposal by contract hauler.
Design population equivalent is 755.
Design flow is 75,750 gallons per day.
Actual flow is 5,800gallons per day.
Design sludge production is 13.6 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.

January 1, 2015
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2019
Expiration Date

John Madras
John Madras, Director, Water Protection Program

PWSD 1.20-000148

OUTFALL #001	TABLE A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 January 1, 2015, 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. estimate
Biochemical Oxygen Demand$_5$	mg/L		30	20	once/quarter****	composite**
Total Suspended Solids	mg/L		30	20	once/quarter****	composite**
E. coli (Note 1, Page 3)	#/100 ml		630	126	once/quarter****	grab
pH – Units	SU	***		***	once/quarter****	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	12.1 12.1		2.6 2.4	once/quarter****	grab
Total Residual Chlorine (Note 2, Page 3)	µg/L	17 (130ML)		8 (130ML)	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2015. 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	mg/L	*		*	once/quarter****	grab

MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE APRIL 28, 2015.

Whole Effluent Toxicity (WET) test	% Survival	See Special Condition # 17	Once/permit cycle	composite**

WET TEST MONITORING REPORTS SHALL BE SUBMITTED ONCE PER PERMIT CYCLE; THE FIRST REPORT IS DUE by DECEMBER 28, 2018.

* 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 6.0-9.0 pH units.

**** See table below for quarterly sampling

Minimum Sampling Requirements				
Quarter	**Months**	**E. coli, Total Residual Chlorine (TRC), and Dissolved Oxygen**	**All Other Parameters**	**Report is Due**
First	January, February, March	Not required to sample.	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	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	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample once during October; no sample required in either November or December	Sample at least once during any month of the quarter	January 28th

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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.

(a) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months.
(b) Do not chemically de-chlorinate if it is not needed to meet the limits in your permit.
(c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 µg/L" TRC.

C. STANDARD CONDITIONS

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

D. 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.
   (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.

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;

D. SPECIAL CONDITIONS cont'd

(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.

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. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

9. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report to the Southwest Regional Office annually, by January 28th, for the previous calendar year. The report shall contain the following information:
a. A list of all:
i. Sanitary Sewer Overflows (SSO) that occurred for the previous year, including SSOs that do not reach waters of the state and;
ii. Building backups in which the backup is attributable to the public sewer system.
iii. This does not include SSOs that occur due to routine maintenance of sewer lines.
iv. This list shall also include the following information for each individual SSO:
1. The location of each SSO (GPS, 911 address, manhole number, etc.)
2. What portion of the collection system did the SSO occur at (manhole, lamphole, sewer cleanout, etc.)
3. The estimated volume (gallons) of each SSO.
4. The estimated duration of each SSO.
5. If the SSO entered waters of the state, and include the name of receiving water. If the SSO entered a drainageway, use the first named stream that the drainageway enters (e.g. first named stream = Dry Creek; Report = Tributary to Dry Creek).
6. Cause for the SSO.
7. How each SSO was mitigated.
8. What actions were taken to prevent a reoccurrence of each SSO.
b. A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
c. A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.

D. SPECIAL CONDITIONS cont'd

10. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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

12. 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 temporarily opened by the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the department. The gate shall be closed and locked when the facility is not staffed.

13. 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.

14. 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.

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

16. 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.

17. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	once / permit cycle	composite*	Any

* 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.

Dilution Series							
AEC%= 100	100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

(i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

(ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

D. SPECIAL CONDITIONS cont'd

(iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; p = 0.05) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.

(3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.

(i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(5) Follow-up tests do not negate an initial failed test.

(6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.

(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

(9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0126985
CLEARWATER CONDOMINIUMS

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 ☒

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Flow equalization / extended aeration / chlorination / dechlorination / sludge holding / post aeration / sludge disposal by contract hauler.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - No.

Application Date: 12/18/2012
Expiration Date: 06/11/2013

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.12	Secondary	Domestic (sanitary)

Facility Performance History:
This facility was last inspected on 11/28/2012. The conditions of the facility at the time of inspection were found to be satisfactory.

Part II – Operator Certification Requirements

☒Not Applicable; Due to its small size, 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 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: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Lake of the Ozarks	(L2)	7205	General Criteria	102901100403	0.0

* - 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
Lake of the Ozarks (L2)	0.0	0.0	0.0

MIXING CONSIDERATIONS

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

Mixing Zone:
Mixing Zone (MZ) Parameters: According to the USGS 1:24,000K Quadrangle, the mainstem lake width near the *assumed* new facility outfall location is approximately 1753 feet (ft.). Using "normal" water levels of 1753 ft. wide and one-quarter of this width equals 438 ft. Therefore, because 100 feet is less than 438 ft., MZ = 100 feet [10 CSR 20-7.031(4)(A)5.B.(IV)(a)].

Mixing Zone Volume: The flow volume approximates a triangular prism because of the slope of the lake bottom, where the formula is Volume = L*W*(D*0.5). Assuming that the width will be either side of the discharge (MZ) length (100 feet) to form the plume effect, the box dimensions are length (L) = 100 ft., width (W) = 100 ft., and depth (D) = 6 ft. Depth was obtained using mixing zone length projected 100 ft. from shoreline to the intersecting contour on 7.5' USGS topographic map (shoreline contour=204 ft. and lake depth contour at 100 ft. from shore = 198 ft.).

Volume = L*W*(D*(0.5)) = (100')*(100')*(3') = 30,000 ft^3.

The flow volume of 22,500 ft^3 is assumed as the daily mixing zone. Therefore;
30Q10=(30,000 ft^3/day)*(1 day/86,400 sec) = 0.35 ft^3/sec.

Receiving Water Body's Water Quality
No stream survey found at this time. The Lake of the Ozarks is not currently on the 2012 EPA approved 303(d) list.

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

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

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

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(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.

☒ - 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.

☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

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

☒ Not Applicable; The permittee/facility is not currently under Water Protection Program enforcement action.

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

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

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:
- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

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

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ Applicable; A RPA was conducted on appropriate parameters. Please see APPENDIX – RPA RESULTS.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ Applicable; Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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

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

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

☒ - At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

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

☒ Not Applicable; This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

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

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

☒ Not Applicable; This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined 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.

☒ Not Applicable; Wasteload allocations were not calculated.

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☒ Not Applicable; A WLA study was either not submitted or determined not applicable by Department staff.

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.

☒ Applicable; Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc…); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

☐ Facility is a designated Major.
☐ Facility continuously or routinely exceeds its design flow.
☐ Facility (industrial) that alters its production process throughout the year.
☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
☐ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
☒ Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
☐ Other – please justify.

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.

☒ 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 facility does not discharge to a 303(d) listed stream.

Part VI –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 and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are 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. But 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 that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia 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. Current effluent limitations in this permit are:

Summer – 12.1 mg/L daily maximum, 2.6 mg/L monthly average.
Winter – 12.1 mg/L daily maximum, 2.4 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this, which discharges to a receiving stream with the mixing consideration listed in Part IV of the Fact Sheet, could 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.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. 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 VII – Effluent Limits Determination

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.

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

OUTFALL #001 – MAIN FACILITY OUTFALL
Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	No	*/*
BOD_5	mg/L	1		30	20	No	30/20
TSS	mg/L	1		30	20	No	30/20
pH	SU	1	6.0-9.0		6.0-9.0	Yes	6.0 – 9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	12.1		2.6	Yes	12.1/4.6
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	12.1		2.4	Yes	12.1/4.6
Dissolved Oxygen (DO)**	mg/L	3, 9	*		*	Yes	5.0/6.3
Escherichia coli	***	1, 3		620	126	Yes	1000/400 (fecal)
Chlorine, Total Residual	µg/L	1, 3	17		8	Yes	19/9.5

* - 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.
**** - Parameter not previously establishedin previous state operating permit.

Basis for Limitations Codes:
1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. 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).

  ☒ – Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

- Total Suspended Solids (TSS).

☒ – Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

- pH. –6.0-9.0 SU. Technology based limits [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(5)(E)], due to the buffering capacity of the mixing zone.

- 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 Background total ammonia nitrogen = 0.01 mg/L

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: $C_e = ((0.12+ 0.35)1.5 – (0.35 * 0.01))/0.12$
$C_e = 6.0$ mg/L

Acute WLA: $C_e = ((10.08 + 0.0)12.1 – (0.0 * 0.01))/10.08$
$C_e = 12.1$ mg/L

$LTA_c = 6.0$ mg/L (0.556) = 3.34 mg/L [CV =1.5, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.145) = 1.75 mg/L [CV =1.5, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.75 mg/L (6.90) = 12.1 mg/L [CV =1.5, 99th Percentile]
AML = 1.75 mg/L (1.50) = 2.6 mg/L [CV =1.5, 95th Percentile, n =30]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.12+ 0.35)3.1 – (0.35 * 0.01))/0.12$
$C_e = 12.42$ mg/L

Acute WLA: $C_e = ((0.12+ 0.0)12.1 – (0.0 * 0.01))/0.12$
$C_e = 12.1$ mg/L

$LTA_c = 12.42$ mg/L (0.493) = 6.12 mg/L [CV =1.8, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.124) = 1.50 mg/L [CV =1.8, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.50 mg/L (8.09) = 12.1 mg/L [CV =1.8, 99th Percentile]
AML = 1.50 mg/L (1.62) = 2.4 mg/L [CV =1.8, 95th Percentile, n =30]

- Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen is included to determine whether reasonable potential to exceed water quality standards exists after the discharge begins.

- *Escherichia coli (E. coli)*. Monthly average of 126 per 100 ml as a geometric mean and Weekly Average of 620 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- 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.

Total Residual Chlorine effluent limits of 17 µg/L daily maximum, 8 µg/L monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum level (ML), should be included in the permit.

- WET Test. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring.* It is recommended that WET testing be conducted during the period of lowest stream flow.
  ☒ Acute

  ☒ No less than ONCE/PERMIT CYCLE:
  ☒ Municipality or domestic facility with a design flow ≥ 22,500 gpd, but less than 1.0 MGD.
  ☐ Other, please justify.

  Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
BOD_5	once/quarter	once/quarter
TSS	once/quarter	once/quarter
pH	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
E. coli	once/quarter	once/quarter
Total Residual Chlorine	once/quarter	once/quarter
Dissolved Oxygen	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter

Sampling Frequency Justification:
Based on the size of the facility and the previous permit cycle DMR reports the sampling frequency was lowered to once per quarter. The Clean Water Commission has directed the Department to proceed with amending 10 CSR 20-7.015 to reduce the sampling frequency required for E.coli to a lesser frequency, still protective of water quality standards, for smaller facilities, including those with discharges of 100,000 gallons per day or less.

Sampling Type Justification
As per 10 CSR 20-7.015, BOD_5, TSS collected for mechanical plants shall be a 24 hour modified composite sample. Due to the small size of this facility this composite sample shall be 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. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and TRC. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia, and Oil & Grease samples must be immediately preserved with acid, these samples are to be collected as a grab.

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.

Finding of affordability - The department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **Appendix – Affordability Analysis**

☒ Not Applicable; The Department is not required to determine findings of affordability because the permit contains no new conditions or requirements that convey a new cost to the facility.

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.

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

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

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

☒ - The Public Notice period for this operating permit was from 08/15/2014 to 09/15/2014. No comments received.

DATE OF FACT SHEET: (06/07/2013)

COMPLETED BY:

LACEY HIRSCHVOGEL, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
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APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	26.23	1.5	26.23	22.00	5.5/0.07	1.49	4.77	YES
Total Ammonia as Nitrogen (Winter) mg/L	12.1	75.95	3.1	75.95	18.00	11.2/0.05	1.84	6.78	YES

* - Units are (mg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

Missouri Department of Natural Resources
Fact Sheet
For the Purpose of Renewal
of
MO-0129038
Cedar Heights Condominiums Wastewater Treatment Facility

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

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

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

This Factsheet is for a Minor.

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding tank / sludge disposal by contract hauler.

Application Date: 11/18/14
Expiration Date: 06/21/14

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.11	Secondary	Domestic

Facility Performance History:
This facility was inspected on September 16, 2010 and was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses. The facility was later placed under an enforcement action. This facility was last inspected on June 7, 2012. The conditions of the facility at that time were found to be satisfactory. A review of monitoring reports submitted by the facility show no effluent limit exceedances in the past five years, but reports were missing for October 2010, December 2010, January 2011, August 2011, and December 2013.

Comments:
The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums. Special conditions were updated to include reporting of Non-detects and bypass reporting requirements. Also, because the receiving stream was incorrectly listed as Lake of the Ozarks on the previous permit, the permit writer has corrected the receiving stream information to a tributary to Lake of the Ozarks in this permit.

Part II – Operator Certification Requirements

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

Owned or operated by or for a

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

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

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

Operator's Name: James Heppler
Certification Number: 5092
Certification Level: C

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III– Operational Monitoring

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

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Lake of the Ozarks	NA	NA	General Criteria	10290110-0403	0.25
Lake of the Ozarks	L2	7205	IRR, LWW, AQL, HHP, WBC-A, SCR		

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

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (C, E, P, P1)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Lake of the Ozarks (L2)	0.0	0.0	0.0

MIXING CONSIDERATIONS
Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:
No receiving water monitoring requirements recommended at this time.

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

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

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

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

☐ - All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.
☐ - This is a New facility, backsliding does not apply.
☒ - Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44. Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.
☐ - This permit contains new and/or expanded discharge, please see APPENDIX FOR ANTIDEGRADATION ANALYSIS.

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

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74, items WQ422 through WQ449.

☐ - Permittee land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.
☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

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

☒ - The facility is currently under enforcement action. The enforcement action is due to an inspection on September 16, 2010 where the facility was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses.
☐ - The facility is not currently under Water Protection Program enforcement action.

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

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

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:
- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

☐ - This permittee has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100] and is expected to implement and enforce its approved program.
☒ - The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ - A RPA was conducted on appropriate parameters. Please see APPENDIX – RPA RESULTS.
☐ - A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ - Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].
☐ - Equivalent to Secondary Treatment is 65% removal [40 CFR Part 133.105(a)(3) & (b)(3)].

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

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

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

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

☐ - At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.
☒ - This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), 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 a cost analysis.

☐ - The facility has been given a schedule of compliance to meet final effluent limits.
☒ - This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators,* (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

☐ - A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.
☒ - At this time, the permittee is not required to develop and implement a SWPPP.

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

☐ - This operating permit is drafted under premises of a petition for variance.
☒ - 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.

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

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☐ - A WLA study including model was submitted to the Department.
☒ - A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:
Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

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.

☐ - The permittee is required to conduct WET test for this facility.
☒ - 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 is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☐ - Bypasses occur or have occurred at this facility.
☒ - 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 facility discharges to a 303(d) listed stream.
☐ - This facility discharges to a stream with an EPA approved TMDL.
☒ - This facility does not discharge to a 303(d) listed stream.

Part VI –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 and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are 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. But 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 that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia 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. Current effluent limitations in this permit are:

Summer – 5.1 mg/L daily maximum, 1.3 mg/L monthly average.
Winter – 11.7 mg/L daily maximum, 2.2 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing will 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.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. 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 VII – Effluent Limits Determination

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

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

OUTFALL #001 – MAIN FACILITY OUTFALL
EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	No	*/*
BOD_5	mg/L	1		30	20	No	30/20
TSS	mg/L	1		30	20	No	30/20
pH	SU	1	6.5 – 9.0			No	6.5-9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3	5.1		1.3	Yes	12.1/4.6
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3	11.7		2.2	Yes	12.1/4.6
Dissolved Oxygen (DO)**	mg/L	7	*		*	No	*/*
Escherichia coli	***	1, 3		630	126	No	630/126
Chlorine, Total Residual	µg/L	1, 3	<130		< 130	No	< 130/ < 130

* - Monitoring requirement only.
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
*** - #/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 (includes RPA)
3. Water Quality Based Effluent Limits
4. Antidegradation Review
5. Antidegradation Policy
6. Water Quality Model
7. Best Professional Judgment
8. TMDL or Permit in lieu of TMDL
9. 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). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- Total Suspended Solids (TSS). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- pH. 6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

- Total Ammonia Nitrogen. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(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 = 1.5 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 1.5 mg/L (0.646) = 0.97 mg/L [CV = 1.09, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.189) = 2.29 mg/L [CV = 1.09, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 0.97 mg/L (5.28) = 5.1 mg/L [CV = 1.09, 99th Percentile]
AML = 0.97 mg/L (1.36) = 1.3 mg/L [CV = 1.09, 95th Percentile, n =30]

Winter: October 1 – March 31
Chronic WLA: C_e = 3.1 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 3.1 mg/L (0.357) = 1.11 mg/L [CV = 2.89, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.094) = 1.14 mg/L [CV = 2.89, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.11 mg/L (10.60) = 11.7 mg/L [CV = 2.89, 99th Percentile]
AML = 1.44 mg/L (2.00) = 2.2 mg/L [CV = 2.89, 95th Percentile, n =30]

- Dissolved Oxygen. Monitoring only 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.

- *Escherichia coli (E. coli)*. Monthly average of 126 per 100 mL as a geometric mean and Weekly Average of 630 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(5)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- 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]. No mixing considerations allowed; therefore, WLA = appropriate criterion.

Chronic WLA: C_e = 10 µg/L

Acute WLA: C_e = 19 µg/L

LTA_c = 10 (0.527) = 5.3 µg/L [CV = 0.6, 99th Percentile]
LTA_a = 19 (0.321) = 6.1 µg/L [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 5.3 (3.11) = 17 µg/L [CV = 0.6, 99th Percentile]
AML = 5.3 (1.55) = 8 µg/L [CV = 0.6, 95th Percentile, n = 4]

The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are 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.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
BOD_5	once/month	once/month
TSS	once/month	once/month
pH	once/month	once/month
Ammonia as N	once/month	once/month
E. coli	once/month	once/month
Total Residual Chlorine	once/month	once/month
Dissolved Oxygen	once/month	once/month

Sampling Frequency Justification:
Sampling and reporting frequency was retained from previous permit.

Sampling Type Justification:
As per 10 CSR 20-7.015, BOD_5, TSS, and WET test samples collected for mechanical plants shall be a 24 hour modified composite sample. Due to the small size of this facility this composite sample shall be 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. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and TRC. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia samples must be immediately preserved, these samples are to be collected as a grab.

Part VIII – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a "finding of affordability" on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

☐ - The Department is required to determine "findings of affordability" because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.
☒ - The Department is not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

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 is tentatively scheduled to begin in February 2015 or is in process.

DATE OF FACT SHEET: DECEMBER 15, 2014

COMPLETED BY:

ANGELA FALLS, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-1419
angela.falls@dnr.mo.gov

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	0
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	0
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page ONE (1)	----	8

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	15
Stabilization ponds without aeration	5	
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical -- without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	5
Dechlorination	2	2
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	5
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	----	22
Total from page ONE (1)	---	8
Grand Total	---	30

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

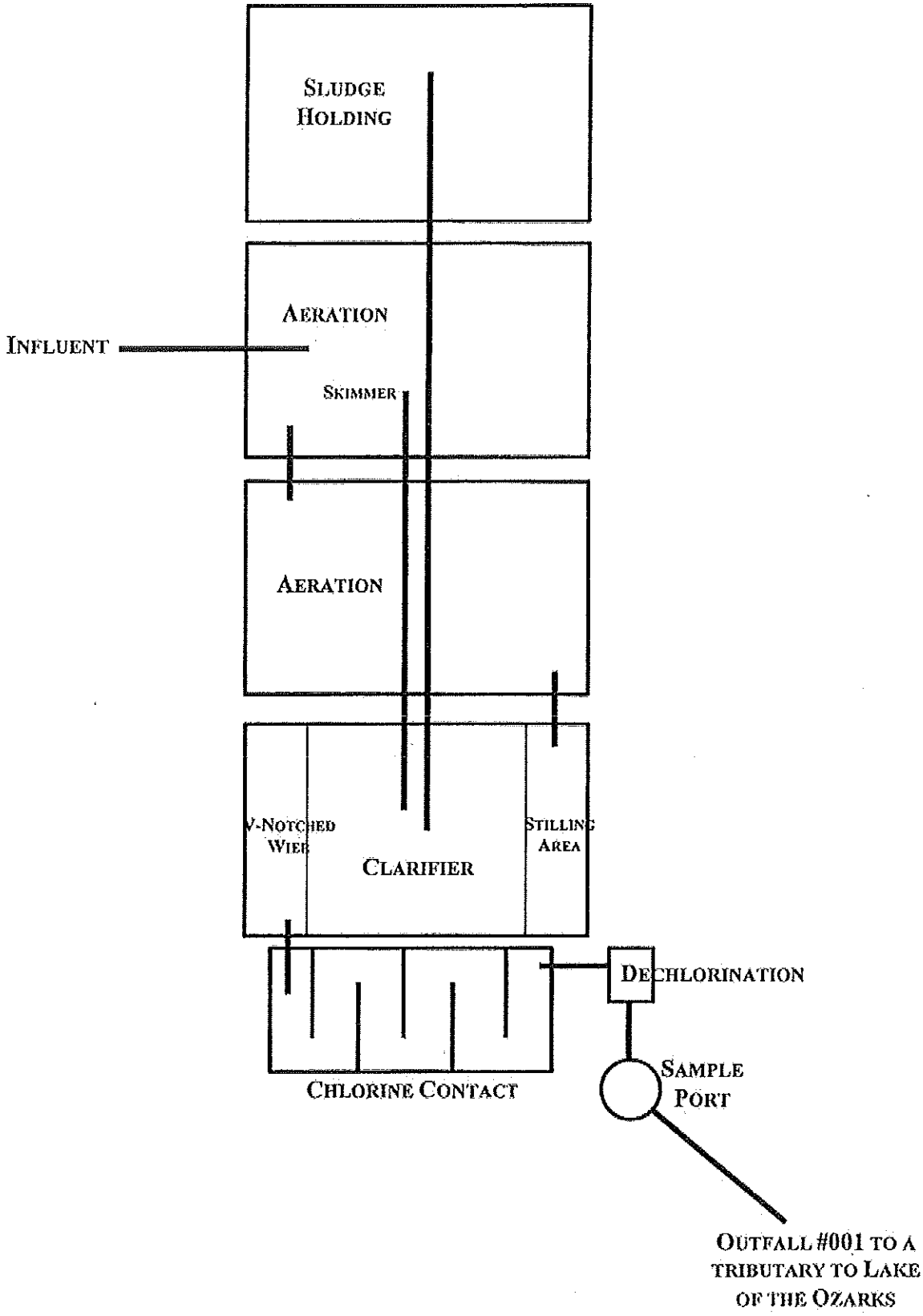
APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	10.59	1.5	10.59	28.00	3.37/0	1.09	3.14	YES
Total Ammonia as Nitrogen (Winter) mg/L	12.1	192.63	3.1	192.63	25.00	25/0.033	2.89	7.71	YES

N/A – Not Applicable
* - Units are (µg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX – PROCESS FLOW DIAGRAM:



STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements.**
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when: 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.

c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

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

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

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

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

1. **Definitions**

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

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

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

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

2. **Identification of Industrial Discharges**

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

3. **Application Information**

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

4. **Notice to the Department**

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

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

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

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

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2014

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

SECTION A – GENERAL REQUIREMENTS

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

a. The department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

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

SECTION G – LAND APPLICATION

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

5. Public Contact Sites:

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

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

6. Agricultural and Silvicultural Sites:

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

a. Haulers that land apply septage must obtain a state permit

b. Do not apply more than 30,000 gallons of septage per acre per year.

c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.

d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.

e. Lime is to added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

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

a. Biosolids shall be monitored to determine the quality for regulated pollutants

b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable department approved material to reach the maximum concentration of pollutants allowed.

c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

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

[1]Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

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

TABLE 2

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

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

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

TABLE 3

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

[1]Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances[1]

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

[1]Design of land treatment systems for Industrial Waste, 1979. Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)
[2]This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

[3]Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

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

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

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
    i. PAN can be determined as follows and is in accordance with WQ426

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

g. Buffer zones are as follows:
    i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
    ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
    iii. 150 feet if dwellings;
    iv. 100 feet of wetlands or permanent flowing streams;
    v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
h. Slope limitation for application sites are as follows;
    i. A slope 0 to 6 percent has no rate limitation
    ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
    iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the department.
k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:

a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    i. PAN can be determined as follows:

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

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

SECTION I – MONITORING FREQUENCY

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

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN[1]	Nitrogen PAN[2]	Priority Pollutants and TCLP[3]
0 to100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	--[4]
10,001 +	1 per week	1 per week	1 per day	--[4]

[1] Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less
[2] Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.
[3] Priority pollutants (40 CFR 122.21, Appendix D, Tables II and III) and toxicity characteristic leaching procedure (40 CFR 261.24) is required only for permit holders that must have a pre-treatment program.
[4] One sample for each 1,000 dry tons of sludge.

Note 1 : Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2 : Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.

3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.

4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
   a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Reports shall be submitted as follows:
   Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

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

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

5. Annual report Contents. The annual report shall include the following:
   a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
   b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
   c. Gallons and % solids data used to calculate the dry ton amounts.
   d. Description of any unusual operating conditions.
   e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
      i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
      ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
   f. Contract Hauler Activities
      If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
   g. Land Application Sites:
      i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
      ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
      iii. Report the method used for compliance with pathogen and vector attraction requirements.
      iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

Clearwater Condos WWTF
MO0126985, Camden County

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

AUG 13 2014

Camden County Water Supply No. 5
P.O. Box 556
Camdenton, MO 65020

Subject: Public Notice for Proposed State Operating Permit for Clearwater Condos WWTF

Dear Permittee:

The enclosed public notice pertains to your proposed State Operating Permit.

Federal regulations required issuance of this public notice to inform interested persons of the agency's intent to issue an operating permit to discharge, and allows a 30-day period for comment. This public notice package should be posted on a bulletin board at your place of business. If response to the public notice indicates significant interest, a public hearing or adjudicatory hearing may be held. Based on comments received, or the results of a hearing, the proposed permit will be modified and issued or possibly denied.

Any questions you may have should be sent to the address indicated on the enclosed public notice.

Sincerely,

WATER PROTECTION PROGRAM

John Madras

John Madras
Director

JM/nb

Enclosure

Missouri Department of Natural Resources

PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: August 15, 2014

In accordance with the state Clean Water Law, Chapter 644, RSMo, Missouri Clean Water Commission regulation 10 CSR 20-6.010, and the Federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state, or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years unless noted otherwise in the Public Notice for that discharge.

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

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to: Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, ATTN: NPDES Permits and Engineering Section/Permit Comments. **Please include the permit number in all comment letters.**

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Missouri Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be received or postmarked by 5:00 p.m. on September 15, 2014. MDNR will consider all written comments, including e-mails, faxes and letters, in the formulation of all final determinations regarding the applications. E-mail comments will be accepted at the following address: publicnoticenpdes@dnr.mo.gov. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at MDNR's Website: http://www.dnr.mo.gov/env/wpp/permits/permit-pn.htm, or at the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

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-0126985
Owner:	Camden County Water Supply No. 5
Address:	PO Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Clearwater Condominiums
Facility Address:	Lake Rd. 54-82, Camdenton, MO 65020
Legal Description:	NW¼, SE¼, Sec. 20, T38N, R17W, Camden County
UTM Coordinates:	X= 515819, Y= 4207626
Receiving Stream:	Lake of the Ozarks (L2)
First Classified Stream and ID:	Lake of the Ozarks (L2)
USGS Basin & Sub-watershed No.:	102901100403

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
This facility is not required to have a certified operator.
Flow equalization / extended aeration / chlorination / dechlorination / sludge holding / post aeration / sludge disposal by contract hauler.
Design population equivalent is 755.
Design flow is 75,750 gallons per day.
Actual flow is 5,800gallons per day.
Design sludge production is 13.6 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.

Effective Date — Sara Parker Pauley, Director, Department of Natural Resources

Expiration Date — John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A. FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 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. estimate
Biochemical Oxygen Demand$_5$	mg/L		30	20	once/quarter****	composite**
Total Suspended Solids	mg/L		30	20	once/quarter****	composite**
E. coli (Note 1, Page 3)	#/100 ml		620	126	once/quarter****	grab
pH – Units	SU	***		***	once/quarter****	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	12.1 12.1		2.6 2.4	once/quarter****	grab
Total Residual Chlorine (Note 2, Page 3)	µg/L	17 (130ML)		8 (130ML)	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE MONTH 28, 20XX. 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	mg/L	*		*	once/quarter****	grab
MONITORING REPORTS SHALL BE SUBMITTED QUARTERLY; THE FIRST REPORT IS DUE MONTH 28, 20XX.						
Whole Effluent Toxicity (WET) test	% Survival	See Special Condition # 17			Once/permit cycle	composite**
WET TEST MONITORING REPORTS SHALL BE SUBMITTED ONCE PER PERMIT CYCLE; THE FIRST REPORT IS DUE by MONTH 28, 20XX.						

* 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 6.0-9.0 pH units.

**** See table below for quarterly sampling

Minimum Sampling Requirements				
Quarter	**Months**	**E. coli, Total Residual Chlorine (TRC), and Dissolved Oxygen**	**All Other Parameters**	**Report is Due**
First	January, February, March	Not required to sample.	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	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	Sample at least once during any month of the quarter	October 28th
Fourth	October, November, December	Sample once during October; no sample required in either November or December	Sample at least once during any month of the quarter	January 28th

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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.

(a) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months.

(b) Do not chemically de-chlorinate **if it is not needed to meet the limits in your permit.**

(c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 µg/L" TRC.

C. STANDARD CONDITIONS

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

D. 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.
   (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.

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;

D. SPECIAL CONDITIONS cont'd

(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.

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. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the department for review and, if deemed necessary, approval.

9. The permittee shall develop and implement a program for maintenance and repair of the collection system. The recommended guidance is the US EPA's Guide For Evaluating Capacity, Management, Operation, And Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document number EPA 305-B-05-002). The permittee shall submit a report to the Southwest Regional Office annually, by January 28th, for the previous calendar year. The report shall contain the following information:
a. A list of all:
i. Sanitary Sewer Overflows (SSO) that occurred for the previous year, including SSOs that do not reach waters of the state and;
ii. Building backups in which the backup is attributable to the public sewer system.
iii. This does not include SSOs that occur due to routine maintenance of sewer lines.
iv. This list shall also include the following information for each individual SSO:
1. The location of each SSO (GPS, 911 address, manhole number, etc.)
2. What portion of the collection system did the SSO occur at (manhole, lamphole, sewer cleanout, etc.)
3. The estimated volume (gallons) of each SSO.
4. The estimated duration of each SSO.
5. If the SSO entered waters of the state, and include the name of receiving water. If the SSO entered a drainageway, use the first named stream that the drainageway enters (e.g. first named stream = Dry Creek; Report = Tributary to Dry Creek).
6. Cause for the SSO.
7. How each SSO was mitigated.
8. What actions were taken to prevent a reoccurrence of each SSO.
b. A summary of the general maintenance and repairs to the collection system serving the facility for the previous year.
c. A summary of any planned maintenance and repairs to the collection system serving the facility for the upcoming calendar year. This list shall include locations (GPS, 911 address, manhole number, etc.) and actions to be taken.

D. SPECIAL CONDITIONS cont'd

10. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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

12. 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 temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the department. The gate shall be closed and locked when the facility is not staffed.

13. 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.

14. 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.

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

16. 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.

17. Whole Effluent Toxicity (WET) Test shall be conducted as follows:

SUMMARY OF ACUTE WET TESTING FOR THIS PERMIT				
OUTFALL	AEC	FREQUENCY	SAMPLE TYPE	MONTH
001	100%	once / permit cycle	composite*	Any

* 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.

Dilution Series							
AEC%= 100	100% effluent	50% effluent	25% effluent	12.5% effluent	6.25% effluent	(Control) 100% upstream, if available	(Control) 100% Lab Water, also called synthetic water

(a) Test Schedule and Follow-Up Requirements

(1) Perform a MULTIPLE-dilution acute WET test in the months and at the frequency specified above. For tests which are successfully passed, submit test results using the Department's WET test report form #MO-780-1899 along with complete copies of the test reports as received from the laboratory, including copies of chain-of-custody forms within 30 calendar days of availability to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102. If the effluent passes the test, do not repeat the test until the next test period.

(i) Chemical and physical analysis of the upstream control and effluent sample shall occur immediately upon being received by the laboratory, prior to any manipulation of the effluent sample beyond preservation methods consistent with federal guidelines for WET testing that are required to stabilize the sample during shipping.

(ii) Any and all chemical or physical analysis of the effluent sample performed in conjunction with the WET test shall be performed at the 100% Effluent concentration in addition to analysis performed upon any other effluent concentration.

D. SPECIAL CONDITIONS cont'd

(iii) All chemical analyses included in the Missouri Department of Natural Resources WET test report form #MO-780-1899 shall be performed and results shall be recorded in the appropriate field of the report form.

(2) The WET test will be considered a failure if mortality observed in effluent concentrations for either specie, equal to or less than the AEC, is significantly different (at the 95% confidence level; p = 0.05) than that observed in the upstream receiving-water control sample. Where upstream receiving water is not available, synthetic laboratory control water may be used.

(3) All failing test results along with complete copies of the test reports as received from the laboratory, INCLUDING THOSE TESTS CONDUCTED UNDER CONDITION (3) BELOW, shall be reported to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the availability of the results.

(4) If the effluent fails the test for BOTH test species, a multiple dilution test shall be performed for BOTH test species within 30 calendar days and biweekly thereafter (for storm water, tests shall be performed on the next and subsequent storm water discharges as they occur, but not less than 7 days apart) until one of the following conditions are met: Note: Written request regarding single species multiple dilution accelerated testing will be address by THE WATER PROTECTION PROGRAM on a case by case basis.

(i) THREE CONSECUTIVE MULTIPLE-DILUTION TESTS PASS. No further tests need to be performed until next regularly scheduled test period.

(ii) A TOTAL OF THREE MULTIPLE-DILUTION TESTS FAIL.

(5) Follow-up tests do not negate an initial failed test.

(6) The permittee shall submit a summary of all test results for the test series along with complete copies of the test reports as received from the laboratory to the WATER PROTECTION PROGRAM, P.O. Box 176, Jefferson City, MO 65102 within 14 calendar days of the third failed test.

(7) Additionally, the following shall apply upon failure of the third follow up MULTIPLE DILUTION test The permittee should contact THE WATER PROTECTION PROGRAM within 14 calendar days from availability of the test results to ascertain as to whether a TIE or TRE is appropriate. If the permittee does not contact THE WATER PROTECTION PROGRAM upon the third follow up test failure, a toxicity identification evaluation (TIE) or toxicity reduction evaluation (TRE) is automatically triggered. The permittee shall submit a plan for conducting a TIE or TRE to the WATER PROTECTION PROGRAM within 60 calendar days of the date of the automatic trigger or DNR's direction to perform either a TIE or TRE. This plan must be approved by DNR before the TIE or TRE is begun. A schedule for completing the TIE or TRE shall be established in the plan approval.

(8) Upon DNR's approval, the TIE/TRE schedule may be modified if toxicity is intermittent during the TIE/TRE investigations. A revised WET test schedule may be established by DNR for this period.

(9) If a previously completed TIE has clearly identified the cause of toxicity, additional TIEs will not be required as long as effluent characteristics remain essentially unchanged and the permittee is proceeding according to a DNR approved schedule to complete a TRE and reduce toxicity. Regularly scheduled WET testing as required in the permit, without the follow-up requirements, will be required during this period.

(10) When WET test sampling is required to run over one DMR period, each DMR report shall contain a copy of the Department's WET test report form that was generated during the reporting period.

(11) Submit a concise summary in tabular format of all WET test results with the annual report.

(b) Test Conditions

(1) Test Type: Acute Static non-renewal

(2) All tests, including repeat tests for previous failures, shall include both test species listed below unless approved by the department on a case by case basis.

(3) Test species: Ceriodaphnia dubia and Pimephales promelas (fathead minnow). Organisms used in WET testing shall come from cultures reared for the purpose of conducting toxicity tests and cultured in a manner consistent with the most current USEPA guidelines. All test animals shall be cultured as described in the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms.

(4) Test period: 48 hours at the "Allowable Effluent Concentration" (AEC) specified above.

(5) Upstream receiving stream water shall be used as dilution water. If upstream water is unavailable or if mortality in the upstream water exceeds 10%, "reconstituted" water will be used as dilution water. Procedures for generating reconstituted water will be supplied by the MDNR upon request.

(6) Tests will be run with 100% receiving-stream water (if available), collected upstream of the outfall at a point beyond any influence of the effluent, and reconstituted water.

(7) If reconstituted-water control mortality for a test species exceeds 10%, the entire test will be rerun.

(8) If upstream control mortality exceeds 10%, the entire test will be rerun using reconstituted water as the dilutant.

D. SPECIAL CONDITIONS cont'd

(9) Whole-effluent-toxicity test shall be consistent with the most current edition of Methods for Measuring the Acute Toxicity of Effluents and Receiving Waters to Freshwater and Marine Organisms

MISSOURI DEPARTMENT OF NATURAL RESOURCES
FACT SHEET
FOR THE PURPOSE OF RENEWAL OF
MO-0126985
CLEARWATER CONDOMINIUMS

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 ☒

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Flow equalization / extended aeration / chlorination / dechlorination / sludge holding / post aeration / sludge disposal by contract hauler.

Have any changes occurred at this facility or in the receiving water body that effects effluent limit derivation?
☒ - No.

Application Date: 12/18/2012
Expiration Date: 06/11/2013

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.12	Secondary	Domestic (sanitary)

Facility Performance History:
This facility was last inspected on 11/28/2012. The conditions of the facility at the time of inspection were found to be satisfactory.

Part II – Operator Certification Requirements

☒Not Applicable; Due to its small size, 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 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: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Lake of the Ozarks	(L2)	7205	General Criteria	102901100403	0.0

* - 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
Lake of the Ozarks (L2)	0.0	0.0	0.0

MIXING CONSIDERATIONS

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

Mixing Zone:
Mixing Zone (MZ) Parameters: According to the USGS 1:24,000K Quadrangle, the mainstem lake width near the *assumed* new facility outfall location is approximately 1753 feet (ft.). Using "normal" water levels of 1753 ft. wide and one-quarter of this width equals 438 ft. Therefore, because 100 feet is less than 438 ft., MZ = 100 feet [10 CSR 20-7.031(4)(A)5.B.(IV)(a)].

Mixing Zone Volume: The flow volume approximates a triangular prism because of the slope of the lake bottom, where the formula is Volume = L*W*(D*0.5). Assuming that the width will be either side of the discharge (MZ) length (100 feet) to form the plume effect, the box dimensions are length (L) = 100 ft., width (W) = 100 ft., and depth (D) = 6 ft. Depth was obtained using mixing zone length projected 100 ft. from shoreline to the intersecting contour on 7.5' USGS topographic map (shoreline contour=204 ft. and lake depth contour at 100 ft. from shore = 198 ft.).

Volume = L*W*(D*(0.5)) = (100')*(100')*(3') = 30,000 ft^3.

The flow volume of 22,500 ft^3 is assumed as the daily mixing zone. Therefore;
30Q10=(30,000 ft^3/day)*(1 day/86,400 sec) = 0.35 ft^3/sec.

Receiving Water Body's Water Quality
No stream survey found at this time. The Lake of the Ozarks is not currently on the 2012 EPA approved 303(d) list.

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

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

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

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(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.

☒ - 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.

☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

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

☒ Not Applicable; The permittee/facility is not currently under Water Protection Program enforcement action.

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

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

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

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

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

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ Applicable; A RPA was conducted on appropriate parameters. Please see APPENDIX – RPA RESULTS.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ Applicable; Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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

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

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

☒ - At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs at Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation, and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.

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

☒ Not Applicable; This permit does not contain a SOC.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of storm water discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Storm Water Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of storm water discharges.

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

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

☒ Not Applicable; This operating permit is not drafted under premises of a petition for variance.

WASTELOAD ALLOCATIONS (WLA) FOR LIMITS:
As per [10 CSR 20-2.010(78)], the amount of pollutant each discharger is allowed by the Department to release into a given stream after the Department has determined 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.

☒ Not Applicable; Wasteload allocations were not calculated.

WLA Modeling:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☒ Not Applicable; A WLA study was either not submitted or determined not applicable by Department staff.

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.

☒ Applicable; Under the federal Clean Water Act (CWA) §101(a)(3), requiring WET testing is reasonably appropriate for site-specific Missouri State Operating Permits for discharges to waters of the state issued under the National Pollutant Discharge Elimination System (NPDES). WET testing is also required by 40 CFR 122.44(d)(1). WET testing ensures that the provisions in the 10 CSR 20-6.010(8)(A)7. and the Water Quality Standards 10 CSR 20-7.031(3)(D),(F),(G),(I)2.A & B are being met. Under [10 CSR 20-6.010(8)(A)4], the Department may require other terms and conditions that it deems necessary to assure compliance with the Clean Water Act and related regulations of the Missouri Clean Water Commission. In addition the following MCWL apply: §§§644.051.3 requires the Department to set permit conditions that comply with the MCWL and CWA; 644.051.4 specifically references toxicity as an item we must consider in writing permits (along with water quality-based effluent limits, pretreatment, etc...); and 644.051.5 is the basic authority to require testing conditions. WET test will be required by facilities meeting the following criteria:

☐ Facility is a designated Major.
☐ Facility continuously or routinely exceeds its design flow.
☐ Facility (industrial) that alters its production process throughout the year.
☐ Facility handles large quantities of toxic substances, or substances that are toxic in large amounts.
☐ Facility has Water Quality-based Effluent Limitations for toxic substances (other than NH_3)
☒ Facility is a municipality or domestic discharger with a Design Flow ≥ 22,500 gpd.
☐ Other – please justify.

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.

☒ 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 facility does not discharge to a 303(d) listed stream.

Part VI –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 and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are 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. But 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 that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia 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. Current effluent limitations in this permit are:

Summer – 12.1 mg/L daily maximum, 2.6 mg/L monthly average.
Winter – 12.1 mg/L daily maximum, 2.4 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this, which discharges to a receiving stream with the mixing consideration listed in Part IV of the Fact Sheet, could 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.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. 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 VII – Effluent Limits Determination

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.

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

OUTFALL #001 – MAIN FACILITY OUTFALL
Effluent limitations derived and established in the below Effluent Limitations Table are based on current operations of the facility. Future permit action due to facility modification may contain new operating permit terms and conditions that supersede the terms and conditions, including effluent limitations, of this operating permit.

EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	No	*/*
BOD_5	mg/L	1		30	20	No	30/20
TSS	mg/L	1		30	20	No	30/20
pH	SU	1	6.0-9.0		6.0-9.0	Yes	6.0 – 9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3, 5	12.1		2.6	Yes	12.1/4.6
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3, 5	12.1		2.4	Yes	12.1/4.6
Dissolved Oxygen (DO)**	mg/L	3, 9	*		*	Yes	5.0/6.3
Escherichia coli	***	1, 3		620	126	Yes	1000/400 (fecal)
Chlorine, Total Residual	µg/L	1, 3	17		8	Yes	19/9.5

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

Basis for Limitations Codes:

1. State or Federal Regulation/Law
2. Water Quality Standard (includes RPA)
3. Water Quality Based Effluent Limits
4. Lagoon Policy
5. Ammonia Policy
6. 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).

  ☒ – Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

- Total Suspended Solids (TSS).

  ☒ – Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the Receiving Stream Information.

- pH. –6.0-9.0 SU. Technology based limits [10 CSR 20-7.015] are protective of the water quality standard [10 CSR 20-7.031(5)(E)], due to the buffering capacity of the mixing zone.

- 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 Background total ammonia nitrogen = 0.01 mg/L

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: $C_e = ((0.12+ 0.35)1.5 - (0.35 * 0.01))/0.12$
$C_e = 6.0$ mg/L

Acute WLA: $C_e = ((10.08 + 0.0)12.1 - (0.0 * 0.01))/10.08$
$C_e = 12.1$ mg/L

$LTA_c = 6.0$ mg/L (0.556) = 3.34 mg/L [CV =1.5, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.145) = 1.75 mg/L [CV =1.5, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.75 mg/L (6.90) = 12.1 mg/L [CV =1.5, 99th Percentile]
AML = 1.75 mg/L (1.50) = 2.6 mg/L [CV =1.5, 95th Percentile, n =30]

Winter: October 1 – March 31

Chronic WLA: $C_e = ((0.12+ 0.35)3.1 - (0.35 * 0.01))/0.12$
$C_e = 12.42$ mg/L

Acute WLA: $C_e = ((0.12+ 0.0)12.1 - (0.0 * 0.01))/0.12$
$C_e = 12.1$ mg/L

$LTA_c = 12.42$ mg/L (0.493) = 6.12 mg/L [CV =1.8, 99th Percentile, 30 day avg.]
$LTA_a = 12.1$ mg/L (0.124) = 1.50 mg/L [CV =1.8, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.50 mg/L (8.09) = 12.1 mg/L [CV =1.8, 99th Percentile]
AML = 1.50 mg/L (1.62) = 2.4 mg/L [CV =1.8, 95th Percentile, n =30]

- Dissolved Oxygen. Monitoring requirement only. Monitoring for dissolved oxygen is included to determine whether reasonable potential to exceed water quality standards exists after the discharge begins.

  - *Escherichia coli (E. coli)*. Monthly average of 126 per 100 ml as a geometric mean and Weekly Average of 620 during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(4)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- 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.

  Total Residual Chlorine effluent limits of 17 µg/L daily maximum, 8 µg/L monthly average are recommended if chlorine is used as a disinfectant. Standard compliance language for TRC, including the minimum level (ML), should be included in the permit.

- WET Test. WET Testing schedules and intervals are established in accordance with the Department's Permit Manual; Section 5.2 *Effluent Limits / WET Testing for Compliance Bio-monitoring.* It is recommended that WET testing be conducted during the period of lowest stream flow.
  ☒ Acute

  ☒ No less than ONCE/PERMIT CYCLE:
  ☒ Municipality or domestic facility with a design flow ≥ 22,500 gpd, but less than 1.0 MGD.
  ☐ Other, please justify.

  Acute and/or Chronic Allowable Effluent Concentrations (AECs) for facilities that discharge to unclassified, Class C, Class P (with default Mixing Considerations), or Lakes [10 CSR 20-7.031(4)(A)4.B.(IV)(b)] are 100%, 50%, 25%, 12.5%, & 6.25%.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/quarter	once/quarter
BOD_5	once/quarter	once/quarter
TSS	once/quarter	once/quarter
pH	once/quarter	once/quarter
Ammonia as N	once/quarter	once/quarter
E. coli	once/quarter	once/quarter
Total Residual Chlorine	once/quarter	once/quarter
Dissolved Oxygen	once/quarter	once/quarter
Oil & Grease	once/quarter	once/quarter

Sampling Frequency Justification:
Based on the size of the facility and the previous permit cycle DMR reports the sampling frequency was lowered to once per quarter. The Clean Water Commission has directed the Department to proceed with amending 10 CSR 20-7.015 to reduce the sampling frequency required for E.coli to a lesser frequency, still protective of water quality standards, for smaller facilities, including those with discharges of 100,000 gallons per day or less.

Sampling Type Justification
As per 10 CSR 20-7.015, BOD_5, TSS collected for mechanical plants shall be a 24 hour modified composite sample. Due to the small size of this facility this composite sample shall be 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. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and TRC. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia, and Oil & Grease samples must be immediately preserved with acid, these samples are to be collected as a grab.

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.

Finding of affordability - The department has made a reasonable search for empirical data indicating the permit is affordable. The search consisted of a review of department records that might contain economic data on the community, a review of information provided by the applicant as part of the application, and public comments received in response to public notices of this draft permit. If the empirical cost data was used by the permit writer, this data may consist of median household income, any other ongoing projects that the Department has knowledge, and other demographic financial information that the community provided as contemplated by Section 644. 145.3. See **Appendix – Affordability Analysis**

☒ Not Applicable; The Department is not required to determine findings of affordability because the permit contains no new conditions or requirements that convey a new cost to the facility.

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.

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 is tentatively scheduled to begin in August 2014 or is in process.

DATE OF FACT SHEET: (06/07/2013)

COMPLETED BY:

LACEY HIRSCHVOGEL, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
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APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	26.23	1.5	26.23	22.00	5.5/0.07	1.49	4.77	YES
Total Ammonia as Nitrogen (Winter) mg/L	12.1	75.95	3.1	75.95	18.00	11.2/0.05	1.84	6.78	YES

* - Units are (mg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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

Part I – General Conditions
Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements.**
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

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

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2014

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

SECTION A – GENERAL REQUIREMENTS

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

a. The department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

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

SECTION G – LAND APPLICATION

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

5. Public Contact Sites:

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

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

6. Agricultural and Silvicultural Sites:

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

a. Haulers that land apply septage must obtain a state permit

b. Do not apply more than 30,000 gallons of septage per acre per year.

c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.

d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.

e. Lime is to added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

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

a. Biosolids shall be monitored to determine the quality for regulated pollutants

b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable department approved material to reach the maximum concentration of pollutants allowed.

c. Table I gives the maximum concentration allowable to protect water quality standards

TABLE 1

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

[1]Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

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

TABLE 2

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

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

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

TABLE 3

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

[1]Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances[1]

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

[1]Design of land treatment systems for Industrial Waste, 1979, Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)
[2]This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

[3]Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

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

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

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
    i. PAN can be determined as follows and is in accordance with WQ426

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

g. Buffer zones are as follows:
    i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
    ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
    iii. 150 feet if dwellings;
    iv. 100 feet of wetlands or permanent flowing streams;
    v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
h. Slope limitation for application sites are as follows;
    i. A slope 0 to 6 percent has no rate limitation
    ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
    iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the department.
k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:

a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section II of these standard conditions.
b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    i. PAN can be determined as follows:

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

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

SECTION I – MONITORING FREQUENCY

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

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN[1]	Nitrogen PAN[2]	Priority Pollutants and TCLP[3]
0 to100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	--[4]
10,001 +	1 per week	1 per week	1 per day	--[4]

[1] Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

[2] Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

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

[4] One sample for each 1,000 dry tons of sludge.

Note 1 : Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2 : Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.

3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.

4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
   a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Reports shall be submitted as follows:
   Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

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

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

5. Annual report Contents. The annual report shall include the following:
    a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
    b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
    c. Gallons and % solids data used to calculate the dry ton amounts.
    d. Description of any unusual operating conditions.
    e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
        i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
        ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
    f. Contract Hauler Activities
    If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
    g. Land Application Sites:
        i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
        ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
        iii. Report the method used for compliance with pathogen and vector attraction requirements.
        iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements.**
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b), or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

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

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

2. **Duty to Reapply.**
   a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.
   b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)
   c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts,
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2014

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

SECTION A – GENERAL REQUIREMENTS

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

a. The department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

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

SECTION G – LAND APPLICATION

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

5. Public Contact Sites:

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

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

6. Agricultural and Silvicultural Sites:

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

a. Haulers that land apply septage must obtain a state permit

b. Do not apply more than 30,000 gallons of septage per acre per year.

c. Septage tanks are designed to retain sludge for one to three years which will allow for a larger reduction in pathogens and vectors, as compared to other mechanical type treatment facilities.

d. To meet Class B sludge requirements, maintain septage at 12 pH for at least thirty (30) minutes before land application. 50 pounds of hydrated lime shall be added to each 1,000 gallons of septage in order to meet pathogen and vector stabilization for septage biosolids applied to crops, pastures or timberland.

e. Lime is to added to the pump truck and not directly to the septic tanks, as lime would harm the beneficial bacteria of the septic tank.

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

a. Biosolids shall be monitored to determine the quality for regulated pollutants

b. The number of samples taken is directly related to the amount of sludge produced by the facility (See Section I of these Standard Conditions). Report as dry weight unless otherwise specified in the site specific permit. Samples should be taken only during land application periods. When necessary, it is permissible to mix biosolids with lower concentrations of biosolids as well as other suitable department approved material to reach the maximum concentration of pollutants allowed.

c. Table 1 gives the maximum concentration allowable to protect water quality standards

TABLE 1

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

[1]Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

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

TABLE 2

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

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

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

TABLE 3

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

[1]Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances[1]

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

[1]Design of land treatment systems for Industrial Waste, 1979, Michael Ray Overcash, North Carolina State University and Land Treatment of Municipal Wastewater, EPA 1981.)
[2]This applies for a soil with a pH between 6.0 and 7.0 (salt based test) or a pH between 6.5 to 7.5 (water based test). Case-by-case review is required for higher pH soils.

[3]Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.
[4]Case by case review. Concentrations in sludge should not exceed the 95th percentile of the National Sewage Sludge Survey, EPA, January 2009.

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

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
    i. PAN can be determined as follows and is in accordance with WQ426

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

g. Buffer zones are as follows:
    i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
    ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
    iii. 150 feet if dwellings;
    iv. 100 feet of wetlands or permanent flowing streams;
    v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.
h. Slope limitation for application sites are as follows;
    i. A slope 0 to 6 percent has no rate limitation
    ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
    iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.
i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.
j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the department.
k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:

a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
    i. PAN can be determined as follows:

(Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).

[1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

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

SECTION I – MONITORING FREQUENCY

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

TABLE 5

Design Sludge Production (dry tons per year)	Monitoring Frequency (See notes 1 and 2)			
	Metals, Pathogens and Vectors	Nitrogen TKN[1]	Nitrogen PAN[2]	Priority Pollutants and TCLP[3]
0 to100	1 per year	1 per year	1 per month	1 per year
101 to 200	biannual	biannual	1 per month	1 per year
201 to 1,000	quarterly	quarterly	1 per month	1 per year
1,001 to 10,000	1 per month	1 per month	1 per week	--[4]
10,001 +	1 per week	1 per week	1 per day	--[4]

[1] Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

[2] Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

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

[4] One sample for each 1,000 dry tons of sludge.

Note 1 : Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.
Note 2 : Total Phosphorus: Total phosphorus and total potassium shall be tested at the same monitoring frequency as metals.

2. If you own a wastewater treatment lagoon or sludge lagoon that is cleaned out once a year or less, you may choose to sample only when the sludge is removed or the lagoon is closed. Test one composite sample for each 100 dry tons of sludge or biosolids removed from the lagoon during the year within the lagoon at closing. Composite sample must represent various areas at one-foot depth.

3. Additional testing may be required in the special conditions or other sections of the permit. Permittees receiving industrial wastewater may be required to conduct additional testing upon request from the department.

4. At this time, the Department recommends monitoring requirements shall be performed in accordance with, "POTW Sludge Sampling and Analysis Guidance Document," United States Environmental Protection Agency, August 1989, and the subsequent revisions.

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

1. The permittee shall maintain records on file at the facility for at least five years for the items listed in these standard conditions and any additional items in the Special Conditions section of this permit. This shall include dates when the sludge facility is checked for proper operation, records of maintenance and repairs and other relevant information.
2. Reporting period
   a. By January 28th of each year, an annual report shall be submitted for the previous calendar year period for all mechanical wastewater treatment facilities, sludge lagoons, and sludge or biosolids disposal facilities.
   b. Permittees with wastewater treatment lagoons shall submit the above annual report only when sludge or biosolids are removed from the lagoon during the report period or when the lagoon is closed.
3. Report Forms. The annual report shall be submitted on report forms provided by the department or equivalent forms approved by the department.
4. Reports shall be submitted as follows:
   Major facilities (those serving 10,000 persons or 1 million gallons per day) shall report to both the department and EPA. Other facilities need to report only to the department. Reports shall be submitted to the addresses listed as follows:

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

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

5. Annual report Contents. The annual report shall include the following:
    a. Sludge and biosolids testing performed. Include a copy or summary of all test results, even if not required by the permit.
    b. Sludge or biosolids quantity shall be reported as dry tons for quantity generated by the wastewater treatment facility, the quantity stored on site at the end of the year, and the quantity used or disposed.
    c. Gallons and % solids data used to calculate the dry ton amounts.
    d. Description of any unusual operating conditions.
    e. Final disposal method, dates, and location, and person responsible for hauling and disposal.
        i. This must include the name, address for the hauler and sludge facility. If hauled to a municipal wastewater treatment facility, sanitary landfill, or other approved treatment facility, give the name of that facility.
        ii. Include a description of the type of hauling equipment used and the capacity in tons, gallons, or cubic feet.
    f. Contract Hauler Activities
    If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.
    g. Land Application Sites:
        i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.
        ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.
        iii. Report the method used for compliance with pathogen and vector attraction requirements.
        iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S - SECTION 1. DOMESTIC SLUDGE REPORTING

GENERAL INFORMATION

REPORTING PERIOD: (YEAR)

FACILITY NAME	CITY NAME
PERMIT NUMBER	COUNTY NAME

Instructions: See Instruction Sheet for directions.

1. Sludge Production, including sludge received from others:

ACTUAL DRY TONS/YEAR	ACTUAL POPULATION EQUIVALENT

2. Sludge Treatment:

☐ Anaerobic Digester ☐ Aerobic Digester ☐ Composting
☐ Storage Tank ☐ Air or Heat Drying
☐ Lime Stabilization ☐ Other, Describe: _____

3. Sludge Use or Disposal: Complete the rest of this form only for the sections applicable to your method of sludge and biosolids use or disposal.

X	All Permittees	Complete Section 1
☐	Land Application (LA)	Complete Sections 2 and 3
☐	Contract Hauler (CH) >150 PE	Complete Sections 2 and 4
☐	Contract Hauler (CH) <150 PE	Complete Section 4
☐	Hauled to another Treatment Facility (HT)	Complete Section 4
☐	Solid Waste Landfill (LF)	Complete Section 4
☐	Sludge Disposal Lagoon (SD)	Complete Section 5
☐	Incineration (IN)	Complete Section 6
☐	Sludge Hauled to Incinerator (IO)	Complete Section 6

4. Certification: I certify under penalty of law that the information contained in this report and attachments are true and correct. This determination has been made under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information used to determine these requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

PRINT NAME	OFFICIAL TITLE	
SIGNATURE	DATE	PHONE

MO 780-1636 (6-04)

INSTRUCTIONS FOR FILLING OUT ANNUAL REPORT
FORM S - DOMESTIC SLUDGE

GENERAL

The attached report form (FORM S) is to be used for submitting the annual sludge report as required under Standard Conditions Part III of the Missouri State Operating Permit (NPDES). **This form is to be used only for domestic wastewater sludges.** It does NOT apply to industrial sludges.

Use the attached Form S as a master copy and make copies off of it as required for sludge reporting in subsequent years. This form must be signed by an appropriate official. Keep a copy for your records. **Send the completed Form S to your Regional Office.**

APPLICABILITY

Mechanical Wastewater Treatment Facilities must sign and submit the form, even if no sludge was removed during the report period. You must complete and submit Form S by Jan. 28 for each year for the previous calendar year.

Wastewater treatment lagoons need to submit the Form S report ONLY when sludge is removed from the lagoon. Complete and submit the Form S by Jan. 28 for sludge removed during the previous calendar year.

Complete the sections of the Form S that are applicable to your facility. See the table below for guidance.

All permittees	Complete Section 1
Land Application (LA)	Complete Sections 2 and 3
Contract Hauler (CH) >150 PE	Complete Sections 2 and 4
Contract Hauler (CH) <150 PE	Complete Section 4
Hauled to another Treatment Facility (HT)	Complete Section 4
Solid Waste Landfill (LF)	Complete Section 4
Sludge Disposal Lagoon (SD)	Complete Section 5
Incineration (IN)	Complete Section 6
Sludge Hauled to Incinerator (IO)	Complete Section 6

ENVIRONMENTAL PROTECTION AGENCY (EPA) REQUIREMENTS

Your facility may also be required to obtain a separate sludge permit from the EPA and to submit reports directly to EPA. Contact the EPA at the following address to determine the EPA's requirements for your facility.

Mr. John Dunn
Regional Sludge Coordinator
U.S. EPA Region VII
Water Management Division
901 N. 5th Street
Kansas City, KS 66101
Phone: (913) 551-7594
FAX: (913) 551-7765

FOR QUESTIONS

For assistance regarding this form or other sludge issues, please contact your Regional Office or contact the Outreach & Assistance Center at 1-800-361-4827 or (573) 526-6627.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S - SECTION 2 - LABORATORY RESULTS - FORM SA

DGE MONITORING RESULTS FOR METALS, NUTRIENTS, PATHOGENS AND VECTORS

PERMIT NO:	REPORT PERIOD: (CALENDAR YEAR)
MO–	

FACILITY NAME

Use this form to report sludge monitoring required under Standard Conditions for NPDES Permits, Part III, dated Aug. 15, 1994. For a copy, contact the department at (573) 751-6825.

If the facility has a design population equivalent (P.E.) of 150 or less, treat the sludge generated as septage and consequently, no testing is required. See WQ 422 guide, *Land Application of Septage*, for further guidance.

Report all results on dry weight basis.

Attach copies of all laboratory results for the items below.

A. MINIMUM MONITORING LIST FOR ALL PERMITTEES

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL SOLIDS	%				
TOTAL ARSENIC	mg/kg				
TOTAL CADMIUM	mg/kg				
TOTAL CHROMIUM	mg/kg				
TOTAL COPPER	mg/kg				
TOTAL LEAD	mg/kg				
TOTAL MERCURY	mg/kg				
TOTAL MOLYBDENUM	mg/kg				
TOTAL NICKEL	mg/kg				
TOTAL SELENIUM	mg/kg				
TOTAL ZINC	mg/kg				

B. ADDITIONAL MONITORING FOR LAND APPLICATION

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES
TOTAL KJELDAHL NITROGEN	mg/kg				
TOTAL PHOSPHORUS AS P	mg/kg				
TOTAL POTASSIUM AS K	mg/kg				
If more than two dry tons of sludge per acre/year is applied complete the following:					
ORGANIC NITROGEN AS N	mg/kg				
AMMONIA NITROGEN AS N	mg/kg				
NITRATE NITROGEN AS N	mg/kg				

C. POLLUTANT LIMITS

POLLUTANT	AVERAGE SAMPLE CONCENTRATION mg/kg DRY WEIGHT	LOW METAL CONCENTRATION mg/kg DRY WEIGHT	CEILING CONCENTRATION mg/kg DRY WEIGHT
ARSENIC		41	75
CADMIUM		39	85
CHROMIUM		1,200	3,000
COPPER		1,500	4,300
LEAD		300	840
MERCURY		17	57
MOLYBDENUM		18	75
NICKEL		420	420
SELENIUM		36	100
ZINC		2,800	7,500

D. PATHOGENS

Pathogen testing is required for all sludges to show operational compliance, including sludges treated by a PSRP approved method.

The geometric mean of the density of fecal coliform is less than 2,000,000 Most Probable Number (MPN) or Colony Forming Units (CFU) per gram of total solids (dry weight basis) for each group of seven samples:

☐ Yes ☐ No Sampling frequency _____

Geometric mean per gram of total solids for each group of seven samples was:

MPN/CFU	SAMPLE DATE
MPN/CFU	SAMPLE DATE
MPN/CFU	SAMPLE DATE

E. VECTOR REDUCTION PROCESSES

☐ 38 percent volatile solids reduction (attach calculations).

☐ SOUR test, mg 0/hr/g (attach graph and calculations).

☐ Other. Attach explanation

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S - SECTION 2 - LABORATORY RESULTS - FORM SB

UDGE MONITORING RESULTS FOR PRIORITY POLLUTANTS AND OTHER SPECIAL TESTING

PERMIT NO: MO–	REPORT PERIOD: (CALENDAR YEAR)
FACILITY NAME	

Report all results on dry weight basis.

F. PRIORITY POLLUTANTS

Report only those pollutants that were above detection limits. Do not repeat pollutants listed in section 2A. Attach additional sheets as needed

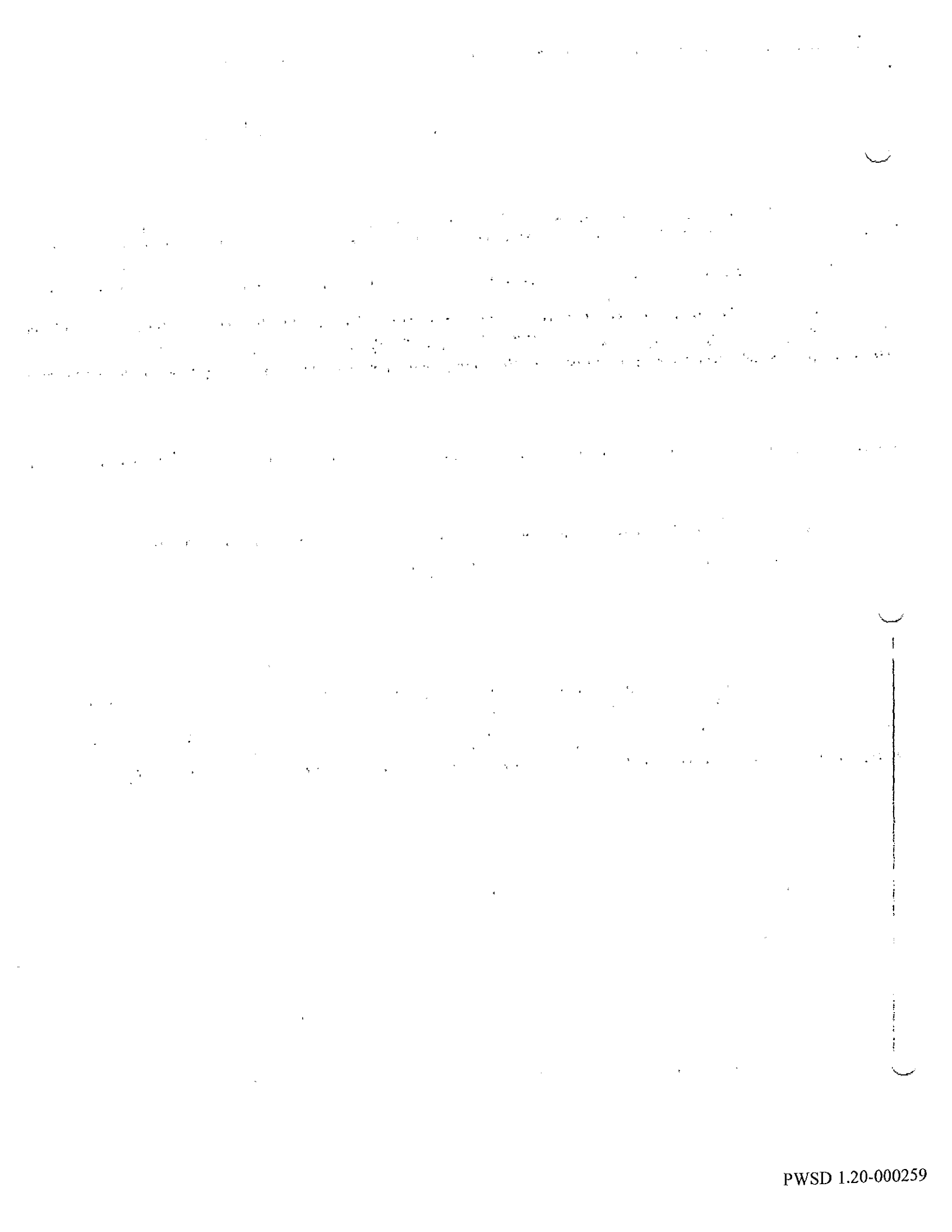
PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES

G. OTHER SPECIAL MONITORING REQUIRED BY PERMIT

Report results of any additional testing required under the Special Conditions section of your permit.

PARAMETER	UNITS	AVERAGE	MINIMUM	MAXIMUM	NUMBER OF SAMPLES

PWSD 1.20-000258



MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM S - SECTION 3. LAND APPLICATION

MT NO.: | REPORTING PERIOD. CALENDAR YEAR

FACILITY NAME

3.00 Land Application - General

This section is based on Standard Conditions for NPDES Permits, Part III, dated Aug. 15, 1994. For a copy, contact the department at (573) 751-6825.

Complete this section if sludge or biosolids were land applied for beneficial use by permittee or by contract hauler under permittee authority.

3.01

☐ dry tons of sludge applied during the report period.

☐ average percent solids

If less than 12 percent solids: _____ total gallons for year

If 12 percent solids or greater: _____ cubic yards for year.

3.02 SLUDGE STORAGE PROVIDED

_____ cubic feet; _____ days of storage.

Number of days each month that sludge was land applied:

Jan	Feb	Mar	Apr	May	June	July	Aug	Sept	Oct	Nov	Dec

3.03 WHO APPLIES YOUR SLUDGE

Permittee personnel ☐ Yes ☐ No

Contract person ☐ Yes ☐ No

Other, describe: _____

3.10 Applicability (Per Section H or Part III Standard Conditions)

3.11 ARE THERE ANY LAND APPLICATION SITES FARTHER THAN 20 MILES FROM THE WASTEWATER TREATMENT FACILITY?

☐ Yes ☐ No If yes, a separate permit is required for those sites. Indicate permit numbers or submit new permit application for each site.

Permit numbers: _____

3.12 ARE ANY INDUSTRIAL SLUDGES LAND APPLIED BY THE PERMITTEE?

☐ Yes ☐ No If yes, complete the following: Permit No: _____

Type of Sludge _____ SIC Code _____

3.13 ARE ALTERNATE LIMITS OR EXCEPTIONS LISTED IN THE SPECIAL CONDITIONS SECTION OF THE PERMIT?

☐ Yes ☐ No If yes, attach explanation sheet.

3.14 IS SLUDGE RECEIVED FROM ANY OUT-OF-STATE GENERATORS?

☐ Yes ☐ No If this sludge is handled separately, complete separate Sections 2 and 3 of Form S for the out-of-state sludge.

3.20 Pollutant Limitations

3.21 ARE METALS WITHIN THE CEILING CONCENTRATION LIMIT?

☐ Yes ☐ No If no, attach explanation sheet.

3.22 ARE METALS WITHIN THE LOW METALS CONCENTRATIONS AND THE TOTAL OF ALL SLUDGE APPLICATIONS TO DATE (INCLUDING PREVIOUS YEARS) HAVE NOT EXCEEDED 500 DRY TONS/ACRE?

☐ Yes ☐ No Attach list of sites using Form SC.

3.23 IF YOU ANSWERED NO TO 3.22, COMPLETE THE FOLLOWING.

Have metals application rates reached any of the cumulative metals loadings? This is based on contributions from all historical sludge loadings, including industrial sludges.

☐ Yes ☐ No Attach a list of sites using Form SD.

Soil test results for metals may be used if historical use is not known. Test metals concentration in parts per million (ppm) dry weight for the top six inches of soil and calculate pounds per acre using this formula:

ppm (dry wt) in soil x 2 = pounds per acre for 6 inches soil depth.

3.30 Management Practices

3.31 NITROGEN LIMITATIONS

Which of the following nitrogen approaches was used?

Sludge applied up to two dry tons/acre/year. ☐ Yes ☐ No

Plant Available Nitrogen (PAN) approach. ☐ Yes ☐ No

_____ Number of composite samples. Results for PAN in mg/kg dry weight and pounds per dry ton of sludge (lb/dt) [lb/dt = 0.002 x mg/kg]:

	AVERAGE	MINIMUM	MAXIMUM
PAN	mg/kg	mg/kg	mg/kg
PAN	lb/dT	lb/dT	lb/dT

3.32 HAVE SLUDGE APPLICATIONS COMPLIED WITH THE FOLLOWING MANAGEMENT PRACTICES AS LISTED IN THE UNIVERSITY OF MISSOURI WQ 426 GUIDE, BEST MANAGEMENT PRACTICES FOR BIOSOLIDS LAND APPLICATION?

1. No discharge of biosolids from application site. ☐ Yes ☐ No
2. Public contact sites restriction. ☐ Yes ☐ No
3. Crop restrictions. ☐ Yes ☐ No
4. Harvest and grazing restrictions. ☐ Yes ☐ No
5. Threatened or endangered species protection. ☐ Yes ☐ No
6. Nitrogen limitations. ☐ Yes ☐ No
7. Buffer zones. ☐ Yes ☐ No
8. Slope limitations for application sites. ☐ Yes ☐ No
9. Storm water runoff. ☐ Yes ☐ No
10. Frozen, snow-covered or saturated soil conditions. ☐ Yes ☐ No
11. Biosolids storage. ☐ Yes ☐ No
12. Application rates. ☐ Yes ☐ No
13. Application equipment. ☐ Yes ☐ No
14. Soil pH limitations. ☐ Yes ☐ No
15. Soil phosphorus limitations. ☐ Yes ☐ No
16. Soil depth limitations. ☐ Yes ☐ No
17. Record keeping. ☐ Yes ☐ No

If No, attach sheet with explanation

3.33 CLASS A SLUDGE (PER WQ 424 GUIDE - BIOSOLIDS STANDARDS FOR PATHOGENS AND VECTORS).

Does the sludge meet Class A pathogen reduction? ☐ Yes ☐ No

Has Class A sludge been applied to public use sites? ☐ Yes ☐ No

If yes to the second question in 3.33, contact Department of Natural Resources.

3.40 Operational Standards for Class B Biosolids (See WQ 424.)

☐ Class B pathogen reduction requirements were met by either fecal coliform limits under section 2D or a PSRP listed in WQ 424, Table 2. Attach supporting data and indicate process option used.

☐ Class B pathogen requirements not currently met. Attach explanation and schedule of compliance.

3.41 VECTOR ATTRACTION REDUCTION REQUIREMENTS WERE MET.

☐ Yes ☐ No

3.50 Monitoring Frequency (Per WQ 424 - Monitoring Requirements for Biosolids Land Application.)

Attach a summary of the monitoring results on Form SA.

3.51 SLUDGE TESTING FOR METALS WAS PERFORMED:

☐ once/year ☐ once/six months

☐ once/quarter ☐ once/month

☐ once/week ☐ once/100 dry tons removed from lagoon.

☐ other, specify: _____

3.52 PERMITTEE IS REQUIRED TO HAVE AN APPROVED PRETREATMENT PROGRAM.

☐ Yes ☐ No If Yes, attach Form SB.

3.53 TOTAL SOLIDS TESTING WAS PERFORMED AT LEAST ONCE PER DAY DURING LAND APPLICATION PERIODS?

☐ Yes ☐ No If No, attach explanation.

3.54 NITROGEN TESTING WAS PERFORMED PER THE FREQUENCY IN WQ 423.

This frequency is _____. ☐ Yes ☐ No If No, attach explanation.

3.55 TOTAL PHOSPHORUS AND TOTAL POTASSIUM WERE TESTED AT THE SAME FREQUENCY REQUIRED FOR METALS AS INDICATED IN WQ 423.

☐ Yes ☐ No If No, attach explanation.

SOIL TESTING FOR PH AND CATION EXCHANGE CAPACITY (CEC) AND AVAILABLE PHOSPHORUS HAS BEEN CONDUCTED WITHIN THE LAST FIVE YEARS.

☐ Yes ☐ No If No, attach explanation.

3.57 WAS ANY ADDITIONAL SLUDGE OR SOIL TESTING REQUIRED UNDER THE SPECIAL CONDITIONS SECTION OF YOUR WATER POLLUTION CONTROL (NPDES) PERMIT?

☐ Yes ☐ No If Yes, attach a summary using Form SB.

PERMIT NO	REPORT PERIOD: CALENDAR YEAR

FACILITY NAME

3.60 Certification for Land Application

Check all that apply.

I certify under penalty of law that

☐ records on testing, and pollutant loadings, as listed above in Section 2, have been kept in accordance with 40 CFR 503.17.

☐ the management practices, as listed above in Section 2, have been met in accordance with 40 CFR 503.14.

☐ the Class B pathogen requirements and the site restrictions, as listed above in Section 2, have been met in accordance with 40 CFR 503.15 and 503.32.

☐ one of the vector attraction requirements, as listed above in Section 2, have been met in accordance with 40 CFR 503.15 and 503.33.

This determination has been made under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information used to determine these requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

NAME	OFFICIAL TITLE
SIGNATURE	DATE

WQ 730 1622 - 03

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SC – LAND APPLICATION OF BIOSOLIDS WITH LOW METALS CONCENTRATIONS

Use this form for application sites that have received biosolids with low metal(s) concentrations per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Report biosolids application rate in dry tons per acre per year (dt/ac/yr). Attach additional copies of this sheet as needed.

PERMIT NO.	REPORT PERIOD: CALENDAR YEAR
MO–	

FACILITY NAME

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

SITE NO.	OWNERS NAME
LEGAL ______ 1/4, ______ 1/4, SEC ______, T ______, R ______, COUNTY ______	
BIOSOLIDS ______ dt/ac/yr ______ acres	NITROGEN ______ lbs/ac/yr (TKN OR PAN)
CROPS GROWN	SOIL pH

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH

FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATION OF BIOSOLIDS

Use this form for application sites that have received biosolids that exceed the low metals concentrations or have exceeded a cumulative site loading of 500 dry tons/acre of biosolids per Section 3.22 of Form S. Enter the site number for each field based on the site maps on file at the facility. Attach additional copies of this sheet as needed.

PERMIT NO.	REPORT PERIOD: CALENDAR YEAR
MO–	

FACILITY NAME

SITE NO.	LAND OWNERS NAME

LEGAL _____ 1/4, _____ 1/4, SEC _____ ; T _____ ; R _____ ; COUNTY _____

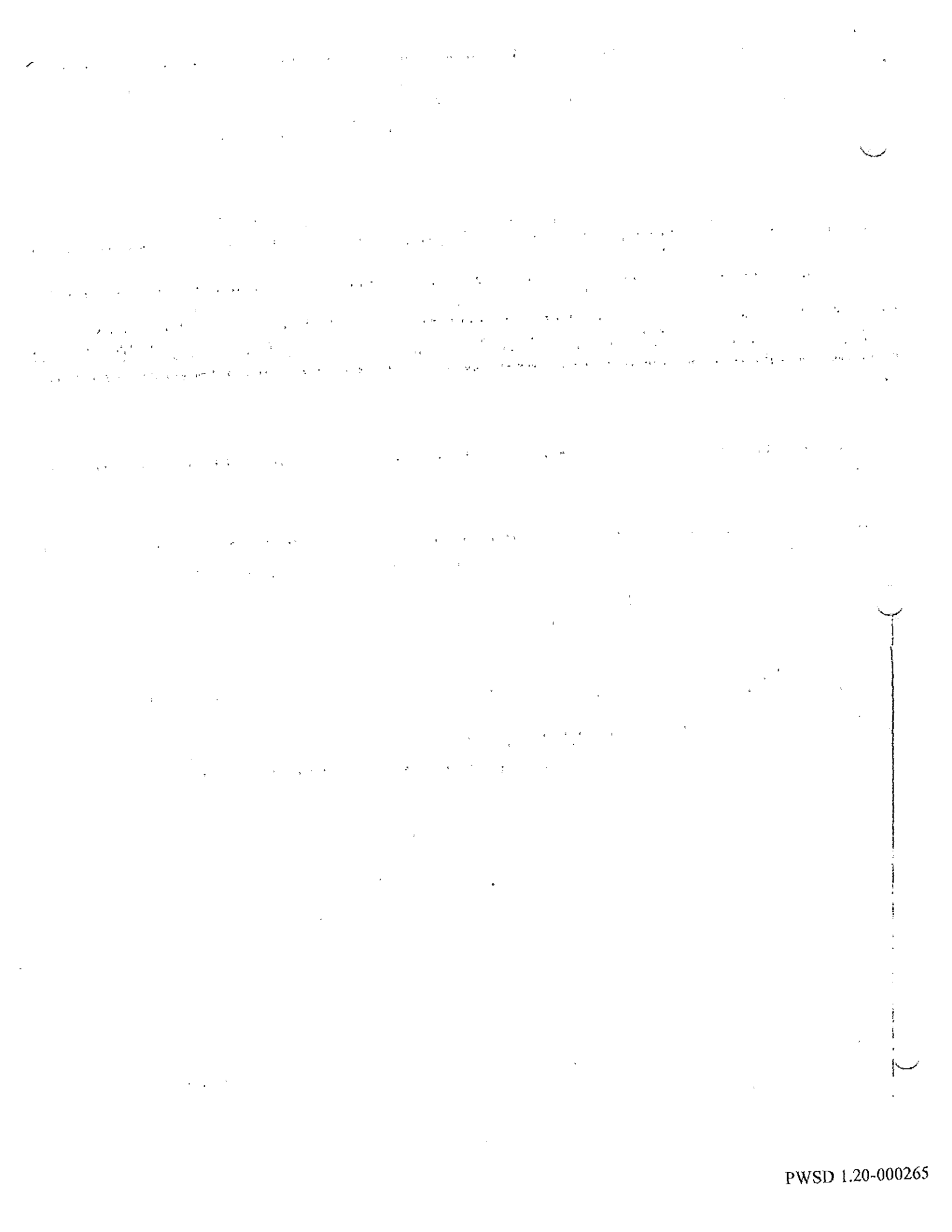
BIOSOLIDS	NITROGEN
_____ dt/ac/yr _____ acres	_____ lbs/ac/yr (TKN OR PAN)

CROPS GROWN

PARAMETER	UNITS	CUMULATIVE LOADINGS			
		PREVIOUS TOTAL	ADDED THIS YEAR	CURRENT TOTAL	PERCENT OF** ALLOWED LOAD
BIOSOLIDS	TON/ACRE*				
TOTAL ARSENIC	LBS/ACRE*				%
TOTAL CADMIUM	LBS/ACRE*				%
TAL CHROMIUM	LBS/ACRE*				%
TOTAL COPPER	LBS/ACRE*				%
TOTAL LEAD	LBS/ACRE*				%
TOTAL MERCURY	LBS/ACRE*				%
TOTAL MOLYBDENUM	LBS/ACRE*				%
TOTAL NICKEL	LBS/ACRE*				%
TOTAL SELENIUM	LBS/ACRE*				%
TOTAL ZINC	LBS/ACRE*				%
SOIL pH (SALT TEST)	pH UNITS				%
SOIL CEC	meg/100g SOIL				%

*Report as dry weight.

**Report the percentage of the allowable cumulative loading for the site based on the limits in Permit Standard Conditions Part III. Round to the nearest 5 percent. If less than 10 percent, report as <10.



Missouri Department of Natural Resources

PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: August 15, 2014

In accordance with the state Clean Water Law, Chapter 644, RSMo, Missouri Clean Water Commission regulation 10 CSR 20-6.010, and the Federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state, or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years unless noted otherwise in the Public Notice for that discharge.

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

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to: Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, ATTN: NPDES Permits and Engineering Section/Permit Comments. **Please include the permit number in all comment letters.**

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Missouri Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be received or postmarked by 5:00 p.m. on September 15, 2014. MDNR will consider all written comments, including e-mails, faxes and letters, in the formulation of all final determinations regarding the applications. E-mail comments will be accepted at the following address: publicnoticenpdes@dnr.mo.gov. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at MDNR's Website: http://www.dnr.mo.gov/env/wpp/permits/permit-pn.htm, or at the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

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-0126985
Owner:	Camden County Water Supply No. 5
Address:	PO Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Clearwater Condominiums
Facility Address:	Lake Rd. 54-82, Camdenton, MO 65020
Legal Description:	NW¼, SE¼, Sec. 20, T38N, R17W, Camden County
UTM Coordinates:	X= 515819, Y= 4207626
Receiving Stream:	Lake of the Ozarks (L2)
First Classified Stream and ID:	Lake of the Ozarks (L2)
USGS Basin & Sub-watershed No.:	102901100303

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
This facility is not required to have a certified operator.
Flow equalization / extended aeration / chlorination / dechlorination / sludge holding / post aeration / sludge disposal by contract hauler.
Design population equivalent is 755.
Design flow is 75,750 gallons per day.
Actual flow is 5,800gallons per day.
Design sludge production is 13.6 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.

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

Expiration Date

John Madras, Director, Water Protection Program

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1st through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

This effluent limit is below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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.

(a) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months.

(b) Do not chemically de-chlorinate if it is not needed to meet the limits in your permit.

(c) If no chlorine was used in a given sampling period, an actual analysis is not necessary. Simply report as "0 µg/L" TRC.

C. STANDARD CONDITIONS

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

D. 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.
   (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.

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;

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

SUBJECT: Financial Assistance for Engineering Report Services -- Calendar Year 2014

Dear Community Water System Official:

I am pleased to announce an opportunity for all eligible community water systems to obtain funding for engineering report services. The purpose of this funding is to help community water systems obtain an engineering report as a first step toward implementing changes that will help the system achieve and maintain technical, managerial and financial capacity, including compliance with the National Primary Drinking Water Regulations and Missouri public drinking water regulations.

This is not a loan program, but rather provides grants to water systems based on their eligibility and priority as determined by a numerical ranking process. Systems with the highest priority point scores are funded first. Awardees are offered up to 90% of the cost needed to hire an engineering firm to prepare an engineering report. Disadvantaged communities are eligible for up to 100% reimbursement. If selected for an award, water systems will be required to select an engineering firm based on a solicitation process that complies with state requirements. Please review the enclosed application packet for more information.

To apply, make sure your water system meets the minimum eligibility criteria in the information packet, complete the application, and return it along with the required supporting documentation, postmarked no later than October 20, 2014, to:

Missouri Department of Natural Resources
Water Protection Program, Public Drinking Water Branch
Attn: Engineering Report Services
1101 Riverside Drive, P.O. Box 176
Jefferson City, MO 65102-0176

If you have any questions regarding this opportunity, please contact Mr. Ryan Seabaugh at (573) 751-8628, or the Drinking Water Permits and Engineering Section Chief at (573) 751-1127 or by email at maher.jaafari@dnr.mo.gov.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Sara Parker Pauley
Director

Enclosure

MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER BRANCH
PHASE ONE ENGINEERING REPORT SERVICES GRANT PROGRAM

Grant Application and Contractual Requirements for Engineering Report Services for Community Public Water Systems

Calendar Year 2014/2015	Application Deadline: October 20, 2014

The Missouri Department of Natural Resources is accepting grant applications from community water systems for development of an engineering report. Funding comes from the Drinking Water State Revolving Fund (DWSRF) set-asides. If you have any questions regarding this funding opportunity, please contact Ryan Seabaugh of the Public Drinking Water Branch, Infrastructure Permits and Engineering Section at (573) 751-8628 or by email ryan.seabaugh@dnr.mo.gov, or Drinking water Permits and Engineering Section chief at (573) 751-1127 or by email at maher.jaafari@dnr.mo.gov.

This Instruction Sheet contains:

- General Information
- Application Instructions
  - Application Deadline
  - Minimum Eligibility Criteria for Applicants
  - Application Evaluation Criteria
  - Assignment of Priority Points
- Information and Contractual Requirements for Funding Recipients
  - Selecting an Engineer
  - Engineering Pre-Selection Process
  - Criteria for Engineering Report
  - Processing Payments
- Application Form (attached)

GENERAL INFORMATION

What is the purpose of this funding?

The primary purpose of this funding is to help community water systems obtain an engineering report as a first step toward implementing changes that will help the system achieve and maintain technical, managerial and financial capacity, including compliance with the National Primary Drinking Water Regulations and the Missouri public drinking water regulations.

Who can apply?

All Community water systems that meet the Minimum Eligibility Criteria for Applicants contained in this document may apply. The community water system must have a good compliance history and a good operation and maintenance history, unless the system agrees to evaluate and undertake feasible and appropriate changes to bring the system back into compliance.

How will applications be ranked?

Complete applications will be ranked according to priority point criteria and eligibility. Only applications that have been completely filled out and signed will be ranked.

How much funding can I expect?

The contract award amount may vary, but shall not exceed 90% of the costs for engineering report services unless the applicant has been identified as a disadvantaged community. The actual percentage that is awarded may be reduced from 90% based on project scope along with risk and eligibility assessed from the application submittal.

Disadvantaged communities are defined as a community with a population of less than 3,300 whose user rates will be at or above 2% of the state Median Household Income (MHI), and the community's MHI is at or below 75% of the state average MHI. Disadvantaged communities may qualify for up to a 100% grant.

What can I use the funding for?

Funding can only be used for engineering report services within the contract period. Funding provided under this contract shall not be used as reimbursement of expenses for services provided outside the contract period.

Will repayment be required?

Funding provided for these contracts is a grant, not a loan. Repayment is not required.

Is a local match required?

Yes. With the exception of disadvantaged communities, grant funding shall not exceed 90% of the cost to develop the engineering report. The applicant must be able to provide funding for at least 10% of the cost.

APPLICATION INSTRUCTIONS

Application Deadline

Applications must be postmarked or received by October 20, 2014. The application is included with this Information Packet. No deadline extensions will be granted. The completed application and all other required information must be mailed or hand-delivered to the Public Drinking Water Branch, Infrastructure Permits and Engineering Section as follows:

Mail to	or hand deliver to
Missouri Department of Natural Resources	Public Drinking Water Branch
Public Drinking Water Branch	Infrastructure Permits and Engineering Section
Infrastructure Permits and Engineering Section	Lewis and Clark State Office Building
P. O. Box 176	1101 Riverside Drive, 3rd Floor
Jefferson City, Missouri 65102-0176	Jefferson City, Missouri

The Department will notify all applicants of the final selection results after all applications have been reviewed.

Minimum Eligibility Criteria for Applicants

Applicant shall complete the Phase One Engineering Report Services Grant Program Application including the Safe Drinking Water Act Compliance Priority Point Checklist (Section 6 of the application) and return it along with the required supporting documentation to the Public Drinking Water Branch no later than the application deadline. Applicants must meet the following minimum eligibility criteria in order to be eligible for this grant. Applicant signature is required on the Application Form to verify eligibility requirements are met.

1. The System must be an existing community water system.

2. The System shall have a valid Permit to Dispense Water or be taking steps to obtain such a permit. (An application for a Permit to Dispense Water must be received by the Department prior to the October 20, 2014 deadline in order for us to consider the water system to be taking steps to obtain a permit.)
3. The System must have paid all outstanding Program Administration and Laboratory Services fees and must have remitted to the Department the Primacy Fees collected from its customers prior to the October 20, 2014 deadline.
4. The System must employ a certified chief operator or contract operator.
5. The System has not received engineering report funding for three years prior to the deadline for this application submission.
6. The System does not have an engineering report that has been approved by the Department within 2 years prior to the deadline for this application submission.
7. The System must agree to make a good faith effort to pursue recommendations contained in the approved engineering report. A good faith effort is defined as an application for financial assistance, application to the Department for construction permit for one or more recommended projects, or documented technical, managerial and financial capacity improvement.

Because the grants are federally funded, applicants are required to submit a Data Universal Numbering System (DUNS) number. This can be obtained via the internet at http://fedgov.dnb.com/webform or by telephone to Dun and Bradstreet at 1-866-705-5711.

Application Evaluation Factors

Applications will be listed in order based on priority points accrued. The purpose of the priority points is to list applications in order so that the most serious problems are given the highest priority. Priority points are based primarily on protection of public health, compliance with the Safe Drinking Water Act and system reliability.

Applicants located within 2014 priority watersheds identified by the *Our Missouri Waters Initiative* may receive additional eligibility priority. More information on the initiative can be found on the Department's website at http://dnr.mo.gov/omwi.htm.

Funding amounts in terms of required match will include the following risk and eligibility factors:

- System size based on population served;
- Documentation and detail of supporting information and project scope;
- Complexity of the project compared to system needs and size; and
- Available funds.

Assignment of Priority Points

All applicants are required to submit a brief description of need (narrative) for each item checked in the Safe Drinking Water Act Compliance Priority Point Checklist. To ensure points are applied for the checklist item, documentation supporting your description is recommended. Documentation may include, but may not necessarily be limited to inspections, sanitary surveys, and system records with written operator or system engineer testimony.

Priority points shall be assigned only where the system intends to correct the deficiency or problem associated with the points. For example, if the system has had persistent violations of a secondary MCL, the engineering report must address that problem. No priority points shall be assigned to a checklist item if the deficiency is resulting from inadequate operation and maintenance of the water system, unless the project enables the community water system (CWS) to meet technical, managerial and financial capacity requirements determined by the Department.

Section A: Safe Drinking WaterAct Violations and Compliance

25	Correction of persistent violations of maximum contaminant levels or treatment performance criteria for acute risk contaminants (such as coliform, turbidity or nitrate) that have occurred within the past 36 months
20	Correction of persistent violations of maximum contaminant levels for naturally-occurring contaminants (radium, radon, uranium, arsenic, radionuclides)
15	Correction of persistent violations of treatment technique requirements
20	Correction of persistent violations of maximum contaminant levels for non-acute risk primary contaminants that have occurred within the last 36 months
15	Correction of persistent violations of maximum contaminant levels for secondary contaminants that have occurred within the past 36 months
15	Compliance with Missouri's surface water treatment, disinfectants/disinfection by-product, or ground water rules
25	Compliance with an administrative order, bilateral compliance agreement, or other enforceable document issued by the Missouri Department of Natural Resources

Section B: Problems with Waterborne Disease, Inadequate Supply or Pressure

25	At least 51% of the project will address problems causing a waterborne disease outbreak attributable to the CWS by the Department of Health and Senior Services
15	The CWS can document its inability consistently to maintain >35 psi as a normal working pressure in the distribution system
20	The CWS can document its inability consistently to maintain >20 psi at all service connections.
20	Private or non-community wells or sources in the project service area are unable to consistently provide an adequate amount of potable water for general household purposes and at least 51% of the project addresses this need (Private or non-community wells or sources contaminated by commercial, industrial or mining wastes will be considered in this category.)

Section C: General Infrastructure Problems

20	Providing the CWS with a backup well or backup interconnection with another CWS
20	Address problem(s) with improper well construction
10	Address unaccounted for water loss that exceeds 10% of the drinking water produced by the system, and the loss is due to leaking or broken water lines
10	Provide necessary modifications to a distribution system that has exceeded or is anticipated to exceed design capacity or useful life within the next five years
10	Address a demonstrated need to replace faulty pipes or substandard pipe materials
2	Address a demonstrated need for distribution system valves and flushing devices
2	Address a demonstrated need for looping of water mains
15	Address an inability to maintain a disinfectant residual at all points in the distribution system
15	Address water storage facilities in poor condition not related to inadequate storage
2	Provide the CWS with a storage capacity equal to one day's average use or provide the CWS with adequate standby power
15	Provide necessary modifications to a source or treatment facility anticipated to exceed design capacity or useful life within the next five years
5	Address significant degradation of the quality of raw water supply
5	Address significant degradation of the quality of finished water in storage
2	Enable the CWS to meet existing state requirements for the treatment and/or storage of waste

residues generated by the water treatment plant

10 Enable repair or replacement of treatment facilities for required disinfection or turbidity removal that are severely deteriorated beyond the useful life of the facility

15 The facility's source has been directly impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.

15 The facility's treatment or distribution system has been impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.

10 At least 51% of the project cost is for repair or replacement of an existing CWS damaged or destroyed by a natural disaster (Note: Documentation must be submitted along with a statement that adequate state or federal disaster relief is not available)

Section D: Regionalization, Interconnection, and Security

20 Providing necessary upgrades to facilities of a primary water system to continue or expand its services as a regional supplier

20 Result in the permanent supply interconnection of two or more existing CWS (this includes new water systems that allow small water systems within their boundaries to consolidate)

10 Result in a regional management system responsible for the day-to-day operation of the water system

20 Provide necessary upgrades or new water distribution system to meet the standards of a regional supplier for the purpose of consolidation

5 Enable the CWS to enhance water system security

Section E: Technical, Managerial and Financial Capacity Demonstration

5 The facility is located within a DNR-endorsed Wellhead or Source Water Protection Area

5 At least 50% of the governing body has received training related to operation and management

5 System has a written operation and maintenance plan and budget

5 The system currently meters all water usage from system connections

INFORMATION AND CONTRACTUAL REQUIREMENTS FOR FUNDING RECIPIENTS

The following information provides detailed instructions if you receive notification that you have been selected for award. The notification letter will also contain information necessary to complete follow-up requirements.

Selecting an Engineer

Funding recipients are responsible for following their own purchase/procurement criteria when obtaining the services of an engineer. However, the procedures and procurement requirements in Sections 8.285-8.291, RSMo apply. The funding recipient must submit the appropriate documentation of the process, as outlined in Engineering Pre-Selection Process. Funding recipients are responsible for selecting an engineer certified in the State of Missouri as a Professional Engineer. The necessary documentation in the Engineering Pre-Selection Process shall be submitted to the Department within 90 days from receipt of the signed award letter. Upon engineering selection, the system representative and the professional engineer shall sign the Three-Party Payment Agreement (Scope of Work). Once the Scope of Work is received, the Department will then finalize the Financial Assistance Agreement (FAA). The FAA and the Scope of Work constitute a contract.

Engineering Pre-Selection Process

The applicant will be notified if funds are available for award. Upon notification, the funding recipient shall proceed with procurement of a qualified engineer or firm. The applicant will have no more than 90 calendar days to procure an engineer, notify the Department, and submit required documentation along with their detailed work plan. Failure to meet the deadline or contact the Department to request a time extension will constitute an incomplete application, and the application will be closed.

The submission shall include the following.

1. A list of the evaluation factors and the scoring system shall be submitted to the Public Drinking Water Branch. The system selection criteria are the record of the process used for pre-selection. The criteria must be logical and support the final decision. The system must base the selection of their desired professional engineer services on the qualification-based selection process. Actual selection scores are not requested but must be kept in the systems' files.
2. A copy of the Request for Statement of Qualifications and the Statement of Qualifications must be submitted to the Department. The Request for Statement of Qualifications tells the potential engineers what you are looking for and allows them to respond, in turn, by a specified attainable deadline.
3. Proof of advertising must be submitted to the Department. Activities to ensure broad solicitation of known or existing firms capable of completing the work must be made. This may take the form of a publication in a newspaper or further solicitation via mail. Note: All solicitation steps are the community's attempt to receive three or more responses.

   Effort must be made to solicit Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) firms as required by Chapter 37, RSMo., and associated regulations. More information on compliance with MBE/WBE requirements and a directory of MBE/WBE vendors may be found at Missouri Office of Equal Opportunity (http://oeo.mo.gov).
4. Completed Three-Party Payment Agreement (Scope of Work).
5. Detailed Work Plan.
6. For projects totaling $30,000 or more, a cost sheet including specific tasks with anticipated hourly charges must also be provided.
7. Technical, Managerial, Financial (TMF) Capacity worksheet provided by the Department.

Criteria for Engineering Report

1. The engineering report must be developed and certified by a registered professional engineer licensed in the State of Missouri.
2. The engineering report must be sufficient in scope and detailed to fully address the criteria listed herein.
3. The engineering report must include Form 780-2091, Facilities Plan Submittal Checklist if applying for public funding.
4. The engineering report must follow the detailed work plan that is submitted along with the Three-Party Payment Agreement (Scope of Work).
5. The engineering report must conform to public drinking water regulations found at 10 CSR 60-10.
6. The engineering report will be reviewed based on criteria of the Department's *Minimum Design Standards for Missouri Community Water Systems*, (effective December 10, 2013), which is available electronically on the Department's website or a hard copy is available upon request to the Public Drinking Water Branch at (573) 751-5331. In addition to meeting the above referenced criteria, other required information is listed below.
   a. General Information
      i. A detailed description of the existing water system including size and length of waterlines, tanks, wells, treatment plants, and pump stations
      ii. Name of system operators
   b. Extent of the Water System(s)

Appraisal of future requirements and expected growth covering a 20-year period

c. Alternate Solutions
Specific comparison of feasible alternatives with respect to construction costs, operation and maintenance costs, including environmental considerations where applicable.

d. Project financing
   i. Explain how the applicant will administer the project
   ii. Explain how construction cost and additional operation and maintenance, including replacement, cost will be covered
   iii. Present existing and proposed project budget for applicant. Include O&M costs, capital improvement costs, debt repayment and status of reserve accounts
   iv. Provide the origin of funding for original facility, including existing debt
   v. Provide the financial status of operating central facilities – rate schedule, annual O&M, status of current debts and reserve accounts and tabulation of users by monthly usage categories

7. All priority point checklist items must be addressed in the engineering report. Failure to adequately address all checklist items will result in reduced funding.
8. The Department must receive one hard copy of the engineering report along with one electronic copy on CD, with a professional engineer's seal on it within seven months from the date the Financial Assistance Agreement (FAA) is signed by the Department. The engineering document should be mailed to:

Missouri Department of Natural Resources
Public Drinking Water Branch
Infrastructure Permits & Engineering Section
P.O. Box 176
Jefferson City, Missouri 65102-0176

Processing Payments

After the engineer is selected, the Three-Party Payment Agreement (Scope of Work) shall be signed by the funding recipient and the engineer. The Scope of Work is an agreement on the payment process. Once the Scope of Work is received, the Department will then finalize the Financial Assistance Agreement (FAA). The FAA and the Scope of Work constitute a contract.

The engineer will submit the necessary engineering cost documentation to the system (receipts, work hours, invoices, etc.). The water system staff will forward the documentation to the Department with a letter approving the expenses. The Department will then pay the water system directly up to 90% of the invoice amount. All subsequent payments by the Department will require proof of payment to the engineering firm of the previous invoice amount. The Department will make the final 25% payment to the engineering firm only after the Department approves, in writing, the engineering report. Funding provided under this contract shall not be used as reimbursement of expenses for engineering services provided outside of the contract period.

The funding recipient is responsible for assuring one hard copy and one electronic copy on compact disk (CD) of the engineering report are received by the Department within seven months from the date the Department signs the FAA.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER BRANCH

PHASE ONE ENGINEERING REPORT SERVICES GRANT PROGRAM APPLICATION

FOR OFFICE USE ONLY
DATE RECEIVED:

Submit to: Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102-0176. Please type or print legibly.

1. GENERAL INFORMATION

PUBLIC WATER SUPPLY NAME	PUBLIC WATER SUPPLY ID NO.	POPULATION	DUNS NO. (Required)
Public Water Supply District # 5			

PUBLIC WATER SUPPLY CONTACT PERSON FOR THIS DRINKING WATER PROJECT	TITLE
Bonnie Burton	Clerk

MAILING ADDRESS: PO Box 656

CITY	STATE	ZIP CODE + FOUR	COUNTY
Camdenton	MO	65020	

TELEPHONE NUMBER WITH AREA CODE	FAX NUMBER WITH AREA CODE (optional)	E-MAIL (optional)
573-280-5416	573 302-1301	pwsdno5@gmail.com

HAS OR WILL THE SYSTEM APPLY FOR DWSRF FUNDING FOR CONSTRUCTION RELATED TO THE PROPOSED ENGINEERING REPORT?
☑ YES ☐ NO

2. DISADVANTAGED COMMUNITY

DISADVANTAGED COMMUNITIES MUST MEET ALL OF THE FOLLOWING REQUIREMENTS:

I. DOES THE SYSTEM SERVE A POPULATION BELOW 3,300? ☑ YES ☐ NO

II. ARE USER RATES AT OR ABOVE 2% OF THE STATE MEDIAN HOUSEHOLD INCOME? ☐ YES ☑ NO
IF YES, MONTHLY COST FOR 5,000 GALLONS OF WATER: _____

III. IS THE COMMUNITY MEDIAN HOUSEHOLD INCOME (MHI) AT OR BELOW 75% OF THE STATE MHI?
☐ YES ☑ NO
IF YES, COMMUNITY MHI: _____ DATA SOURCE: _____

3. ELIGIBILITY CRITERIA

THE FOLLOWING ARE MINIMUM ELIGIBILITY CRITERIA

I. DOES THE SYSTEM HAVE A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC? ☑ YES ☐ NO
IF NO, HAS THE SYSTEM SUBMITTED AN APPICATION TO OBTAIN A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC?
☐ YES ☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

II. DOES THE CONTINUING OPERATING AUTHORITY HAVE ANY OUTSTANDING DRINKING WATER FEES?
☑ YES ☐ NO (NOTE: ALL OUTSTANDING FEES MUST BE PAID PRIOR TO SELECTION TO REMAIN ELIGIBLE FOR FUNDING)

III. DOES THE WATER SYSTEM EMPLOY A CERTIFIED CHIEF OPERATOR OR CONTRACT OPERATOR?
☑ YES NAME: Lake Ozark Water & Sewer CERTIFICATION NUMBER: _____
☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

IV. WHAT YEAR WAS THE LAST ENGINEERING REPORT COMPLETED FOR THIS WATER SYSTEM? _____

4. ESTIMATED PROJECT COST INFORMATION

TOTAL ENGINEERING REPORT COST (AMOUNT REQUESTED)		$
BREAKDOWN OF ENGINEERING REPORT COST PER DESIGNATED CATEGORIES		
I.	TREATMENT	$
II.	TRANSMISSION AND DISTRIBUTION	$
III.	STORAGE	$
IV.	SOURCE	$
V.	OTHER SPECIFY:	$

5. PROJECT DESCRIPTION

DESCRIBE THE MAJOR COMPONENTS OF THE PROJECT. WHY IS THIS ENGINEERING REPORT NEEDED? (ATTACH A SEPARATE SHEET, IF NECESSARY)

6. SAFE DRINKING WATER ACT COMPLIANCE PRIORITY POINT CHECKLIST

Please check only the items listed below that will be addressed with this project. Systems under enforcement activity must check the appropriate boxes in Section A to be included as part of the proposed engineering study.

Section A: Safe Drinking Water Act Violations and Compliance

The engineering report will address these issues the PWS is experiencing:

- ☐ Correct persistent violations of maximum contaminant levels or treatment performance criteria for acute risk contaminants (such as coliform, turbidity or nitrate) that have occurred within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for naturally-occurring contaminants (such as radium, radon, uranium, arsenic, radionuclides).
- ☐ Correct persistent violations of treatment technique requirements.
- ☐ Correct persistent violations of maximum contaminant levels for non-acute risk primary contaminants occurring within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for secondary contaminants occurring within the past 36 months.
- ☐ Compliance with Missouri's Surface Water Treatment Rules, Disinfectants/Disinfection By-Products Rules, or Ground Water Rules.
- ☐ Enable the Community Water System to comply with an administrative order, bilateral compliance agreement, or other enforceable document issued by the Missouri Department of Natural Resources.

Section B: Problems with Waterborne Disease, Inadequate Supply or Pressure

The PWS is experiencing these problems and the engineering report will address them:

- ☐ At least 51 percent of the project will address problems causing a waterborne disease outbreak attributable to the Community Water System by the Department of Health and Senior Services.
- ☐ The Community Water System can document its inability consistently to maintain >35 psi as a normal working pressure in the distribution system.
- ☐ The Community Water System can document its inability consistently to maintain >20 psi at all service connections.
- ☐ Private or non-community wells or sources in the project service area are unable to consistently provide an adequate amount of potable water for general household purposes and at least 51 percent of the project addresses this need.

Section C: General Infrastructure Problems

The PWS is experiencing these problems and the engineering report will address them:

- ☐ Provide the Community Water System with a backup well or backup interconnection with another Community Water System.
- ☐ Address problem(s) with improper well construction.
- ☐ Address unaccounted for water that exceeds 10 percent of the drinking water produced by the system, and the loss is due to leaking or broken water lines.
- ☐ Provide necessary modifications to a distribution system anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address a demonstrated need to replace faulty pipes or substandard pipe materials.
- ☐ Address a demonstrated need for distribution system valves and flushing devices.
- ☐ Address a demonstrated need for looping of water mains.
- ☐ Address an inability to maintain a disinfectant residual at all points in the distribution system.
- ☐ Address water storage facilities in poor condition not related to inadequate storage.
- ☐ Provide the Community Water System with a storage capacity equal to one day's average use or provide the Community Water System with adequate standby power.
- ☐ Provide necessary modifications to a source or treatment facility anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address significant degradation of the quality of raw water supply.
- ☐ Address significant degradation of the quality of finished water in storage.
- ☐ Enable the Community Water System to meet existing state requirements for the treatment or storage of waste residues generated by the water treatment plant.

- ☐ Enable repair or replacement of treatment facilities for required disinfection or turbidity removal that are severely deteriorated beyond the useful life of the facility.
- ☐ The facility's source has been directly impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
- ☐ The facility's treatment plant or distribution system has been impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
- ☐ At least 51 percent of the project cost is for repair or replacing an existing Community Water System damaged or destroyed by a natural disaster. (Note: Documentation must be submitted along with a statement that adequate state or federal disaster relief is not available).

Section D: Regionalization, Interconnection, and Security

The engineering report will:

- ☐ Provide necessary upgrades to facilities of a primary water system to continue or expand services as a regional water supplier.
- ☐ Result in the permanent supply interconnection of two or more existing Community Water Systems. (This includes new water systems that allow small water systems within their boundaries to consolidate).
- ☐ Result in a regional management system responsible for the day-to-day operation of the water system.
- ☐ Provide necessary upgrades or new water distribution system to meet the standards of a regional supplier for the purpose of consolidation.
- ☐ Enable the Community Water System to enhance the water system security.

Section E: Technical, Managerial, and Financial Capacity Demonstration

The applicant has the following TMF capacity:

- ☐ The facility is located within an endorsed DNR Wellhead Protection or Source Water Protection Area.
- ☐ At least 50% of the governing body has received training related to operation and management.
- ☐ System has a written operation and maintenance plan and budget.
- ☐ The system currently meters all water usage from system connections.

7. SUPPORTING DOCUMENTATION

Required supporting documentation to be provided include:

- ☐ A brief description of need for each item checked in the priority checklist
- ☐ Documentation supporting your description (ex. Inspections, sanitary surveys, or system records)

8. CERTIFICATION

The undersigned representative certifies the information submitted in this application is true and correct to the best of his or her knowledge and that he or she is authorized to sign and submit this application. The applicant agrees, if a grant is awarded on the basis of this application, to comply with all applicable rules and regulations of the Department of Natural Resources and the terms and conditions of the grant agreement. Incomplete applications will not be scored.

SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE
NAME AND OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE

PREPARER'S NAME AND SIGNATURE (IF APPLICABLE)

SIGNATURE OF PREPARER	DATE
NAME AND TITLE	TELEPHONE NUMBER WITH AREA CODE

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

SUBJECT: Financial Assistance for Engineering Report Services – Calendar Year 2014

Dear Community Water System Official:

I am pleased to announce an opportunity for all eligible community water systems to obtain funding for engineering report services. The purpose of this funding is to help community water systems obtain an engineering report as a first step toward implementing changes that will help the system achieve and maintain technical, managerial and financial capacity, including compliance with the National Primary Drinking Water Regulations and Missouri public drinking water regulations.

This is not a loan program, but rather provides grants to water systems based on their eligibility and priority as determined by a numerical ranking process. Systems with the highest priority point scores are funded first. Awardees are offered up to 90% of the cost needed to hire an engineering firm to prepare an engineering report. Disadvantaged communities are eligible for up to 100% reimbursement. If selected for an award, water systems will be required to select an engineering firm based on a solicitation process that complies with state requirements. Please review the enclosed application packet for more information.

To apply, make sure your water system meets the minimum eligibility criteria in the information packet, complete the application, and return it along with the required supporting documentation, postmarked no later than October 20, 2014, to:

Missouri Department of Natural Resources
Water Protection Program, Public Drinking Water Branch
Attn: Engineering Report Services
1101 Riverside Drive, P.O. Box 176
Jefferson City, MO 65102-0176

FOREMOST INSURANCE COMPANY
GRAND RAPIDS, MICHIGAN

MISSOURI
DWELLING FIRE AND SPECIALTY HOMEOWNERS INSURANCE APPLICATION

REFERENCE / POLICY NUMBER	EFFECTIVE DATE

You must have a completed and signed application with front and rear view photos of the dwelling.

DO NOT MAIL BOUND APPLICATIONS.
If coverage is bound you MUST:
1. Process within 10 days of the effective date.
2. Enter policy at www.ForemostSTAR.com, OR
3. Call Toll-Free 1-800-527-3905.

PRODUCER INFORMATION

PRODUCER CODE
77-0164-235

PRODUCER NAME

PHONE NUMBER	FAX NUMBER

POLICY INFORMATION

- ☑ **Dwelling Fire One** (Fire and EC Perils)
  - ☐ Owner-Occupied
  - ☐ Seasonal/Secondary
  - ☐ Landlord
  - ☐ Vacation Rental
  - ☐ Vacant
- ☐ **Dwelling Fire Three** (Comprehensive Coverage)
  - ☐ Owner-Occupied
  - ☐ Seasonal/Secondary
  - ☐ Landlord
  - ☐ Vacation Rental
- ☐ **Classic ACV HO** (Comprehensive Coverage)
  - ☐ Owner-Occupied
  - ☐ Seasonal/Secondary
- ☐ **Classic CL HO** (Comprehensive Coverage)
  - ☐ Owner-Occupied
  - ☐ Seasonal/Secondary

INSURED INFORMATION

Applicant includes all entities &/or individuals to be listed on our policy as Named Insured, including those Named Insureds listed under the additional interest section.

IS THE DWELLING DEEDED IN A NAME OTHER THAN AN INDIVIDUAL(S)? ☑ YES ☐ NO

INSURED TYPE: ☐ Individual ☐ Trust-Land ☐ Trust-Family ☐ Trust-Living ☐ Life Estate ☐ In Estate ☐ Business Name ☐ Other

If Individual is selected, complete Individual First Named Insured information. For all others, complete both Individual with Control and Entity that appears on the Title or Deed.

INSURED TYPE INDIVIDUAL

First Named Insured† (Credit & loss reports when applicable, will be obtained on this person.)

LAST NAME	FIRST NAME	MIDDLE INITIAL	DATE OF BIRTH	SOCIAL SECURITY NUMBER
				— —

PHONE NUMBER ( )	WORK PHONE NUMBER ( )

IS THE FIRST NAMED INSURED ON THE DEED/TITLE? ☐ YES ☐ NO
If NO, is this a Land Contract or Buy For agreement? (N/A if use is Rental, Vacation Rental, or Vacant) ☐ YES ☐ NO

DOES THE FIRST NAMED INSURED RESIDE IN THE DWELLING? (N/A if use is Rental, Vacation Rental, or Vacant) ☐ YES ☐ NO

Second Named Insured†

LAST NAME	FIRST NAME	MIDDLE INITIAL

IS THE SECOND INSURED A FAMILY MEMBER RELATED TO THE NAMED INSURED? ☐ YES ☐ NO
If NO, does the second insured have an insurable interest in the dwelling? ☐ YES ☐ NO

DOES THE SECOND INSURED RESIDE IN THE DWELLING? (N/A if use is Rental, Vacation Rental, or Vacant) ☐ YES ☐ NO

INSURED TYPE OTHER

ENTITY THAT APPEARS ON THE TITLE OR DEED†: LOIS JOHNSON REVOCABLE TRUST

First Individual with Control (Credit & loss reports when applicable, will be obtained on this person.)

LAST NAME	FIRST NAME	MIDDLE INITIAL	DATE OF BIRTH	SOCIAL SECURITY NUMBER
BURTON	BONNIE		07/04/1953	XXX — XX — 4420

PHONE NUMBER ( )	WORK PHONE NUMBER ( )

DOES THE FIRST INDIVIDUAL WITH CONTROL RESIDE IN THE DWELLING? (N/A if use is Rental, Vacation Rental, or Vacant) ☐ YES ☐ NO

Second Individual with Control

LAST NAME	FIRST NAME	MIDDLE INITIAL

DOES THE SECOND INDIVIDUAL WITH CONTROL RESIDE IN THE DWELLING? (N/A if use is Rental, Vacation Rental, or Vacant) ☐ YES ☐ NO

PROPERTY LOCATION ADDRESS

STREET AND HOUSE NUMBER	CITY	STATE	ZIP CODE	COUNTY
654 STRECKER RD	BALLWIN	MO	63011-1715	SAINT LOUIS

IN CITY LIMITS?	PRIMARY F/D	PROTECTION CLASS	WITHIN 1,000 FT. OF FIRE HYDRANT?	WITHIN 5 MILES OF FIRE DEPT?
☑ YES ☐ NO	METRO WEST FD	3	☑ YES ☐ NO	☑ YES ☐ NO

IS THE DWELLING LOCATED IN A FIRE SUBSCRIPTION DISTRICT?	IF YES, HAS THE SUBSCRIPTION FEE BEEN PAID?
☐ YES ☐ NO	☐ YES ☐ NO

NUMBER OF RENTAL OR VACANT, SITE-BUILT PROPERTIES INSURED BY FOREMOST? _____

DOES THE INSURED HAVE ANOTHER, IN-FORCE PERSONAL LINES OR LIFE POLICY WITH FOREMOST, FARMERS, BRISTOL WEST OR 21st CENTURY? ☐ YES ☑ NO
A life policy must be term, whole, or variable universal policy, have a face amount of $50,000 or greater, issued to an adult and in-force.

IS THERE A LANDLORD ASSOCIATION YOU BELONG TO? ☐ YES ☐ NO
If YES, provide name of association you belong to _____

IS PROPERTY MANAGED BY A MANAGEMENT COMPANY? ☐ YES ☐ NO
If YES, provide management company name _____

TENANT SCREENINGS (Check all that apply): ☐ Credit Check ☐ Eviction Search ☐ Skip Search ☐ HO4 Tenant policy on file ☐ Criminal Background Check ☐ None

MAILING ADDRESS

SAME AS PROPERTY ADDRESS? ☐ YES ☑ NO If NO, please provide additional information below.

STREET AND HOUSE NUMBER	CITY	STATE	ZIP CODE
3140 BIRCHMONT DR NE	BEMIDJI	MN	56601-4323

ELIGIBILITY INFORMATION

CONSTRUCTION TYPE:
☑ Frame ☐ Masonry Veneer**
☐ Brick/Masonry** ☐ Hardi-Plank
☐ Fire Resistant ☐ Other*
** To qualify, exterior must be at least 90%

DWELLING CLASSIFICATION:
☑ Traditional Site Built ☐ Adobe ☐ Earth Home* ☐ Manufactured (Mobile/Multi-Sectional) - Vacant Only
☐ Log Home ☐ Metal* ☐ Modular
☐ Other (Describe)*
Unacceptable = Condo, Dome Homes, Straw Homes, Manufactured (Mobile/Multi-Sectional) - Occupied

FOUNDATION:
☑ Basement ☐ Closed with Crawl Space (continuous foundation) ☐ Open - Height More than 2 Feet* ☐ Other*
☐ Slab ☐ Open - Height 2 Feet or Lower* ☐ Wood*

NUMBER OF FAMILY UNITS? Fire: ☑ 1 ☐ 2 ☐ 3 ☐ 4 HO: ☐ 1 ☐ 2

NUMBER OF RESIDENTIAL DWELLINGS ON SAME PREMISES? 1
Note: If requesting liability coverage, properties with multiple dwellings on the same premises must be written through Foremost and must be written with the same liability limit.

PRIMARY HEATING METHOD:
☐ Coal Furnace
☐ Electric Baseboard
☐ Fireplace*
☑ Furnace - Gas (Incl. LPG) or Electric
☐ Heat Pump
☐ Liquid Fuel Furnace/Space Heater & Above Ground Tank less than 20 yrs. old*
☐ Liquid Fuel Furnace/Space Heater & Above Ground Tank 20 yrs. or older*
☐ Liquid Fuel Furnace/Space Heater & Buried Tank less than 15 yrs. old*
☐ Liquid Fuel Furnace/Space Heater & Buried Tank 15 yrs. or older*
Note: Buried Bare Steel Tanks = Unacceptable
☐ Portable Space Heater* (Kerosene = Unacceptable)
☐ Permanent Gas/Electric Space Heater - YES (meets requirements)
☐ Permanent Gas/Electric Space Heater - NO (does not meet requirements)
☐ Steam
☐ Woodburner
☐ None
☐ Other*
Permanent Gas/Electric Space Heater Requirements - Must be UL approved, professionally installed and attached by fuel supply lines or wall mounted and thermostatically controlled.

AUXILIARY HEAT ☑ NO ☐ YES (Select type from Primary Heating Methods listed above) NONE

DWELLING PURCHASE DATE (MO/YEAR)	AMOUNT OF INSURANCE	CURRENT MARKET VALUE OR ACV (Less Land)	REPLACEMENT AMOUNT (When replacement cost is purchased)	TOTAL SQUARE FEET
08 / 1985	$ 91000.00	$ 91000.00	$	1138

ELIGIBILITY QUESTIONS

▼ If question at left is "NO" skip to the next question. If "YES" select options below. ▼

Is there a swimming pool with a depth of more than 2.5 feet on premises?
☑ NO ☐ YES
☐ Pool is Unfenced or Not Fully Enclosed* ☐ Fence or Pool Height Less than 4 Feet*
☐ Fence or Pool Height 4 Feet or Higher ☐ Other*

Is the dwelling currently vacant?
☐ NO ☑ YES
Are the following vacancy requirements met? ☐ NO (Unacceptable) ☑ YES
Requirements = Intent to sell, rent or occupy; vacant for less than 24 months; completely secured; and if currently uninsured, has been uninsured for less than 12 months prior to effective date.
☐ Up for Sale ☐ Under Renovation
☐ Currently Up for Rent ☑ Deceased/In Estate
☐ New Purchase/Inherited ☐ Other*
☐ Nursing Home/Assisted Living

Owner Occupied
Do you have roomers or boarders? ☐ NO ☐ YES
☐ 1 or 2 Roomers/Boarders Unacceptable = 3 or more roomers/boarders
Non-owner Occupied
Is the dwelling used for student housing? ☐ NO ☐ YES
☐ Graduate Students* - Number of Students Unacceptable = Fraternity/Sorority, Student Housing
Refer to Program Guide for eligibility.
☐ Other*

Business, including Farm/Ranch on premises?
☑ NO ☐ YES
Refer to Program Guide for business definition and eligibility.
Is the business incidental use? ☐ NO ☐ YES
Business:
☐ Office* ☐ Art Studio* ☐ Other*
☐ Day Care* ☐ Musical or Dance Lessons*
Unacceptable = Auto Repair & Beauty Salon
Farming:
☐ Farms 25 acres or less & no farm animals ☐ Farms 25 acres or less & owns 10 or less farm animals
☐ Owns 10 or less farm animals and no farming ☐ Other*
Unacceptable = Farms more than 25 acres, owns more than 10 farm animals, rents land to others, earns more than $5,000 or boards animals of others.

Is there existing damage or needed repairs to Roof, Dwelling, Chimney, Foundation, Premises or Out Building?
☑ NO ☐ YES*

Roof:
☑ None
☐ More than One Apply-Check All that Apply
☐ Missing Shingles
☐ Leaking Roof ☐ Moss
☐ Age - Wear & Tear ☐ Wavy/Buckling Roof
☐ Curling Shingles ☐ Other

Dwelling:
☑ None
☐ More than One Apply-Check All that Apply
☐ Missing or Damaged Siding
☐ Peeling Paint Greater than 30% of Dwelling
☐ Peeling Paint 30% or Less of Dwelling
☐ Missing/Broken/Boarded Windows
☐ Rotting or Exposed Wood
☐ Damage to Fascia or Soffit Boards
☐ Rotted Porch or Deck Boards
☐ Structural Damage
☐ Missing/Damaged Railings
☐ Other

Chimney:
☑ None
☐ More than One Apply-Check All that Apply
☐ Missing and or Loose Bricks
☐ Leaning Chimney
☐ Deteriorated Mortar
☐ Other

Foundation:
☑ None
☐ More than One Apply-Check All that Apply
☐ Cracking and/or Settling
☐ Mold and/or Mildew
☐ Other

Premises:
☑ None
☐ More than One Apply-Check All that Apply
☐ Debris on Premises
☐ Disabled Vehicles
☐ Appliances on Property
☐ Sidewalks/Driveways/Steps in Poor Condition
☐ Other

Out Building:
☑ None
☐ More than One Apply-Check All that Apply
☐ Roof Damage
☐ Missing/Damaged Siding
☐ Missing/Broken/Boarded Windows
☐ Graffiti
☐ Structurally Unsound
☐ Other

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
dnr.mo.gov

January 8, 2014

Camden County PWSD No. 5
Clearwater Condos WWTF
P.O. Box 556
Camdenton, MO 65020

RE: MISSOURI STATE OPERATING PERMIT # MO0126985

Dear Permittee:

In reviewing the file for your wastewater or storm water facility I note that you have failed to submit the Discharge Monitoring Report (DMR) for the **month of November 2014** required by your Missouri State Operating Permit (MSOP). Your report is due in our office no later than the 28th day of the month following the report period.

A completed monitoring report with the required information should be submitted to this agency within five (5) days from the date of this letter or in writing within 15 calendar days of receipt of this letter, identify the reasons for the violations and corrective actions you have taken or will take.

The Department of Natural Resources (Department) monitors and tracks instances of noncompliance related to DMRs. All facilities that are significantly non-compliant are reported to the Environmental Protection Agency and the Department then takes action to ensure their return to compliance. It is the policy of this office to require facilities with a history of noncompliance to sign a Schedule of Compliance that outlines corrective measures to be taken within a specified time period. You are encouraged to take appropriate steps to eliminate the current violation.

If you have questions please contact me by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Lana Cypret

Lana Cypret
Technical Assistant

LGC/ryc

029.wpcp.ClearwaterCondominiums.mo0126985.x.2015.01.08.fy15.dmr.x.lgc

FILE

Missouri Department of Natural Resources
Public Drinking Water Branch
Infrastructure, Permits and Engineering Section
1101 Riverside Drive
P.O. Box 176
Jefferson City, MO 65102-0176
Attn: Engineering Services Funding Application

RE: Camden PWSD #5, Camden County
DWSRF 2013 Application for Engineering Report Services Funding for Community Water Systems
PWS ID # MO-3031383 – Cedar Heights Condominiums
PWS ID # MO-3302557 – Clearwater Condominiums

To Whom It May Concern:

PWSD #5 of Camden County, Missouri is submitting the attached application for engineering report services funding for the two community public water systems under its authority. The two systems are comprised of the Cedar Heights (MO-3031383) and Clearwater (MO-3302557) public water systems. The District is still waiting to be issued a DUNS number and the additional information requested as part of the funding application can be found in the remainder of this letter and the attached documentation, which includes an exhibit showing the District boundaries and the water systems described herein. Please note that the District intends to serve the Mission Hills area (15 connections) from the Clearwater public water system (construction is pending). Also, the Old Kinderhook public water system is shown for proximity only and is not part of the District. The potential for regionalization with the Old Kinderhook system will be addressed in the engineering report. The engineering report will also include the results of a computerized hydraulic model analysis (WaterCAD v8), which will be created for each system served by the District.

The following description and documentation are provided to justify the items checked on the District's Application Checklist associated with the 2013 DWSRF Engineering Report Services Funding, which represent the items that will be addressed in the engineering report.

Section A: SDWA Violations/Compliance

- The engineering report will include determining the impact the Groundwater Rule has on the two current water systems, including operational procedures and any improvements that need to be planned and budgeted for to ensure compliance with the Groundwater Rule.

- The District was recently presented with a Missouri Department of Natural Resources (MoDNR) Report of Inspection for the Cedar Heights Condominiums public water system that included a *Compliance Agreement*, following a November 7, 2012 routine inspection by MoDNR. The Report of Inspection states that the District does not have a written Permit to Dispense for this system. The *Compliance Agreement* includes acts and provisions relating to the use of this system's sole well, in which it was concluded that the well does not meet acceptable construction standards for a public water system (non-state-approved well) and is therefore a health risk to the public. The *Compliance Agreement* also contains provisions relating to 4-log reduction of viruses that appear to contain questionable calculations. In general, the *Compliance Agreement* concludes that the District is operating a non-compliant well for

the Cedar Heights water system and an engineering evaluation to determine the true extent of non-compliance should be made, including developing specific action items for the District to undertake to achieve compliance. The proposed engineering report will address the District's Report of Inspection, including the entire *Compliance Agreement*, and will present a plan to resolve any outstanding issues.

Section C: Problems with inadequate wells, water loss, distribution systems, storage, and treatment

- Both the Cedar Heights and Clearwater public water systems currently have only one active well per system. The engineering report will address interconnecting the two systems to provide suitable redundant water sources or providing the District with a backup well(s). The potential for interconnecting with the Old Kinderhook water system as a backup supply will also be evaluated. The Old Kinderhook public water system currently has one active well and one emergency well. Additionally, the District's wells are not provided with standby or emergency power. Accordingly, the possibility of consolidating (regionalizing) all three water systems will be evaluated in the engineering report.

- As described in the previous section, the engineering report will address the noted improper well construction associated with the Cedar Heights public water system. The report will also address any improper construction associated with the Clearwater well. Accordingly, the engineering report will present a plan to reconcile any outstanding issues with either of the District's current supply wells.

- The District is currently operating two separate public water systems that have two distinct distribution systems with dead-end lines and single-line feed service areas with little or no redundancy. The District would benefit from an engineering evaluation that includes strategic water main looping and redundant waterline feeds. Water main looping, combined with more isolation valves, would also allow the District to keep more units in service while addressing system repairs.

- The single standpipe that provides the Cedar Heights water system with storage and pressure is in urgent need of exterior maintenance to provide corrosion protection and also requires modifications to meet MoDNR design standards and provide adequate detention time for disinfection. Both the Cedar Heights and Clearwater systems have only one storage tank each and a plan for adequate maintenance and operation, including the potential for an emergency interconnection to provide redundancy, needs to be developed.

Section D: Regionalization, Interconnection, and Security.

- The engineering report will analyze and evaluate the feasibility of and upgrades necessary to allow the District to extend its services as a regional supplier, in specific regards to consolidating, interconnecting, and expanding service to areas within and adjacent to the District boundaries.

- Security of the District's water supply and storage facilities is a concern. There are both well and storage facilities operated by the District that are not sufficiently fenced or have recommended safety and security provisions.

Section E: Managerial and Financial Capacity Consideration

- The District's water systems are operated by an appropriately-certified contract operator, including emergency system operators.

- The District has received training on operations and management of the existing water supply systems.

- The District has a written budget and operations and maintenance procedure that allows for planning, budgeting, and maintaining the existing water systems and any proposed improvements.

The proposed water system engineering report will not be an amendment to a previous report that was submitted to the Department within the last two years.

The District hopes it has provided the Department with all of the information needed for the funding application. If you need anything further please contact us.

Sincerely,

Bonnie Burton
District Clerk, PWSD#5

MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER BRANCH
PHASE ONE ENGINEERING REPORT SERVICES GRANT PROGRAM

Grant Application and Contractual Requirements for Engineering Report Services for Community Public Water Systems

Calendar Year 2014/2015	Application Deadline: October 20, 2014

The Missouri Department of Natural Resources is accepting grant applications from community water systems for development of an engineering report. Funding comes from the Drinking Water State Revolving Fund (DWSRF) set-asides. If you have any questions regarding this funding opportunity, please contact Ryan Seabaugh of the Public Drinking Water Branch, Infrastructure Permits and Engineering Section at (573) 751-8628 or by email ryan.seabaugh@dnr.mo.gov, or Drinking water Permits and Engineering Section chief at (573) 751-1127 or by email at maher.jaafari@dnr.mo.gov.

This Instruction Sheet contains:

- General Information
- Application Instructions
  - Application Deadline
  - Minimum Eligibility Criteria for Applicants
  - Application Evaluation Criteria
  - Assignment of Priority Points
- Information and Contractual Requirements for Funding Recipients
  - Selecting an Engineer
  - Engineering Pre-Selection Process
  - Criteria for Engineering Report
  - Processing Payments
- Application Form (attached)

GENERAL INFORMATION

What is the purpose of this funding?

The primary purpose of this funding is to help community water systems obtain an engineering report as a first step toward implementing changes that will help the system achieve and maintain technical, managerial and financial capacity, including compliance with the National Primary Drinking Water Regulations and the Missouri public drinking water regulations.

Who can apply?

All Community water systems that meet the Minimum Eligibility Criteria for Applicants contained in this document may apply. The community water system must have a good compliance history and a good operation and maintenance history, unless the system agrees to evaluate and undertake feasible and appropriate changes to bring the system back into compliance.

How will applications be ranked?

Complete applications will be ranked according to priority point criteria and eligibility. Only applications that have been completely filled out and signed will be ranked.

How much funding can I expect?

The contract award amount may vary, but shall not exceed 90% of the costs for engineering report services unless the applicant has been identified as a disadvantaged community. The actual percentage that is awarded may be reduced from 90% based on project scope along with risk and eligibility assessed from the application submittal.

Disadvantaged communities are defined as a community with a population of less than 3,300 whose user rates will be at or above 2% of the state Median Household Income (MHI), and the community's MHI is at or below 75% of the state average MHI. Disadvantaged communities may qualify for up to a 100% grant.

What can I use the funding for?

Funding can only be used for engineering report services within the contract period. Funding provided under this contract shall not be used as reimbursement of expenses for services provided outside the contract period.

Will repayment be required?

Funding provided for these contracts is a grant, not a loan. Repayment is not required.

Is a local match required?

Yes. With the exception of disadvantaged communities, grant funding shall not exceed 90% of the cost to develop the engineering report. The applicant must be able to provide funding for at least 10% of the cost.

APPLICATION INSTRUCTIONS

Application Deadline

Applications must be postmarked or received by October 20, 2014. The application is included with this Information Packet. No deadline extensions will be granted. The completed application and all other required information must be mailed or hand-delivered to the Public Drinking Water Branch, Infrastructure Permits and Engineering Section as follows:

Mail to	or hand deliver to
Missouri Department of Natural Resources	Public Drinking Water Branch
Public Drinking Water Branch	Infrastructure Permits and Engineering Section
Infrastructure Permits and Engineering Section	Lewis and Clark State Office Building
P. O. Box 176	1101 Riverside Drive, 3rd Floor
Jefferson City, Missouri 65102-0176	Jefferson City, Missouri

The Department will notify all applicants of the final selection results after all applications have been reviewed.

Minimum Eligibility Criteria for Applicants

Applicant shall complete the Phase One Engineering Report Services Grant Program Application including the Safe Drinking Water Act Compliance Priority Point Checklist (Section 6 of the application) and return it along with the required supporting documentation to the Public Drinking Water Branch no later than the application deadline. Applicants must meet the following minimum eligibility criteria in order to be eligible for this grant. Applicant signature is required on the Application Form to verify eligibility requirements are met.

1. The System must be an existing community water system.

2. The System shall have a valid Permit to Dispense Water or be taking steps to obtain such a permit. (An application for a Permit to Dispense Water must be received by the Department prior to the October 20, 2014 deadline in order for us to consider the water system to be taking steps to obtain a permit.)
3. The System must have paid all outstanding Program Administration and Laboratory Services fees and must have remitted to the Department the Primacy Fees collected from its customers prior to the October 20, 2014 deadline.
4. The System must employ a certified chief operator or contract operator.
5. The System has not received engineering report funding for three years prior to the deadline for this application submission.
6. The System does not have an engineering report that has been approved by the Department within 2 years prior to the deadline for this application submission.
7. The System must agree to make a good faith effort to pursue recommendations contained in the approved engineering report. A good faith effort is defined as an application for financial assistance, application to the Department for construction permit for one or more recommended projects, or documented technical, managerial and financial capacity improvement.

Because the grants are federally funded, applicants are required to submit a Data Universal Numbering System (DUNS) number. This can be obtained via the internet at http://fedgov.dnb.com/webform or by telephone to Dun and Bradstreet at 1-866-705-5711.

Application Evaluation Factors

Applications will be listed in order based on priority points accrued. The purpose of the priority points is to list applications in order so that the most serious problems are given the highest priority. Priority points are based primarily on protection of public health, compliance with the Safe Drinking Water Act and system reliability.

Applicants located within 2014 priority watersheds identified by the *Our Missouri Waters Initiative* may receive additional eligibility priority. More information on the initiative can be found on the Department's website at http://dnr.mo.gov/omwi.htm.

Funding amounts in terms of required match will include the following risk and eligibility factors:

- System size based on population served;
- Documentation and detail of supporting information and project scope;
- Complexity of the project compared to system needs and size; and
- Available funds.

Assignment of Priority Points

All applicants are required to submit a brief description of need (narrative) for each item checked in the Safe Drinking Water Act Compliance Priority Point Checklist. To ensure points are applied for the checklist item, documentation supporting your description is recommended. Documentation may include, but may not necessarily be limited to inspections, sanitary surveys, and system records with written operator or system engineer testimony.

Priority points shall be assigned only where the system intends to correct the deficiency or problem associated with the points. For example, if the system has had persistent violations of a secondary MCL, the engineering report must address that problem. No priority points shall be assigned to a checklist item if the deficiency is resulting from inadequate operation and maintenance of the water system, unless the project enables the community water system (CWS) to meet technical, managerial and financial capacity requirements determined by the Department.

Section A: Safe Drinking WaterAct Violations and Compliance

25	Correction of persistent violations of maximum contaminant levels or treatment performance criteria for acute risk contaminants (such as coliform, turbidity or nitrate) that have occurred within the past 36 months
20	Correction of persistent violations of maximum contaminant levels for naturally-occurring contaminants (radium, radon, uranium, arsenic, radionuclides)
15	Correction of persistent violations of treatment technique requirements
20	Correction of persistent violations of maximum contaminant levels for non-acute risk primary contaminants that have occurred within the last 36 months
15	Correction of persistent violations of maximum contaminant levels for secondary contaminants that have occurred within the past 36 months
15	Compliance with Missouri's surface water treatment, disinfectants/disinfection by-product, or ground water rules
25	Compliance with an administrative order, bilateral compliance agreement, or other enforceable document issued by the Missouri Department of Natural Resources

Section B: Problems with Waterborne Disease, Inadequate Supply or Pressure

25	At least 51% of the project will address problems causing a waterborne disease outbreak attributable to the CWS by the Department of Health and Senior Services
15	The CWS can document its inability consistently to maintain >35 psi as a normal working pressure in the distribution system
20	The CWS can document its inability consistently to maintain >20 psi at all service connections.
20	Private or non-community wells or sources in the project service area are unable to consistently provide an adequate amount of potable water for general household purposes and at least 51% of the project addresses this need (Private or non-community wells or sources contaminated by commercial, industrial or mining wastes will be considered in this category.)

Section C: General Infrastructure Problems

20	Providing the CWS with a backup well or backup interconnection with another CWS
20	Address problem(s) with improper well construction
10	Address unaccounted for water loss that exceeds 10% of the drinking water produced by the system, and the loss is due to leaking or broken water lines
10	Provide necessary modifications to a distribution system that has exceeded or is anticipated to exceed design capacity or useful life within the next five years
10	Address a demonstrated need to replace faulty pipes or substandard pipe materials
2	Address a demonstrated need for distribution system valves and flushing devices
2	Address a demonstrated need for looping of water mains
15	Address an inability to maintain a disinfectant residual at all points in the distribution system
15	Address water storage facilities in poor condition not related to inadequate storage
2	Provide the CWS with a storage capacity equal to one day's average use or provide the CWS with adequate standby power
15	Provide necessary modifications to a source or treatment facility anticipated to exceed design capacity or useful life within the next five years
5	Address significant degradation of the quality of raw water supply
5	Address significant degradation of the quality of finished water in storage
2	Enable the CWS to meet existing state requirements for the treatment and/or storage of waste

residues generated by the water treatment plant

10	Enable repair or replacement of treatment facilities for required disinfection or turbidity removal that are severely deteriorated beyond the useful life of the facility
15	The facility's source has been directly impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
15	The facility's treatment or distribution system has been impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
10	At least 51% of the project cost is for repair or replacement of an existing CWS damaged or destroyed by a natural disaster (Note: Documentation must be submitted along with a statement that adequate state or federal disaster relief is not available)

Section D: Regionalization, Interconnection, and Security

20	Providing necessary upgrades to facilities of a primary water system to continue or expand its services as a regional supplier
20	Result in the permanent supply interconnection of two or more existing CWS (this includes new water systems that allow small water systems within their boundaries to consolidate)
10	Result in a regional management system responsible for the day-to-day operation of the water system
20	Provide necessary upgrades or new water distribution system to meet the standards of a regional supplier for the purpose of consolidation
5	Enable the CWS to enhance water system security

Section E: Technical, Managerial and Financial Capacity Demonstration

5	The facility is located within a DNR-endorsed Wellhead or Source Water Protection Area
5	At least 50% of the governing body has received training related to operation and management
5	System has a written operation and maintenance plan and budget
5	The system currently meters all water usage from system connections

INFORMATION AND CONTRACTUAL REQUIREMENTS FOR FUNDING RECIPIENTS

The following information provides detailed instructions if you receive notification that you have been selected for award. The notification letter will also contain information necessary to complete follow-up requirements.

Selecting an Engineer

Funding recipients are responsible for following their own purchase/procurement criteria when obtaining the services of an engineer. However, the procedures and procurement requirements in Sections 8.285-8.291, RSMo apply. The funding recipient must submit the appropriate documentation of the process, as outlined in Engineering Pre-Selection Process. Funding recipients are responsible for selecting an engineer certified in the State of Missouri as a Professional Engineer. The necessary documentation in the Engineering Pre-Selection Process shall be submitted to the Department within 90 days from receipt of the signed award letter. Upon engineering selection, the system representative and the professional engineer shall sign the Three-Party Payment Agreement (Scope of Work). Once the Scope of Work is received, the Department will then finalize the Financial Assistance Agreement (FAA). The FAA and the Scope of Work constitute a contract.

Engineering Pre-Selection Process

The applicant will be notified if funds are available for award. Upon notification, the funding recipient shall proceed with procurement of a qualified engineer or firm. The applicant will have no more than 90 calendar days to procure an engineer, notify the Department, and submit required documentation along with their detailed work plan. Failure to meet the deadline or contact the Department to request a time extension will constitute an incomplete application, and the application will be closed.

The submission shall include the following.

1. A list of the evaluation factors and the scoring system shall be submitted to the Public Drinking Water Branch. The system selection criteria are the record of the process used for pre-selection. The criteria must be logical and support the final decision. The system must base the selection of their desired professional engineer services on the qualification-based selection process. Actual selection scores are not requested but must be kept in the systems' files.
2. A copy of the Request for Statement of Qualifications and the Statement of Qualifications must be submitted to the Department. The Request for Statement of Qualifications tells the potential engineers what you are looking for and allows them to respond, in turn, by a specified attainable deadline.
3. Proof of advertising must be submitted to the Department. Activities to ensure broad solicitation of known or existing firms capable of completing the work must be made. This may take the form of a publication in a newspaper or further solicitation via mail. Note: All solicitation steps are the community's attempt to receive three or more responses.

   Effort must be made to solicit Minority Business Enterprise (MBE) and Women Business Enterprise (WBE) firms as required by Chapter 37, RSMo., and associated regulations. More information on compliance with MBE/WBE requirements and a directory of MBE/WBE vendors may be found at Missouri Office of Equal Opportunity (http://oeo.mo.gov).
4. Completed Three-Party Payment Agreement (Scope of Work).
5. Detailed Work Plan.
6. For projects totaling $30,000 or more, a cost sheet including specific tasks with anticipated hourly charges must also be provided.
7. Technical, Managerial, Financial (TMF) Capacity worksheet provided by the Department.

Criteria for Engineering Report

1. The engineering report must be developed and certified by a registered professional engineer licensed in the State of Missouri.
2. The engineering report must be sufficient in scope and detailed to fully address the criteria listed herein.
3. The engineering report must include Form 780-2091: Facilities Plan Submittal Checklist if applying for public funding.
4. The engineering report must follow the detailed work plan that is submitted along with the Three-Party Payment Agreement (Scope of Work).
5. The engineering report must conform to public drinking water regulations found at 10 CSR 60-10.
6. The engineering report will be reviewed based on criteria of the Department's *Minimum Design Standards for Missouri Community Water Systems*, (effective December 10, 2013), which is available electronically on the Department's website or a hard copy is available upon request to the Public Drinking Water Branch at (573) 751-5331. In addition to meeting the above referenced criteria, other required information is listed below.
   a. General Information
      i. A detailed description of the existing water system including size and length of waterlines, tanks, wells, treatment plants, and pump stations
      ii. Name of system operators
   b. Extent of the Water System(s)

Appraisal of future requirements and expected growth covering a 20-year period

c. Alternate Solutions
Specific comparison of feasible alternatives with respect to construction costs, operation and maintenance costs, including environmental considerations where applicable.

d. Project financing
   i. Explain how the applicant will administer the project
   ii. Explain how construction cost and additional operation and maintenance, including replacement, cost will be covered
   iii. Present existing and proposed project budget for applicant. Include O&M costs, capital improvement costs, debt repayment and status of reserve accounts
   iv. Provide the origin of funding for original facility, including existing debt
   v. Provide the financial status of operating central facilities – rate schedule, annual O&M, status of current debts and reserve accounts and tabulation of users by monthly usage categories

7. All priority point checklist items must be addressed in the engineering report. Failure to adequately address all checklist items will result in reduced funding.
8. The Department must receive one hard copy of the engineering report along with one electronic copy on CD, with a professional engineer's seal on it within seven months from the date the Financial Assistance Agreement (FAA) is signed by the Department. The engineering document should be mailed to:

Missouri Department of Natural Resources
Public Drinking Water Branch
Infrastructure Permits & Engineering Section
P.O. Box 176
Jefferson City, Missouri 65102-0176

Processing Payments

After the engineer is selected, the Three-Party Payment Agreement (Scope of Work) shall be signed by the funding recipient and the engineer. The Scope of Work is an agreement on the payment process. Once the Scope of Work is received, the Department will then finalize the Financial Assistance Agreement (FAA). The FAA and the Scope of Work constitute a contract.

The engineer will submit the necessary engineering cost documentation to the system (receipts, work hours, invoices, etc.). The water system staff will forward the documentation to the Department with a letter approving the expenses. The Department will then pay the water system directly up to 90% of the invoice amount. All subsequent payments by the Department will require proof of payment to the engineering firm of the previous invoice amount. The Department will make the final 25% payment to the engineering firm only after the Department approves, in writing, the engineering report. Funding provided under this contract shall not be used as reimbursement of expenses for engineering services provided outside of the contract period.

The funding recipient is responsible for assuring one hard copy and one electronic copy on compact disk (CD) of the engineering report are received by the Department within seven months from the date the Department signs the FAA.

MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER BRANCH

PHASE ONE ENGINEERING REPORT SERVICES GRANT PROGRAM APPLICATION

FOR OFFICE USE ONLY
DATE RECEIVED

Submit to: Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102-0176. Please type or print legibly.

1. GENERAL INFORMATION

PUBLIC WATER SUPPLY NAME / PUBLIC WATER SUPPLY ID NO.	POPULATION	DUNS NO. (Required)
PWSD # 5 Camden County	400 Units	

PUBLIC WATER SUPPLY CONTACT PERSON FOR THIS DRINKING WATER PROJECT	TITLE
Bonnie Burton	Clerk

MAILING ADDRESS: PO Box 556

CITY	STATE	ZIP CODE + FOUR	COUNTY
Camdenton	MO	65020	Camden

TELEPHONE NUMBER WITH AREA CODE	FAX NUMBER WITH AREA CODE (optional)	E-MAIL (optional)
573-280-5416	573-302-1301	pwsdno5@gmail.com

HAS OR WILL THE SYSTEM APPLY FOR DWSRF FUNDING FOR CONSTRUCTION RELATED TO THE PROPOSED ENGINEERING REPORT?
☒ YES ☐ NO

2. DISADVANTAGED COMMUNITY

DISADVANTAGED COMMUNITIES MUST MEET ALL OF THE FOLLOWING REQUIREMENTS.

I. DOES THE SYSTEM SERVE A POPULATION BELOW 3,300? ☒ YES ☒ NO

II. ARE USER RATES AT OR ABOVE 2% OF THE STATE MEDIAN HOUSEHOLD INCOME? ☐ YES ☒ NO
IF YES, MONTHLY COST FOR 5,000 GALLONS OF WATER: _____

III. IS THE COMMUNITY MEDIAN HOUSEHOLD INCOME (MHI) AT OR BELOW 75% OF THE STATE MHI?
☐ YES ☐ NO
IF YES, COMMUNITY MHI: _____ DATA SOURCE: _____

3. ELIGIBILITY CRITERIA

THE FOLLOWING ARE MINIMUM ELIGIBILTY CRITERIA

I. DOES THE SYSTEM HAVE A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC? ☒ YES ☐ NO
IF NO, HAS THE SYSTEM SUBMITTED AN APPLICATION TO OBTAIN A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC?
☐ YES ☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

II. DOES THE CONTINUING OPERATING AUTHORITY HAVE ANY OUTSTANDING DRINKING WATER FEES?
☐ YES ☒ NO (NOTE: ALL OUTSTANDING FEES MUST BE PAID PRIOR TO SELECTION TO REMAIN ELIGIBLE FOR FUNDING)

III. DOES THE WATER SYSTEM EMPLOY A CERTIFIED CHIEF OPERATOR OR CONTRACT OPERATOR?
☒ YES NAME: Lows - Chad Stout CERTIFICATION NUMBER: 5092
☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

IV. WHAT YEAR WAS THE LAST ENGINEERING REPORT COMPLETED FOR THIS WATER SYSTEM? 2010

4. ESTIMATED PROJECT COST INFORMATION

TOTAL ENGINEERING REPORT COST (AMOUNT REQUESTED)		$ Unknown
BREAKDOWN OF ENGINEERING REPORT COST PER DESIGNATED CATEGORIES		
I.	TREATMENT	$
II.	TRANSMISSION AND DISTRIBUTION	$
III.	STORAGE	$
IV.	SOURCE	$
V.	OTHER SPECIFY:	$

5. PROJECT DESCRIPTION

DESCRIBE THE MAJOR COMPONENTS OF THE PROJECT. WHY IS THIS ENGINEERING REPORT NEEDED? (ATTACH A SEPARATE SHEET, IF NECESSARY)

New water tower and to connect the water lines between Clearwater/ Mission Hills and Cedar Heights. To be able to offer systemservice to people in between that are now on private systems

6. SAFE DRINKING WATER ACT COMPLIANCE PRIORITY POINT CHECKLIST

Please check only the items listed below that will be addressed with this project. Systems under enforcement activity must check the appropriate boxes in Section A to be included as part of the proposed engineering study.

Section A: Safe Drinking Water Act Violations and Compliance

The engineering report will address these issues the PWS is experiencing:

- ☐ Correct persistent violations of maximum contaminant levels or treatment performance criteria for acute risk contaminants (such as coliform, turbidity or nitrate) that have occurred within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for naturally-occurring contaminants (such as radium, radon, uranium, arsenic, radionuclides).
- ☐ Correct persistent violations of treatment technique requirements.
- ☐ Correct persistent violations of maximum contaminant levels for non-acute risk primary contaminants occurring within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for secondary contaminants occurring within the past 36 months.
- ☐ Compliance with Missouri's Surface Water Treatment Rules, Disinfectants/Disinfection By-Products Rules, or Ground Water Rules.
- ☒ Enable the Community Water System to comply with an administrative order, bilateral compliance agreement, or other enforceable document issued by the Missouri Department of Natural Resources.

Section B: Problems with Waterborne Disease, Inadequate Supply or Pressure

The PWS is experiencing these problems and the engineering report will address them:

- ☐ At least 51 percent of the project will address problems causing a waterborne disease outbreak attributable to the Community Water System by the Department of Health and Senior Services.
- ☐ The Community Water System can document its inability consistently to maintain >35 psi as a normal working pressure in the distribution system.
- ☐ The Community Water System can document its inability consistently to maintain >20 psi at all service connections.
- ☐ Private or non-community wells or sources in the project service area are unable to consistently provide an adequate amount of potable water for general household purposes and at least 51 percent of the project addresses this need.

Section C: General Infrastructure Problems

The PWS is experiencing these problems and the engineering report will address them:

- ☒ Provide the Community Water System with a backup well or backup interconnection with another Community Water System.
- ☐ Address problem(s) with improper well construction.
- ☐ Address unaccounted for water that exceeds 10 percent of the drinking water produced by the system, and the loss is due to leaking or broken water lines.
- ☒ Provide necessary modifications to a distribution system anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address a demonstrated need to replace faulty pipes or substandard pipe materials.
- ☐ Address a demonstrated need for distribution system valves and flushing devices.
- ☒ Address a demonstrated need for looping of water mains.
- ☐ Address an inability to maintain a disinfectant residual at all points in the distribution system.
- ☐ Address water storage facilities in poor condition not related to inadequate storage.
- ☒ Provide the Community Water System with a storage capacity equal to one day's average use or provide the Community Water System with adequate standby power.
- ☒ Provide necessary modifications to a source or treatment facility anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address significant degradation of the quality of raw water supply.
- ☐ Address significant degradation of the quality of finished water in storage.
- ☐ Enable the Community Water System to meet existing state requirements for the treatment or storage of waste residues generated by the water treatment plant.

☐ Enable repair or replacement of treatment facilities for required disinfection or turbidity removal that are severely deteriorated beyond the useful life of the facility.

☐ The facility's source has been directly impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.

☐ The facility's treatment plant or distribution system has been impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.

☐ At least 51 percent of the project cost is for repair or replacing an existing Community Water System damaged or destroyed by a natural disaster. (Note: Documentation must be submitted along with a statement that adequate state or federal disaster relief is not available).

Section D: Regionalization, Interconnection, and Security

The engineering report will:

☒ Provide necessary upgrades to facilities of a primary water system to continue or expand services as a regional water supplier.

☒ Result in the permanent supply interconnection of two or more existing Community Water Systems. (This includes new water systems that allow small water systems within their boundaries to consolidate).

☐ Result in a regional management system responsible for the day-to-day operation of the water system.

☐ Provide necessary upgrades of new water distribution system to meet the standards of a regional supplier for the purpose of consolidation.

☐ Enable the Community Water System to enhance the water system security.

Section E: Technical, Managerial, and Financial Capacity Demonstration

The applicant has the following TMF capacity:

☐ The facility is located within an endorsed DNR Wellhead Protection or Source Water Protection Area.

☐ At least 50% of the governing body has received training related to operation and management.

☒ System has a written operation and maintenance plan and budget.

☐ The system currently meters all water usage from system connections.

7. SUPPORTING DOCUMENTATION

Required supporting documentation to be provided include:

☒ A brief description of need for each item checked in the priority checklist

☐ Documentation supporting your description (ex. Inspections, sanitary surveys, or system records)

8. CERTIFICATION

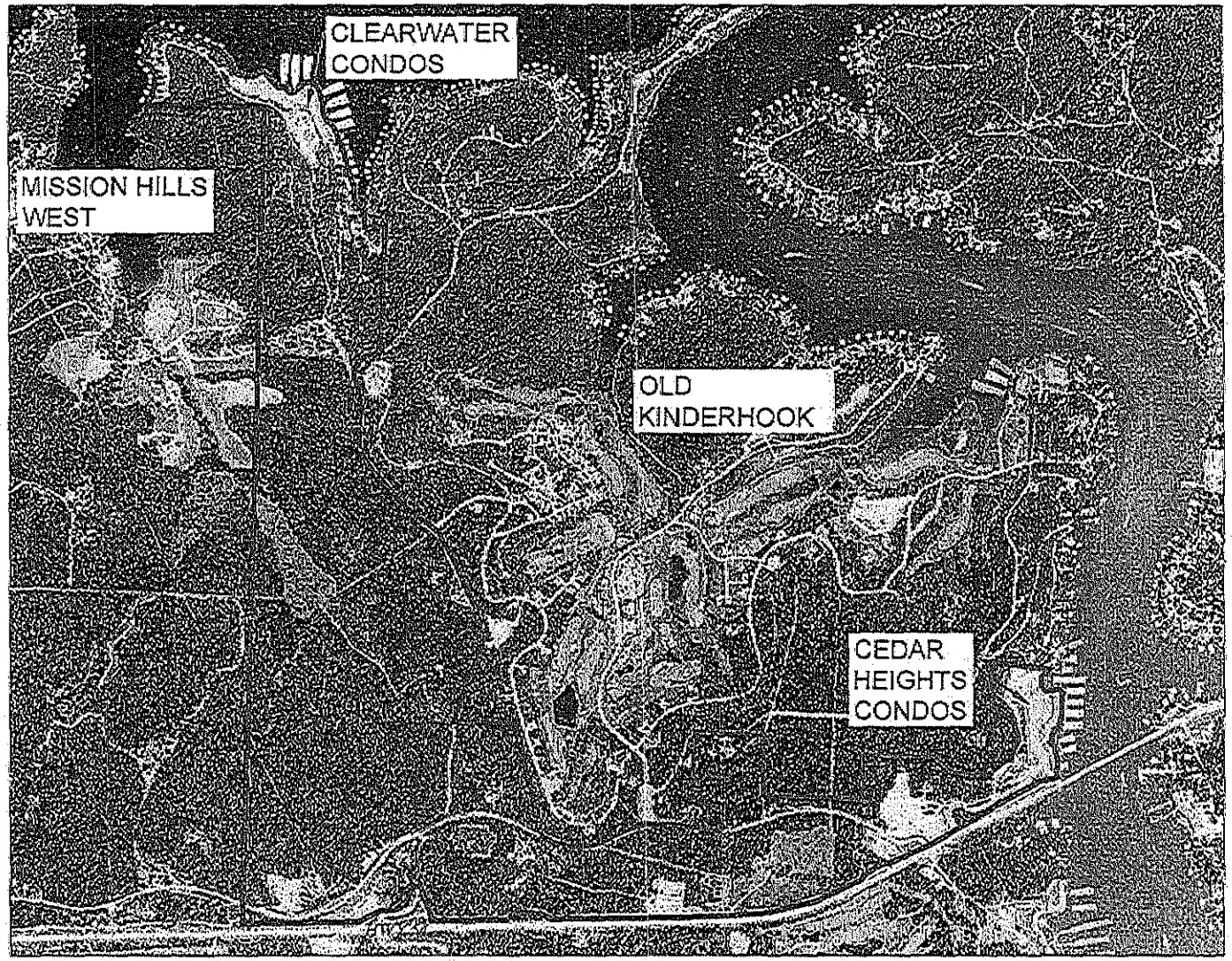
The undersigned representative certifies the information submitted in this application is true and correct to the best of his or her knowledge and that he or she is authorized to sign and submit this application. The applicant agrees, if a grant is awarded on the basis of this application, to comply with all applicable rules and regulations of the Department of Natural Resources and the terms and conditions of the grant agreement. Incomplete applications will not be scored.

SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE
Bonnie Burton	10/17/14
NAME AND OFFICIAL TITLE	TELEPHONE NUMBER WITH AREA CODE
Bonnie Burton District Clerk	573 2-80-5416

PREPARER'S NAME AND SIGNATURE (IF APPLICABLE)

SIGNATURE OF PREPARER	DATE
NAME AND TITLE	TELEPHONE NUMBER WITH AREA CODE

PWSD #5 OF CAMDEN COUNTY



LEGEND

DISTRICT BOUNDARY

N

N.T.S.

OLSSON ASSOCIATES

PWSD 1-20-000298

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

April 4, 2014

Mr. David Stone
P.O. Box 556
Camdenton, MO 65020

RE: SBS-155-13 Camden County PWSD #5 -- Small Borrowers Program

Dear Mr Stone:

The Small Borrowers Loan Program reimbursement form No. 1 you recently submitted to the Department of Natural Resources has been reviewed and approved for payment. It has been determined that $43,488.45 is the eligible amount for reimbursement from the Small Borrowers program. You should receive payment in the near future for the Small Borrowers portion.

For your convenience, we now have an email address available for you to submit payment requests. The email address is deqwpcpfacaccounting@dnr.mo.gov. Payments can also be faxed to the attention of the Financial Assistance Center, Accounting Unit at (573) 751-9396.

If you have any questions, please contact me at (573) 751-4940 or P.O. Box 176, Jefferson City, MO 65102-0176. Thank you for your participation in the Small Borrowers Loan Program.

Sincerely,

WATER PROTECTION PROGRAM

Beverly Grote

Beverly Grote, Accounting Specialist
Financial Assistance Center

Enclosure

Celebrating 40 years of taking care of Missouri's natural resources. To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.

E:\FS\PROJECTS-SMALL BORROWERS\Camden County PWSD #5 SBS-155-13\SRF-06

Recycled Paper

FORM 1746

Missouri Department of Revenue
Missouri Sales or Use Tax Exemption Application

Required Information to Submit

Submit the listed items to ensure the Department of Revenue (Department) can process your exemption application. Submit all required information to avoid a delay or denial of your exemption letter. Federal or Missouri state agencies, Missouri political subdivisions, elementary and secondary schools operated at public expense, or schools of higher education are not required to furnish the documents below (see instructions).

- Application - A fully completed and signed Missouri Sales or Use Tax Exemption Application (Form 1746).
- Determination of Exemption - A copy of IRS determination of exemption, Federal Form 501(c). Federal, state, Missouri political subdivisions or agencies, public elementary, secondary, or higher education schools or universities are not required to submit a Federal Form 501(c).
- Certificate of Incorporation or Registration - A copy of the Certificate of Incorporation or Registration issued by the Missouri Secretary of State, if registered or incorporated
- Bylaws - A copy of the organization's bylaws
- Financial Statement - A three-year financial statement (or number of years in existence if less than three) providing sources and amounts of income. A three-year financial statement is determined by the date of incorporation or the date the 501(c) exemption was issued.
- If the organization is less than six months old a projected budget for one year should be provided. The projected budget must include sources and amounts of income and expenses for one year.

  The financial statement can be in the form of a spreadsheet, ledger book, or you may submit copies of all pages of the Internal Revenue Service (IRS) Return of Organization Exempt From Income Tax (Form 990). All schedules must include detailed information to avoid a delay in processing your application. The Department does not accept bank statements. If abbreviations are used, provide an explanation.
- Cooperative Marketing Association - Attach the following:
  - Documentation verifying your payment of the annual registration fee;
  - A copy of the most recent annual report filed with the Missouri Secretary of State; and
  - A copy of the articles of incorporation that details that the corporation is organized as a nonprofit, non-stock corporation under Section 274.030 RSMo.

IRS Exemption Ruling

If you are registered with the IRS and have received a 501(c) letter, you must attach a copy of the most current letter of exemption issued to you by the IRS.

If you have not received an exemption letter from the IRS, you can obtain an Application for Recognition of Exemption (Form 1023) by visiting their website at www.irs.gov or call (877) 829-5500.

Instructions

Missouri Tax I.D. Number
If you have been issued a Missouri Tax I.D. Number by the Department, enter that number in the space provided. Providing your Missouri Tax I.D. Number will ensure the Department registers your organization accurately.

Incorporated Organizations
If you are incorporated in Missouri, check "Missouri Corporation" and provide the required information. If you are an out-of-state corporation, and own property in Missouri, check the "Out-of-State Corporation" box and provide the required information.

Mailing Address
If correspondence should be mailed to an address other than the address of the organization or agency, provide the address to be used for mailing purposes (i.e., officer's, accountant's, or lawyer's address, etc.) P.O. Box may be used.

Record Storage
If the books and records are kept at an address (location) other than that of the organization, agency, or mailing address, provide the address.

Attachments
The attachments are used to determine whether an organization is exempt under Missouri law. Please remember to include all attachments pertaining to your organization. If you do not include all required attachments, it could result in a delay in issuing your exemption letter or a denial of your application.

Out of state organizations applying for a Missouri exemption letter must provide a copy of the sales and use tax exemption letter issued to the organization in their home state.

Organization or Agency Officers

Name (Last, First, Middle Initial)	Title	Social Security Number	Birthdate (MM/DD/YYYY)
Kristina Henry	President	496 79 9969	10/04/1971

Street Address	City	State	Zip Code
577 Missionthills Ln.	Camdenton	MO	65020

Name (Last, First, Middle Initial)	Title	Social Security Number	Birthdate (MM/DD/YYYY)
Burton, Bonnie J	Clerk	493 60 4420	07/04/1953

Street Address	City	State	Zip Code
298 Cedar Heights 4A,	Camdenton	MO	65020

Description of Organization

In one or two brief statements, summarize the primary organizational purpose and the main activities. Explain the intended use of the exemption letter.

We provide Water and Sewer service as a public entity for the people in the PWSD#5 area.

Signature

Under penalties of perjury, I declare that the above information and any attached supplement is true, complete, and correct; that the present nature, purpose and activities of the above-named organization or agency are the same as they were when the attached documents were issued and will continue to remain the same; that I will remain knowledgeable of the statutes and regulations governing sales or use tax exemptions and that I will immediately notify the Department of any change in circumstances which could reasonably lead me to believe that the above-named organization or agency would no longer qualify as exempt, either because of a change in the law or because of a material change in the organization's or agency's nature, purpose, or activities.

It is understood that any misrepresentation contained herein or failure on my part to fulfill the promises entered into here will result in the immediate revocation of any exemption letter issued to this organization or agency.

An officer, member, or responsible person must sign the application. If a power of attorney signs the application, you must include a Power of Attorney (Form 2827) signed by an officer, member, or responsible person listed on the application.

Signature of Officer or Responsible Person	Title
Bonnie Burton	Clerk
Printed Name	**E-mail Address**
Bonnie Burton	pwsdno5@gmail.com

Social Security Number	Date of Birth (MM/DD/YYYY)	Date (MM/DD/YYYY)
493 60 4420	07/04/1953	04/16/2014

Confidentiality of Tax Records

Missouri Statute 32.057, RSMo, states that all tax records and information maintained by the Department are confidential. The tax information can only be given to the owner, partner, member, or officer who is listed with us as such. If you wish to give an employee, attorney, or accountant access to your tax information, you must supply us with a power of attorney giving us the authority to release confidential information to them.

If your officers, members, or responsible persons change, you must update your registration with the Department by completing a Registration or Exemption Change Request (Form 126), before we can release tax information to those new officers, members, or responsible persons.

Mail to: Taxation Division
P.O. Box 358
Jefferson City, MO 65105-0358

Phone: (573) 751-2836
TDD: (800) 735-2966
Fax: (573) 751-9409
E-mail: salestaxexemptions@dor.mo.gov

Visit dor.mo.gov/business/sales/ for additional information.

Gmail by Google

PWSDNO.5 PWSDNO.5 <pwsdno.5@gmail.com>

RE: Final DNR loan payment

1 message

Grote, Beverly <beverly.grote@dnr.mo.gov> Tue, May 13, 2014 at 11:22 AM
To: Bonnie Burton <pwsdno.5@gmail.com>

Bonnie,

We will need a Reimbursement Form requesting the amount from Harris Excavating with a Current Period amount of $56,511.55 and a Cumulative amount of $100,000.00. It will be Payment Request Number 2 at the top of the form. It will need to be signed by David Stone since he is the authorized representative.

Once we get the signed reimbursement form, we will have all the paperwork necessary to process the request. You may either email the signed reimbursement form to deqwpcpfacaccounting@dnr.mo.gov or fax it to 573-751-9396. Let me know if you fax it so I can get it to the right person. It will then be assigned to an accounting specialist to process.

Let me know if you have any questions. Thank you!

Beverly Grote

Accounting Specialist

Water Protection Program

Financial Assistance Center

Missouri Department of Natural Resources

Telephone: 573-751-4940

Fax: 573-751-9396

Email: beverly.grote@dnr.mo.gov

Group Email: deqwpcpfacaccounting@dnr.mo.gov

Celebrating 40 years of taking care of Missouri's natural resources. To learn more about the Missouri Department of Natural Resources visit dnr.mo.gov.

From: bonniejburton@gmail.com [mailto:bonniejburton@gmail.com] **On Behalf Of** Bonnie Burton
Sent: Tuesday, May 13, 2014 10:53 AM
To: Grote, Beverly
Subject: Final DNR loan payment

Hi Beverly,

Here is what I sent in April and have not heard anything yet. Is Harris being paid direct or is the check coming to me and if so has it been sent? This should of been our last payment on our loan.

Bonnie

PWSD#5 Board of Directors

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
REVISED
AUGUST 1, 2014

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

Part I – General Conditions

Section A – Sampling, Monitoring, and Recording

1. **Sampling Requirements.**
   a. Samples and measurements taken for the purpose of monitoring shall be representative of the monitored activity.
   b. All samples shall be taken at the outfall(s) or Missouri Department of Natural Resources (Department) approved sampling location(s), and unless specified, before the effluent joins or is diluted by any other body of water or substance.

2. **Monitoring Requirements.**
   a. Records of monitoring information shall include:
      i. The date, exact place, and time of sampling or measurements;
      ii. The individual(s) who performed the sampling or measurements;
      iii. The date(s) analyses were performed;
      iv. The individual(s) who performed the analyses;
      v. The analytical techniques or methods used; and
      vi. The results of such analyses.
   b. If the permittee monitors any pollutant more frequently than required by the permit at the location specified in the permit using test procedures approved under 40 CFR Part 136, or another method required for an industry-specific waste stream under 40 CFR subchapters N or O, the results of such monitoring shall be included in the calculation and reported to the Department with the discharge monitoring report data (DMR) submitted to the Department pursuant to Section B, paragraph 7.

3. **Sample and Monitoring Calculations.** Calculations for all sample and monitoring results which require averaging of measurements shall utilize an arithmetic mean unless otherwise specified in the permit.

4. **Test Procedures.** The analytical and sampling methods used shall conform to the reference methods listed in 10 CSR 20-7.015 unless alternates are approved by the Department. The facility shall use sufficiently sensitive analytical methods for detecting, identifying, and measuring the concentrations of pollutants. The facility shall ensure that the selected methods are able to quantify the presence of pollutants in a given discharge at concentrations that are low enough to determine compliance with Water Quality Standards in 10 CSR 20-7.031 or effluent limitations unless provisions in the permit allow for other alternatives. A method is "sufficiently sensitive" when; 1) the method minimum level is at or below the level of the applicable water quality criterion for the pollutant or, 2) the method minimum level is above the applicable water quality criterion, but the amount of pollutant in a facility's discharge is high enough that the method detects and quantifies the level of pollutant in the discharge, or 3) the method has the lowest minimum level of the analytical methods approved under 10 CSR 20-7.015. These methods are also required for parameters that are listed as monitoring only, as the data collected may be used to determine if limitations need to be established. A permittee is responsible for working with their contractors to ensure that the analysis performed is sufficiently sensitive.

5. **Record Retention.** Except for records of monitoring information required by the permit related to the permittee's sewage sludge use and disposal activities, which shall be retained for a period of at least five (5) years (or longer as required by 40 CFR part 503), the permittee shall retain records of all monitoring information, including all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by the permit, and records of all data used to complete the application for the permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Department at any time.

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

Section B – Reporting Requirements

1. **Planned Changes.**
   a. The permittee shall give notice to the Department as soon as possible of any planned physical alterations or additions to the permitted facility when:
      i. The alteration or addition to a permitted facility may meet one of the criteria for determining whether a facility is a new source in 40 CFR 122.29(b); or
      ii. The alteration or addition could significantly change the nature or increase the quantity of pollutants discharged. This notification applies to pollutants which are subject neither to effluent limitations in the permit, nor to notification requirements under 40 CFR 122.42(a)(1);
      iii. The alteration or addition results in a significant change in the permittee's sludge use or disposal practices, and such alteration, addition, or change may justify the application of permit conditions that are different from or absent in the existing permit, including notification of additional use or disposal sites not reported during the permit application process or not reported pursuant to an approved land application plan;
      iv. Any facility expansions, production increases, or process modifications which will result in a new or substantially different discharge or sludge characteristics must be reported to the Department 60 days before the facility or process modification begins. Notification may be accomplished by application for a new permit. If the discharge does not violate effluent limitations specified in the permit, the facility is to submit a notice to the Department of the changed discharge at least 30 days before such changes. The Department may require a construction permit and/or permit modification as a result of the proposed changes at the facility.

2. **Non-compliance Reporting.**
   a. The permittee shall report any noncompliance which may endanger health or the environment. Relevant information shall be provided orally or via the current electronic method approved by the Department, within 24 hours from the time the permittee becomes aware of the circumstances, and shall be reported to the appropriate Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. A written submission shall also be provided within five (5) business days of the time the permittee becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected, the anticipated time it is expected to continue; and steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

b. The following shall be included as information which must be reported within 24 hours under this paragraph.
   i. Any unanticipated bypass which exceeds any effluent limitation in the permit.
   ii. Any upset which exceeds any effluent limitation in the permit.
   iii. Violation of a maximum daily discharge limitation for any of the pollutants listed by the Department in the permit required to be reported within 24 hours.
c. The Department may waive the written report on a case-by-case basis for reports under paragraph 2. b. of this section if the oral report has been received within 24 hours.

3. **Anticipated Noncompliance.** The permittee shall give advance notice to the Department of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. The notice shall be submitted to the Department 60 days prior to such changes or activity.

4. **Compliance Schedules.** Reports of compliance or noncompliance with, or any progress reports on, interim and final requirements contained in any compliance schedule of the permit shall be submitted no later than 14 days following each schedule date. The report shall provide an explanation for the instance of noncompliance and a proposed schedule or anticipated date, for achieving compliance with the compliance schedule requirement.

5. **Other Noncompliance.** The permittee shall report all instances of noncompliance not reported under paragraphs 2, 3, and 6 of this section, at the time monitoring reports are submitted. The reports shall contain the information listed in paragraph 2. a. of this section.

6. **Other Information.** Where the permittee becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or in any report to the Department, it shall promptly submit such facts or information.

7. **Discharge Monitoring Reports.**
   a. Monitoring results shall be reported at the intervals specified in the permit.
   b. Monitoring results must be reported to the Department via the current method approved by the Department, unless the permittee has been granted a waiver from using the method. If the permittee has been granted a waiver, the permittee must use forms provided by the Department.
   c. Monitoring results shall be reported to the Department no later than the 28th day of the month following the end of the reporting period.

Section C – Bypass/Upset Requirements

1. **Definitions.**
   a. *Bypass*: the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending.
   b. *Severe Property Damage*: substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.
   c. *Upset*: an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permittee. An upset does not include noncompliance to the extent caused by operational error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventive maintenance, or careless or improper operation.

2. **Bypass Requirements.**
   a. Bypass not exceeding limitations. The permittee may allow any bypass to occur which does not cause effluent limitations to be exceeded, but only if it also is for essential maintenance to assure efficient operation. These bypasses are not subject to the provisions of paragraphs 2. b. and 2. c. of this section.
   b. Notice.
      i. Anticipated bypass. If the permittee knows in advance of the need for a bypass, it shall submit prior notice, if possible at least 10 days before the date of the bypass.
      ii. Unanticipated bypass. The permittee shall submit notice of an unanticipated bypass as required in Section B – Reporting Requirements, paragraph 5 (24-hour notice).
   c. Prohibition of bypass.
      i. Bypass is prohibited, and the Department may take enforcement action against a permittee for bypass, unless:
         1. Bypass was unavoidable to prevent loss of life, personal injury, or severe property damage;
         2. There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate back-up equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance; and
         3. The permittee submitted notices as required under paragraph 2. b. of this section.
      ii. The Department may approve an anticipated bypass, after considering its adverse effects, if the Department determines that it will meet the three (3) conditions listed above in paragraph 2. c. i. of this section.

3. **Upset Requirements.**
   a. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of paragraph 3. b. of this section are met. No determination made during administrative review of claim that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.
   b. Conditions necessary for a demonstration of upset. A permittee who wishes to establish the affirmative defense of upset shall demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      i. An upset occurred and that the permittee can identify the cause(s) of the upset;
      ii. The permitted facility was at the time being properly operated; and
      iii. The permittee submitted notice of the upset as required in Section B – Reporting Requirements, paragraph 2. b. ii. (24-hour notice).
      iv. The permittee complied with any remedial measures required under Section D – Administrative Requirements, paragraph 4.
   c. Burden of proof. In any enforcement proceeding, the permittee seeking to establish the occurrence of an upset has the burden of proof.

Section D – Administrative Requirements

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

imposed in a pretreatment program approved under section 402(a)(3) or 402(b)(8) of the Act, is subject to criminal penalties of $2,500 to $25,000 per day of violation, or imprisonment of not more than one (1) year, or both. In the case of a second or subsequent conviction for a negligent violation, a person shall be subject to criminal penalties of not more than $50,000 per day of violation, or by imprisonment of not more than two (2) years, or both. Any person who knowingly violates such sections, or such conditions or limitations is subject to criminal penalties of $5,000 to $50,000 per day of violation, or imprisonment for not more than three (3) years, or both. In the case of a second or subsequent conviction for a knowing violation, a person shall be subject to criminal penalties of not more than $100,000 per day of violation, or imprisonment of not more than six (6) years, or both. Any person who knowingly violates section 301, 302, 303, 306, 307, 308, 318 or 405 of the Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of the Act, and who knows at that time that he thereby places another person in imminent danger of death or serious bodily injury, shall, upon conviction, be subject to a fine of not more than $250,000 or imprisonment of not more than 15 years, or both. In the case of a second or subsequent conviction for a knowing endangerment violation, a person shall be subject to a fine of not more than $500,000 or by imprisonment of not more than 30 years, or both. An organization, as defined in section 309(c)(3)(B)(iii) of the CWA, shall, upon conviction of violating the imminent danger provision, be subject to a fine of not more than $1,000,000 and can be fined up to $2,000,000 for second or subsequent convictions.

c. Any person may be assessed an administrative penalty by the EPA Director for violating section 301, 302, 306, 307, 308, 318 or 405 of this Act, or any permit condition or limitation implementing any of such sections in a permit issued under section 402 of this Act. Administrative penalties for Class I violations are not to exceed $10,000 per violation, with the maximum amount of any Class I penalty assessed not to exceed $25,000. Penalties for Class II violations are not to exceed $10,000 per day for each day during which the violation continues, with the maximum amount of any Class II penalty not to exceed $125,000.

d. It is unlawful for any person to cause or permit any discharge of water contaminants from any water contaminant or point source located in Missouri in violation of sections 644.006 to 644.141 of the Missouri Clean Water Law, or any standard, rule or regulation promulgated by the commission. In the event the commission or the director determines that any provision of sections 644.006 to 644.141 of the Missouri Clean Water Law or standard, rules, limitations or regulations promulgated pursuant thereto, or permits issued by, or any final abatement order, other order, or determination made by the commission or the director, or any filing requirement pursuant to sections 644.006 to 644.141 of the Missouri Clean Water Law or any other provision which this state is required to enforce pursuant to any federal water pollution control act, is being, was, or is in imminent danger of being violated, the commission or director may cause to have instituted a civil action in any court of competent jurisdiction for the injunctive relief to prevent any such violation or further violation or for the assessment of a penalty not to exceed $10,000 per day for each day, or part thereof, the violation occurred and continues to occur, or both, as the court deems proper. Any person who willfully or negligently commits any violation in this paragraph shall, upon conviction, be punished by a fine of not less than $2,500 nor more than $25,000 per day of violation, or by imprisonment for not more than one year, or both. Second and successive convictions for violation of the same provision of this paragraph by any person shall be punished by a fine of not more than $50,000 per day of violation, or by imprisonment for not more than two (2) years, or both.

Duty to Reapply.

a. If the permittee wishes to continue an activity regulated by this permit after the expiration date of this permit, the permittee must apply for and obtain a new permit.

b. A permittee with a currently effective site-specific permit shall submit an application for renewal at least 180 days before the expiration date of the existing permit, unless permission for a later date has been granted by the Department. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

c. A permittees with currently effective general permit shall submit an application for renewal at least 30 days before the existing permit expires, unless the permittee has been notified by the Department that an earlier application must be made. The Department may grant permission for a later submission date. (The Department shall not grant permission for applications to be submitted later than the expiration date of the existing permit.)

3. **Need to Halt or Reduce Activity Not a Defense.** It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

4. **Duty to Mitigate.** The permittee shall take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment.

5. **Proper Operation and Maintenance.** The permittee shall at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permittee to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permittee only when the operation is necessary to achieve compliance with the conditions of the permit.

6. **Permit Actions.**
   a. Subject to compliance with statutory requirements of the Law and Regulations and applicable Court Order, this permit may be modified, suspended, or revoked in whole or in part during its term for cause including, but not limited to, the following:
      i. Violations of any terms or conditions of this permit or the law;
      ii. Having obtained this permit by misrepresentation or failure to disclose fully any relevant facts;
      iii. A change in any circumstances or conditions that requires either a temporary or permanent reduction or elimination of the authorized discharge; or
      iv. Any reason set forth in the Law or Regulations.
   b. The filing of a request by the permittee for a permit modification, revocation and reissuance, or termination, or a notification of planned changes or anticipated noncompliance does not stay any permit condition.

7. **Permit Transfer.**
   a. Subject to 10 CSR 20-6.010, an operating permit may be transferred upon submission to the Department of an application to transfer signed by the existing owner and the new owner, unless prohibited by the terms of the permit. Until such time the permit is officially transferred, the original permittee remains responsible for complying with the terms and conditions of the existing permit.
   b. The Department may require modification or revocation and reissuance of the permit to change the name of the permittee and incorporate such other requirements as may be necessary under the Missouri Clean Water Law or the Federal Clean Water Act.
   c. The Department, within 30 days of receipt of the application, shall notify the new permittee of its intent to revoke or reissue or transfer the permit.

8. **Toxic Pollutants.** The permittee shall comply with effluent standards or prohibitions established under section 307(a) of the Federal Clean Water Act for toxic pollutants and with standards for sewage sludge use or disposal established under section 405(d) of the Federal Clean Water Act within the time provided in the regulations that establish these standards or prohibitions or standards for sewage sludge use or disposal, even if the permit has not yet been modified to incorporate the requirement.

9. **Property Rights.** This permit does not convey any property rights of any sort, or any exclusive privilege.

10. **Duty to Provide Information.** The permittee shall furnish to the Department, within a reasonable time, any information which the Department may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish to the Department upon request, copies of records required to be kept by this permit.

11. **Inspection and Entry.** The permittee shall allow the Department, or an authorized representative (including an authorized contractor acting as a representative of the Department), upon presentation of credentials and other documents as may be required by law, to:
    a. Enter upon the permittee's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of the permit;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
    c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and
    d. Sample or monitor at reasonable times, for the purposes of assuring permit compliance or as otherwise authorized by the Federal Clean Water Act or Missouri Clean Water Law, any substances or parameters at any location.

12. **Closure of Treatment Facilities.**
    a. Persons who cease operation or plan to cease operation of waste, wastewater, and sludge handling and treatment facilities shall close the facilities in accordance with a closure plan approved by the Department.
    b. Operating Permits under 10 CSR 20-6.010 or under 10 CSR 20-6.015 are required until all waste, wastewater, and sludges have been disposed of in accordance with the closure plan approved by the Department and any disturbed areas have been properly stabilized. Disturbed areas will be considered stabilized when perennial vegetation, pavement, or structures using permanent materials cover all areas that have been disturbed. Vegetative cover, if used, shall be at least 70% plant density over 100% of the disturbed area.

13. **Signatory Requirement.**
    a. All permit applications, reports required by the permit, or information requested by the Department shall be signed and certified. (See 40 CFR 122.22 and 10 CSR 20-6.010)
    b. The Federal Clean Water Act provides that any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or non-compliance shall, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than six (6) months per violation, or by both.
    c. The Missouri Clean Water Law provides that any person who knowingly makes any false statement, representation or certification in any application, record, report, plan, or other document filed or required to be maintained pursuant to sections 644.006 to 644.141 shall, upon conviction, be punished by a fine of not more than ten thousand dollars, or by imprisonment for not more than six months, or by both.

14. **Severability.** The provisions of the permit are severable, and if any provision of the permit, or the application of any provision of the permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of the permit, shall not be affected thereby.

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

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

1. **Definitions**

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

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

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

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

2. **Identification of Industrial Discharges**

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

3. **Application Information**

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

4. **Notice to the Department**

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

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

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

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

STANDARD CONDITIONS FOR NPDES PERMITS
ISSUED BY
THE MISSOURI DEPARTMENT OF NATURAL RESOURCES
MISSOURI CLEAN WATER COMMISSION
March 1, 2014

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

SECTION A – GENERAL REQUIREMENTS

1. This permit pertains to sludge requirements under the Missouri Clean Water Law and regulation for domestic wastewater and industrial process wastewater. This permit also incorporates applicable federal sludge disposal requirements under 40 CFR 503 for domestic wastewater. The Environmental Protection Agency (EPA) has principal authority for permitting and enforcement of the federal sludge regulations under 40 CFR 503 for domestic wastewater. EPA has reviewed and accepted these standard sludge conditions. EPA may choose to issue a separate sludge addendum to this permit or a separate federal sludge permit at their discretion to further address the federal requirements.
2. These Part III Standard Conditions apply only to sludge and biosolids generated at domestic wastewater treatment facilities, including public owned treatment works (POTW), privately owned facilities and sludge or biosolids generated at industrial facilities.
3. Sludge and Biosolids Use and Disposal Practices:
    a. The permittee is authorized to operate the sludge and biosolids treatment, storage, use, and disposal facilities listed in the facility description of this permit.
    b. The permittee shall not exceed the design sludge volume listed in the facility description and shall not use sludge disposal methods that are not listed in the facility description, without prior approval of the permitting authority.
    c. The permittee is authorized to operate the storage, treatment or generating sites listed in the Facility Description section of this permit.
4. Sludge Received from other Facilities:
    a. Permittees may accept domestic wastewater sludge from other facilities including septic tank pumpings from residential sources as long as the design sludge volume is not exceeded and the treatment facility performance is not impaired.
    b. The permittee shall obtain a signed statement from the sludge generator or hauler that certifies the type and source of the sludge
5. These permit requirements do not supersede nor remove liability for compliance with county and other local ordinances.
6. These permit requirements do not supersede nor remove liability for compliance with other environmental regulations such as odor emissions under the Missouri Air Pollution Control Law and regulations.
7. This permit may (after due process) be modified, or alternatively revoked and reissued, to comply with any applicable sludge disposal standard or limitation issued or approved under Section 405(d) of the Clean Water Actor under Chapter 644 RSMo.
8. In addition to STANDARD CONDITIONS, the Department may include sludge limitations in the special conditions portion or other sections of a site specific permit.
9. Alternate Limits in the Site Specific Permit.
    Where deemed appropriate, the Department may require an individual site specific permit in order to authorize alternate limitations:
    a. A site specific permit must be obtained for each operating location, including application sites.
    b. To request a site specific permit, an individual permit application, permit fee, and supporting documents shall be submitted for each operating location. This shall include a detailed sludge/biosolids management plan or engineering report.
10. Exceptions to these Standard Conditions may be authorized on a case-by-case basis by the Department, as follows:
    a. The Department will prepare a permit modification and follow permit notice provisions as applicable under 10 CSR 20-6.020, 40 CFR 124.10, and 40 CFR 501.15(a)(2)(ix)(E). This includes notification of the owner of the property located adjacent to each land application site, where appropriate.
    b. Exceptions cannot be granted where prohibited by the federal sludge regulations under 40 CFR 503.

SECTION B – DEFINITIONS

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

SECTION C – MECHANICAL WASTEWATER TREATMENT FACILITIES

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

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

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

SECTION E – INCINERATION OF SLUDGE

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

SECTION F – SURFACE DISPOSAL SITES AND SLUDGE LAGOONS

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

SECTION G – LAND APPLICATION

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

    Permittees who wish to apply Class A biosolids to public contact sites must obtain approval from the Department after two years of proper operation with acceptable testing documentation that shows the biosolids meet Class A criteria. A shorter length of testing will be allowed with prior approval from the Department. Authorization for land applications must be provided in the special conditions section of this permit or in a separate site specific permit.
    a. After Class B biosolids have been land applied, public access must be restricted for 12 months.
    b. Class B biosolids are only land applied to root crops, home gardens or vegetable crops whose edible parts will not be for human consumption.

6. Agricultural and Silvicultural Sites:

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

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

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

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

TABLE 1

Biosolids Ceiling Concentration [1]	
Pollutant	Milligrams per kilogram dry weight
Arsenic	75
Cadmium	85
Copper	4,300
Lead	840
Mercury	57
Molybdenum	75
Nickel	420
Selenium	100
Zinc	7,500

[1] Land application is not allowed if the sludge concentration exceeds the maximum limits for any of these pollutants

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

TABLE 2

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

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

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

TABLE 3

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

[1] Total cumulative loading limits for soils with equal or greater than 6.0 pH (salt based test) or 6.5 pH (water based test)

TABLE 4 - Guidelines for land application of other trace substances [1]

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

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

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

[3] Total Dioxin Toxicity Equivalents (TEQ) in soils, based on a risk assessment under 40 CFR 744, May 1998.

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

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

a. Use best management practices when applying biosolids.
b. Biosolids cannot discharge from the land application site
c. Biosolid application is subject to the Missouri Department of Agriculture State Milk Board concerning grazing restrictions of lactating dairy cattle.
d. Biosolid application must be in accordance with section 4 of the Endangered Species Act.
e. Do not apply more than the agronomic rate of nitrogen needed.
f. The applicator must document the Plant Available Nitrogen (PAN) loadings, available nitrogen in the soil and crop removals unless the nitrogen content of the biosolids does not exceed 50,000 milligrams per kilogram of total nitrogen on a dry weight basis and biosolids application rate is less than two dry tons per acre per year.
   i. PAN can be determined as follows and is in accordance with WQ426
   (Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).
   [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.

g. Buffer zones are as follows:
   i. 300 feet of a water supply well, sinkhole, lake, pond, water supply reservoir or water supply intake in a stream;
   ii. 300 feet of a losing stream, no discharge stream, stream stretches designated for whole body contact recreation, wild and scenic rivers, Ozark National Scenic Riverways or outstanding state resource waters as listed in the Water Quality Standards, 10 CSR 20-7.031;
   iii. 150 feet if dwellings;
   iv. 100 feet of wetlands or permanent flowing streams;
   v. 50 feet of a property line or other waters of the state, including intermittent flowing streams.

h. Slope limitation for application sites are as follows;
   i. A slope 0 to 6 percent has no rate limitation
   ii. Applied to a slope 7 to 12 percent, the applicator may apply biosolids when soil conservation practices are used to meet the minimum erosion levels
   iii. Slopes > 12, apply biosolids only when grass is vegetated and maintained with at least 80 percent ground cover at a rate of two dry tons per acre per year or less.

i. No biosolids may be land applied in an area that it is reasonably certain that pollutants will be transported into waters of the state.

j. Do not apply biosolids to sites with soil that is snow covered, frozen or saturated with liquid without prior approval by the Department.

k. Biosolids / sludge applicators must keep detailed records up to five years.

SECTION H – CLOSURE REQUIREMENTS

1. This section applies to all wastewater facilities (mechanical, industrial, and lagoons) and sludge or biosolids storage and treatment facilities and incineration ash ponds. It does not apply to land application sites.
2. Permittees of a domestic wastewater facility who plan to cease operation must obtain Department approval of a closure plan which addresses proper removal and disposal of all residues, including sludge, biosolids. Mechanical plants, sludge lagoons, ash ponds and other storage structures must obtain approval of a closure plan from the Department. Permittee must maintain this permit until the facility is closed in accordance with the approved closure plan per 10 CSR 20 – 6. 010 and 10 CSR 20 – 6.015.
3. Residuals that are left in place during closure of a lagoon or earthen structure or ash pond shall not exceed the agricultural loading rates as follows:
   a. Residuals shall meet the monitoring and land application limits for agricultural rates as referenced in Section H of these standard conditions.
   b. If a wastewater treatment lagoon has been in operation for 15 years or more without sludge removal, the sludge in the lagoon qualifies as a Class B biosolids with respect to pathogens due to anaerobic digestion, and testing for fecal coliform is not required. For other lagoons, testing for fecal coliform is required to show compliance with Class B biosolids limitations. In order to reach Class B biosolids requirements, fecal coliform must be less than 2,000,000 colony forming units or 2,000,000 most probable number. All fecal samples must be presented as geometric mean per gram.
   c. The allowable nitrogen loading that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. For a grass cover crop, the allowable PAN is 300 pounds/acre.
      i. PAN can be determined as follows:
      (Nitrate + nitrite nitrogen) + (organic nitrogen x 0.2) + (ammonia nitrogen x volatilization factor[1]).
      [1] Volatilization factor is 0.7 for surface application and 1 for subsurface application.
4. When closing a domestic wastewater treatment lagoon with a design treatment capacity equal or less than 150 persons, the residuals are considered "septage" under the similar treatment works definition. See Section B of these standard conditions. Under the septage category, residuals may be left in place as follows:
   a. Testing for metals or fecal coliform is not required
   b. If the wastewater treatment lagoon has been in use for less than 15 years, mix lime with the sludge at a rate of 50 pounds of hydrated lime per 1000 gallons (134 cubic feet) of sludge.
   c. The amount of sludge that may be left in the lagoon shall be based on the plant available nitrogen (PAN) loading. 100 dry tons/acre of sludge may be left in the basin without testing for nitrogen. If 100 dry tons/acre or more will be left in the lagoon, test for nitrogen and determine the PAN using the calculation above. Allowable PAN loading is 300 pounds/acre.

5. Residuals left within the domestic lagoon shall be mixed with soil on at least a 1 to 1 ratio, the lagoon berm shall be demolished, and the site shall be graded and contain ≥70% vegetative density over 100% of the site so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
6. Lagoons and/or earthen structure and/or ash pond closure activities shall obtain a storm water permit for land disturbance activities that equal or exceed one acre in accordance with 10 CSR 20-6.200
7. When closing a mechanical wastewater and/or industrial process wastewater plant; all sludge must be cleaned out and disposed of in accordance with the Department approved closure plan before the permit for the facility can be terminated.
    a. Land must be stabilized which includes any grading, alternate use or fate upon approval by the Department, remediation, or other work that exposes sediment to stormwater per 10 CSR 20-6.200. The site shall be graded and contain ≥70% vegetative density over 100% of the site, so as to avoid ponding of storm water and provide adequate surface water drainage without creating erosion.
    b. Per 10 CSR 20-6.015(4)(B)6, Hazardous Waste shall not be land applied or disposed during industrial and mechanical plant closures unless in accordance with Missouri Hazardous Waste Management Law and Regulations under 10 CSR 25.
    c. After demolition of the mechanical plant / industrial plant, the site must only contain clean fill defined in RSMo 260.200 (5) as uncontaminated soil, rock, sand, gravel, concrete, asphaltic concrete, cinderblocks, brick, minimal amounts of wood and metal, and inert solids as approved by rule or policy of the Department for fill or other beneficial use. Other solid wastes must be removed.
8. If sludge from the domestic lagoon or mechanical treatment plant exceeds agricultural rates under Section G and/or H, a landfill permit or solid waste disposal permit must be obtained if the permittee chooses to seek authorization for on-site sludge disposal under the Missouri Solid Waste Management Law and regulations per 10 CSR 80, and the permittee must comply with the surface disposal requirements under 40 CFR 503, Subpart C.

SECTION I – MONITORING FREQUENCY

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

TABLE 5

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

[1] Test total Kjeldahl nitrogen, if biosolids application is 2 dry tons per acre per year or less

[2] Calculate plant available nitrogen, if biosolids application is more than 2 dry tons per acre per year.

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

[4] One sample for each 1,000 dry tons of sludge.

Note 1: Total solids: A grab sample of sludge shall be tested one per day during land application periods for percent total solids. This data shall be used to calculate the dry tons of sludge applied per acre.

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

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

SECTION J – RECORD KEEPING AND REPORTING REQUIREMENTS

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

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

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

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

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

f. Contract Hauler Activities

If contract hauler, provide a copy of a signed contract from the contractor. Permittee shall require the contractor to supply information required under this permit for which the contractor is responsible. The permittee shall submit a signed statement from the contractor that he has complied with the standards contained in this permit, unless the contract hauler has a separate sludge or biosolids use permit.

g. Land Application Sites:

i. Report the location of each application site, the annual and cumulative dry tons/acre for each site, and the landowners name and address. The location for each spreading site shall be given as a legal description for nearest ¼, ¼, Section, Township, Range, and county, or UTM coordinates. If biosolids application exceeds 2 dry tons/acre/year, reports biosolids nitrogen results, Plant Available Nitrogen (PAN) in pounds/acre, crop nitrogen requirement.

ii. If the "Low Metals" criteria are exceeded, report the annual and cumulative pollutant loading rates in pounds per acre for each applicable pollutant, and report the percent of cumulative pollutant loading which has been reached at each site.

iii. Report the method used for compliance with pathogen and vector attraction requirements.

iv. Report soil test results for pH, CEC, and phosphorus. If none was tested during the year, report the last date when tested and results.

RECEIVED

OCT 21 2014

WATER PROTECTION PROGRAM

MISSOURI DEPARTMENT OF NATURAL RESOURCES
PUBLIC DRINKING WATER BRANCH
PHASE ONE ENGINEERING REPORT SERVICES GRANT PROGRAM
APPLICATION

FOR OFFICE USE ONLY

DATE RECEIVED

Submit to: Missouri Department of Natural Resources, Public Drinking Water Branch, P.O. Box 176, Jefferson City, MO 65102-0176. Please type or print legibly.

1. GENERAL INFORMATION

PUBLIC WATER SUPPLY NAME	PUBLIC WATER SUPPLY ID NO.	POPULATION	DUNS NO. (If known)
PWSD # 5 Camden County		400 units	

PUBLIC WATER SUPPLY CONTACT PERSON FOR THIS DRINKING WATER PROJECT	TITLE
Bonnie Burton	Clerk

MAILING ADDRESS: PO Box 556

CITY	STATE	ZIP CODE + FOUR	COUNTY
Camdenton	MO	65020	Camden

TELEPHONE NUMBER WITH AREA CODE	FAX NUMBER WITH AREA CODE (optional)	E-MAIL (optional)
573-280-5416	573-302-1301	pwsdno5@gmail.com

HAS OR WILL THE SYSTEM APPLY FOR DWSRF FUNDING FOR CONSTRUCTION RELATED TO THE PROPOSED ENGINEERING REPORT?
☒ YES ☐ NO

2. DISADVANTAGED COMMUNITY

DISADVANTAGED COMMUNITIES MUST MEET ALL OF THE FOLLOWING REQUIREMENTS.

I. DOES THE SYSTEM SERVE A POPULATION BELOW 3,300? ☒ YES ☒ NO

II. ARE USER RATES AT OR ABOVE 2% OF THE STATE MEDIAN HOUSEHOLD INCOME? ☐ YES ☒ NO
IF YES, MONTHLY COST FOR 5,000 GALLONS OF WATER: _____

III. IS THE COMMUNITY MEDIAN HOUSEHOLD INCOME (MHI) AT OR BELOW 75% OF THE STATE MHI?
☐ YES ☐ NO
IF YES, COMMUNITY MHI: _____ DATA SOURCE: _____

3. ELIGIBILITY CRITERIA

THE FOLLOWING ARE MINIMUM ELIGIBILITY CRITERIA

I. DOES THE SYSTEM HAVE A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC? ☒ YES ☐ NO
IF NO, HAS THE SYSTEM SUBMITTED AN APPICATION TO OBTAIN A VALID PERMIT TO DISPENSE WATER TO THE PUBLIC?
☐ YES ☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

II. DOES THE CONTINUING OPERATING AUTHORITY HAVE ANY OUTSTANDING DRINKING WATER FEES?
☐ YES ☒ NO (NOTE: ALL OUTSTANDING FEES MUST BE PAID PRIOR TO SELECTION TO REMAIN ELIGIBLE FOR FUNDING)

III. DOES THE WATER SYSTEM EMPLOY A CERTIFIED CHIEF OPERATOR OR CONTRACT OPERATOR?
☒ YES NAME: Lows - Chad Stout CERTIFICATION NUMBER: 5092
☐ NO (NOTE: IF NO, YOU ARE INELIGIBLE TO RECEIVE FUNDING)

IV. WHAT YEAR WAS THE LAST ENGINEERING REPORT COMPLETED FOR THIS WATER SYSTEM? 2010

4. ESTIMATED PROJECT COST INFORMATION

TOTAL ENGINEERING REPORT COST (AMOUNT REQUESTED)		$ unknown
BREAKDOWN OF ENGINEERING REPORT COST PER DESIGNATED CATEGORIES		
I.	TREATMENT	$
II.	TRANSMISSION AND DISTRIBUTION	$
III.	STORAGE	$
IV.	SOURCE	$
V.	OTHER SPECIFY:	$

5. PROJECT DESCRIPTION

DESCRIBE THE MAJOR COMPONENTS OF THE PROJECT. WHY IS THIS ENGINEERING REPORT NEEDED? (ATTACH A SEPARATE SHEET, IF NECESSARY)

New water tower and to connect the water lines between Clearwater Mission Hills and Cedar Heights. To be able to offer systemservice to people in between that are now on private systems

6. SAFE DRINKING WATER ACT COMPLIANCE PRIORITY POINT CHECKLIST

Please check only the items listed below that will be addressed with this project. Systems under enforcement activity must check the appropriate boxes in Section A to be included as part of the proposed engineering study.

Section A: Safe Drinking Water Act Violations and Compliance

The engineering report will address these issues the PWS is experiencing:

- ☐ Correct persistent violations of maximum contaminant levels or treatment performance criteria for acute risk contaminants (such as coliform, turbidity or nitrate) that have occurred within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for naturally-occurring contaminants (such as radium, radon, uranium, arsenic, radionuclides).
- ☐ Correct persistent violations of treatment technique requirements.
- ☐ Correct persistent violations of maximum contaminant levels for non-acute risk primary contaminants occurring within the past 36 months.
- ☐ Correct persistent violations of maximum contaminant levels for secondary contaminants occurring within the past 36 months.
- ☐ Compliance with Missouri's Surface Water Treatment Rules, Disinfectants/Disinfection By-Products Rules, or Ground Water Rules.
- ☒ Enable the Community Water System to comply with an administrative order, bilateral compliance agreement, or other enforceable document issued by the Missouri Department of Natural Resources.

Section B: Problems with Waterborne Disease, Inadequate Supply or Pressure

The PWS is experiencing these problems and the engineering report will address them:

- ☐ At least 51 percent of the project will address problems causing a waterborne disease outbreak attributable to the Community Water System by the Department of Health and Senior Services.
- ☐ The Community Water System can document its inability consistently to maintain >35 psi as a normal working pressure in the distribution system.
- ☐ The Community Water System can document its inability consistently to maintain >20 psi at all service connections.
- ☐ Private or non-community wells or sources in the project service area are unable to consistently provide an adequate amount of potable water for general household purposes and at least 51 percent of the project addresses this need.

Section C: General Infrastructure Problems

The PWS is experiencing these problems and the engineering report will address them:

- ☒ Provide the Community Water System with a backup well or backup interconnection with another Community Water System.
- ☐ Address problem(s) with improper well construction.
- ☐ Address unaccounted for water that exceeds 10 percent of the drinking water produced by the system, and the loss is due to leaking or broken water lines.
- ☒ Provide necessary modifications to a distribution system anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address a demonstrated need to replace faulty pipes or substandard pipe materials.
- ☐ Address a demonstrated need for distribution system valves and flushing devices.
- ☒ Address a demonstrated need for looping of water mains.
- ☐ Address an inability to maintain a disinfectant residual at all points in the distribution system.
- ☐ Address water storage facilities in poor condition not related to inadequate storage.
- ☒ Provide the Community Water System with a storage capacity equal to one day's average use or provide the Community Water System with adequate standby power.
- ☒ Provide necessary modifications to a source or treatment facility anticipated to exceed design capacity or useful life within the next five years.
- ☐ Address significant degradation of the quality of raw water supply.
- ☐ Address significant degradation of the quality of finished water in storage.
- ☐ Enable the Community Water System to meet existing state requirements for the treatment or storage of waste residues generated by the water treatment plant.

- ☐ Enable repair or replacement of treatment facilities for required disinfection or turbidity removal that are severely deteriorated beyond the useful life of the facility.
- ☐ The facility's source has been directly impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
- ☐ The facility's treatment plant or distribution system has been impacted by natural disasters (such as flood or drought) or non-naturally occurring contamination within the last four years.
- ☐ At least 51 percent of the project cost is for repair or replacing an existing Community Water System damaged or destroyed by a natural disaster. (Note: Documentation must be submitted along with a statement that adequate state or federal disaster relief is not available).

Section D: Regionalization, Interconnection, and Security

The engineering report will:

- ☒ Provide necessary upgrades to facilities of a primary water system to continue or expand services as a regional water supplier.
- ☒ Result in the permanent supply interconnection of two or more existing Community Water Systems. (This includes new water systems that allow small water systems within their boundaries to consolidate).
- ☐ Result in a regional management system responsible for the day-to-day operation of the water system.
- ☐ Provide necessary upgrades or new water distribution system to meet the standards of a regional supplier for the purpose of consolidation.
- ☐ Enable the Community Water System to enhance the water system security.

Section E: Technical, Managerial, and Financial Capacity Demonstration

The applicant has the following TMF capacity:

- ☐ The facility is located within an endorsed DNR Wellhead Protection or Source Water Protection Area.
- ☐ At least 50% of the governing body has received training related to operation and management.
- ☒ System has a written operation and maintenance plan and budget.
- ☐ The system currently meters all water usage from system connections.

7. SUPPORTING DOCUMENTATION

Required supporting documentation to be provided include:

- ☒ A brief description of need for each item checked in the priority checklist
- ☐ Documentation supporting your description (ex. Inspections, sanitary surveys, or system records)

8. CERTIFICATION

The undersigned representative certifies the information submitted in this application is true and correct to the best of his or her knowledge and that he or she is authorized to sign and submit this application. The applicant agrees, if a grant is awarded on the basis of this application, to comply with all applicable rules and regulations of the Department of Natural Resources and the terms and conditions of the grant agreement. Incomplete applications will not be scored.

SIGNATURE OF AUTHORIZED REPRESENTATIVE	DATE
Bonnie Burton	10/17/14
NAME AND OFFICIAL TITLE	**TELEPHONE NUMBER WITH AREA CODE**
Bonnie Burton District Clerk	573 280-5416

PREPARER'S NAME AND SIGNATURE (IF APPLICABLE)

SIGNATURE OF PREPARER	DATE
NAME AND TITLE	**TELEPHONE NUMBER WITH AREA CODE**

THREE PARTY PAYMENT AGREEMENT

ENGINEERING REPORT SERVICES

DETAILED SCOPE OF WORK

It is the intent of the Missouri Department of Natural Resources (Department) to provide engineering reviews of the public water system engineering report for necessary improvement or modifications to the system to achieve and maintain technical, managerial, and financial capacity with respect to the National Primary Drinking Water Regulations.

All of the above shall be referred to as the Project.

The engineering firm shall provide professional services for this Project in accordance with the Terms and Conditions of this Agreement. The Department shall compensate the water system, in accordance with the Terms of this Agreement as follows:

BASIC SERVICES: Basic services include engineering report development costs to meet, at minimum, the criteria for engineering report services provided in the "Contract for Engineering Services," within the contract period.

Hourly Rates for various professionals may be included in an attached rate sheet. Hourly Rates, as presented shall be computed on the basis of:

☐ Check here for attached rate sheet

Registered Engineer at $_____/Hour

Engineer Technician at $_____/Hour

Clerical at $_____/Hour

Total estimated Reimbursable Expenses $_____

Total estimated cost of Engineering Report Services (Services + Reimbursable) $_____

REIMBURSABLE EXPENSES are as follows:

1. Lodging, meals and mileage: Not to exceed the state or federal per diem rates, incurred while traveling in connection with the Project.
   Meal per diem rates can be found at: http://content.oa.mo.gov/accounting/state-employees/travel-portal-information/state-meals-diem.
   Lodging per diem rates can be found at: http://www.gsa.gov/portal/content/104877?utm_source=OGP&utm_medium=print-radio&utm_term=portal/category/21287&utm_campaign=shortcuts
   State Mileage Rates can be found at: http://content.oa.mo.gov/accounting/state-employees/travel-portal-information/mileage
2. Actual cost of long distance and facsimile transmission incurred in connection with the Project.
3. Actual cost of postage above normal first class rates, when such postage is requested and approved by the Department.

Responsibilities of the Engineering Firm:

1. The engineering firm agrees to meet or exceed all of the criteria listed in "Criteria for Engineering Report DWSRF Contract for Engineering Services" of the Information Packet.
2. The engineering firm agrees to provide all costs incurred during the contract period for engineering report services, with written receipts or invoices, to the public water system for review. The invoices will be in sufficient detail as requested by the Department.
3. The engineering firm agrees to submit progress reports to the department at 25%, 50% and at 75% of completion. Invoices and all associated receipts approved by the public water system must be submitted along with each progress report.
4. The engineering firm shall send invoices and all associated receipts to the public water system monthly and within 15 calendar days of the last monthly service date.
5. The engineering firm shall submit invoices in sufficient detail to identify the work tasks, dates and hours of service and personnel involved to the water system for review.
6. The engineering firm agrees to accomplish said Project within the established budget. In the event the engineering firm determines the Project cannot be accomplished within the budget, the firm shall notify, in writing, the public water system, so that the Project scope can be reviewed and modified if necessary.
7. The engineering firm agrees to include in the engineering report information supporting all items that were checked on the public water system's Application for DWSRF Contract for Engineering Services Checklist. Failure to adequately address all checklist items may result in reduced funding.
8. The engineering firm shall use reasonable care to verify that all information supplied to the firm by the public water system is correct and accurate.
9. The engineering firm shall provide upon demand evidence of an appropriate professional liability insurance policy.
10. The engineering firm shall submit one hard copy of the engineering report along with one electronic copy of the engineering report on CD, with a Professional Engineer's Seal on it, to the department by the due date. The engineering report is due 7 months from the date the Department signs the Financial Assistance Agreement. No extensions will be granted.

NAME OF ENGINEERING FIRM

NAME AND SIGNATURE OF PROJECT MANAGER

DUNS NUMBER TELEPHONE

ADDRESS

E-MAIL ADDRESS

Responsibilities of the Public Water System:

1. The public water system will agree to make a Good Faith Effort to obtain funding and other means for project development as recommended in the approved engineering report.
2. The public water system will agree to make a Good Faith Effort to pursue recommendations regarding achieving and maintaining technical, managerial, and financial capacity including possible regionalization, consolidation, resource sharing, etc., as contained in the approved engineering report. Failure to provide a good faith effort may result in ineligibility for future services funding.
3. The public water system shall review the engineering costs and, upon approval, send a signed letter of approval of the associated engineering costs for the specified invoice number, along with documentation of payment for the previous invoice to the Department for review. The public water system's approval should be based upon the comparison of costs to the established budget (hourly rates and invoices, etc.), the review of the documentation of services and actual services provided to date. The public water system reserves the right to deny approval and request to withhold payments to the engineering firm for losses connected with the Project caused by the errors, omissions, or wrongful acts of the engineering firm in performing duties under the project agreement.
4. The Public Water System shall send invoices and associated documents within 15 calendar days of receipt of invoices from the engineer to the Department at Attn: Engineering Report Services Funding, Water Protection Program, Fiscal Management Unit, 1101 Riverside Drive, P. O. Box 176, Jefferson City, Missouri 65102 for review.
5. The public water system shall pay the engineering firm all approved project costs covered under the Financial Assistance Agreement.
6. The public water system shall provide accurate information regarding requirements for the Project, as well as information required in order to promote the orderly progress of the work.
7. If the public water system observes or otherwise becomes aware of any fault or defect in the Project or non-conformance with the Contract Documents, public water system shall give prompt written notice to the Department and the engineering firm.
8. Upon completion of the engineering report, the public water system shall submit a pre-application form to the Missouri Water and Wastewater Review Committee (MWWRC) and to the Department.

NAME OF PUBLIC WATER SYSTEM

NAME AND SIGNATURE OF WATER AUTHORITY

DUNS NUMBER TELEPHONE

ADDRESS

E-MAIL ADDRESS

Responsibilities of the Department:

1. The Department will review the approval letter and associated documentation of costs. Payment for services (Basic Services and Reimbursable Expenses) will be made directly to the water system upon approval. **The Department reserves the right to deny payment of inappropriate or insufficiently detailed Basic Services and Reimbursable Expense request and for failure to meet the engineering report criteria.**

2. The Department will authorize payment upon receipt and approval of all documentation in relation to each invoice up to 75% of the contracted award.

3. The Department will hold final payment to the water system until the Department approves, in writing, the engineering report. The final payment will be 25% of the estimated project cost, provided said payment does not exceed the contract amount.

4. The Department will pay up to 90% of the actual costs for engineering report services during the contract period, not to exceed the contract amount.

PAYMENTS FOR SERVICES SHALL BE MADE AS FOLLOWS:

Payments by the Department shall be made upon receipt of:

A sufficiently detailed invoice and any associated receipts;
A signed invoice approval letter from the public water system; and
proof of payment for any prior invoice amounts

Invoices shall be itemized by date and number of hours worked at the appropriate hourly rate on the project. An invoice marked "FINAL" must be submitted within the budget period which ends 270 days from the execution of the Financial Assistance Agreement, or the Department will consider all work invoiced and paid. An example invoice sheet that details the information to be provided is available on request.

After approval of the first invoice, the Department will pay the system for up to 90% of the invoice amount. All subsequent payments by the department will require proof of payment to the engineering firm of the previous invoice amount.

All project costs over the total contract amount will be paid by the public water system, if applicable.

The Department will hold final payment to the water system until the Department approves, in writing, the engineering report. The final payment will be 25% of the Department's contract amount. **Additionally, if information on the application is not addressed in the engineering report, the Department will withhold a portion of the funding amount and it will be the responsibility of the water system to make up the difference.**

ARBITRATION, DISPUTES AND DISAGREEMENTS

In order to prevent all disputes or disagreements between the parties in this Agreement in relation to the performance on the part of the engineering firm, it is expressly agreed and understood that in case any controversy or difference of opinion shall arise between the parties as to the quality, quantity or value of the work, the interpretation of the provisions of this Agreement or any other matter connected with this work, the decision of the Director, Department of Natural Resources, shall be final and binding on the parties.

EXTENT OF AGREEMENT

This Agreement along with the Financial Assistance Agreement represents the entire and integrated agreement between the engineering firm, public water system and the Department, as previously defined. This covers the period from the execution date of the Financial Assistance Agreement to 210 calendar days after signature by the Department. This agreement may be amended only by written instrument signed by all three said Parties.

Missouri Department of Natural Resources
Public Drinking Water Branch
Infrastructure, Permits and Engineering Section
1101 Riverside Drive
P.O. Box 176
Jefferson City, MO 65102-0176
Attn: Engineering Services Funding Application

RE: Camden PWSD #5, Camden County
DWSRF 2013 Application for Engineering Report Services Funding for Community Water Systems
PWS ID # MO-3031383 – Cedar Heights Condominiums
PWS ID # MO-3302557 – Clearwater Condominiums

To Whom It May Concern:

PWSD #5 of Camden County, Missouri is submitting the attached application for engineering report services funding for the two community public water systems under its authority. The two systems are comprised of the Cedar Heights (MO-3031383) and Clearwater (MO-3302557) public water systems. The District is still waiting to be issued a DUNS number and the additional information requested as part of the funding application can be found in the remainder of this letter and the attached documentation, which includes an exhibit showing the District boundaries and the water systems described herein. Please note that the District intends to serve the Mission Hills area (15 connections) from the Clearwater public water system (construction is pending). Also, the Old Kinderhook public water system is shown for proximity only and is not part of the District. The potential for regionalization with the Old Kinderhook system will be addressed in the engineering report. The engineering report will also include the results of a computerized hydraulic model analysis (WaterCAD v8), which will be created for each system served by the District.

The following description and documentation are provided to justify the items checked on the District's Application Checklist associated with the 2013 DWSRF Engineering Report Services Funding, which represent the items that will be addressed in the engineering report.

Section A: SDWA Violations/Compliance

- The engineering report will include determining the impact the Groundwater Rule has on the two current water systems, including operational procedures and any improvements that need to be planned and budgeted for to ensure compliance with the Groundwater Rule.

- The District was recently presented with a Missouri Department of Natural Resources (MoDNR) Report of Inspection for the Cedar Heights Condominiums public water system that included a *Compliance Agreement*, following a November 7, 2012 routine inspection by MoDNR. The Report of Inspection states that the District does not have a written Permit to Dispense for this system. The *Compliance Agreement* includes acts and provisions relating to the use of this system's sole well, in which it was concluded that the well does not meet acceptable construction standards for a public water system (non-state-approved well) and is therefore a health risk to the public. The *Compliance Agreement* also contains provisions relating to 4-log reduction of viruses that appear to contain questionable calculations. In general, the *Compliance Agreement* concludes that the District is operating a non-compliant well for

the Cedar Heights water system and an engineering evaluation to determine the true extent of non-compliance should be made, including developing specific action items for the District to undertake to achieve compliance. The proposed engineering report will address the District's Report of Inspection, including the entire *Compliance Agreement*, and will present a plan to resolve any outstanding issues.

Section C: Problems with inadequate wells, water loss, distribution systems, storage, and treatment

- Both the Cedar Heights and Clearwater public water systems currently have only one active well per system. The engineering report will address interconnecting the two systems to provide suitable redundant water sources or providing the District with a backup well(s). The potential for interconnecting with the Old Kinderhook water system as a backup supply will also be evaluated. The Old Kinderhook public water system currently has one active well and one emergency well. Additionally, the District's wells are not provided with standby or emergency power. Accordingly, the possibility of consolidating (regionalizing) all three water systems will be evaluated in the engineering report.

- As described in the previous section, the engineering report will address the noted improper well construction associated with the Cedar Heights public water system. The report will also address any improper construction associated with the Clearwater well. Accordingly, the engineering report will present a plan to reconcile any outstanding issues with either of the District's current supply wells.

- The District is currently operating two separate public water systems that have two distinct distribution systems with dead-end lines and single-line feed service areas with little or no redundancy. The District would benefit from an engineering evaluation that includes strategic water main looping and redundant waterline feeds. Water main looping, combined with more isolation valves, would also allow the District to keep more units in service while addressing system repairs.

- The single standpipe that provides the Cedar Heights water system with storage and pressure is in urgent need of exterior maintenance to provide corrosion protection and also requires modifications to meet MoDNR design standards and provide adequate detention time for disinfection. Both the Cedar Heights and Clearwater systems have only one storage tank each and a plan for adequate maintenance and operation, including the potential for an emergency interconnection to provide redundancy, needs to be developed.

Section D: Regionalization, Interconnection, and Security

- The engineering report will analyze and evaluate the feasibility of and upgrades necessary to allow the District to extend its services as a regional supplier, in specific regards to consolidating, interconnecting, and expanding service to areas within and adjacent to the District boundaries.

- Security of the District's water supply and storage facilities is a concern. There are both well and storage facilities operated by the District that are not sufficiently fenced or have recommended safety and security provisions.

Section E: Managerial and Financial Capacity Consideration

- The District's water systems are operated by an appropriately-certified contract operator, including emergency system operators.

- The District has received training on operations and management of the existing water supply systems.

- The District has a written budget and operations and maintenance procedure that allows for planning, budgeting, and maintaining the existing water systems and any proposed improvements.

- The proposed water system engineering report will not be an amendment to a previous report that was submitted to the Department within the last two years.

The District hopes it has provided the Department with all of the information needed for the funding application. If you need anything further please contact us.

Sincerely,

Bonnie Burton

Bonnie Burton
District Clerk, PWSD#5

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

DEC 12 2014

Ms. Bonnie Burton
Camden County Public Water District No. 5
P.O. Box 556
Camdenton, MO 65020

Dear Ms. Burton:

The Missouri Department of Natural Resources' Water Protection Program received your application for renewal of Missouri State Operating Permit MO-0129038 on November 18, 2014. Your application has been assigned to me for review. Applications are processed in the order they are received. If you would like to meet in person or via conference call to discuss your application, please contact me by phone or e-mail.

Phone: (573) 751-1419
Email: angela.falls@dnr.mo.gov
Fax: (573) 522-9920

If you have any questions about this letter or the anticipated timing of the process, or would like to schedule a meeting to discuss the permit, please feel free to contact me by phone, e-mail, or by mail at Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, MO 65102-0176.

Sincerely,

WATER PROTECTION PROGRAM

Angela Falls
Domestic Wastewater Unit

AF/ab

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
STATE OF MISSOURI
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

Ms. Bonnie Burton
Cedar Heights Condominiums
P.O. Box 556
Camdenton, MO 65020

Dear Ms. Burton:

Enclosed please find a draft Missouri State Operating Permit MO-0129038 for Cedar Heights Condominiums WWTF. In accordance with Chapter 640.016.2 RSMo, the Department of Natural Resources is offering you this opportunity to review the draft permit for non-substantive drafting errors and any other technical comments prior to Public Notice. This draft permit is tentatively scheduled to be placed on Public Notice in January 2015.

Comments must be received by (January 8, 2015) to be considered. The comments must be in written form and can be e-mailed, faxed or mailed. If you would like to comment on the enclosed draft permit, please feel free to provide comments via e-mail at angela.falls@dnr.mo.gov, by fax at (573) 522-9920, or by mail at P.O. Box 176, Jefferson City, MO 65102. If you have any questions about this letter or would like to schedule a meeting to discuss the permit, please feel free to contact me by phone at (573) 751-1419.

Sincerely,

WATER PROTECTION PROGRAM

Angela Falls
Domestic Wastewater Unit

AF/ab

Enclosure

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-0129038
Owner:	Camden County Public Water District No. 5
Address:	P.O. Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Cedar Heights Condominiums Wastewater Treatment Facility
Facility Address:	Cedar Heights Drive and Highway 54, Camdenton, MO 65020
Legal Description:	NW ¼, NW ¼, Sec. 34, T38N, R17W, Camden County
UTM Coordinates:	X= 518185, Y= 4205373
Receiving Stream:	Tributary to Lake of the Ozarks
First Classified Stream and ID:	Lake of the Ozarks (L2) (7205)
USGS Basin & Sub-watershed No.:	(10290110-0403)

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator.
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding / sludge disposal by contract hauler.
Design population equivalent is 847.
Design flow is 72,000 gallons per day.
Actual flow is 7,400 gallons per day.
Design sludge production is 15.2 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 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 on Effective Date 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/month	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		30	20	once/month	composite**
Total Suspended Solids	mg/L		30	20	once/month	composite**
pH – Units	SU	***		***	once/month	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	5.1 11.7		1.3 2.2	once/month	grab
E. coli (Note 1)	#/100mL		630	126	once/month	grab
Total Residual Chlorine (Note 2)	µg/L	< 130		< 130	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX. 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 (Note 2)	mg/L	*		*	once/month	grab
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX.						

* 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.

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

(a) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit. 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.

(b) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months and an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary.

(c) Do not chemically de-chlorinate if it is not needed to meet the limits in your permit.

(d) If no chlorine was used in a given sampling period, an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary. Simply report as "0 µg/L" for TRC and "NA" for DO.

TABLE B
INFLUENT MONITORING REQUIREMENTS

The facility is required to meet a removal efficiency of 85% or more as a monthly average. The monitoring requirements shall become effective on Effective Date and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand$_5$	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX.			

** 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.

C. STANDARD CONDITIONS

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

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of 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 has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at http://dnr.mo.gov/pubs/pub2481.htm.

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.

D. SPECIAL CONDITIONS (continued)

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

6. 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. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
   (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

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

10. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.

D. SPECIAL CONDITIONS (continued)

11. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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

13. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

14. 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.

15. 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.

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

17. 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 THE PURPOSE OF RENEWAL
OF
MO-0129038
CEDAR HEIGHTS CONDOMINIUMS WASTEWATER TREATMENT FACILITY

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

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

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

This Factsheet is for a Minor.

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding / sludge disposal by contract hauler.

Application Date: 11/18/14
Expiration Date: 06/21/14

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.11	Secondary	Domestic

Facility Performance History:
This facility was inspected on September 16, 2010 and was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses. The facility was later placed under an enforcement action.
This facility was last inspected on June 7, 2012. The conditions of the facility at that time were found to be satisfactory. A review of monitoring reports submitted by the facility show no effluent limit exceedances in the past five years, but reports were missing for October 2010, December 2010, January 2011, August 2011, and December 2013.

Comments:
The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums. Special conditions were updated to include reporting of Non-detects and bypass reporting requirements. Also, because the receiving stream was incorrectly listed as Lake of the Ozarks on the previous permit, the permit writer has corrected the receiving stream information to a tributary to Lake of the Ozarks in this permit.

Part II – Operator Certification Requirements

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

Owned or operated by or for a

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

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

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

Operator's Name: James Heppler
Certification Number: 5092
Certification Level: C

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III– Operational Monitoring

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

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Lake of the Ozarks	NA	NA	General Criteria	(10290110-0403)	0.25
Lake of the Ozarks	L2	7205	IRR, LWW, AQL, HHP, WBC-A, SCR		

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

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (C, E, P, P1)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Lake of the Ozarks (L2)	0.0	0.0	0.0

MIXING CONSIDERATIONS
Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:
No receiving water monitoring requirements recommended at this time.

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

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

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

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

☐ - All limits in this operating permit are at least as protective as those previously established; therefore, backsliding does not apply.
☐ - This is a New facility, backsliding does not apply.
☒ - Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44. Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.
☐ - This permit contains new and/or expanded discharge, please see APPENDIX FOR ANTIDEGRADATION ANALYSIS.

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

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74, items WQ422 through WQ449.

☐ - Permittee land applies biosolids in accordance with Standard Conditions III and a Department approved biosolids management plan.
☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

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

☒ - The facility is currently under enforcement action. The enforcement action is due to an inspection on September 16, 2010 where the facility was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses.
☐ - The facility is not currently under Water Protection Program enforcement action.

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

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

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:
- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

☐ - This permittee has an approved pretreatment program in accordance with the requirements of [40 CFR Part 403] and [10 CSR 20-6.100] and is expected to implement and enforce its approved program.
☒ - The permittee, at this time, is not required to have a Pretreatment Program or does not have an approved pretreatment program.

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ - A RPA was conducted on appropriate parameters. Please see APPENDIX – RPA RESULTS.
☐ - A RPA was not conducted for this facility.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ - Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].
☐ - Equivalent to Secondary Treatment is 65% removal [40 CFR Part 133.105(a)(3) & (b)(3)].

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

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

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

☐ - At this time, the Department recommends the US EPA's Guide for Evaluating Capacity, Management, Operation and Maintenance (CMOM) Programs At Sanitary Sewer Collection Systems (Document # EPA 305-B-05-002). The CMOM identifies some of the criteria used by the EPA to evaluate a collection system's management, operation and maintenance and was intended for use by the EPA, state, regulated community, and/or third party entities. The CMOM is applicable to small, medium, and large systems; both public and privately owned; and both regional and satellite collection systems. The CMOM does not substitute for the Clean Water Act, the Missouri Clean Water Law, and both federal and state regulations, as it is not a regulation.
☒ - This facility is not required to develop or implement a program for maintenance and repair of the collection system; however, it is a violation of Missouri State Environmental Laws and Regulations to allow untreated wastewater to discharge to waters of the state.

SCHEDULE OF COMPLIANCE (SOC):
Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), 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 a cost analysis.

☐ - The facility has been given a schedule of compliance to meet final effluent limits.
☒ - This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities; (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators,* (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

☐ - A SWPPP shall be developed and implemented for each site and shall incorporate required practices identified by the Department with jurisdiction, incorporate erosion control practices specific to site conditions, and provide for maintenance and adherence to the plan.
☒ - At this time, the permittee is not required to develop and implement a SWPPP.

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

☐ - This operating permit is drafted under premises of a petition for variance.
☒ - 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.

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

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☐ - A WLA study including model was submitted to the Department.
☒ - A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:
Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

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.

☐ - The permittee is required to conduct WET test for this facility.
☒ - 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 is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☐ - Bypasses occur or have occurred at this facility.
☒ - 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 facility discharges to a 303(d) listed stream.
☐ - This facility discharges to a stream with an EPA approved TMDL.
☒ - This facility does not discharge to a 303(d) listed stream.

Part VI –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 and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are 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. But 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 that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia 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. Current effluent limitations in this permit are:

Summer – 5.1 mg/L daily maximum, 1.2 mg/L monthly average.
Winter – 11.7 mg/L daily maximum, 2.2 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing will 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.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. 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 VII – Effluent Limits Determination

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

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

OUTFALL #001 – MAIN FACILITY OUTFALL
EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	NO	*/*
BOD_5	mg/L	1		30	20	NO	30/20
TSS	mg/L	1		30	20	NO	30/20
pH	SU	1		6.5 – 9.0		NO	6.5-9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3	5.1		1.3	YES	12.1/4.6
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3	13.7		2.2	YES	12.1/4.6
Dissolved Oxygen (DO)**	mg/L	1	*		*	NO	*/*
Escherichia coli	***	1, 3		630	126	NO	630/126
Chlorine, Total Residual	µg/L	1, 3	< 130		< 130	NO	< 130/ < 130

* - Monitoring requirement only.
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
*** - #/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 (includes RPA)
3. Water Quality Based Effluent Limits
4. Antidegradation Review
5. Antidegradation Policy
6. Water Quality Model
7. Best Professional Judgment
8. TMDL or Permit in lieu of TMDL
9. 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). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- Total Suspended Solids (TSS). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- pH. 6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

- Total Ammonia Nitrogen. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(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 = 1.5 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 1.5 mg/L (0.646) = 0.97 mg/L [CV = 1.09, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.189) = 2.29 mg/L [CV = 1.09, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 0.97 mg/L (5.28) = 5.1 mg/L [CV = 1.09, 99th Percentile]
AML = 0.97 mg/L (1.36) = 1.3 mg/L [CV = 1.09, 95th Percentile, n =30]

Winter: October 1 – March 31
Chronic WLA: C_e = 3.1 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 3.1 mg/L (0.357) = 1.11 mg/L [CV = 2.89, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.094) = 1.14 mg/L [CV = 2.89, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.11 mg/L (10.60) = 11.7 mg/L [CV = 2.89, 99th Percentile]
AML = 1.44 mg/L (2.00) = 2.2 mg/L [CV = 2.89, 95th Percentile, n =30]

- Dissolved Oxygen. Monitoring only 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.

- *Escherichia coli (E. coli)*. Monthly average of 126 per 100 mL as a geometric mean and Weekly Average of 630 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(5)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- 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]. No mixing considerations allowed; therefore, WLA = appropriate criterion.

Chronic WLA: C_e = 10 µg/L

Acute WLA: C_e = 19 µg/L

LTA_c = 10 (0.527) = 5.3 µg/L [CV = 0.6, 99th Percentile]
LTA_a = 19 (0.321) = 6.1 µg/L [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 5.3 (3.11) = 17 µg/L [CV = 0.6, 99th Percentile]
AML = 5.3 (1.55) = 8 µg/L [CV = 0.6, 95th Percentile, n = 4]

The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are 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.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
BOD_5	once/month	once/month
TSS	once/month	once/month
pH	once/month	once/month
Ammonia as N	once/month	once/month
E. coli	once/month	once/month
Total Residual Chlorine	once/month	once/month
Dissolved Oxygen	once/month	once/month

Sampling Frequency Justification:
Sampling and reporting frequency was retained from previous permit.

Sampling Type Justification:
As per 10 CSR 20-7.015, BOD_5, TSS, and WET test samples collected for mechanical plants shall be a 24 hour modified composite sample. Due to the small size of this facility this composite sample shall be 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. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and TRC. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia samples must be immediately preserved, these samples are to be collected as a grab.

Part VIII – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a "finding of affordability" on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

☐ - The Department is required to determine "findings of affordability" because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.
☒ - The Department is not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

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 is tentatively scheduled to begin in January or is in process.

DATE OF FACT SHEET: DECEMBER 15, 2014

COMPLETED BY:

ANGELA FALLS, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-1419
angela.falls@dnr.mo.gov

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt./10,000 PE or major fraction thereof.	0
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	0
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page ONE (1)	—	8

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	15
Stabilization ponds without aeration	5	
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical - following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	5
Dechlorination	2	2
On-site generation of disinfectant (except UV light)		
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	5
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	---	22
Total from page ONE (1)	---	8
Grand Total	---	30

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

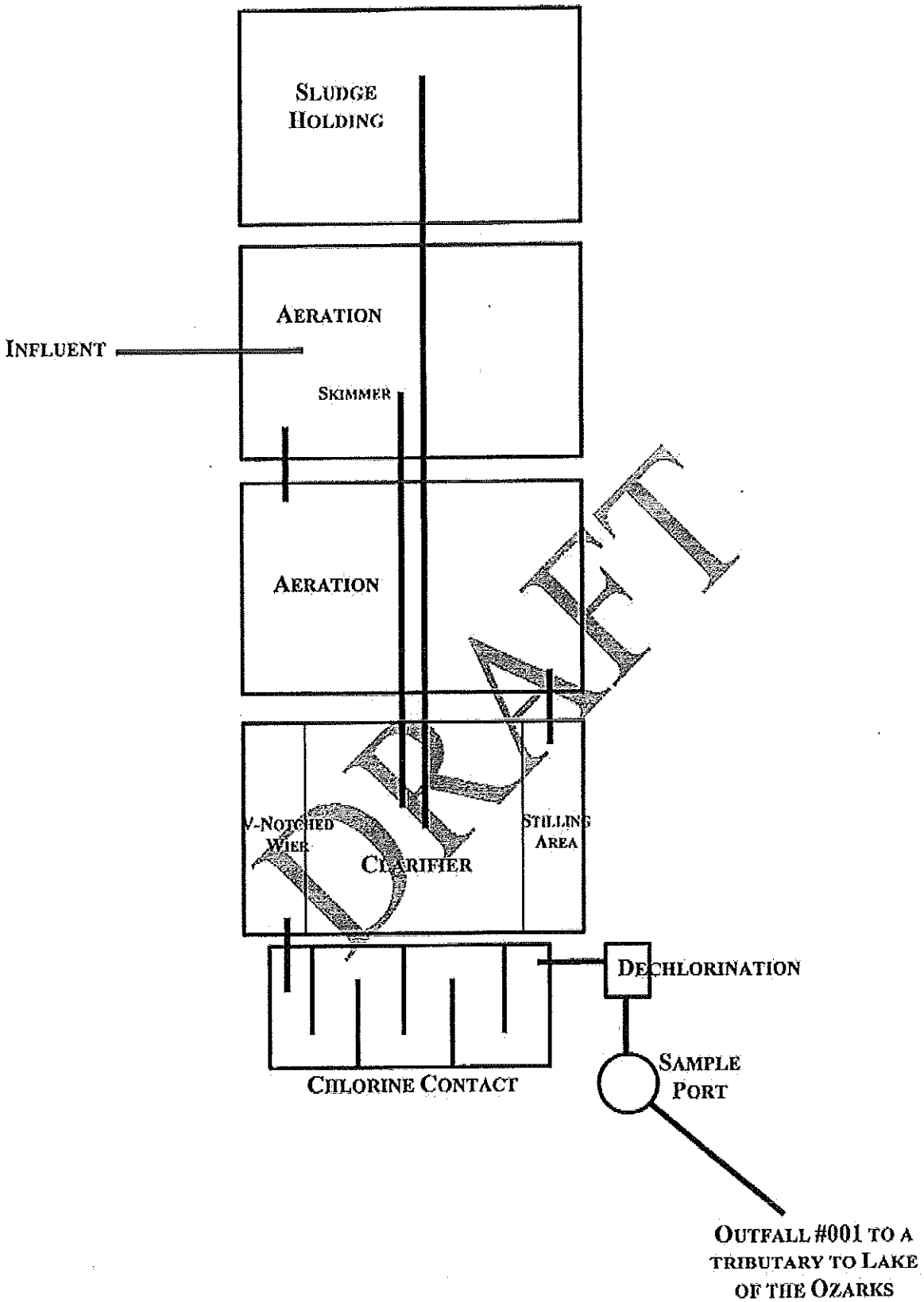
APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	10.59	1.5	10.59	28.00	3.37/0	1.09	3.14	YES
Total Ammonia as Nitrogen (Winter) mg/L	12.1	192.63	3.1	192.63	25.00	25/0.033	2.89	7.71	YES

N/A – Not Applicable
* - Units are (µg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX – PROCESS FLOW DIAGRAM:



Cedar Heights Condominiums
MO0129038, Camden County

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

JAN 27 2015

Camden County PWSD No. 5
P.O. Box 556
Camdenton, MO 65020

Subject: Public Notice for Proposed State Operating Permit for Cedar Heights Condominiums

Dear Permittee:

The enclosed public notice pertains to your proposed State Operating Permit.

Federal regulations required issuance of this public notice to inform interested persons of the agency's intent to issue an operating permit to discharge, and allows a 30-day period for comment. This public notice package should be posted on a bulletin board at your place of business. If response to the public notice indicates significant interest, a public hearing or adjudicatory hearing may be held. Based on comments received, or the results of a hearing, the proposed permit will be modified and issued or possibly denied.

Any questions you may have should be sent to the address indicated on the enclosed public notice.

Sincerely,

WATER PROTECTION PROGRAM

John Madras

John Madras
Director

JM/nb

Enclosure

Missouri Department of Natural Resources

PUBLIC NOTICE

DRAFT MISSOURI STATE OPERATING PERMIT

DATE: January 30, 2015

In accordance with the state Clean Water Law, Chapter 644, RSMo, Missouri Clean Water Commission regulation 10 CSR 20-6.010, and the Federal Clean Water Act, the applicants listed herein have applied for authorization to either discharge to waters of the state, or to operate a no-discharge wastewater treatment facility. The proposed permits for these operations are consistent with applicable water quality standards, effluent standards and/or treatment requirements or suitable timetables to meet these requirements (see 10 CSR 20-7.015 and 7.031). All permits will be issued for a period of five years unless noted otherwise in the Public Notice for that discharge.

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

Persons wishing to comment on the proposed permit conditions are invited to submit them in writing to: Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, ATTN: NPDES Permits and Engineering Section/Permit Comments. **Please include the permit number in all comment letters.**

Comments should be confined to the issues relating to the proposed action and permit(s) and the effect on water quality. The MDNR may not consider as relevant comments or objections to a permit based on issues outside the authority of the Missouri Clean Water Commission, (see Curdt v. Mo. Clean Water Commission, 586 S.W.2d 58 Mo. App. 1979).

All comments must be received or postmarked by 5:00 p.m. on March 02, 2015. MDNR will consider all written comments, including e-mails, faxes and letters, in the formulation of all final determinations regarding the applications. E-mail comments will be accepted at the following address: publicnoticenpdes@dnr.mo.gov. If response to this notice indicates significant public interest, a public meeting or hearing may be held after due notice for the purpose of receiving public comment on the proposed permit or determination. Public hearings and/or issuance of the permit will be conducted or processed according to 10 CSR 20-6.020.

Copies of all draft permits and other information including copies of applicable regulations are available for inspection and copying at MDNR's Website: http://www.dnr.mo.gov/env/wpp/permits/permit-pn.htm, or at the Missouri Department of Natural Resources, Water Protection Program, P.O. Box 176, Jefferson City, Missouri 65102, between the hours of 8:00 a.m. and 5:00 p.m., Monday through Friday.

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-0129038
Owner:	Camden County Public Water District No. 5
Address:	P.O. Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Cedar Heights Condominiums Wastewater Treatment Facility
Facility Address:	Northwest of Cedar Heights Dr. and Hwy 54 intersection, Camdenton, MO 65020
Legal Description:	NW ¼, NW ¼, Sec 34, T38N, R17W, Camden County
UTM Coordinates:	X= 518185, Y= 4205373
Receiving Stream:	Tributary to Lake of the Ozarks
First Classified Stream and ID:	Lake of the Ozarks (L2) (7205)
USGS Basin & Sub-watershed No.:	(10290110-0403)

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator.
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding tank / sludge disposal by contract hauler.
Design population equivalent is 847.
Design flow is 72,000 gallons per day.
Actual flow is 7,400 gallons per day.
Design sludge production is 15.2 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 621.250 RSMo. Section 640.013 RSMo and Section 644.051.6 of the Law.

Effective Date

Sara Parker Pauley, Director, Department of Natural Resources

Expiration Date

John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 on Effective Date 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/month	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		30	20	once/month	composite**
Total Suspended Solids	mg/L		30	20	once/month	composite**
pH – Units	SU	***		***	once/month	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	5.1 11.7		1.3 2.2	once/month	grab
E. coli (Note 1)	#/100mL		630	126	once/month	grab
Total Residual Chlorine (Note 2)	µg/L	< 130		< 130	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX. 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 (Note 2)	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX.

* 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.

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

(a) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit. 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.

(b) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months and an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary.

(c) Do not chemically de-chlorinate if it is not needed to meet the limits in your permit.

(d) If no chlorine was used in a given sampling period, an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary. Simply report as "0 µg/L" for TRC and "NA" for DO.

TABLE B
INFLUENT MONITORING REQUIREMENTS

The facility is required to meet a removal efficiency of 85% or more as a monthly average. The monitoring requirements shall become effective on Effective Date and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand$_5$	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MONTH 28, 20XX.			

** 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.

C. STANDARD CONDITIONS

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

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of 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 has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at http://dnr.mo.gov/pubs/pub2481.htm.

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.

D. SPECIAL CONDITIONS (continued)

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

6. 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. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
   (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

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

10. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.

D. SPECIAL CONDITIONS (continued)

11. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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

13. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

14. 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.

15. 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.

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

17. 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.

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
dnr.mo.gov

February 11, 2015

Camden County PWSD No. 5
Cedar Heights Condominiums
P.O. Box 556
Camdenton, MO 65020

RE: MISSOURI STATE OPERATING PERMIT # MO0129038

Dear Permittee:

In reviewing the file for your wastewater or storm water facility I note that you have failed to submit the Annual Discharge Monitoring Report (DMR) for **the month of December 2014** required by your Missouri State Operating Permit (MSOP). Your report is due in our office no later than the 28th day of the month following the report period.

A completed monitoring report with the required information should be submitted to this agency within five (5) days from the date of this letter or in writing within 15 calendar days of receipt of this letter, identify the reasons for the violations and corrective actions you have taken or will take.

The Department of Natural Resources (Department) monitors and tracks instances of noncompliance related to DMRs. All facilities that are significantly non-compliant are reported to the Environmental Protection Agency and the Department then takes action to ensure their return to compliance. It is the policy of this office to require facilities with a history of noncompliance to sign a Schedule of Compliance that outlines corrective measures to be taken within a specified time period. You are encouraged to take appropriate steps to eliminate the current violation.

If you have questions please contact me by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Lana Cypret

Lana Cypret
Technical Assistant

LGC/ryc

c: Ms. Joan Doerhoff, Water Pollution Control Branch, Enforcement
Mr. Jake Waters, Southwest Regional Office

029.wpcp.CedarHeightsCondos.mo0129038.x.2015.02.11.fy15.dmr.x.lgc

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

March 6, 2015

Camden Co Pwsd # 5 - Clearwater Condos
Kristina Henry
Po Box 556
Camdenton, MO 65020-0000

PWS ID# MO3302557

Important Compliance Information

RE: **2014 Consumer Confidence Report**

Dear Ms. Henry:

The 2014 Consumer Confidence Report (CCR) for your water system will be available by April 1, 2015. The Public Drinking Water Branch (PDWB) will develop a "skeleton" 2014 CCR for community water systems that will be hosted on the department's website. The CCR and instructions will be emailed to the CCR Contact listed below on file for your water system.

CCR Contact Person: BURTON, BONNIE
CCR Contact Email: bonniejburton@gmail.com

If there is no CCR Contact person and/or email listed above, or the information needs to be updated, please contact us by phone, at (573) 526-3832 or by email, at CCR@dnr.mo.gov.

To obtain access to the 2014 CCR for your system and instructions, including the newly-revised Certification form, please visit our website at http://dnr.mo.gov/ccr/ccr.htm.

A seven (7) minute YouTube video is available to explain the electronic CCR (eCCR) process and distribution method at: https://www.youtube.com/watch?v=cMvi4O5HoFs.

If you do not have internet access, you may request a paper copy of the CCR packet by calling the CCR Coordinator at (573) 526-3832.

Sincerely,

WATER PROTECTION PROGRAM

Matt Kliethermes
Environmental Specialist
Public Drinking Water Branch

MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM

FORM S – SECTION 1. DOMESTIC SLUDGE REPORTING

GENERAL INFORMATION

REPORTING PERIOD: (YEAR)

2015

FACILITY NAME	CITY NAME
Clearwater Condominiums	Camdenton
PERMIT NUMBER	**COUNTY NAME**
MO-0126985	Camden

INSTRUCTIONS: See attached instruction sheet for directions.

1. Sludge Production, including sludge received from others:

ACTUAL DRY TONS/YEAR	ACTUAL POPULATION EQUIVALENT
0	755

2. Sludge Treatment

- ☐ Anaerobic Digester
- ☑ Aerobic Digester
- ☐ Composting
- ☐ Storage Tank
- ☐ Air or Heat Drying
- ☐ Lime Stabilization
- ☐ Other, Describe: _____

3. Sludge Use or Disposal: Complete the rest of this form only for the sections applicable to your method of sludge and biosolids use or disposal.

X All Permittees	Complete Section 1
☐ Land Application (LA)	Complete Sections 2 and 3
☐ Contract Hauler (CH) >150 PE	Complete Sections 2 and 4
☐ Contract Hauler (CH) <150 PE	Complete Section 4
☐ Hauled to another Treatment Facility (HT)	Complete Section 4
☐ Solid Waste Landfill (LF)	Complete Section 4
☐ Sludge Disposal Lagoon (SD)	Complete Section 5
☐ Incineration (IN)	Complete Section 6
☐ Sludge Hauled to Incinerator (IO)	Complete Section 6

4. Certification: I certify under penalty of law that the information contained in this report and attachments are true and correct. This determination has been made under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information used to determine these requirements have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

NAME (PRINT OR TYPE)	OFFICIAL TITLE	
SIGNATURE	DATE	TELEPHONE NUMBER WITH AREA CODE

MO 780-1836 (11-09)

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

MAR 1 8 2015

Camden County Public Water District No. 5
P.O. Box 556
Camdenton, MO 65020

Dear Permittee:

Pursuant to the Federal Water Pollution Control Act, under the authority granted to the State of Missouri and in compliance with the Missouri Clean Water Law, we have issued and are enclosing your State Operating Permit to discharge from Cedar Heights Condominiums WWTF.

Please read your permit and attached Standard Conditions. They contain important information on monitoring requirements, effluent limitations, sampling frequencies and reporting requirements.

Monitoring reports required by the special conditions must be submitted on a periodic basis. Copies of the necessary report forms are enclosed and should be mailed to your regional office. Please contact that office for additional forms.

This permit may include requirements with which you may not be familiar. If you would like the department to meet with you to discuss how to satisfy the permit requirements, an appointment can be set up by contacting your local regional office at 417-891-4300. These visits are called Compliance Assistance Visits and focus on explaining the requirements to the permit holder.

This permit is both your Federal NPDES Permit and your new Missouri State Operating Permit and replaces all previous State Operating Permits issued for this facility under this permit number. In all future correspondence regarding this facility, please refer to your State Operating Permit number and facility name as shown on page one of the permit.

If you were adversely affected by this decision, you may be entitled to an appeal before the Administrative Hearing Commission (ACH) pursuant to 10 CSR 20-1.020 and Section 621.250, RSMo. To appeal, you must file a petition with the ACH within thirty days after the date this decision was mailed or the date it was delivered, whichever date was earlier. If any such petition is sent by registered mail or certified mail, it will be deemed filed on the date it is mailed; if it is sent by any method other than registered mail or certified mail, it will be deemed filed on the date it is received by the ACH. Contact information for the AHC is: Administrative Hearing Commission, Truman State Office Building, Room 640, 301 W. High Street, P.O. Box 1557, Jefferson City, Missouri 65102, Phone: 573-751-2422, Fax: 573-751-5018, and Website: www.oa.mo.gov/ahc.

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-0129038
Owner:	Camden County Public Water District No. 5
Address:	P.O. Box 556, Camdenton, MO 65020
Continuing Authority:	Same as above
Address:	Same as above
Facility Name:	Cedar Heights Condominiums Wastewater Treatment Facility
Facility Address:	Northwest of Cedar Heights Dr. and Hwy 54 intersection, Camdenton, MO 65020
Legal Description:	NW ¼, NW ¼, Sec. 34, T38N, R17W, Camden County
UTM Coordinates:	X= 518185, Y= 4205373
Receiving Stream:	Tributary to Lake of the Ozarks
First Classified Stream and ID:	Lake of the Ozarks (L2) (7205)
USGS Basin & Sub-watershed No.:	(10290110-0403)

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

FACILITY DESCRIPTION

Outfall #001 – POTW – SIC #4952
The use or operation of this facility shall be by or under the supervision of a Certified "C" Operator.
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding tank / sludge disposal by contract hauler.
Design population equivalent is 847.
Design flow is 72,000 gallons per day.
Actual flow is 7,400 gallons per day.
Design sludge production is 15.2 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 621.250 RSMo, Section 640.013 RSMo and Section 644.051.6 of the Law.

April 1, 2015
Effective Date

Sara Parker Pauley
Sara Parker Pauley, Director, Department of Natural Resources

June 30, 2019
Expiration Date

John Madras
John Madras, Director, Water Protection Program

OUTFALL #001	TABLE A FINAL EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

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 on April 1, 2015, 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/month	24 hr. estimate
Biochemical Oxygen Demand$_5$	mg/L		30	20	once/month	composite**
Total Suspended Solids	mg/L		30	20	once/month	composite**
pH – Units	SU	***		***	once/month	grab
Ammonia as N (April 1 – Sept 30) (Oct 1 – March 31)	mg/L	5.1 11.7		1.3 2.2	once/month	grab
E. coli (Note 1)	#/100mL		630	126	once/month	grab
Total Residual Chlorine (Note 2)	µg/L	< 130		< 130	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MAY 28, 2015. 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 (Note 2)	mg/L	*		*	once/month	grab

MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MAY 28, 2015.

* 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.

Note 1 - Effluent limitations and monitoring requirements for *E. coli* are applicable only during the recreational season from April 1 through October 31. The Monthly Average Limit for *E. coli* is expressed as a geometric mean. The Weekly Average for *E. coli* will be expressed as a geometric mean if more than one (1) sample is collected during a calendar week (Sunday through Saturday).

Note 2 - This permit contains a Total Residual Chlorine (TRC) limit.

(a) The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are below the minimum quantification level (ML) of the most common and practical EPA approved CL TRC 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. The minimum quantification level does not authorize the discharge of chlorine in excess of the effluent limits stated in the permit. 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.

(b) Disinfection is required during the recreational season from April 1 through October 31. Do not chlorinate during the non-recreational months and an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary.

(c) Do not chemically de-chlorinate if it is not needed to meet the limits in your permit.

(d) If no chlorine was used in a given sampling period, an actual analysis for TRC and Dissolved Oxygen (DO) is not necessary. Simply report as "0 µg/L" for TRC and "NA" for DO.

TABLE B
INFLUENT MONITORING REQUIREMENTS

The facility is required to meet a removal efficiency of 85% or more as a monthly average. The monitoring requirements shall become effective on Effective Date and remain in effect until expiration of the permit. To determine removal efficiencies, the influent wastewater shall be monitored by the permittee as specified below:

SAMPLING LOCATION AND PARAMETER(S)	UNITS	MONITORING REQUIREMENTS	
		MEASUREMENT FREQUENCY	SAMPLE TYPE
Biochemical Oxygen Demand$_5$	mg/L	once/month	composite**
Total Suspended Solids	mg/L	once/month	composite**
MONITORING REPORTS SHALL BE SUBMITTED MONTHLY; THE FIRST REPORT IS DUE MAY 28, 2015.			

** 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.

C. STANDARD CONDITIONS

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

D. SPECIAL CONDITIONS

1. This permit establishes final ammonia limitations based on Missouri's current Water Quality Standard. On August 22, 2013, the U.S. Environmental Protection Agency (EPA) published a notice in the Federal Register announcing of 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 has initiated stakeholder discussions on how to best incorporate these new criteria into the State's rules. A date for when this rule change will occur has not been determined. Also, refer to Section VI of this permit's factsheet for further information including estimated future effluent limits for this facility. It is recommended the permittee view the Department's 2013 EPA criteria Factsheet located at http://dnr.mo.gov/pubs/pub2481.htm.

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.

D. SPECIAL CONDITIONS (continued)

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

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

7. Reporting of Non-Detects:
   (a) An analysis conducted by the permittee or their contracted laboratory shall be conducted in such a way that the precision and accuracy of the analyzed result can be enumerated.
   (b) The permittee shall not report a sample result as "Non-Detect" without also reporting the detection limit of the test. Reporting as "Non Detect" without also including the detection limit will be considered failure to report, which is a violation of this permit.
   (c) The permittee shall provide the "Non-Detect" sample result using the less than sign and the minimum detection limit (e.g. <10).
   (d) The permittee shall use one-half of the detection limit for the non-detect result when calculating monthly averages.
   (e) See Standard Conditions Part I, Section A, #4 regarding proper detection limits used for sample analysis.

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

9. The permittee shall comply with any applicable requirements listed in 10 CSR 20-9, unless the facility has received written notification that the Department has approved a modification to the requirements. The monitoring frequencies contained in this permit shall not be construed by the permittee as a modification of the monitoring frequencies listed in 10 CSR 20-9. If a modification of the monitoring frequencies listed in 10 CSR 20-9 is needed, the permittee shall submit a written request to the Department for review and, if deemed necessary, approval.

D. SPECIAL CONDITIONS (continued)

10. Bypasses are not authorized at this facility unless they meet the criteria in 40 CFR 122.41(m). If a bypass occurs, the permittee shall report in accordance to 40 CFR 122.41(m)(3)(i), and with Standard Condition Part I, Section B, subsection 2.b. Bypasses are to be reported to the Southwest Regional Office during normal business hours or the Environmental Emergency Response hotline at 573-634-2436 outside of normal business hours. Blending, which is the practice of combining a partially-treated wastewater process stream with a fully-treated wastewater process stream prior to discharge, is not considered a form of bypass. If the permittee wishes to utilize blending, the permittee shall file an application to modify this permit to facilitate the inclusion of appropriate monitoring conditions.

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

12. At least one gate must be provided to access the wastewater treatment facility and provide for maintenance and mowing. The gate shall remain closed except when temporarily opened by; the permittee to access the facility, perform operational monitoring, sampling, maintenance, mowing, or for inspections by the Department. The gate shall be closed and locked when the facility is not staffed.

13. 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.

14. 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.

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

16. 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 THE PURPOSE OF RENEWAL
OF
MO-0129038
CEDAR HEIGHTS CONDOMINIUMS WASTEWATER TREATMENT FACILITY

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

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

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

This Factsheet is for a Minor.

Part I – Facility Information

Facility Type: POTW - SIC #4952

Facility Description:
Flow equalization basin / extended aeration / chlorination / dechlorination / sludge holding tank / sludge disposal by contract hauler.

Application Date: 11/18/14
Expiration Date: 06/21/14

OUTFALL(S) TABLE:

OUTFALL	DESIGN FLOW (CFS)	TREATMENT LEVEL	EFFLUENT TYPE
#001	0.11	Secondary	Domestic

Facility Performance History:
This facility was inspected on September 16, 2010 and was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses. The facility was later placed under an enforcement action. This facility was last inspected on June 7, 2012. The conditions of the facility at that time were found to be satisfactory. A review of monitoring reports submitted by the facility show no effluent limit exceedances in the past five years, but reports were missing for October 2010, December 2010, January 2011, August 2011, and December 2013.

Comments:
The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums. Special conditions were updated to include reporting of Non-detects and bypass reporting requirements. Also, because the receiving stream was incorrectly listed as Lake of the Ozarks on the previous permit, the permit writer has corrected the receiving stream information to a tributary to Lake of the Ozarks in this permit.

Part II – Operator Certification Requirements

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

Owned or operated by or for a

☒ - Public Water Supply Districts

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

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

Operator's Name: James Heppler
Certification Number: 5092
Certification Level: C

The listing of the operator above only signifies that staff drafting this operating permit have reviewed appropriate Department records and determined that the name listed on the operating permit application has the correct and applicable Certification Level.

Part III– Operational Monitoring

☒ - As per [10 CSR 20-9.010(4))], the facility is required to conduct operational monitoring.

Part IV – Receiving Stream Information

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(4)].

RECEIVING STREAM(S) TABLE: OUTFALL #001

WATER-BODY NAME	CLASS	WBID	DESIGNATED USES*	12-DIGIT HUC	DISTANCE TO CLASSIFIED SEGMENT (MI)
Tributary to Lake of the Ozarks	NA	NA	General Criteria	10290110-0403	0.25
Lake of the Ozarks	L2	7205	IRR, LWW, AQL, HHP, WBC-A, SCR		

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

RECEIVING STREAM(S) LOW-FLOW VALUES:

RECEIVING STREAM (C, E, P, P1)	LOW-FLOW VALUES (CFS)		
	1Q10	7Q10	30Q10
Tributary to Lake of the Ozarks (L2)	0.0	0.0	0.0

MIXING CONSIDERATIONS
Mixing Zone: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(a)].
Zone of Initial Dilution: Not Allowed [10 CSR 20-7.031(5)(A)4.B.(I)(b)].

RECEIVING STREAM MONITORING REQUIREMENTS:
No receiving water monitoring requirements recommended at this time.

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

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

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

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

☒ - Limitations in this operating permit for the reissuance of this permit conform to the anti-backsliding provisions of Section 402(o) of the Clean Water Act, and 40 CFR Part 122.44. Information is available which was not available at the time of permit issuance (other than revised regulations, guidance, or test methods) and which would have justified the application of a less stringent effluent limitation at the time of permit issuance. The WET Test requirement has been removed from this permit due to no reasonable potential for a water quality exceedance as this facility serves condominiums.

ANTIDEGRADATION:
In accordance with Missouri's Water Quality Standard [10 CSR 20-7.031(3)], the Department is to document by means of Antidegradation Review that the use of a water body's available assimilative capacity is justified. Degradation is justified by documenting the socio-economic importance of a discharging activity after determining the necessity of the discharge.

☒ - No degradation proposed and no further review necessary. Facility did not apply for authorization to increase pollutant loading or to add additional pollutants to their discharge.

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

BIOSOLIDS & SEWAGE SLUDGE:
Biosolids are solid materials resulting from domestic wastewater treatment that meet federal and state criteria for beneficial uses (i.e. fertilizer). Sewage sludge is solids, semi-solids, or liquid residue generated during the treatment of domestic sewage in a treatment works; including but not limited to, domestic septage; scum or solids removed in primary, secondary, or advanced wastewater treatment process; and a material derived from sewage sludge. Sewage sludge does not include ash generated during the firing of sewage sludge in a sewage sludge incinerator or grit and screening generated during preliminary treatment of domestic sewage in a treatment works. Additional information regarding biosolids and sludge is located at the following web address: http://extension.missouri.edu/main/DisplayCategory.aspx?C=74, items WQ422 through WQ449.

☒ - Permittee is not authorized to land apply biosolids. Sludge/biosolids are removed by contract hauler.

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

☒ - The facility is currently under enforcement action. The enforcement action is due to an inspection on September 16, 2010 where the facility was found to be non-compliant for the following violations: excessive sludge in the clarifier, failure to apply for a construction permit as required in the operating permit, caused pollution to an unnamed tributary to Lake of the Ozarks, receiving stream has significant area of stream bottom covered with sludge deposits, and failure to provide notification to the department for all bypasses.

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

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

Several special conditions pertaining to the permittee's pretreatment program may be included in the permit, and are as follows:
- Implementation and enforcement of the program,
- Annual pretreatment report submittal,
- Submittal of list of industrial users,
- Technical evaluation of need to establish local limitations, and
- Submittal of the results of the evaluation

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

REASONABLE POTENTIAL ANALYSIS (RPA):
Federal regulation [40 CFR Part 122.44(d)(1)(i)] requires effluent limitations for all pollutants that are or may be discharged at a level that will cause or have the reasonable potential to cause or contribute to an in-stream excursion above narrative or numeric water quality standard.

In accordance with [40 CFR Part 122.44(d)(1)(iii)] if the permit writer determines that any given pollutant has the reasonable potential to cause, or contribute to an in-stream excursion above the WQS, the permit must contain effluent limits for that pollutant.

☒ - A RPA was conducted on appropriate parameters. Please see APPENDIX – RPA RESULTS.

REMOVAL EFFICIENCY:
Removal efficiency is a method by which the Federal Regulations define Secondary Treatment and Equivalent to Secondary Treatment, which applies to Biochemical Oxygen Demand 5-day (BOD_5) and Total Suspended Solids (TSS) for Publicly Owned Treatment Works (POTWs)/municipals.

☒ - Secondary Treatment is 85% removal [40 CFR Part 133.102(a)(3) & (b)(3)].

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

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

Missouri RSMo §644.026.1.(13) mandates that the Department issue permits for discharges of water contaminants into the waters of this state, and also for the operation of sewer systems. Such permit conditions shall ensure compliance with all requirements as established by sections 644.006 to 644.141. Standard Conditions Part I, referenced in the permit, contains provisions requiring proper operation and maintenance of all facilities and systems of treatment and control. Missouri RSMo §644.026.1.(15) instructs the Department to require proper maintenance and operation of treatment facilities and sewer systems and proper disposal of residual waste from all such facilities. To ensure that public health and the environment are protected, any noncompliance which may endanger public health or the environment must be reported to the Department within 24 hours of the time the permittee becomes aware of the noncompliance. Standard Conditions Part I, referenced in the permit, contains the reporting requirements for the permittee when bypasses and upsets occur. The permit also contains requirements for permittees to develop and implement a program for maintenance and repair of the collection system. The permit requires that the permittee submit an annual report to the Department for the previous calendar year that contains a list of all SSOs and building backups (locations, features of collection system where the SSO/building backup occurred, volumes, durations, receiving stream, causes, mitigation efforts, and actions to prevent reoccurrences), a summary of efforts taken by the permittee to locate and eliminate sources of excess I & I, a summary of general maintenance and repairs to the collection system, and a summary of any planned maintenance and repairs to the collection system for the upcoming calendar year.

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

SCHEDULE OF COMPLIANCE (SOC):

Per 644.051.4 RSMo, a permit may be issued with a Schedule of Compliance (SOC) to provide time for a facility to come into compliance with new state or federal effluent regulations, water quality standards, or other requirements. Such a schedule is not allowed if the facility is already in compliance with the new requirement, or if prohibited by other statute or regulation. A SOC includes an enforceable sequence of interim requirements (actions, operations, or milestone events) leading to compliance with the Missouri Clean Water Law, its implementing regulations, and/or the terms and conditions of an operating permit. *See also* Section 502(17) of the Clean Water Act, and 40 CFR §122.2. For new effluent limitations, the permit includes interim monitoring for the specific parameter to demonstrate the facility is not already in compliance with the new requirement. Per 40 CFR § 122.47(a)(1) and 10 CSR 20-7.031(11), 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 a cost analysis.

☒ - This permit does not contain a SOC.

STORMWATER POLLUTION PREVENTION PLAN (SWPPP):
In accordance with 40 CFR 122.44(k) *Best Management Practices (BMPs)* to control or abate the discharge of pollutants when: (1) Authorized under section 304(e) of the Clean Water Act (CWA) for the control of toxic pollutants and hazardous substances from ancillary industrial activities: (2) Authorized under section 402(p) of the CWA for the control of stormwater discharges; (3) Numeric effluent limitations are infeasible; or (4) the practices are reasonably necessary to achieve effluent limitations and standards or to carry out the purposes and intent of the CWA.

In accordance with the EPA's *Developing Your Stormwater Pollution Prevention Plan, A Guide for Industrial Operators*, (Document number EPA 833-B-09-002) [published by the United States Environmental Protection Agency (USEPA) in February 2009], BMPs are measures or practices used to reduce the amount of pollution entering (regarding this operating permit) waters of the state. BMPs may take the form of a process, activity, or physical structure.

Additionally in accordance with the Stormwater Management, a SWPPP is a series of steps and activities to (1) identify sources of pollution or contamination, and (2) select and carry out actions which prevent or control the pollution of stormwater discharges.

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

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

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

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:

$$Ce = \frac{(Qe+Qs)C-(Cs\times Qs)}{(Qe)}$$ (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

WLA MODELING:
There are two general types of effluent limitations, technology-based effluent limits (TBELs) and water quality based effluent limits (WQBELs). If TBELs do not provide adequate protection for the receiving waters, then WQBEL must be used.

☒ - A WLA study was either not submitted or determined not applicable by Department staff.

WATER QUALITY STANDARDS:
Per [10 CSR 20-7.031(4)], General Criteria shall be applicable to all waters of the state at all times including mixing zones. Additionally, [40 CFR 122.44(d)(1)] directs the Department to establish in each NPDES permit to include conditions to achieve water quality established under Section 303 of the Clean Water Act, including State narrative criteria for water quality.

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

40 CFR 122.41(M) - BYPASSES:
The federal Clean Water Act (CWA), Section 402 prohibits wastewater dischargers from "bypassing" untreated or partially treated sewage (wastewater) beyond the headworks. A bypass is defined as an intentional diversion of waste streams from any portion of a treatment facility, [40 CFR 122.41(m)(1)(i)]. Additionally, Missouri regulation 10 CSR 20-7.015(9)(G) states a bypass means the intentional diversion of waste streams from any portion of a treatment facility, except in the case of blending, to waters of the state. Only under exceptional and specified limitations do the federal regulations allow for a facility to bypass some or all of the flow from its treatment process. Bypasses are prohibited by the CWA unless a permittee can meet all of the criteria listed in 40 CFR 122.41(m)(4)(i)(A), (B), & (C). Any bypasses from this facility are subject to the reporting required in 40 CFR 122.41(l)(6) and per Missouri's Standard Conditions I, Section B, part 2.b. Additionally, Anticipated Bypasses include bypasses from peak flow basins or similar devices designed for peak wet weather flows.

☒ - This facility does not anticipate bypassing.

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 facility does not discharge to a 303(d) listed stream.

Part VI –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 and gill breathing snails. Missouri's current ammonia criteria are based on toxicity testing of several species, but did not include data from mussels or gill breathing snails. Missouri is home to 69 of North America's mussel species, which are spread across the state. According to the Missouri Department of Conservation nearly two-thirds of the mussel species in Missouri are considered to be "of conservation concern". Nine species are listed as federally endangered, with an additional species currently proposed as endangered and another species proposed as threatened.

The adult forms of mussels that are 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. But 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 that are native to Missouri and their sensitivity to ammonia.

Many treatment facilities in Missouri are currently scheduled to be upgraded to comply with the current water quality standards. But these new ammonia 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. Current effluent limitations in this permit are:

Summer – 5.1 mg/L daily maximum, 1.3 mg/L monthly average.
Winter – 11.7 mg/L daily maximum, 2.2 mg/L monthly average.

Under the new EPA criteria, where mussels of the family Unionidae are present or expected to be present, the estimated effluent limitations for a facility in a location such as this that discharges to a receiving stream with no mixing will 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.

Actual effluent limits will depend in part on the actual performance of the facility.

Operating permits for facilities in Missouri must be written based on current statutes and regulations. Therefore permits will be written with the existing effluent limitations until the new standards are adopted. To aid permittees in decision making, an advisory will be added to permit Fact Sheets notifying permittees of the expected effluent limitations for ammonia. 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 VII – Effluent Limits Determination

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

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

OUTFALL #001 – MAIN FACILITY OUTFALL
EFFLUENT LIMITATIONS TABLE:

PARAMETER	Unit	Basis for Limits	Daily Maximum	Weekly Average	Monthly Average	Modified	Previous Permit Limitations
Flow	MGD	1	*		*	No	*/*
BOD_5	mg/L	1		30	20	No	30/20
TSS	mg/L	1		30	20	No	30/20
pH	SU	1	6.5 – 9.0			No	6.5-9.0
Ammonia as N (April 1 – Sept 30)	mg/L	2, 3	5.1		1.3	Yes	12.1/4.6
Ammonia as N (Oct 1 – March 31)	mg/L	2, 3	11.7		2.2	Yes	12.1/4.6
Dissolved Oxygen (DO)**	mg/L	7	*		*	No	*/*
Escherichia coli	***	1, 3		630	126	No	630/126
Chlorine, Total Residual	µg/L	1, 3	< 130		< 130	No	< 130/ < 130

* - Monitoring requirement only,
** - For DO the Daily Maximum is a Daily Minimum and the Monthly Average is a Monthly Average Minimum.
*** - #/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 (includes RPA)
3. Water Quality Based Effluent Limits
4. Antidegradation Review
5. Antidegradation Policy
6. Water Quality Model
7. Best Professional Judgment
8. TMDL or Permit in lieu of TMDL
9. 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). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- Total Suspended Solids (TSS). Effluent limitations have been retained from previous state operating permit, please see the APPLICABLE DESIGNATION OF WATERS OF THE STATE sub-section of the **Effluent Limits Determination.**

- pH. 6.5-9.0 SU. Technology based effluent limitations of 6.0-9.0 SU [10 CSR 20-7.015] are not protective of the Water Quality Standard, which states that water contaminants shall not cause pH to be outside the range of 6.5-9.0 SU. No mixing zone is allowed due to the classification of the receiving stream, therefore the water quality standard must be met at the outfall.

- Total Ammonia Nitrogen. Early Life Stages Present Total Ammonia Nitrogen criteria apply [10 CSR 20-7.031(5)(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 = 1.5 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 1.5 mg/L (0.646) = 0.97 mg/L [CV = 1.09, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.189) = 2.29 mg/L [CV = 1.09, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 0.97 mg/L (5.28) = 5.1 mg/L [CV = 1.09, 99th Percentile]
AML = 0.97 mg/L (1.36) = 1.3 mg/L [CV = 1.09, 95th Percentile, n =30]

Winter: October 1 – March 31
Chronic WLA: C_e = 3.1 mg/L

Acute WLA: C_e = 12.1 mg/L

LTA_c = 3.1 mg/L (0.357) = 1.11 mg/L [CV = 2.89, 99th Percentile, 30 day avg.]
LTA_a = 12.1 mg/L (0.094) = 1.14 mg/L [CV = 2.89, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 1.11 mg/L (10.60) = 11.7 mg/L [CV = 2.89, 99th Percentile]
AML = 1.44 mg/L (2.00) = 2.2 mg/L [CV = 2.89, 95th Percentile, n =30]

- Dissolved Oxygen. Monitoring only 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.

- *Escherichia coli (E. coli)*. Monthly average of 126 per 100 mL as a geometric mean and Weekly Average of 630 per 100 mL as a geometric mean during the recreational season (April 1 – October 31), to protect Whole Body Contact Recreation (A) designated use of the receiving stream, as per 10 CSR 20-7.031(5)(C). An effluent limit for both monthly average and weekly average is required by 40 CFR 122.45(d).

- 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]. No mixing considerations allowed; therefore, WLA = appropriate criterion.

Chronic WLA: C_e = 10 µg/L

Acute WLA: C_e = 19 µg/L

LTA_c = 10 (0.527) = 5.3 µg/L [CV = 0.6, 99th Percentile]
LTA_a = 19 (0.321) = 6.1 µg/L [CV = 0.6, 99th Percentile]

Use most protective number of LTA_c or LTA_a.

MDL = 5.3 (3.11) = 17 µg/L [CV = 0.6, 99th Percentile]
AML = 5.3 (1.55) = 8 µg/L [CV = 0.6, 95th Percentile, n = 4]

The Water Quality Based Effluent Limit for Total Residual Chlorine was calculated to be 17 µg/L (daily maximum limit) and 8 µg/L (monthly average limit). These limits are 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.

Minimum Sampling and Reporting Frequency Requirements.

PARAMETER	SAMPLING FREQUENCY	REPORTING FREQUENCY
Flow	once/month	once/month
BOD_5	once/month	once/month
TSS	once/month	once/month
pH	once/month	once/month
Ammonia as N	once/month	once/month
E. coli	once/month	once/month
Total Residual Chlorine	once/month	once/month
Dissolved Oxygen	once/month	once/month

Sampling Frequency Justification:
Sampling and reporting frequency was retained from previous permit.

Sampling Type Justification:
As per 10 CSR 20-7.015, BOD_5, TSS, and WET test samples collected for mechanical plants shall be a 24 hour modified composite sample. Due to the small size of this facility this composite sample shall be 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. Grab samples, however, must be collected for pH, Ammonia as N, *E. coli*, and TRC. This is due to the holding time restriction for *E. coli*, the volatility of Ammonia and TRC, and the fact that pH and DO cannot be preserved and must be sampled in the field. As Ammonia samples must be immediately preserved, these samples are to be collected as a grab.

Part VIII – Cost Analysis for Compliance

Pursuant to Section 644.145, RSMo, when issuing permits under this chapter that incorporate a new requirement for discharges from publicly owned combined or separate sanitary or storm sewer systems or publicly owned treatment works, or when enforcing provisions of this chapter or the Federal Water Pollution Control Act, 33 U.S.C. 1251 et seq., pertaining to any portion of a publicly owned combined or separate sanitary or storm sewer system or [publicly owned] treatment works, the Department of Natural Resources shall make a "finding of affordability" on the costs to be incurred and the impact of any rate changes on ratepayers upon which to base such permits and decisions, to the extent allowable under this chapter and the Federal Water Pollution Control Act. This process is completed through a cost analysis for compliance. Permits that do not include new requirements may be deemed affordable.

☐ - The Department is required to determine "findings of affordability" because the permit applies to a combined or separate sanitary sewer system for a publically-owned treatment works.
☒ - The Department is not required to determine Cost Analysis for Compliance because the permit contains no new conditions or requirements that convey a new cost to the facility.

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 from January 30, 2015 – March 2, 2015. No comments were received.

DATE OF FACT SHEET: DECEMBER 15, 2014

COMPLETED BY:

ANGELA FALLS, ENVIRONMENTAL SPECIALIST
MISSOURI DEPARTMENT OF NATURAL RESOURCES
WATER PROTECTION PROGRAM
OPERATING PERMITS SECTION - DOMESTIC WASTEWATER UNIT
(573) 751-1419
angela.falls@dnr.mo.gov

Appendices

APPENDIX - CLASSIFICATION WORKSHEET:

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
Maximum Population Equivalent (P.E.) served (Max 10 pts.)	1 pt/10,000 PE or major fraction thereof.	0
Maximum: 10 pt Design Flow (avg. day) or peak month; use greater (Max 10 pts.)	1 pt. / MGD or major fraction thereof.	0
EFFLUENT DISCHARGE RECEIVING WATER SENSITIVITY:		
Missouri or Mississippi River	0	
All other stream discharges except to losing streams and stream reaches supporting whole body contact	1	
Discharge to lake or reservoir outside of designated whole body contact recreational area	2	
Discharge to losing stream, or stream, lake or reservoir area supporting whole body contact recreation	3	3
PRELIMINARY TREATMENT - Headworks		
Screening and/or comminution	3	
Grit removal	3	
Plant pumping of main flow (lift station at the headworks)	3	
PRIMARY TREATMENT		
Primary clarifiers	5	
Combined sedimentation/digestion	5	
Chemical addition (except chlorine, enzymes)	4	
REQUIRED LABORATORY CONTROL – performed by plant personnel (highest level only)		
Push – button or visual methods for simple test such as pH, Settleable solids	3	
Additional procedures such as DO, COD, BOD, titrations, solids, volatile content	5	5
More advanced determinations such as BOD seeding procedures, fecal coliform, nutrients, total oils, phenols, etc.	7	
Highly sophisticated instrumentation, such as atomic absorption and gas chromatograph	10	
ALTERNATIVE FATE OF EFFLUENT		
Direct reuse or recycle of effluent	6	
Land Disposal – low rate	3	
High rate	5	
Overland flow	4	
Total from page ONE (1)	—	8

APPENDIX - CLASSIFICATION WORKSHEET (CONTINUED):

ITEM	POINTS POSSIBLE	POINTS ASSIGNED
VARIATION IN RAW WASTE (highest level only) (DMR exceedances and Design Flow exceedances)		
Variation do not exceed those normally or typically expected	0	0
Recurring deviations or excessive variations of 100 to 200 % in strength and/or flow	2	
Recurring deviations or excessive variations of more than 200 % in strength and/or flow	4	
Raw wastes subject to toxic waste discharge	6	
SECONDARY TREATMENT		
Trickling filter and other fixed film media with secondary clarifiers	10	
Activated sludge with secondary clarifiers (including extended aeration and oxidation ditches)	15	15
Stabilization ponds without aeration	5	
Aerated lagoon	8	
Advanced Waste Treatment Polishing Pond	2	
Chemical/physical – without secondary	15	
Chemical/physical – following secondary	10	
Biological or chemical/biological	12	
Carbon regeneration	4	
DISINFECTION		
Chlorination or comparable	5	5
Dechlorination	2	2
On-site generation of disinfectant (except UV light)	5	
UV light	4	
SOLIDS HANDLING - SLUDGE		
Solids Handling Thickening	5	5
Anaerobic digestion	10	
Aerobic digestion	6	
Evaporative sludge drying	2	
Mechanical dewatering	8	
Solids reduction (incineration, wet oxidation)	12	
Land application	6	
Total from page TWO (2)	---	22
Total from page ONE (1)	---	8
Grand Total	---	30

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

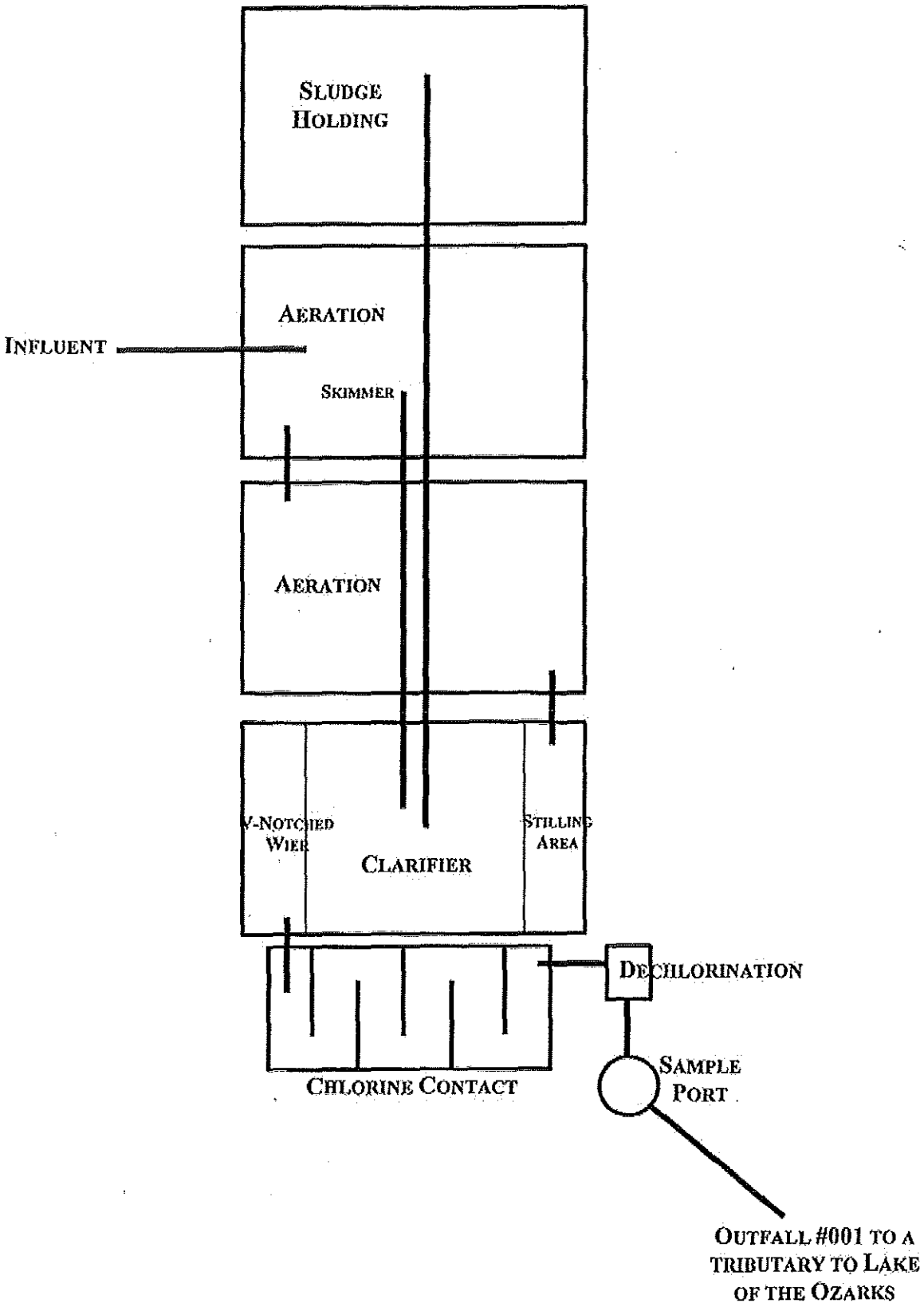
APPENDIX – RPA RESULTS:

Parameter	CMC*	RWC Acute*	CCC*	RWC Chronic*	n**	Range max/min	CV***	MF	RP Yes/No
Total Ammonia as Nitrogen (Summer) mg/L	12.1	10.59	1.5	10.59	28.00	3.37/0	1.09	3.14	YES
Total Ammonia as Nitrogen (Winter) mg/L	12.1	192.63	3.1	192.63	25.00	25/0.033	2.89	7.71	YES

N/A – Not Applicable
* - Units are (µg/L) unless otherwise noted.
** - If the number of samples is 10 or greater, then the CV value must be used in the WQBEL for the applicable constituent. If the number of samples is < 10, then the default CV value must be used in the WQBEL for the applicable constituent.
*** - Coefficient of Variation (CV) is calculated by dividing the Standard Deviation of the sample set by the Mean of the same sample set.
RWC – Receiving Water Concentration. It is the concentration of a toxicant or the parameter toxicity in the receiving water after mixing (if applicable).
n – Is the number of samples.
MF – Multiplying Factor. 99% Confidence Level and 99% Probability Basis.
RP – Reasonable Potential. It is where an effluent is projected or calculated to cause an excursion above a water quality standard based on a number of factors including, as a minimum, the four factors listed in 40 CFR 122.44(d)(1)(ii).

Reasonable Potential Analysis is conducted as per (TSD, EPA/505/2-90-001, Section 3.3.2). A more detailed version including calculations of this RPA is available upon request.

APPENDIX – PROCESS FLOW DIAGRAM:



STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
dnr.mo.gov

April 1, 2015

REMINDER LETTER

Camden County Water Supply No. 5
Clearwater Condominiums
P.O. Box 556
Camdenton, MO 65020

RE: MISSOURI STATE OPERATING PERMIT MO0126985

Dear Permittee:

Your state operating permit for wastewater discharge referenced above contains an annual requirement for an **Inflow/Infiltration Report** due **January 28, 2015.** This may or may not be in addition to other reporting on parameters or outfalls due on a more frequent basis.

Please review your permit, including any requirements of the Special Conditions section or Schedule of Compliance. If you are unable, after your review, to determine the nature of the annual reporting requirement please contact the Southwest Regional Office, Water Pollution Control Unit at 417-891-4300.

If you have already sent this report we commend you. If you have questions please contact the water pollution staff by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Lana Cypret

Lana Cypret
Technical Assistant II

LGC/ryc

Enclosure (I & I form)

029.wpcp.ClearwaterCondominiums.mo0126985.x.2015.04.01.fy15.ltr.x.lgc.doc

Facility Name	
Permit Number	
County	

This report covers the period of:

Jan 1, 2014 to Dec 31, 2014

ANNUAL INFLOW AND INFILTRATION REPORT

The report shall be submitted by January 28th of each year by electronic DMR or to the
SOUTHWEST REGIONAL OFFICE, 2040 W. WOODLAND, SPRINGFIELD, MO 65807

Manhole Observation							
Number of Manholes Observed							
Dates Observed							
Add additional pages if needed							

Results - Manholes Replaced							
Number of Manholes Replaced							
Types of Manholes Replaced							
Dates of Replacement							
Add additional pages if needed							

Results - Manholes Rehabbed							
Number of Manholes Rehabbed							
Types of Manholes Rehabbed							
Dates of Rehabilitation							
Add additional pages if needed							

Smoke Testing							
Linear Feet of Lines Tested							
Dates Observed							
Add additional pages if needed							

Results - Lines Cleaned							
Linear Feet of Lines Cleaned							
Date and Method Used to Clean Lines (Jet, Pig, Auger)							
Add additional pages if needed							

Facility Name	0
Permit Number	0
County	0

This report covers the period of:

Jan 1, 2014 to Dec 31, 2014

ANNUAL INFLOW AND INFILTRATION REPORT

Smoke Testing (continued) - Results - Lines Replaced

Linear Feet of Lines Replaced							
Date, Type of Line Replaced and Type of New Line							
Add additional pages if needed							

Results - Lines Rehabbed

Linear Feet of Lines Rehabbed							
Date, Type of Line Replaced and Rehab Material							
Add additional pages if needed							

CCTV (Closed-circuit television)

Linear Feet Viewed							
Dates Observed							
Add additional pages if needed							

Lamphole Observation

Number Observed							
Dates Observed							
Add additional pages if needed							

Results - Lampholes Replaced

Number Replaced							
Dates Replaced							
Add additional pages if needed							

Sanitary Sewer Overflows

Number of Dry Weather Sanitary Sewer Overflows		Number of Wet Weather Sanitary Sewer Overflows	

Basement/Building Backups

Number of Dry Weather Basement/Building Backups		Number of Wet Weather Basement/Building Backups	

General Information

Miles of collection system (including forcemains)		Peak Effluent Flow Rate (MGD)	
Average Effluent Flow Rate (MGD)			

SIGNATURE AND TITLE OF AUTHORIZED INDIVIDUAL, IN ACCORDANCE WITH 10 CSR 20-6.010(2)(C)	DATE
PHONE NUMBER	E-MAIL ADDRESS (Optional)

LAKE OF THE OZARKS WATER & SEWER, LLC
Wastewater and water specialists
840 Thunder Mountain Road
Camdenton, MO 65020
Phone 573 346-2092
Fax 573 346-4676

Proposal to Perform Operations and Maintenance of the Camden County PWSD #5 wastewater treatment facilities (Presently Clearwater and Cedar Heights Condominiums)

This proposal is submitted by Lake of the Ozarks Water & Sewer, LLC with the intent to clarify and describe Operation and Maintenance Services.

OPERATIONS: This includes all of the normal day to day functions required to maintain facility functions within Missouri DNR and EPA standards. Operations will include, but are not limited to, the following functions:

Maintain records of sample testing, maintenance performed and operations.
Read oxygen content and adjust related equipment to maintain the proper oxygen level.
Read flow.
Check and clean flow diverter.
Check aeration basin for flow pattern, level, color, foaming etc.
Check clarifier. Skim, wash down walls, scrub off algae, and spray with chlorine if necessary.
Check return flow and make necessary adjustments.
Check operation of return pumps.
Check alarm functions.
Check operation of the scum pump.
Check and clean the parshall flume.
Check flow device function.
Check storage tanks.
Check blower and motor functions, timers, relays, belts, sheaves, temperature, and lubrication.
As needed: Waste sludge, pump off supernatant from the sludge holding and sludge storage tanks, transfer sludge, and bag and dispose of trash.

MAINTENANCE:

Adjust the blower drive belts.
Lubricate the blowers (minimum of twice a year with oil changes).
Change air filters as needed (minimum twice a year).
Adjust the timers as needed.
No labor will be charged for drive belt and air filter replacement.
Lift stations will be checked three (3) times a year at both condominium complexes and once per year at the homes of Mission Hills as part of a preventative maintenance program.

CHARGES:

Facility owner to pay for drive belts, air filters, chlorine, and dechlor, if needed.
Mechanical and electrical repairs are billed at **$85.00 per hour**.
No major repairs will be performed without facility owner's prior consent.
The W.E.T. test is NOT included in this cost.
Any parts or additional labor incurred on the lift station inspections will be an additional charge to CCPWSD #5.

Our operators are certified by the Missouri Department of Natural Resources to operate both wastewater and drinking water systems. Lake of the Ozarks Water & Sewer is fully insured with liability and workman's compensation insurance. All testing is done in our lab, McDuffey Lab, which is a state certified drinking water lab.

Monthly charge is **$3310.00 per month** for a two year agreement with a 30 day termination, for cause, by either Lake of the Ozarks Water & Sewer, LLC or facility owner. The wastewater treatment plant and potable water facilities will be checked **5 days per week** for this charge.

This fee includes:
NPDES monthly testing, which consists of: BOD, TSS, pH, Ammonia, D.O. and e-coli.
Influent testing is still required on Cedar Heights.

- Monitoring reports as required.
- Sludge testing, excluding 503 metals test.
- Annual Form S, 503 sludge report.
- Form B (permit renewal, once every 5 years)

This bid is good for thirty days from this date April 8, 2015.

Chad Stout Date
Lake of the Ozarks Water & Sewer, LLC

Bonnie Bates 4/9/15
CCPWSD #5 Representative Date

LAKE OF THE OZARKS WATER & SEWER, LLC
Wastewater and water specialists
840 Thunder Mountain Road
Camdenton, MO 65020
Phone 573 346-2092
Fax 573 346-4676

Proposal to contract as the certified chief operator of the Camden County PWSD #5 drinking water system.

This written agreement specifies the services which will be provided by Lake of the Ozarks Water & Sewer, LLC (L.O.W.S.) and the responsibilities of the chief operator of the system.

The Chief Operator, an employee of Lake of the Ozarks Water & Sewer, LLC, will:

- Operate your water system in compliance with Missouri statutes 10 CSR 60 (The Department of Natural Resources Public Drinking Water Program).
- The certified operator of the Camden County PWSD # 5 system is required to have a minimum certification level of DSII. The chief operator provided by L.O.W.S. will have the required certification or higher. L.O.W.S. will be responsible for the continuing education of the certified chief operator.
- Check the well houses five (5) days a week, read the meters, record water usage and record the pressures. Maintain the area immediately around the well houses.
- Check the storage tanks five (5) days a week and record the pressures. Maintain the area immediately around the storage tanks.
- Implement the main flushing program and keep written documentation of all flushing.
- Exercise all valves in accordance with the written flushing program and valve maintenance program.
- Work with service contractors including but not limited to contractors installing new water lines, telephone company personnel and private contractors, complete minor repair work as needed.
- According to 10 CSR 60, only the certified operator may make process/system integrity decisions about water quality or quantity that affect public health. Since your certified operator has the overall responsibility of this water system, it is the responsibility of Camden County PWSD # 5 to inform the operator of all new hookups to the system, water line breaks, occurrences of low water pressure, or anything else that affects the water quality or quantity. This is to ensure that appropriate documentation is maintained, that all repairs are done in compliance with AWWA standards and that the quality of the water is maintained. The certified operator will advise repair personnel if needed. If the certified operator is called to the system to advise repair personnel, respond to an emergency call or evening and weekend calls, the facility will be charged for the visit at the rate of $85.00 per man hour.

- The maximum response time for the operator to be at the water system in the event of an emergency is 24 hours.

- The certified operator will visit the system each weekday. At each visit, the operator will
  Check the function of the chlorinator,
  Read the meter in the well house,
  Add chlorine to the chlorinator and dilute chlorine to maintain proper residual needs,
  Read the chlorine residual at various locations throughout the month,
  Visually inspect the well head and the building facility,
  Check the pressure gauges for proper function cycle the pump, collect all necessary samples for testing.

- The certified operator will collect **one drinking water sample (a total of 2 samples, one from Cedar Heights and one from Clearwater)** per month for microbiological testing and perform this testing in our state certified drinking water laboratory, McDuffey Lab. Should additional microbiological water samples be required during the month, the charge will be **$25.00** per sample. McDuffey Lab will report the test results to the facility and the Missouri Department of Natural Resources (DNR) in compliance with 10 CSR 60 requirements.

- The DNR will be notified that L.O.W.S. is designated as the Camden County PWSD # 5 chief operator so that all sample collection kits will be sent to L.O.W.S. The certified operator will take responsibility for collecting all samples (with the exception of lead and copper samples) for DNR testing and will be responsible for returning the samples as directed for DNR testing. These samples include nitrites/nitrates, VOCs, SOCs, Gross Alpha, Gross Beta, and Radionuclide. The operator will take the sample collection bottles for **lead and copper** testing to the facility contact for distribution to residents for collection. Since **lead and copper** sampling must be taken as the "first draw" in the morning in the individual homes, residents will collect these samples. The certified operator will return to pick up the collected samples and will return them to the DNR.

- L.O.W.S. will complete the annual Consumer Confidence Report (CCR) for this water system, if needed. The system will be provided with two copies of the completed CCR, the CCR Certification Form and instructions on distribution/notification of the CCR to consumers. The facility will be responsible for copying the CCR and distributing it to consumers.

- L.O.W.S. will complete the Primacy Fee Form for the facility, if needed. However it will be the responsibility of the facility to collect the fees and to submit them to the DNR in a timely manner.

- The employees of L.O.W.S. are covered by liability insurance and workman's compensation insurance. Proof of insurance is available upon request.

- On the date of this agreement, L.O.W.S. employs four certified drinking water operators.

- L.O.W.S. shall be responsible for all operational decisions made as it relates to the drinking water system. However, if a decision concerning the operation of the drinking water system is made in the chief operator's stead, Camden County PWSD # 5 agrees to hold L.O.W.S., its agents and employees, harmless from any decisions made in its absence and further agrees to indemnify L.O.W.S., its agents and employees, for any loss or penalty imposed as it relates to said decision(s).

Representatives of the facility shall provide the operator with the name(s) of qualified repair personnel to be contacted in the event of a water line break.

Monthly charge is included in the accompanying wastewater bid for a two year agreement with a 30 day termination, for cause, by Lake of the Ozarks Water & Sewer, LLC, or the facility owner/representative.

This bid is good for thirty days from this date, April 8, 2015

Chad Stout Date
Lake of the Ozarks Water & Sewer

4/9/15
Facility Representative Date

INVOICE

MISSOURI DEPARTMENT OF NATURAL RESOURCES
Division Of Environmental Quality / Water Protection Program

Jefferson City, MO 65102

Contact: BUDGET & FEES UNIT
Phone: (573)751-1300
Fax: (573)526-1146

Bill To: CAMDEN COUNTY PWSD NO. 5
P.O. BOX 556
CAMDENTON, MO 65020

Invoice #: 34601508310
Permit #: MO0129038
Date: April 10, 2015
Date Due: June 30, 2015

Please fill in the number of connections and invoice totals below.

SEWER CONNECTION FEES ANNUAL NOTICE

Description	Unit	Quantity	Amount	Total
Cedar Heights Condominiums * FOR FEE DATE OF: 6/2015 CURRENT INVOICE # 34601508310				
RESIDENTIAL (see fee chart below for amount)	CONNECTIONS			
INDUSTRIAL/COMMERCIAL NOT SERVED BY PUBLIC WATER SUPPLY (PWS) DISTRICT	CONNECTIONS		$3.42	
INDUSTRIAL/COMMERCIAL <= 1" SERVICE LINE OR SERVED BY PRIVATE WATER SUPPLY SYSTEM	CONNECTIONS		$3.00	
INDUSTRIAL/COMMERCIAL > 1" - 3.999" SERVICE	CONNECTIONS		$11.00	
INDUSTRIAL/COMMERCIAL > 4" SERVICE LINE	CONNECTIONS		$29.00	

RESIDENTIAL CONNECTION FEE CHART

LESS THAN / EQUAL TO 1,000 CUSTOMERS $0.80 PER CONNECTION
1,001 CUSTOMERS - 7,000 CUSTOMERS $0.80 PER CONNECTION
7,001 CUSTOMERS - 20,000 CUSTOMERS $0.72 PER CONNECTION
20,001 CUSTOMERS - 35,000 CUSTOMERS $0.60 PER CONNECTION
GREATER THAN 35,000 CUSTOMERS $0.48 PER CONNECTION

Maximum fee from single industrial/commercial customer is $700.00.

Balance Due	
Less 5% Allowance (.05 X Balance Due)	
Less Overpaid Fees	$0.00
Subtotal	
Plus Underpaid Fees	$0.00
Total Due	

Please note that your annual fee may have changed based on revisions to 10 CSR 20-6.011 which is effective January 1, 2015 pursuant to RSMo 644.054.

Please return entire Invoice with your payment and keep a copy for your records.

Permit #: MO0129038
CAMDEN COUNTY PWSD NO. 5
P.O. BOX 556
CAMDENTON, MO 65020

Please return this remittance advice with your payment to:
Missouri Department Of Natural Resources
Administrative Support / Accounting
Po Box 477, Jefferson City, Mo 65102

Invoice Number:
34601508310
Invoice Date:
April 10, 2015

Make check payable to *MO DEPT OF NATURAL RESOURCES*

Total Due: $ _____ **Amount Enclosed:** _____ **Check No:** _____
Due Date: June 30, 2015

Please include the Permit # on your check.

Per Chapter 37, Section 37.007 RSMo, if paying by electronic method, a transaction fee will be included. The transaction fee is paid to a 3rd party vendor, not the MO Dept of Natural Resources.

Accounting Distribution:

Annual POTWS & Munis 0568-780-4461-1130-02-UFWP = 34601508310

Late Penalties 0568-780-4461-1618-00-UFWP = 34601508310

Visa ____ **MC** ____ **Discover** ____

Credit Card # | | | | | | | | | | | | | | | | |

Exp Date: ____ / ____

Signature: _____

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
dnr.mo.gov

April 28, 2015

Camden County Water Supply No. 5
Clearwater Condos WWTF
P.O. Box 556
Camdenton, MO 65020

RE: MISSOURI STATE OPERATING PERMIT MO0126985

Dear Permittee:

Your state operating permit for wastewater discharge referenced above contains a requirement for **Response Due June 1, 2012.** This may or may not be in addition to other reporting on parameters or outfalls due on a more frequent basis. **Our records indicate that this report is past due.** Non-receipt of this report constitutes a violation and will show up on the Annual Non-Compliance Report (QNCR) that is reported to the Environmental Protection Agency (EPA).

Please review your permit, including any requirements of the Special Conditions section or Schedule of Compliance. If you are unable, after your review, to determine the nature of the annual reporting requirement please contact the Southwest Regional Office, Water Pollution Control Branch at 417-891-4300.

If you have already sent this report we commend you. If you have questions please contact the **Water Pollution staff** by calling 417-891-4300 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Kevin Hess
Water Pollution

KH/lcr

Enclosure

029.wpcp.ClearwaterCondominiums.mo0126985.x.2015.04.28.fy15.romit.x.lgc.doc

LAKE OF THE OZARKS WATER & SEWER

Wastewater and water specialists

840 Thunder Mountain Road
Camdenton, MO 65020

Phone 573 346-2092
Fax 573 346-4676

May 7, 2015

You will find the following items enclosed:

One copy of the "Cedar Heights Condominiums 2014 Annual Water Quality Report". This is also called the CCR (Consumer Confidence Report).

The 2014 CCR Certification Form

To fulfill your obligation to the Missouri Department of Natural Resources regarding the 2014 CCR, you will need to do the following:

- Be sure to send out a newsletter letting the condo owners know that the Cedar Heights Condominiums 2014 Annual Water Quality Report is available upon request and how to receive a copy. All condo owners need to be sent this newsletter prior to **July 1, 2015.**
- On page 1 of the 2014 CCR Certification Form, fill in the **Date Accomplished** on line 4.
- Mail, Email or fax the certification form, a copy of the newsletter **AND** a copy of the Cedar Heights Condominiums 2014 Annual Water Quality Report (CCR) to the Missouri Department of Natural Resources no later than **October 1, 2015.**

Please contact me if you have any questions.

Sincerely,

Betty Boushie

Betty Boushie
Lake of the Ozarks Water & Sewer

6/7/15
mailed to DNR with copy of newsletter

LAKE OF THE OZARKS WATER & SEWER

Wastewater and water specialists

840 Thunder Mountain Road
Camdenton, MO 65020

Phone 573 346-2092
Fax 573 346-4676

May 7, 2015

You will find the following items enclosed.

One copy of the "Clearwater Condominiums 2014 Annual Water Quality Report". This is also called the CCR (Consumer Confidence Report).

The 2014 CCR Certification Form

To fulfill your obligation to the Missouri Department of Natural Resources regarding the 2014 CCR, you will need to do the following:

- Be sure to send out a newsletter letting the condo owners know that the Clearwater Condominiums 2014 Annual Water Quality Report is available upon request and how to receive a copy. All condo owners need to be sent this newsletter prior to **July 1, 2015.**
- On page 1 of the 2014 CCR Certification Form, fill in the **Date Accomplished** on line 4.
- Mail, Email or fax the certification form, a copy of the newsletter **AND** a copy of the Clearwater Condominiums 2014 Annual Water Quality Report (CCR) to the Missouri Department of Natural Resources no later than **October 1, 2015.**

Please contact me if you have any questions.

Sincerely,

Betty Boushie
Lake of the Ozarks Water & Sewer

CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA

MO3031383

2014 Annual Water Quality Report

(Consumer Confidence Report)

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

Attencion!

Este informe contiene información muy importante. Tradúscalo o pregúntele a alguien que lo entienda bien.
[Translated: This report contains very important information. Translate or ask someone who understands this very well.]

What is the source of my water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Our water comes from the following source(s):

Source Name	Type
WELL #2	GROUND WATER

Source Water Assessment

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water area delineations for each well or surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at http://maproom.missouri.edu/swipmaps/pwssid.htm. To access the maps for your water system you will need the State-assigned identification code, which is printed at the top of this report. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

Why are there contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Contaminants that may be present in source water include:
A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is our water system meeting other rules that govern our operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO3031383 for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How might I become actively involved?

If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at **573-346-2092** to inquire about scheduled meetings or contact persons.

Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Terms and Abbreviations

Population: 485. This is the equivalent residential population served including non-bill paying customers.
MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
SMCL: Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply
AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow..
TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
90th percentile: For lead and Copper testing. 10% of test results are above this level and 90% are below this level.
Range of Results: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Value.
RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.
LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.
TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.
HAA5: Haloacetic Acids (mono-, di- and tri-chloroacetic acid, and mono- and di-bromoacetic acid) as a group.
ppb: parts per billion or micrograms per liter.
ppm: parts per million or milligrams per liter.
n/a: not applicable.
NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.
nd: not detectable at testing limits.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA

MO3031383

2014 Annual Water Quality Report

(Consumer Confidence Report)

Contaminants Report

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative.

Regulated Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range of Results (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	3/14/2012	0.0417	0.0417	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
CHROMIUM	3/14/2012	3.91	3.91	ppb	100	100	Discharge from steel and pulp mills
NITRATE-NITRITE	9/29/2014	1.22	1.22	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Disinfection Byproducts	Monitoring Period	Highest LRAA	Range (low – high)	Unit	MCL	MCLG	Typical Source
TTHM	2014 - 2016	2	2.16	ppb	80	0	Byproduct of drinking water disinfection

Lead and Copper	Date	90th Percentile	Range of Results (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2012	0.1565	0.0558 - 0.17	ppm	1.3	0	Corrosion of household plumbing systems

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2014				

Violations and Health Effects Information

During the 2014 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2014		

Special Lead and Copper Notice:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at http://water.epa.gov/drink/info/lead/index.cfm.

You can also find sample results for all contaminants from both past and present compliance monitoring online at the Missouri DNR Drinking Water Watch website http://dnr.mo.gov/DWW/indexSearchDNR.jsp. To find Lead and Copper results for your system, type your water system name in the box titled Water System Name and select *Find Water Systems* at the bottom of the page. The new screen will show you the water system name and number, select and click the Water System Number. At the top of the next page, under the *Help* column find, *Other Chemical Results by Analyte*, select and click on it. Scroll down alphabetically to Lead and click the blue Analyte Code (1030). The Lead and Copper locations will be displayed under the heading *Sample Comments*. Scroll to find your location and click on the *Sample No.* for the results. If your house was selected by the water system and you assisted in taking a Lead and Copper sample from your home but cannot find your location in the list, please contact CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA for your results.

Optional Monitoring (not required by EPA)

Optional Contaminants

Monitoring is not required for optional contaminants.

Secondary Contaminants	Collection Date	Your Water System Highest Value	Range (low - high)	Unit	SMCL
ALKALINITY, CACO3 STABILITY	3/14/2012	372	372	MG/L	
CALCIUM	3/14/2012	78.2	78.2	MG/L	
CHLORIDE	3/14/2012	7.4	7.4	MG/L	250
HARDNESS, CARBONATE	3/14/2012	386	386	MG/L	
IRON	3/14/2012	0.00608	0.00608	MG/L	0.3
MAGNESIUM	3/14/2012	46.4	46.4	MG/L	
NICKEL	3/14/2012	0.00107	0.00107	MG/L	0.1
PH	3/14/2012	7.57	7.57	PH	8.5
POTASSIUM	3/14/2012	0.43	0.43	MG/L	
SODIUM	3/14/2012	2.5	2.5	MG/L	
SULFATE	3/14/2012	8.07	8.07	MG/L	250
TDS	3/14/2012	400	400	MG/L	500
ZINC	3/14/2012	0.11	0.11	MG/L	5

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.

Thursday, March 12, 2015

CAMDEN CO PWSD # 5 - CLEARWATER CONDOS MO3302557

2014 Annual Water Quality Report

(Consumer Confidence Report)

This report is intended to provide you with important information about your drinking water and the efforts made to provide safe drinking water.

Attencion!

Este Informe contiene información muy importante. Tradúscalo o prequntele a alguien que lo entienda bien.
[Translated: This report contains very important information. Translate or ask someone who understands this very well.]

What is the source of my water?

The sources of drinking water (both tap water and bottled water) include rivers, lakes, streams, ponds, reservoirs, springs, and groundwater wells. As water travels over the surface of the land or through the ground, it dissolves naturally-occurring minerals and, in some cases, radioactive material, and can pick up substances resulting from the presence of animals or from human activity.

Our water comes from the following source(s):

Source Name	Type
WELL #1	GROUND WATER

Source Water Assessment

The Department of Natural Resources conducted a source water assessment to determine the susceptibility of our water source to potential contaminants. This process involved the establishment of source water area delineations for each well or surface water intake and then a contaminant inventory was performed within those delineated areas to assess potential threats to each source. Assessment maps and summary information sheets are available on the internet at http://maproom.missouri.edu/swipmaps/pwssid.htm. To access the maps for your water system you will need the State-assigned identification code, which is printed at the top of this report. The Source Water Inventory Project maps and information sheets provide a foundation upon which a more comprehensive source water protection plan can be developed.

Why are there contaminants in my water?

Drinking water, including bottled water, may reasonably be expected to contain at least small amounts of some contaminants. The presence of contaminants does not necessarily indicate that water poses a health risk. More information about contaminants and potential health effects can be obtained by calling the Environmental Protection Agency's Safe Drinking Water Hotline (800-426-4791).

Contaminants that may be present in source water include:
A. Microbial contaminants, such as viruses and bacteria, which may come from sewage treatment plants, septic systems, agricultural livestock operations, and wildlife.
B. Inorganic contaminants, such as salts and metals, which can be naturally-occurring or result from urban stormwater runoff, industrial, or domestic wastewater discharges, oil and gas production, mining, or farming.
C. Pesticides and herbicides, which may come from a variety of sources such as agriculture, urban stormwater runoff, and residential uses.
D. Organic chemical contaminants, including synthetic and volatile organic chemicals, which are byproducts of industrial processes and petroleum production, and can also come from gas stations, urban stormwater runoff, and septic systems.
E. Radioactive contaminants, which can be naturally-occurring or be the result of oil and gas production and mining activities.

In order to ensure that tap water is safe to drink, the Department of Natural Resources prescribes regulations which limit the amount of certain contaminants in water provided by public water systems. Department of Health regulations establish limits for contaminants in bottled water which must provide the same protection for public health.

Is our water system meeting other rules that govern our operations?

The Missouri Department of Natural Resources regulates our water system and requires us to test our water on a regular basis to ensure its safety. Our system has been assigned the identification number MO3302557 for the purposes of tracking our test results. Last year, we tested for a variety of contaminants. The detectable results of these tests are on the following pages of this report. Any violations of state requirements or standards will be further explained later in this report.

How might I become actively involved?

If you would like to observe the decision-making process that affect drinking water quality or if you have any further questions about your drinking water report, please call us at 573-346-2092 to inquire about scheduled meetings or contact persons.

Do I need to take any special precautions?

Some people may be more vulnerable to contaminants in drinking water than the general population. Immunocompromised persons such as persons with cancer undergoing chemotherapy, persons who have undergone organ transplants, people with HIV/AIDS or other immune system disorders, some elderly, and infants can be particularly at risk from infections. These people should seek advice about drinking water from their health care providers. EPA/CDC guidelines on appropriate means to lessen the risk of infection by Cryptosporidium and other microbial contaminants are available from the Safe Drinking Water Hotline (800-426-4791).

Terms and Abbreviations

Population: 250. This is the equivalent residential population served including non-bill paying customers.
MCLG: Maximum Contaminant Level Goal, or the level of a contaminant in drinking water below which there is no known or expected risk to health. MCLGs allow for a margin of safety.
MCL: Maximum Contaminant Level, or the highest level of a contaminant that is allowed in drinking water. MCLs are set as close to the MCLGs as feasible using the best available treatment technology.
SMCL: Secondary Maximum Contaminant Level, or the secondary standards that are non-enforceable guidelines for contaminants and may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply
AL: Action Level, or the concentration of a contaminant which, when exceeded, triggers treatment or other requirements which a water system must follow.
TT: Treatment Technique, or a required process intended to reduce the level of a contaminant in drinking water.
90th percentile: For lead and Copper testing. 10% of test results are above this level and 90% are below this level.
Range of Results: Shows the lowest and highest levels found during a testing period, if only one sample was taken, then this number equals the Highest Value.
RAA: Running Annual Average, or the average of sample analytical results for samples taken during the previous four calendar quarters.
LRAA: Locational Running Annual Average, or the locational average of sample analytical results for samples taken during the previous four calendar quarters.
TTHM: Total Trihalomethanes (chloroform, bromodichloromethane, dibromochloromethane, and bromoform) as a group.
HAA5: Haloacetic Acids (mono-, di- and tri-chloracetic acid, and mono- and di-bormoacetic acid) as a group.
ppb: parts per billion or micrograms per liter.
ppm: parts per million or milligrams per liter.
n/a: not applicable.
NTU: Nephelometric Turbidity Unit, used to measure cloudiness in drinking water.
nd: not detectable at testing limits.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

CAMDEN CO PWSD # 5 - CLEARWATER CONDOS

MO3302557

2014 Annual Water Quality Report

(Consumer Confidence Report)

Contaminants Report

The state has reduced monitoring requirements for certain contaminants to less often than once per year because the concentrations of these contaminants are not expected to vary significantly from year to year. Records with a sample year more than one year old are still considered representative.

Regulated Contaminants

Regulated Contaminants	Collection Date	Highest Value	Range of Results (low – high)	Unit	MCL	MCLG	Typical Source
BARIUM	6/2/2014	0.0296	0.0296	ppm	2	2	Discharge of drilling wastes; Discharge from metal refineries; Erosion of natural deposits
FLUORIDE	6/2/2014	0.28	0.28	ppm	4	4	Natural deposits; Water additive which promotes strong teeth
NITRATE-NITRITE	3/25/2014	0.23	0.23	ppm	10	10	Runoff from fertilizer use; Leaching from septic tanks, sewage; Erosion of natural deposits

Lead and Copper	Date	90th Percentile	Range of Results (low – high)	Unit	AL	Sites Over AL	Typical Source
COPPER	2011 - 2013	0.169	0.0619 - 0.185	ppm	1.3	0	Corrosion of household plumbing systems
LEAD	2011 - 2013	0.6	1.19	ppb	15	0	Corrosion of household plumbing systems

Microbiological	Result	MCL	MCLG	Typical Source
No Detected Results were Found in the Calendar Year of 2014				

Violations and Health Effects Information

During the 2014 calendar year, we had the below noted violation(s) of drinking water regulations.

Compliance Period	Analyte	Type
No Violations Occurred in the Calendar Year of 2014		

Special Lead and Copper Notice:

If present, elevated levels of lead can cause serious health problems, especially for pregnant women and young children. Lead in drinking water is primarily from materials and components associated with service lines and home plumbing. CAMDEN CO PWSD # 5 - CLEARWATER CONDOS is responsible for providing high quality drinking water, but cannot control the variety of materials used in plumbing components. When your water has been sitting for several hours, you can minimize the potential for lead exposure by flushing your tap for 30 seconds to 2 minutes before using water for drinking or cooking. If you are concerned about lead in your water, you may wish to have your water tested. Information on lead in drinking water, testing methods, and steps you can take to minimize exposure is available from the Safe Drinking Water Hotline (800-426-4791) or at http://water.epa.gov/drink/info/lead/index.cfm.

You can also find sample results for all contaminants from both past and present compliance monitoring online at the Missouri DNR Drinking Water Watch website http://dnr.mo.gov/DWW/indexSearchDNR.jsp. To find Lead and Copper results for your system, type your water system name in the box titled Water System Name and select *Find Water Systems* at the bottom of the page. The new screen will show you the water system name and number, select and click the Water System Number. At the top of the next page, under the *Help* column find, *Other Chemical Results by Analyte*, select and click on it. Scroll down alphabetically to Lead and click the blue Analyte Code (1030). The Lead and Copper locations will be displayed under the heading *Sample Comments*. Scroll to find your location and click on the *Sample No.* for the results. If your house was selected by the water system and you assisted in taking a Lead and Copper sample from your home but cannot find your location in the list, please contact CAMDEN CO PWSD # 5 - CLEARWATER CONDOS for your results.

Optional Monitoring (not required by EPA)

Optional Contaminants

Monitoring is not required for optional contaminants.

Secondary Contaminants	Collection Date	Your Water System Highest Value	Range (low - high)	Unit	SMCL
ALKALINITY, CACO3 STABILITY	6/2/2014	185	185	MG/L	
CALCIUM	6/2/2014	50	50	MG/L	
CHLORIDE	6/2/2014	44.3	44.3	MG/L	250
HARDNESS, CARBONATE	6/2/2014	218	218	MG/L	
IRON	6/2/2014	0.234	0.234	MG/L	0.3
MAGNESIUM	6/2/2014	22.7	22.7	MG/L	
MANGANESE	6/2/2014	0.00433	0.00433	MG/L	0.05
PH	6/2/2014	8.19	8.19	PH	8.5
POTASSIUM	6/2/2014	3.32	3.32	MG/L	
SODIUM	6/2/2014	22.6	22.6	MG/L	
SULFATE	6/2/2014	15.3	15.3	MG/L	250
TDS	6/2/2014	270	270	MG/L	500
ZINC	6/2/2014	0.0144	0.0144	MG/L	5

Secondary standards are non-enforceable guidelines for contaminants that may cause cosmetic effects (such as skin or tooth discoloration) or aesthetic effects (such as taste, odor or color) in drinking water. EPA recommends these standards but does not require water systems to comply.

Thursday, March 12, 2015

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

June 30, 2015

NOTICE OF VIOLATION #16323SW
CERTIFIED MAIL #7014 0150 0001 9539 5932
RETURN RECEIPT REQUESTED

Camden County Water Supply No. 5
P.O. Box 556
Camdenton, MO 65020

Dear Permittee:

A compliance inspection of the Clearwater Condominiums Wastewater Treatment Facility, located in Camden County, Missouri, was conducted on May 28, 2015. Enclosed is a copy of the Report of Inspection. I believe the report is self-explanatory and trust you will address any unsatisfactory features noted, as well as any recommendations contained therein. A Notice of Violation (NOV) #16323SW is enclosed for a Total Residual Chlorine exceedance during the inspection.

If you have any questions, please contact Ms. Laura M. Gerson via mail in the Southwest Regional Office, 2040 W. Woodland, Springfield, Missouri 65807-5912 or by calling 573-348-4028.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Cynthia S. Davies
Regional Director

CSD/lgk

Enclosures

c: Mr. Jim Heppler, Lake of the Ozarks Water & Sewer

029.wpcp.ClearwaterCondos.mo0126985.x.2015.06.30.fy15.ins_nov.16323sw.lmg.doc

MISSOURI DEPARTMENT OF NATURAL RESOURCES

NOTICE OF VIOLATION

VIOLATION NUMBER
16323SW

DATE AND TIME ISSUED
June 30, 2015

SOURCE (NAME, ADDRESS, PERMIT NUMBER, LOCATION)
Clearwater Condominiums

Lake Road 54-82

MO0126985

NW 1/4, SE 1/4, Sec. 20, T38N, R17W, Camden County

MAILING ADDRESS	CITY	STATE	ZIP CODE
P.O. Box 556	Camdenton	MO	65020

NAME OF OWNER OR MANAGER	TITLE OF OWNER OR MANAGER
Camden County Water Supply No. 5	Owner

LAW, REGULATION OR PERMIT VIOLATED

Missouri State Operating Permit (MSOP) MO0126985
Missouri Clean Water Commission Regulation 10 CSR 20-7.015
Missouri Clean Water Law Sections 644.076.1 and 644.051.1(3), RSMo.

NATURE OF VIOLATION — DATE(S): — TIME(S):

The Permittee failed to comply with effluent limits contained in Table "A" of the MSOP number MO0126985 for Total Residual Chlorine.

SIGNATURE (PERSON RECEIVING NOTICE)	SIGNATURE (PERSON ISSUING NOTICE)
Sent Via US Mail	Laura Gerson Laura M. Gerson
TITLE OR POSITION	TITLE OR POSITION
	Environmental Specialist/SWRO

DISTRIBUTION: SOURCE CENTRAL OFFICE REGIONAL OFFICE

MISSOURI DEPARTMENT OF NATURAL RESOURCES
REPORT OF INSPECTION
CLEARWATER CONDOMINIUMS WASTEWATER TREATMENT FACILITY
MISSOURI STATE OPERATING PERMIT NUMBER MO0126985
CAMDEN COUNTY, MISSOURI

June 30, 2015

INTRODUCTION

A compliance inspection of the Clearwater Condominiums Wastewater Treatment Facility (WWTF) in Camden County, Missouri, was conducted by Ms. Laura M. Gerson of the Missouri Department of Natural Resources (department) Southwest Regional Office on May 28, 2015. Mr. Jim Heppler, Operator, was present representing the facility during the inspection.

The purpose of this inspection was to determine compliance with Missouri State Operating Permit (MSOP) MO0126985, the Missouri Clean Water Commission Regulations, and Missouri Clean Water Law. This report presents the findings and observations made during the compliance inspection. Authority for this inspection is provided in Missouri Clean Water Law 644.026.1(21), RSMo.

FACILITY DESCRIPTION

The treatment facility is composed of flow equalization, extended aeration, chlorination, dechlorination, post aeration as well as sludge holding. The system has a design flow capacity of 75,750 gallons per day. Actual flow is 5, 800 gallons a day. Sludge is disposed by contract hauler. Discharge from this facility flows into Lake of the Ozarks classified as a gaining setting. The facility has a design population equivalent of 755. The UTM 83 coordinates for this facility's outfall are E 515844, N 4207497. The MSOP MO0126985 was last issued on January 1, 2015, and expires on June 30, 2019.

COMPLIANCE HISTORY

Our records indicate that the previous inspection of this facility was conducted by the department on November 28, 2012. The facility was satisfactory at the time of inspection. Samples were not taken as the facility was not discharging.

During the office portion of the inspection I reviewed the facility's Annual Sludge Report and Discharge Monitoring Reports (DMR). The previous year's Form S Annual Sludge Report was received by the department on January 8, 2015. The DMRs submitted to this office from January 2013 to March 2015 reflect overall compliance with MSOP limits. On the March 2013 DMR, the pH was reported as 6.3 SU. pH is limited to the range of 6.5-9.0 SU. Ammonia was not reported on the May 2013 DMR submitted to the department.

COMPLIANCE DETERMINATION

The facility was found to be in non-compliance with the Missouri Clean Water Law, the Clean Water Commission Regulations, and Missouri State Operating Permit MO0126985, based upon the observations made at the time of the inspection. At the time of the report the results of sample analysis were not complete. Additional violations may be documented upon receipt of the sample analysis results.

UNSATISFACTORY FEATURES

The Permittee failed to comply with the effluent limitations for Total Residual Chlorine contained in Part "A" of MSOP number MO0122033 promulgated by the Clean Water Commission under the Missouri Clean Water Law. Failure to comply with these limits is a violation of Missouri Clean Water Law Sections 644.051.1(3) and 644.076.1, RSMo, and Missouri Clean Water Commission Regulation 10 CSR 20-7.015.

REQUIRED ACTION: This was addressed during the inspection. No further action is needed at this time.

SUBMITTED BY:

Laura M. Gerson

Laura M. Gerson
Environmental Specialist
Southwest Regional Office

REVIEWED BY:

Tina A. White, Chief
Water Pollution Inspection and Enforcement Unit
Southwest Regional Office

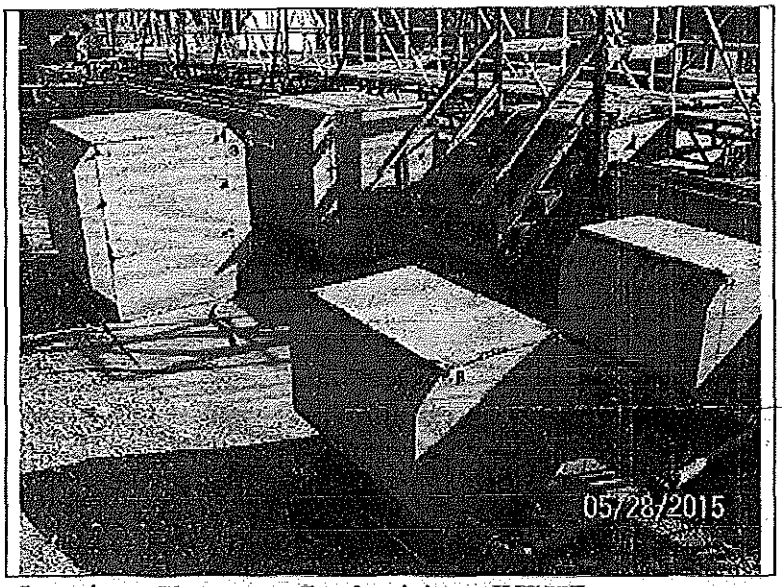


Photo 1

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Blowers.

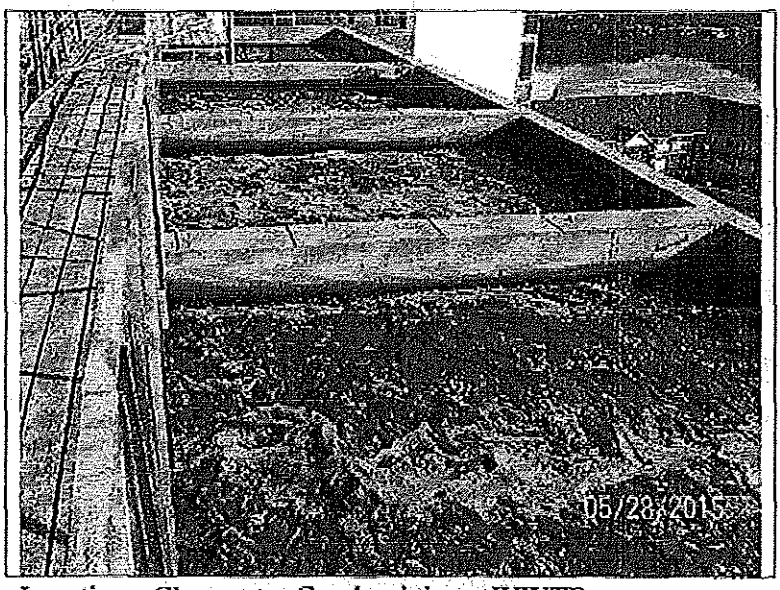


Photo 2

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Aeration.

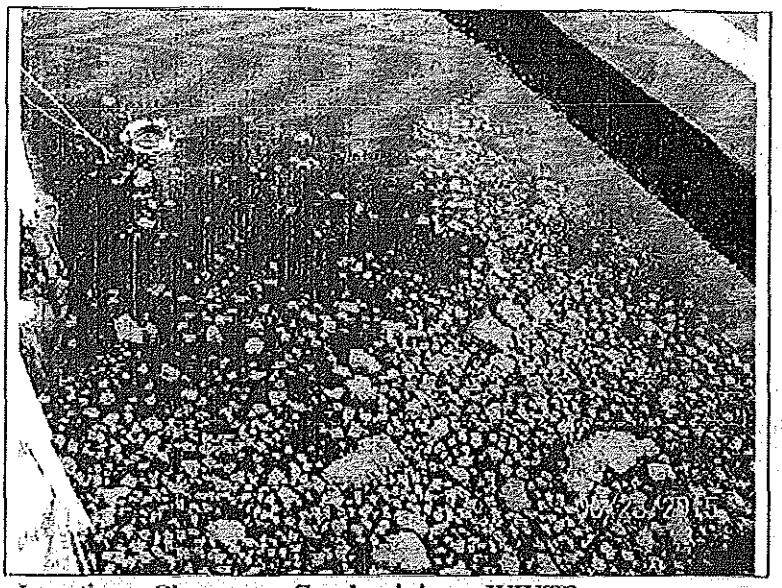


Photo 3

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Bulking in clarifier. Denitrified sludge gets pumped back into the flow equalization basin.

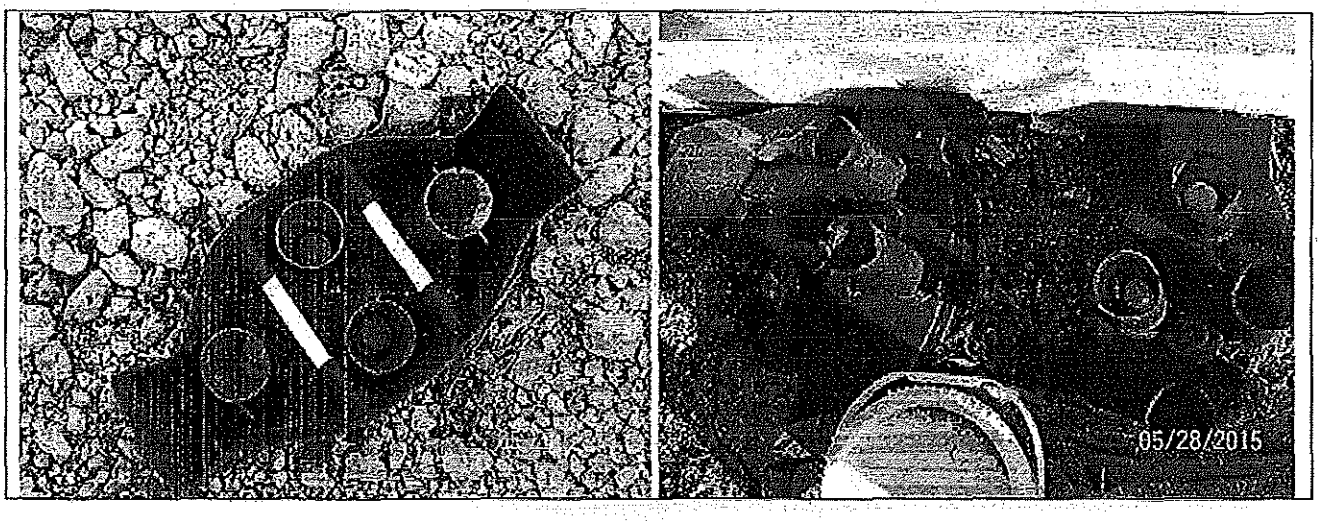


Photo 4a

Photo 4b

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Chlorination (left) and dechlorination (right) tablets are present.

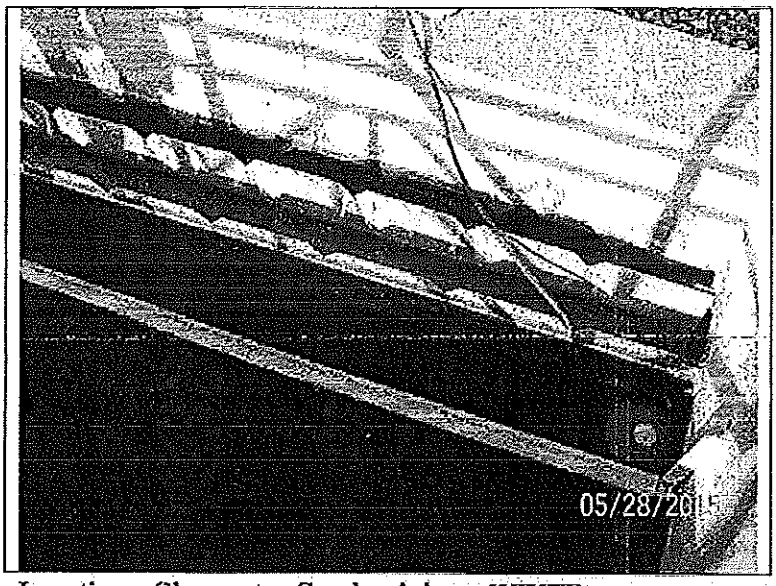


Photo 5

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Weir is free from solids.

Photo 6

Location: Clearwater Condominiums WWTF
Photographer: Laura M. Gerson
Photograph Date: May 28, 2015
Comments: Sample port with outfall sign on fence.

Enclosure 3

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DIVISION OF ENVIRONMENTAL QUALITY
PUBLIC DRINKING WATER PROGRAM

BACTERIOLOGICAL SITE SAMPLING POINTS

WATER SUPPLY NAME	COUNTY	DRINKING WATER PERMIT NUMBER
CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA	CAMDEN	MO3031383

SAMPLE LOCATION ID NUMBER	COLLECTION POINT LOCATION (ADDRESS/DESCRIPTION)	UPSTREAM/DOWNSTREAM LOCATIONS (This column is for sample collectors use)
003	WATER CLOSET #3	
006	GARAGES D28 &D29	
009	OFFICE INSIDE	
01	WATER CLOSET #2	
02	WELL HOUSE	
03	UPPER WATER TOWER	
04	CONSTRUCTION OFFICE	
05	WATER CLOSET #1	
06	WATER CLOSET 31	
DBPDUAL-01	BLDG #364 - FIRE ROOM - OUTSIDE TAP	
SPECIAL	WATER CLOSET #2	

This is a listing of bacteriological sampling sites used at CAMDEN CO PWSD # 5 - CEDAR HEIGHTS HOA. Each location has an ID number and location description. In our computer tracking system, the ID numbers serve as links to the location/address description of current monitoring sites and help show a history of monitoring results for any particular location. Therefore, we cannot reuse sample location ID numbers once they have been established. However, new sites can be added by choosing new/different sample location ID numbers.

Please use this listing as a reference guide when collecting bacteriological samples. This listing should be made available to the person(s) responsible for collecting bacteriological samples. To update or add new sites, please mail a copy of the changes to the address shown below, send a fax to (573) 751-3110 or call the SDWIS Data Coordinator at (573) 751-0972. Please remember to retain a copy of sites for your records. A copy of your changes will be sent to the Department of Natural Resources' Regional Office nearest you.

Thank You.

Missouri Department of Natural Resources
Public Drinking Water Branch
P.O. Box 176
Jefferson City, Missouri 65102

Friday, February 06, 2015

COMMUNITY MICROBIOLOGICAL SAMPLING PROGRAM

This guidance has been prepared by the Missouri Department of Natural Resources-Public Drinking Water Branch to help explain the monitoring and reporting requirements of community public water systems as required by federal and state law. We hope this guidance is a useful tool in helping assure small community water systems have safe drinking water and that they remain in compliance with the Safe Drinking Water Act. We suggest that you keep a copy of this document on file for future reference.

WHY SHOULD I SAMPLE MY WATER?

Most Americans take drinking water for granted. After all, drinking water in the United States is inexpensive, abundant, and the best in the world. The common misconception is that only tourists visiting foreign countries and campers "roughing it" in the back country get sick from waterborne diseases. It is true that water treatment in the United States has virtually eliminated once common waterborne diseases like cholera, typhoid fever, and hepatitis; however, the Center for Disease Control reports that in 1999 and 2000, there were 39 confirmed waterborne outbreaks affecting over 2,000 people. The most frequently reported cases are acute gastrointestinal illnesses with symptoms of nausea, vomiting, diarrhea, and abdominal discomfort. These illnesses are caused by various waterborne microorganisms, including viruses, bacteria, and protozoa. To curtail this serious problem, Congress passed amendments to the Safe Drinking Water Act requiring the Environmental Protection Agency (EPA) to take a more active role in assuring the quality of public drinking water supplies. Regulations promulgated by EPA require small community water systems to monitor their drinking water for biological indicator organisms (coliforms) and chemical contaminants, to ensure its suitability for domestic use.

WHAT IS A COMMUNITY PUBLIC WATER SYSTEM?

A community public water system is defined as "A public water system which serves at least fifteen service connections and is operated on a year-round basis or regularly serves at least twenty-five residents on a year-round basis from its own source (usually a well)."

HOW MANY SAMPLES SHOULD I TAKE?

The number of routine bacteriological samples a public water system is required to collect each month is primarily based on the number of people the system serves. A public water system serving up to 1,000 people per day must collect one routine sample a month; those serving 1,001 to 2,500 must submit 2 per month, and so on. Exceptions are systems that have iron removal plants, practice lime softening, are surface water supplies, or use groundwater under the direct influence of surface water. These supplies must take a minimum of five routine samples per month. If you are unsure of how many samples your supply is required to collect, contact the Missouri Department of Natural Resources-Public Drinking Water Branch.

Once tested, if any of the routine samples turn out unsafe, additional follow-up samples are required to help investigate and correct the problem.

WHEN SHOULD I COLLECT MY SAMPLE AND WHERE DO I SEND IT?

At the beginning of each year, you will be provided with a sample calendar for the Missouri Department of Health and Senior Services (MDHSS) laboratory. If possible, collect your sample(s) during the boxed in days each month in order to even out the lab workload. If you are unable to sample on those days, you should still collect them that month. Failure to do so will result in a monitoring violation. Also, because the holding time for bacteriological sample is only 30 hours, only collect samples on Monday, Tuesday, or Wednesday. Samples en route over the weekend (when the state laboratory is closed) will exceed the 30-hour time limit and be invalidated.

DO I HAVE TO USE THE STATE LABORATORY SYSTEM?

Public water systems may choose to utilize an independent laboratory, but it must be certified by Missouri Department of Natural Resources for the parameter being tested. If you use an independent lab, you may submit your sample any time during the month. A copy of the results must be submitted to the Missouri Department of Natural Resources-Public Drinking Water Branch as soon as possible, but no later than the 10th day of the following month either by the lab or the water supply.

A listing of labs certified by Missouri Department of Natural Resources can be obtained by calling the Monitoring Section at 573-751-1077 or on the Department website at http://www.dnr.mo.gov/env/wpp/labs/index.html.

WHERE DO I GET SAMPLE BOTTLES?

The state laboratory mails sample bottles in bulk. Systems required to take one sample per month are provided a set of ten bottles, return address labels, water analyses cards and shipping boxes. An orange colored postcard with the Missouri Department of Natural Resources-Public Drinking Water Branch return address on it is included with the bottles. When you have four sample bottles remaining, use this postcard to order a new supply. You may also submit an order online at: http://dnr.mo.gov/env/wpp/monitoring.htm or call Ellen Harrel at 573-751-1077. **Each shipment also contains sample collection instructions (See Exhibit A for an example).**

Systems that use an independent laboratory should get their bottles from that laboratory.

HOW MUCH ARE THE STATE LAB FEES?

The lab services and program administration fee for community supplies using ground water is based on the number of connections a system has:

Number of Connections	Fee
Less than 4,100	$200
4,101 to 7,599	$300
Greater then 7,600	$500
Supplies using Surface Water	$500

This fee includes services for all the necessary chemical and bacteriological testing. **See Exhibit C for further information.**

WHAT IS THE PRIMACY FEE?

The primacy fee was created by House Bill 1393. Its purpose is to fund the activities of the Missouri Department of Natural Resources-Public Drinking Water Branch to maintain compliance with federal requirements and to maintain state enforcement primacy for the Safe Drinking Water Act. This fee is charged to each customer connection and ranges from $.66 to $2.00 per year **(see Exhibit C for further information).**

SELECTING SAMPLE SITES

The Federal and State Safe Drinking Water Act requires all public water systems to develop a site sampling plan. The purpose of the plan is to ensure that all bacteriological samples are collected at points representative of the entire distribution system. Experience has shown that many times when a water supply gets positive samples, it is due to the distribution system and not the source water. The importance of a sampling plan depends on how big a water system is. For example, if a mobile home park has a main office and fifteen trailers - a map or sketch of the grounds indicating the location of each trailer, the well house, approximately where the water lines run and where the samples are being collected, is sufficient. On the other hand, a larger system may have an engineering plan sheet or a street map that could be used to develop a sampling plan. Generally speaking, a small water system should have one routine sampling point and four others for repeat samples. Special allowances can be made for systems without enough sampling points.

Try to choose routine sampling points that are evenly scattered throughout the distribution system. **Do not use the well or the treatment plant (if you have one) as a routine sampling point.** Choose sampling taps in the following order of preference: cold water only inside taps, freeze-proof taps through the building foundation, and lastly, hot and cold mixing faucets. Avoid leaking faucets, freeze-proof yard hydrants, and outside foundation taps that are close to the ground.

The Missouri Department of Natural Resources-Public Drinking Water Branch regional office staff that covers your area will review your sample site plan. **Exhibit B** is a map of our regional office territories and contact information. Unless they ask you to submit your sample site plan, you may keep a copy of it on file and it will be reviewed when they conduct a sanitary survey of your facility.

HOW SHOULD A SAMPLE BE COLLECTED?

(See Exhibit A for detailed instructions and diagrams.) Only collect samples in the bottles supplied by the laboratory that does your testing. Do not rinse the bottles out because they contain a small amount of dechlorinating agent. Before you do anything else, wash your hands. If the sample tap has any attachments on it (such as screens, swiveled faucets, aeration devices, gaskets, or water filters) remove them. Flush the sample tap. If sampling from a cold water tap, let it run for approximately 3 minutes. If sampling from a mixing faucet, flush the hot water for approximately 2 minutes and then the cold water for 3 minutes. Next, disinfect the tap. If you have a tap that is all metal, one way to disinfect it is by thoroughly heating it from the nose to the valve with a propane torch, being careful to get the open end well heated. Before using this method, be sure the faucet does not have any plastic parts and there are no potential fire hazards. If flame sterilization is not practical, you can rinse the inside and outside of the tap with a solution of household bleach and water (1.5 teaspoons of bleach to 1 gallon of water). A plastic

squirt bottle will allow you to thoroughly flood the inside of the faucet. Let the cold water run again for an additional 2 to 3 minutes. Reduce the flow to allow you to fill the bottle without splashing. Remove the bottle cap being very careful not to contaminate the inside of the cap or the bottle. Hold the bottle in one hand and the cap (bottom facing down) in the other. Once you start filling the bottle, do not adjust the stream flow. Fill to the black line on the bottle, or approximately one inch below the bottle cap. Cap the bottle immediately.

HOW DOES THE LAB KNOW WHERE THIS SAMPLE CAME FROM?

Every sample that you submit for analysis must be accompanied by a chain of custody card (sample card) that describes who collected the sample, where, what time, etc. The state lab system uses a two copy NCR (no carbon required) paper sample card. **Instructions on how to fill out the card are on the back of each card.** Use a ballpoint pen and press firmly to be sure it marks the second copy. The lab needs both copies returned. The card must be filled out **completely, accurately and legibly** in order to get credit for submitting your sample. Sample cards are provided with each supply of sample bottles.

HOW DO I GET MY SAMPLE TO THE STATE LABORATORY?

The state laboratory system provides you with shipping boxes and preaddressed labels to the MDHSS lab nearest you. Affix a label to the outside of the box and put the sample bottle and sample card in the box. The box should be securely taped. Avoid using duct tape; this will result in the lab not being able to reuse the box.

Bacteriological samples have a 30 hour time limit; therefore they must be transported to the lab as quickly as possible. The MDHSS has a contract courier service that does not charge for delivery, available Monday-Thursday. **Exhibit D** is a list of the stops in your region. They are also listed online at:. http://dnr.mo.gov/env/wpp/pdwb/courier-list.pdf. Before using it the first time, it is recommended to contact the courier stop to verify what time the pick up is made. You will want to get your sample to the pickup point **BEFORE** the stop is made that day in order to meet the 30-hour holding time.

For some systems, first class-special delivery through the post office is more convenient. There are a couple of things you can do to help insure your sample will get to the lab within the 30 hour time limit. You can contact a local post office and find out what time the mail is dispatched. Collect and mail your samples as close to the dispatch time as possible. Let your post office worker know that your package has a critical shipping time and make sure it gets in the special delivery bag. If you try these things and samples are consistently late, you may have to use the MDHSS courier service, go to express mail that guarantees 24-hour delivery, or try another carrier like UPS or Federal Express.

HOW IS THE SAMPLE ANALYZED?

Bacteriological drinking water samples are analyzed for a group of bacteria known as coliforms. Coliforms are common in the environment and are relatively easy and inexpensive to test for in the laboratory. Because they are often found in association with disease-causing organisms, they are commonly used as an indicator of drinking water contamination.

If total coliforms are present, they are further analyzed to determine if E coli is present. E coli are shed from the body in feces and indicate a greater possibility that disease-causing organisms are present in the water.

WHAT DO THE RESULTS MEAN?

For every sample you submit you will receive a report of the results. The most common results are as follows:

Lab Result Codes	Results
A	This is a safe sample. Sample was absent of Total Coliforms/E coli.
P	Coliforms are present in the sample, it is considered an unsafe sample.
P	E coli is present in the sample, it is considered an unsafe sample.
OUT	Bacteriological samples have a 30-hour time limit. This sample was not analyzed because more than 30 hours expired between the time the sample was collected and when it reached the lab.
BIT	Sample invalid. Bottle broken in transit.

Sample results for public water systems are available on Drinking Water Watch at: http://dnr.mo.gov/DWW/

ARE ANY FOLLOW-UP SAMPLES REQUIRED?

If a routine sample is contaminated with total coliforms, a set of four repeat samples must be collected. If a routine sample is invalid, a replacement sample must be submitted. Samples that are outdated or broken in transit are invalid and the water system must submit a replacement sample.

*REPEAT SAMPLES

When a supply has a coliform positive sample, four repeat samples must be collected. One repeat sample must be collected at the same location as the original coliform positive sample. Another repeat sample must be collected from a location within five service connections upstream from the original positive sample location and another from within five service connections downstream. **The fourth repeat sample must be collected from the source (well).** If a waters system has multiple wells, a source water sample must be collected from each well. If it can be confirmed that the other wells did not contribute to the original routine positive sample, a source water sample does not have to be collected from the noncontributing well(s). Communication with the regional offices will likely be required to confirm follow up sampling requirements. Failure to collect the repeat samples or collect a source water repeat sample(s) will result in a monitoring violation.

Repeat samples must be collected within 24 hours of being notified of the unsafe sample by the MDNR or your contract lab. If you use the state lab, you will likely be notified by telephone from the MDNR regional office in your area. The Department will attempt to make this contact with you on every unsafe sample to lend technical assistance in identifying and correcting the problem, and to answer any questions you may have about follow up sampling activities. A time extension to the 24-hour deadline may be allowed by the MDNR if the water system has a logistical problem of collecting the repeat samples and getting them to the lab. For example, if we find out you have a positive sample on a Friday afternoon and it is too far to drive the samples to the lab, you may be able to get an extension.

The sample card has a space under "Sample Type" to indicate that a sample is a repeat and a space under "Repeat Location" to indicate where the repeat was collected (upstream, downstream, original site or well). Be sure to check the repeat box and the appropriate location box on each repeat sample.

In addition to these repeat samples, any system that collects one sample per month must submit five routine samples the month following a coliform positive sample.

*EXAMPLE: Your system is required to submit one routine sample per month. In the month of May, your routine sample turns out coliform positive. You must submit four repeat samples within 24 hours of notification. In June, you will be required to submit five routine samples. If the five routines in June are all safe, you can return to one routine sample in July. However, if coliforms are found you must continue to submit five routine samples per month until all the samples submitted in a month are free of coliform bacteria.

*REPLACEMENT SAMPLES

If a routine sample is invalid, a replacement sample must be submitted.
When practical, replacement samples must also be collected within 24 hours of being notified of the results. Only one replacement sample is needed for each invalid sample. The most common reason why samples are invalidated is due to exceeding the 30-hour time limit.

HOW DO I STAY IN COMPLIANCE WITH THE COLIFORM RULE?

There are basically two ways to violate the Total Coliform Rule:

1. Exceeding the Maximum Contaminant Level (MCL), or
2. Failure to monitor.

* MAXIMUM CONTAINMENT LEVEL

Compliance is based on the presence or absence of coliform bacteria. Any water system that has two or more coliform positive samples in a month is considered to have a MCL violation.

Any sample that tests positive for coliform bacteria must be further analyzed to see if it is positive for E coli or fecal coliforms. If both the original routine and any one of the repeats are positive for coliform and any one of them is also positive for E coli or fecal coliforms, it is an ACUTE MCL violation. Because of the immediate health concern, a boil water order must be issued along with making public notice.

Also, since E coli can indicate the presence of an immediate acute health risk, a boil water advisory will likely be issued in the event of a single E coli positive sample.

All of the repeat and/or replacement samples collected as a result of an original positive coliform sample count towards determination of compliance with the MCL. For example, if a routine sample is collected the last week of May and tests positive for coliform, the repeat samples probably will not be collected until the first week of June. These repeat samples, even though they are collected in the month following the original positive sample, would count toward determining compliance for May.

IS CHEMICAL MONITORING REQUIRED?

Since enactment of the Safe Drinking Water Act, public water systems throughout the United States have been monitoring their water for certain chemicals. The focus has mainly been on industrial solvents and pesticides because of their potential to contaminate groundwater. As more monitoring has been done and the laboratory science for detecting these compounds has improved, EPA has continued to expand the list of contaminants that every public water system must monitor for. Your water will routinely be monitored for inorganics, volatile organics, and pesticides. Because of the cost involved, it is the MDNR's intention to provide all the chemical monitoring required of your system. You will be notified whenever any chemical testing is scheduled. Typically, chemical monitoring is required on a three year sampling schedule. Sampling instructions and containers will be forwarded to you when the time comes.

Do not confuse this chemical testing with the monthly bacteriological testing. The sample kit and containers will be different. Be sure to read the sample instructions carefully and call the MDNR-PDWB if you have any questions.

SUMMARY

Improving and maintaining drinking water quality is not just the responsibility of the EPA and state agencies. It is also the responsibility of the water supplies and all concerned citizens. With the public's health at stake, everyone should be paying more attention to drinking water and its quality. The frequent monitoring of each public water system will provide a historical record of each system's water quality. This record is critical to ensuring a safe drinking water supply for all Missourians. Your cooperation and support are vital to the success of this program. The MDNR staff is dedicated to helping you with technical assistance any time you have problems or questions.

The MDNR-PDWB can be reached by phone at 573-751-5331 or by mail at:

Missouri Department of Natural Resources
Public Drinking Water Branch
P.O. Box 176
Jefferson City, Missouri 65102

Links:

MDNR-PDWB Homepage
http://www.dnr.mo.gov/env/wpp/dw-index.htm

MDHSS Public Drinking Water Information
http://health.mo.gov/lab/publicdrinkingwater.php

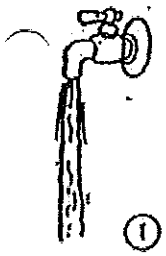
University of Missouri-Public Drinking Water Information
http://extension.missouri.edu/main/DisplayCategory.aspx?C=222

EPA Public Drinking Water Information
http://www.epa.gov/safewater/pws/index.html

Drinking Water Watch
http://dnr.mo.gov/DWW/

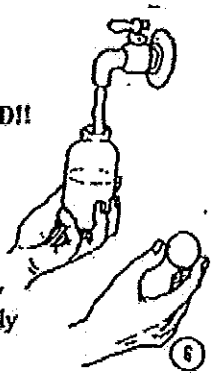
Exhibit A

METHOD FOR COLLECTING DRINKING WATER SAMPLES FOR BACTERIOLOGICAL ANALYSIS

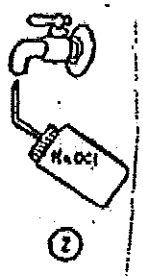


Only samples collected in bottles prepared by the State Public Health Laboratories will be accepted for analysis. **DO NOT OPEN SAMPLE BOTTLE UNTIL ALL INSTRUCTIONS HAVE BEEN READ!!**

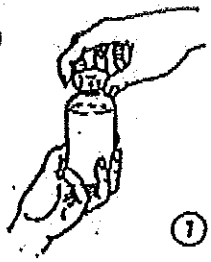
The sample should be taken from a smooth-nosed cold water tap if possible. Avoid collecting samples from leaking taps that allow water to flow over the outside of the tap or from frost-proof hydrants (8) or hot-cold mixing faucets (9), since it is not practical to sterilize these fixtures.



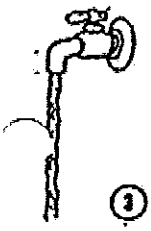
(1) Remove aeration devices and screens from faucets before sampling. Open the tap fully and let water run to waste for 2 or 3 minutes or until the service line has been thoroughly flushed.



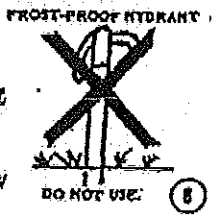
(2) Flame-sterilize the tap from its nose to the valve, being certain that the open end has been thoroughly flushed or chemically disinfect the tap by thoroughly rinsing both the inside and outside of the tap with a 100 ppm solution of sodium hypochlorite (NaOCl). A 100 ppm sodium hypochlorite can be made by mixing ¼ ounce (1.5 teaspoon) of household bleach with one gallon of clean water. If tap cleanliness is questionable, provisions should be made to allow the solution to remain in contact with the tap for up to 15 minutes or to increase the strength of the solution to ensure adequate disinfection.



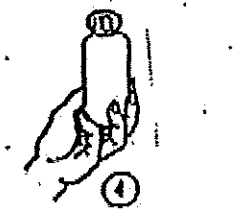
(3) Flush the tap for an additional 2 or 3 minutes, then reduce to a gentle flow to permit filling the bottle without splashing.



(4) **DO NOT RINSE THE SAMPLING BOTTLE and KEEP BOTTLE CLOSED UNTIL FILLED.** The bottles contain a chlorine neutralizer that is present in liquid or crystalline form. They are sterile and ready for use when shipped. A loose cap does not affect sterility.

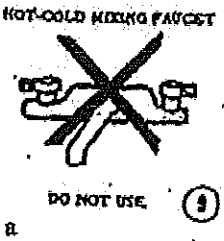


(5) Grasp the cap along the top edge and remove. **DO NOT TOUCH THE INSIDE OF THE CAP OR THE BOTTLE, AND DO NOT ATTEMPT TO CLEAN OR RINSE THE BOTTLE.**



(6) Hold the bottle so that water entering it will not come in contact with your hands. Allow water to flow smoothly from the tap and fill the bottle to the 100 ml line (or fill to the black line present on some bottles). **SAMPLE WILL NOT BE TESTED IF THERE IS LESS THAN ½ INCH AIR SPACE IN THE BOTTLE.**

(7) Replace cap on bottle and tighten securely.



SHIPPING INSTRUCTIONS

COLLECT SAMPLES ONLY ON MONDAY, TUESDAY, WEDNESDAY OR THURSDAY EXCEPT IN AN EMERGENCY. Samples should not be en route to the laboratory over a weekend or a state holiday.

SHIP SAMPLES IMMEDIATELY AFTER COLLECTION. This important because samples not received at the laboratory within 30 hours of collection will be invalid. Check with your local postmaster for time of dispatch and collect the samples shortly before shipment to the laboratory. To ensure shortest shipping time, <u>use first class postage.</u>

INFORMATION FORM: Fill out a separate form for each water sample submitted. Supply all information requested on the form and enclose with the sample container. Be certain that the number on the form matches the number on the bottle. **SAMPLES WITH INCOMPLETE COLLECTION INFORMATION WILL NOT BE TESTED.**

10 CSR 60-16.020 Laboratory Certification Fee

PURPOSE: This rule establishes fees for certification of laboratories to conduct chemical testing of drinking water.

(1) The following laboratory certification fees shall be paid before a certification will be issued for chemical testing of drinking water under 10 CSR 60-5.020(2), (3), (4) or (5).

(A) The fee for certification to analyze organic chemicals in drinking water shall be two thousand seven hundred dollars ($2700) for each three (3)-year certification period.

(B) The fee for certification to analyze inorganic chemicals in drinking water shall be one thousand five hundred dollars ($1500) for each three (3)-year certification period.

(C) The fee for a laboratory audit shall be two thousand five hundred dollars ($2500).

AUTHORITY: section 640.100, RSMo Supp 1993. Original rule filed Dec. 14, 1992 effective Aug. 9, 1993.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993.*

10 CSR 60-16.030 Laboratory Services and Program Administration Fees

PURPOSE: This rule levies and sets the amount of the annual laboratory services and program administration fees and describes the method of remitting the fee to the department.

(1) This rule applies to all public water systems.

(2) This rule establishes the laboratory services and program administration fees authorized by section 640.100.4., RSMo. The fees cover the reasonable costs of laboratory services, both within the Department of Natural Resources and the Department of Health, and program administration, not to exceed the statutory limits of two hundred dollars ($200) for a supplier servicing less than four thousand one hundred (4100) service connections, three hundred dollars ($300) for a supplier serving less than seven thousand six hundred (7600) service connections, five hundred dollars ($500) for a supplier serving seven thousand six hundred (7600) or more service connections, and five hundred dollars ($500) for a supplier that uses surface water.

(3) The laboratory services and program administration fees are established at the following amounts. The fees are based on the estimated annual costs for laboratory services and program administration incurred by the state per public water system not to exceed the statutory limits shown in section (2) of this rule.

(A) The annual fees for a transient noncommunity water system shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
(any)	$100

(B) The annual fees for all secondary public water systems and for public water systems, except transient noncommunity water systems, that use groundwater, including groundwater under the direct influence of surface water, shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
less than 4100	$200
4100 to 7599	$300
7600 or more	$500

(C) The annual fees for public water systems, except transient noncommunity water systems, that use surface water, including systems using both surface water and groundwater, shall be—

Number of Service Connections	Laboratory Services and Program Administration Fees
(any)	$500

(4) Remission of Fees to the State.

(A) All systems listed in the public water system inventory as of January 1 of each year shall remit the annual laboratory services and program administration fees for that calendar year by February 28 of the same year.

(B) Failure to remit the fees as required will result in the following actions by the department:

1. Department of Natural Resources and Department of Health laboratory services shall be terminated for that water system for that calendar year;

2. Interest shall accrue on the entire amount from the original date payment was due at a rate of twelve percent (12%) per anum until payment is remitted;

3. The department may take action in accordance with section 640.130, RSMo and may revoke the system's permit to dispense water to the public; and

4. The department may grant an extension of time, not to exceed two (2) months, to remit the fees or may waive interest on fees.

AUTHORITY: section 640.100, RSMo Supp. 1993. Original rule filed April 14, 1994, effective Nov. 30, 1994.*

**Original authority: 640.100, RSMo 1939, amended 1978, 1981, 1982, 1988, 1989, 1992, 1993.*

MISSOURI DEPARTMENT OF NATURAL RESOURCES
REGIONAL AND SATELLITE OFFICES

Kansas City Area

Kansas City Regional Office
500 NE Colbern Rd.
Lee's Summit, MO 64086-4710
816-622-7000 FAX: 816-622-7044

Truman Lake Satellite Office
Harry S Truman State Park
28761 State Park Road West
Warsaw, MO 65355
660-438-3039 FAX: 660-438-5271

Northeast Area

Northeast Regional Office
1709 Prospect Drive
Macon, MO 63552-2602
660-385-8000 FAX: 660-385-8090

Arrow Rock Satellite Office
101 7th St.
Arrow Rock, MO 65320
660-837-3130

Department Central Offices
P.O. Box 176
Jefferson City, MO 65102-0176
573-751-3443
dnr.mo.gov/shared/map-jeffcity.htm

Southwest Area

Southwest Regional Office
2040 W. Woodland
Springfield, MO 65807-5912
417-891-4300 FAX: 417-891-4399

Lake of the Ozarks Satellite Office
Camden County, 5570 Hwy. 54,
Osage Beach, MO 65065
Mailing Address: 2040 W. Woodland
Springfield, MO 65807-5912
573-348-2442 FAX: 573-348-2568

St. Louis Area

St. Louis Regional Office
7545 S. Lindbergh, Ste 210
St. Louis, MO 63125
314-416-2960 FAX: 314-416-2970

Franklin County Satellite Office
Meramec State Park
Hwy. 185 S.
Sullivan, MO 63080
573-860-4308 FAX: 573-468-5051

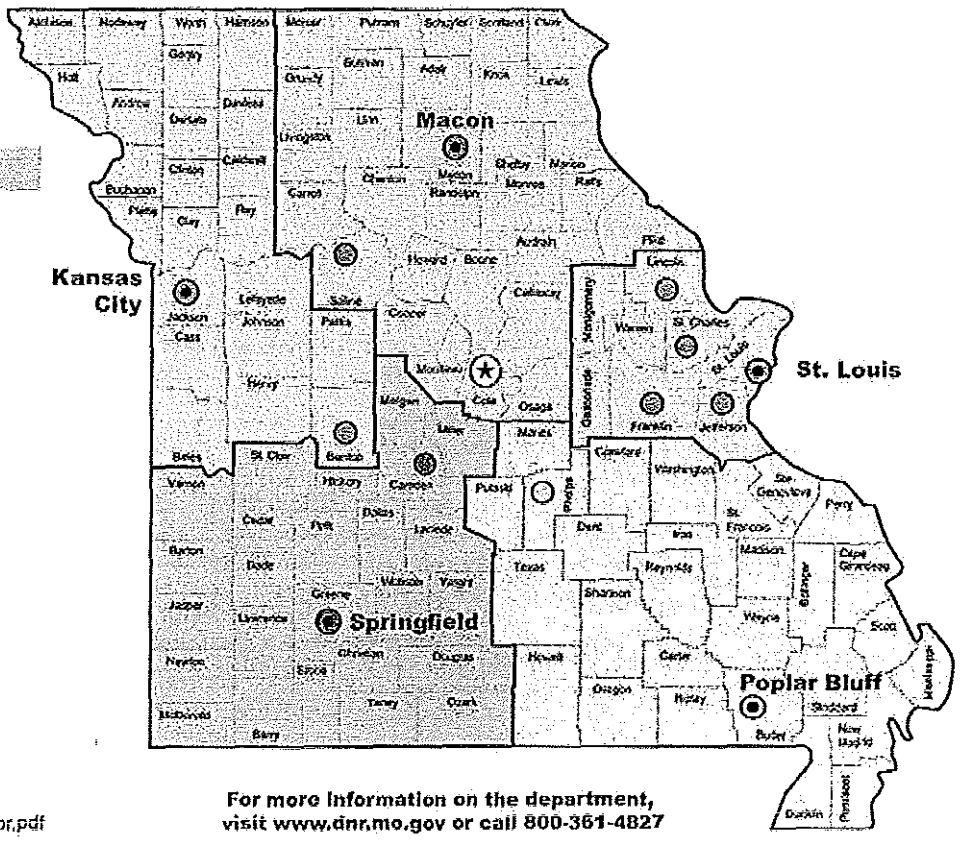
Jefferson County Satellite Office
Eastern District Parks Office
Hwy. 61
Festus, MO 63028
636-931-5200 FAX: 636-931-5204

Lincoln County Satellite Office
Cuivre River State Park
678 State Rt. 147
Troy, MO 63379
636-528-4779 FAX: 636-528-8362

Southeast Area

Southeast Regional Office
2155 North Westwood Blvd.
Poplar Bluff, MO 63901
573-840-9750 FAX: 573-840-9754

Rolla Satellite Office
111 Fairgrounds Rd.
Rolla, MO 65402
573-368-3625 FAX: 573-368-3912



For more information on the department, visit www.dnr.mo.gov or call 800-361-4827

8/2014 www.dnr.mo.gov/regions/romap-color.pdf

Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

JUL 27 2015

Ms. Bonnie Burton
Camden County Public Water Supply
District No. 5
P.O. Box 556
Camdenton, MO 65020

RE: Three-Party Contract for Engineering Report Services, Camden Co. PWSD #5–Contract Number ER15-DWSA-MO3031383

Dear Ms. Burton:

On behalf of the Missouri Department of Natural Resources' Public Drinking Water Branch, I am pleased to offer the enclosed contract for Engineering Report Services. The agreement and scope of work represents the entire and integrated agreement between Camden Co. PWSD #5, Darren Krehbiel Consultants, LLC and the department.

Please carefully review the terms of the contract and the scope of services. To accept the contract, you and Darren Krehbiel Consultants, LLC must each sign the enclosed three copies of the 3-Party Contract Agreement. The contract is effective upon signature of the authorized officials. By signing the agreement, both parties are committing to follow and comply with all of the terms and conditions. Please return the contract documentation to: Public Drinking Water Branch, Permits and Engineering Section, P.O. Box 176, Jefferson City, Missouri 65102, within 21 days of the date of this letter and include the following:

- One signed original of the 3-Party Contract Agreement

You should retain two signed original 3-Party Contract Agreements, including all terms and conditions, for your water system and engineering firm. You may contact Ms. Megan Torrence at (573) 522-1801 or Mr. Maher Jaafari, P.E., at (573) 751-1127 if you have any questions.

A completed Engineering Report must be submitted to the department for review and approval within seven months from the date the department signed the contract. No time extensions will be granted.

All requests for payment must be sent to: Water Protection Program, Fiscal Management Section, P.O. Box 176, Jefferson City, Missouri 65102.

The department appreciates your efforts working with us to ensure safe and reliable drinking water for the citizens of Missouri. Thank you.

Sincerely,

DEPARTMENT OF NATURAL RESOURCES

Sara Parker Pauley
Director

SPP:mtk

Enclosures

c: Darren Krehbiel Consultants, LLC
Mary Mulhearn, Legislative Director, Department of Natural Resources
Southwest Regional Office

STATE OF MISSOURI
Jeremiah W. (Jay) Nixon, Governor • Sara Parker Pauley, Director
DEPARTMENT OF NATURAL RESOURCES
www.dnr.mo.gov

July 30, 2015

Camden County Water Supply No. 5
Clearwater Condominiums
P.O. Box 556
Camdenton, MO 65020

RE: Sample Results for the May 28, 2015 Inspection

Dear Permittee:

Enclosed are the results of laboratory analyses for a sample collected from the effluent of Clearwater Condominiums by a representative of the Missouri Department of Natural Resources on May 28, 2015. The results reflect non-compliance with the effluent limitation set forth in your Missouri State Operating Permit (MSOP) MO0126985. The ammonia result of 3.41 mg/L exceeded the monthly average of 2.6 mg/L. Since Notice of Violation #16323SW has already been issued, no additional Letter of Warning or Notice of Violation will be issued.

If you have any questions, please feel free to contact me at 573-348-4028 or via mail at Southwest Regional Office, 2040 W. Woodland, Springfield MO 65807-5912.

Sincerely,

SOUTHWEST REGIONAL OFFICE

Laura Gerson

Laura M. Gerson
Environmental Specialist

LMG/kb

Enclosure

c: Mr. Jim Heppler, Lake of the Ozarks Water & Sewer

029.wpcp.ClearwaterCondos.mo0126985.x.2015.07.30.fy16.sample.16323sw.lmg

Recycled Paper

Missouri Department of Natural Resources
Environmental Services Program

Order ID 150529012 **Program, Contact:** WPC Linda Mebruer

Report Date: 06/19/2015 **LDPR/JobCode:** FEINS

RECEIVED
JUN 23 2015
DEQ/SWRO

Sample: AC52060
Customer #: 150145

Facility ID: MO0126985 **Site:** Clearwater Condos
County: Camden **Sample Reference ID:**
Collector: LAURA GERSON **Affiliation:** SWRO **Collect Date:** 5/28/2015 8:25:00AM
Entry Point:
Sample Comment: Grab; outfall 001
Precision

UTM-Easting 15844E **Northing** 4207497N

Test	Parameter	Result	Qualifier	Units	Method
mmonia as N	Ammonia as N	3.41		mg/L	L 10-107-06-1-J
iochemical Oxygen Demand	Biochemical Oxygen Demand	<4	ND	mg/L	SM 5210-B
coli - IDEXX	E. coli - IDEXX	<1	03, ND	mpn/100ml	SM 9223B
eld Dissolved Oxygen	Field Dissolved Oxygen	5.67		mg/L	SM 4500-O-G
eld pH	Field pH	7.25		pH Units	EPA 150.1
eld Temperature	Field Temperature	22.5 C			EPA 170.1
tal Residual Chlorine	Total Residual Chlorine	2.20		mg/L	Field Dependent
tal Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR	<5	ND	mg/L	SM 2540-D

ample: AC52061
Customer #: 150144

Facility ID: MO0126985 **Site:** Clearwater Condos
County: Camden **Sample Reference ID:**
Collector: LAURA GERSON **Affiliation:** SWRO **Collect Date:** 5/28/2015 8:30:00AM
Entry Point:
Sample Comment: Grab; outfall 001. Duplicate for #150145
Precision

JTM-Easting 5844E **Northing** 4207497N

Test	Parameter	Result	Qualifier	Units	Method
mmonia as N	Ammonia as N	3.42		mg/L	L 10-107-06-1-J
ichemical Oxygen Demand	Biochemical Oxygen Demand	<4	ND	mg/L	SM 5210-B
coli - IDEXX	E. coli - IDEXX	<1	03, ND	mpn/100ml	SM 9223B
ld Dissolved Oxygen	Field Dissolved Oxygen	5.65		mg/L	SM 4500-O-G
ld pH	Field pH	7.32		pH Units	EPA 150.1
ld Temperature	Field Temperature	22.4 C			EPA 170.1
al Residual Chlorine	Total Residual Chlorine	2.20		mg/L	Field Dependent
al Suspended Solids (TSS) / NFR	Total Suspended Solids (TSS) / NFR	<5	ND	mg/L	SM 2540-D

227. wpcp. ClearwaterCondos. MO0126985. x. 2015. 06. 23. 1415. sam. x. rcvd

150529012

PWSD 1 20-000426

The analysis of this sample was performed in accordance with procedures approved or recognized by the U.S Environmental Protection Agency.

Chris Boldt, Laboratory Manager
Environmental Services Program
Division of Environmental Quality

Qualifier Descriptions

01 Improper collection method
02 Improper preservation
03 Exceeded holding time
04 Analyzed by Contract Laboratory
05 Estimated value, detected below PQL
06 Estimated value, QC data outside limits
07 Estimated value, analyte outside calibration range
08 Analyte present in blank at > 1/2 reported value
09 Sample was diluted during analysis
10 Laboratory error
11 Estimated value, matrix interference
12 Insufficient quantity
13 Estimated value, true result is >= reported value
14 Estimated value, non-homogeneous sample
15 No Result - Failed Quality Controls Requirements
16 Not analyzed - related analyte not detected
17 Results in dry weight
18 Sample pH is outside the acceptable range
19 Estimated value
20 Not analyzed - instrument failure
21 No result - spectral interference
22 pH was performed at the Laboratory
23 Contract Lab specific qualifier - see sample comments
24 No result - matrix interference
25 No Result: Excessive Chlorination
26 No Result: Excessive Dechlorination
27 Sample temperature outside acceptable range
28 Headspace (air bubbles) present in sample vial
29 Estimated value, QC data biased low
30 Estimated value, QC data biased high
ND Not detected at reported value

PWSD 1.20-000427

150529012

MISSOURI DEPARTMENT OF NATURAL RESOURCES

MISSOURI DEPARTMENT OF NATURAL RESOURCES
DRINKING WATER REVOLVING FUND SET-ASIDE
3-PARTY CONTRACT AGREEMENT

...der the authority of, and subject to, pertinent legislation, regulations, and policies applicable to Section 1452(g)(2) of the Federal Safe Drinking Water Act.

1. Public Water System (Name, Address) Camden Co. PWSD #5 P.O. Box 556 Camdenton, MO 65020	2. Project Number: ER15-DWSA-MO3031383 3. Budget Period: Date of Dept Signature – Nine (9) months 4. Project Period: Date of Dept Signature – Seven (7) months
5. Public Water System Project Manager Bonnie Burton 573/280-5416	6. Type of Assistance (indicate by X) New Award X Amendment No. ____ Amendment ID:
7. Engineering Firm Darren Krehbiel Consultants, LLC 63 Blair Ave. Camdenton, MO 65020	8. State Project Manager: Maher Jaafari, P.E. Telephone: 573/751-1127 Coordinator: Megan Torrence Telephone: 573/522-1801

9. Project Title and Description:
Three-Party Engineering Report Services for Camden Co. PWSD #5
Develop an engineering report for improvements that will help the system achieve and maintain technical, managerial and financial capacity, including compliance with the National Primary Drinking Water Regulations and Missouri public drinking water regulations

10. Source of Funding/Year: **Drinking Water State Revolving Fund Set-Aside Funds / 2013**

11. Project Funding:

	Amount	Percent
Financial Award	$21,750	75%
PWS Match	$7,250	25%
Total Project Cost	$29,000	100%

12. Amendment (describe)

13. The recipients agree to administer this agreement in accordance with the terms and conditions attached hereto.

a. All applicable federal and state regulations including but not limited to 10 CSR 60-13.020 and 40 CFR Part 31.
b. Applicable program guidelines: CFDA #66.468
c. Recipient application received: October 21, 2014
d. Detailed Scope of Work (Attachment A)
f. General Terms and Conditions (Attachment B)

The assistance as described herein is hereby offered and accepted effective upon signature of authorized officials and on the date indicated in Parts 3 and 4 above.

MISSOURI DEPARTMENT OF NATURAL RESOURCES

Department Director or Designee (typed) **Sara Parker Pauley, Director**	Signature Sara Parker Pauley	Date 7-27-15
RECIPIENT PUBLIC WATER SYSTEM: Camden Co. PWSD #5		DUNS #: 038115529
Name and Title DAVID STONE - CHAIRMAN OF THE BOARD	Signature David Stone	Date 8/17/15
ENGINEERING FIRM: Darren Krehbiel Consultants, LLC		DUNS #: 079185040
Name and Title DARREN KREHBIEL SOLE MEMBER	Signature	Date 8/17/2015

Attachment B
MISSOURI DEPARTMENT OF NATURAL RESOURCES
Federal Subgrants
General Terms and Conditions

I. Administrative Requirements

These general terms and conditions highlight requirements which are especially pertinent to federal subgrants made by the Missouri Department of Natural Resources (MDNR). These general terms and conditions do not set out all of the provisions of the applicable laws and regulations, nor do they represent an exhaustive list of all requirements applicable to this award. These terms and conditions are emphasized here because they are frequently invoked and their violation is of serious concern.

In addition to these terms and conditions, the subgrantee must comply with all governing requirements of their subgrant, including the federal Common Rule (adopted by federal agencies and contained in specific Codes of Federal Regulation, for each federal agency, under the title "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments"). The Common Rule is fully incorporated by reference into these terms and conditions. The common rule as codified by the federal granting agency can be found at http://www.whitehouse.gov/omb/grants/chart.html

A. **Method of Payment.** The subgrantee will be reimbursed by the MDNR for all allowable expenses incurred in performing the scope of services. The subgrantee shall report project expenses and submit to the MDNR original invoices for payment as required by division/program per the subgrant agreement. The form must be completed with the MDNR invoiced amount and local share detailed. Invoices must provide a breakdown of project expenses by the budget categories contained in the subgrant budget. Invoices must be received by the MDNR per the subgrant agreement. No reimbursements will be made for expenditures incurred after the closing budget date unless a budget time period extension has been granted by the MDNR prior to the closing date.

1. Payments under non-construction grants will be based on the grant sharing ratio as applied to the total project cost for each invoice submitted unless the subgrant specifically provides for advance payments. Advance payments may only be made upon a showing of good cause or special circumstances, as determined by the MDNR. Advance payments will only be made on a monthly basis to cover estimated expenditures for a 30-day period or as otherwise agreed. The MDNR will not advance more than 25% of the total amount of the grant unless the recipient demonstrates good cause.

2. All reimbursement requests must have the following certification by the authorized subgrantee official: I certify that to the best of my knowledge and belief the data above are correct and that all outlays were made or will be made in accordance with the subgrant and that payment is due and has not been previously requested.

B. **Retention and Custodial Requirements for Records.** The subgrantee shall retain financial records, supporting documents, and other records pertinent to the subgrant for a period of three years starting from the date of submission of the final financial status report. Authorized representatives of federal awarding agencies, the Comptroller General of the United States, and the MDNR shall have access to any pertinent books, documents, and records of subgrantees in order to conduct audits or examinations. The subgrantee agrees to allow monitoring and auditing by the MDNR and/or authorized representative. If any litigation, claim, negotiation, audit, or other action involving the records has been started before the expiration of the 3-year period, the subgrantee shall retain records until completion of the action and resolution of all issues which arise from it, or until the end of the regular 3-year period, whichever is later.

C. **Program Income.**

1. Subgrantees are encouraged to earn income to defray program costs. Program income means income from fees for services performed, from the use or rental of real or personal property acquired with grant funds, from the sale of commodities or items fabricated under the subgrant, and from payments of principal and interest on loans made with subgrant funds. Program income does not include items such as interest on grant funds, rebates, credits, discounts, or refunds.

2. Program income shall be deducted from outlays, which may be both state and subgrantee unless the MDNR, with approval of the federal awarding agency, as negotiated with the subgrantee, specifies an alternative method in the subgrant. The default deductive alternative requires that program income be deducted from total allowable costs to determine the net amount to which the respective matching ratios are applied. For example, 50/50 share ratio subgrant with total allowable costs of $10,000 that earns $1,000 in program income would result in $4,500 net share and a $4,500 net sub-grant share.

D. **Match or Cost Share Funding.** In general, match or cost sharing represents that portion of project costs not borne by state appropriations. The matching share will usually be prescribed as a minimum percentage. In-kind (noncash) contributions are allowable project costs when they directly benefit and are specifically identifiable to the project or program. Any in-kind match must be assigned a fair market value stated in dollars and the rationale used to calculate the value must be provided. Neither costs nor the values of third party in-kind contributions count towards satisfying a cost sharing or matching requirement of a grant agreement if they have been or will be counted towards satisfying a cost sharing or matching requirement of another federal subgrant agreement, a federal procurement contract, or any other award of federal funds. Federal funds from another federal grant or subgrant shall not count towards satisfying a cost sharing or matching requirement of a grant agreement.

1. Match or cost share funding will be established by the MDNR through negotiation with the subgrantee. Signature by both the MDNR and subgrantee on the subgrant signature form firmly affixes the match or cost sharing ratios. Full expenditure of subgrantee match or cost share funding is required over the life of the subgrant. Subgrantee must invoice the MDNR, as required by the particular subgrant, and provide financial records for total expenditure of state and match or cost share funding. The MDNR will reimburse the subgrantee for its percentage portion agreed to less any negotiated withholding.

2. Failure to provide 100% of the match or cost share ratio of total expenditures as identified in the subgrant may cause the subgrantee to become ineligible to receive additional financial assistance from the MDNR. Failure to provide the required match may result in other enforcement remedies as stated in Y. for non-compliance.

E. **Financial Management Systems.** The financial management systems of subgrantees must meet the following standards:

1. Financial Reporting. Accurate, current, and complete disclosure of financial results of financially assisted activities must be made in accordance with the financial reporting requirements of the subgrant;

2. Accounting Records. Maintain records which adequately identify the source and application of funds provided for financially assisted activities. These records must contain information pertaining to subgrant awards and authorizations, obligations, unobligated balances, assets, liabilities, outlays or expenditures, and income;

3. Internal Control. Effective control and accountability must be maintained for all subgrantee cash, real and personal property, and other assets. Subgrantees must

adequately safeguard all such property and must assure that it is used solely for authorized purposes;

4. Budget Control. Actual expenditures or outlays must be compared with budgeted amounts for each subgrant;

5. Allowable Costs. Applicable OMB cost principles, federal agency program regulations, and the subgrant scope of work will be followed in determining the reasonableness, allowability, and allocability of costs;

6. Source Documentation. Accounting records must be supported by such source documentation as canceled checks, paid bills, payrolls, time and attendance records, contract, and subgrant award document. The documentation must be made available by the subgrantee at the MDNR's request;

7. The subgrantee shall have procedures in place to minimize the time lapsed between money disbursed by the MDNR and money spent by the subgrantee.

F. **Reporting of Program Performance.** Subgrantee shall submit to the MDNR a performance report for each program, function, or activity as specified by the subgrant or at least annually and/or after completion of the project. Performance report requirements, if not expressly stated in the scope of work, should include, at a minimum, a comparison of actual accomplishments to the goals established, reasons why goals were not met, including analysis and explanation of cost overruns or higher unit cost when appropriate, and other pertinent information. Representatives of the MDNR shall have the right to visit the project site(s) during reasonable hours for the duration of the contract period and for three years thereafter.

G. **Budget and Scope of Work Revisions.** Subgrantees are permitted to rebudget within the approved direct cost budget to meet unanticipated requirements. However, subgrantee must request approval in writing to revise budgets and scopes of work under the following conditions:

1. For non-construction grants, subgrantees shall obtain the prior approval of the MDNR, unless waived by the MDNR, for cumulative transfers among direct cost categories, or, if applicable, among separately budgeted programs, projects, functions or activities when the accumulative amounts of such transfers exceed or are expected to exceed 10% of the current total approved budget whenever the MDNR's share exceeds $100,000.

2. For construction and non-construction projects, subgrantees shall obtain prior written approval from the MDNR for any budget revision which would result in the need for additional funds.

3. For combined non-construction and construction projects, the subgrantee must obtain prior written approval from the MDNR before making any fund or budget transfer from the non-construction to construction or vice versa.

4. Subgrantees under non-construction projects must obtain prior written approval from the MDNR whenever contracting out, subgranting, or otherwise obtaining a third party to perform activities which are central to the purpose of the award.

5. Changes to the scope of services described in the subgrant must receive prior approval from the MDNR. Approved changes in the scope of work or budget shall be incorporated by written amendment to the subgrant.

6. Extending the grant past the original completion date requires approval of the MDNR.

H. **Equipment Use.** Subgrantee agrees that any equipment purchased pursuant to this agreement shall be used for the performance of services under this agreement during the term of this

agreement. The equipment shall not be moved from the State of Missouri without approval from the MDNR. The following standards shall govern the utilization and disposition of equipment acquired with subgrant funds:

1. Title to equipment acquired under this subgrant will vest with the subgrantee on acquisition. Equipment means an article of nonexpendable, tangible personal property having a useful life of more than one year and an acquisition cost $5,000 and greater.

   a. Equipment shall be used by the subgrantee in the program or project for which it was acquired as long as needed, whether or not the project or program continues to be supported by MDNR funds. When no longer needed for the original program or project, the equipment may be used in other activities currently or previously supported by the MDNR or the federal agency. If the MDNR puts subgrantee on notice that it believes grant assets are not being used for the intended purpose, subgrantee shall not sell, give away, move or abandon the assets without the MDNR's prior written approval.

   b. The subgrantee shall also make equipment available for use on other projects or programs currently or previously supported by the MDNR, providing such use will not interfere with the work on the projects or program for which it was originally acquired. First preference for other use shall be given to other programs or projects supported by the MDNR. User fees should be considered if appropriate.

   c. The subgrantee must not use equipment acquired with MDNR funds to provide services for a fee to compete unfairly with private companies that provide equivalent services, unless specifically permitted or contemplated by state or federal law. This fee may be considered program income under Section C above.

   d. When acquiring replacement equipment, the subgrantee may use the equipment to be replaced as a trade-in or sell the property and use the proceeds to offset the cost of the replacement property, subject to the approval of the MDNR.

2. Equipment Management. Subgrantee's procedures for managing equipment, whether acquired in whole or in part with subgrant funds, will, at a minimum, meet the following requirements until disposition takes place:

   a. Subgrantee must maintain property records that include a description of the equipment, a serial number or other identification number, the source of property, the acquisition date, cost of the property, percentage of federal or state participation in the cost of the property, and the location, use and condition of the property.

   b. A physical inventory of the property must be taken and the results reconciled with the property records at least once every two years.

   c. A control system must be developed to ensure adequate safeguards to prevent against loss, damage, or theft of the property. Any loss, damage, or theft shall be reported to and investigated by local authorities. The subgrantee shall procure and maintain insurance covering loss or damage to equipment purchased with a sub-grant award, with financially sound and reputable insurance companies or through self-insurance, in such amounts and covering such risks as are usually carried by companies engaged in the same or similar business and similarly situated.

d. Subgrantee must develop adequate maintenance procedures to keep the property in good condition.

e. If the subgrantee is authorized or required to sell the property, proper sales procedures must be established to ensure the highest possible return.

3. Disposition. When original or replacement equipment acquired under a subgrant is no longer needed for the original project or program or for other activities currently or previously supported by the MDNR, subgrantee shall dispose of the equipment as follows:

a. Items of equipment with a current per-unit fair market value of less than $5,000 may be retained, sold or otherwise disposed of with no further obligation to the MDNR.

b. For items of equipment with a current per unit fair market value of $5,000 or more, the MDNR shall have a right to an amount calculated by multiplying the current market value or proceeds from sale by the MDNR's share of the equipment.

c. In cases where a subgrantee fails to take appropriate disposition actions, the MDNR may direct the subgrantee how to dispose of the equipment.

d. If the MDNR puts subgrantee on notice that it believes grant assets are not being used for the intended purpose, subgrantee shall not sell, give away, move or abandon the asset without MDNR's written approval.

I. **Supplies.** Title to supplies acquired under a subgrant will vest, upon acquisitions, in the subgrantee.

If there is a residual inventory of unused supplies exceeding $5,000 in total aggregate fair market value upon termination or completion of the award, and if the supplies are not needed for any other federally sponsored programs or projects, the subgrantee shall compensate the department for its share.

J. **Inventions and Patents.** If any subgrantee produces subject matter, which is or may be patentable in the course of work sponsored by this subgrant, subgrantee shall promptly and fully disclose such subject matter in writing to the MDNR. In the event that the subgrantee fails or declines to file Letters of Patent or to recognize patentable subject matter, the MDNR reserves the right to file the same. The MDNR grants to the subgrantee the opportunity to acquire an exclusive license, including the right to sublicense, with a royalty consideration paid to the MDNR. Payment of royalties by subgrantee to the MDNR will be addressed in a separate royalty agreement.

K. **Copyrights.** Except as otherwise provided in the terms and conditions of this subgrant, the author or the subgrantee is free to copyright any books, publications, or other copyrightable material developed in the course of this subgrant; however, the MDNR and federal awarding agency reserve a royalty-free, nonexclusive and irrevocable right to reproduce, publish, or otherwise use, and to authorize others to use, with the approval of MDNR, the work for government purposes.

L. **Prior Approval for Publications.** The subgrantee shall submit to the MDNR two draft copies of each publication and other printed materials which are intended for distribution and are financed, wholly or in part, by subgrant funds. The subgrantee shall not print or distribute any publication until receiving written approval by the grant manager.

M. **Mandatory Disclosures.** Subgrantee agrees that all statements, press releases, requests for proposals, bid solicitations, and other documents describing the program/project for which funds

are now being awarded will include a statement of the percentage of the total cost of the program/project which is financed with federal and state money, and the dollar amount of federal and state funds for the program/project.

N. **Procurement Standards.** Subgrantees shall use their own procurement procedures provided that procurement conforms to standards set forth in the "Uniform Administrative Requirements for Grants and Cooperative Agreements to State and Local Governments."

1. No work or services, paid for wholly or in part with state or federal funds, will be contracted without the written consent of the MDNR. See G.4.

2. Subgrantee agrees that any contract, interagency agreement, or equipment to be procured under this award which was not included in the approved work plan must receive formal MDNR approval prior to expenditure of funds associated with that contract, interagency agreement, or equipment purchase.

O. **Audit Requirements.** The MDNR has the right to conduct audits of recipients at any time. The subgrantee shall arrange for independent audits as prescribed in OMB Circular A-133, Single Audit Act Amendments of 1996, as applicable. Audits must confirm that records accurately reflect the operations of the subgrantee, the internal control structure provides reasonable assurance that assets are safeguarded, and subgrantee is in compliance with applicable laws and regulations. When the subgrantee has its yearly audit conducted by a governmental agency or private auditing firm, the relevant portion(s) of the audit report will be submitted to the MDNR. Other portions of the audit shall be made available at the MDNR's request.

P. **Allowability of Costs.** Allowability of costs shall be determined in accordance with cost principles contained in OMB Circular No. A-87 for state and local governments, and Circular No. A-122 for nonprofit organizations.

Q. **Conflicts of Interest.** No party to this subgrant, nor any officer, agent, or employee of either party to this subgrant, shall participate in any decision related to such subgrant which could result in a real or apparent conflict of interest, including any decision which would affect their personal or pecuniary interest, directly or indirectly.

The subgrantee is advised that, consistent with Chapter 105, RSMo, no state employee shall perform any service for consideration paid by the subgrantee for one year after termination of the employee's state employment by which the former state employee attempts to influence a decision of a state agency. A state employee who leaves state employment is permanently banned from performing any service for any consideration in relation to any case, decision, proceeding, or application in which the employee personally participated during state employment.

R. **State Appropriated Funding.** The subgrantee agrees that funds expended for the purposes of this subgrant must be appropriated and made available by the Missouri General Assembly for each fiscal year included within the subgrant period, as well as being awarded by the federal or state agency supporting the project. Therefore, the subgrant shall automatically terminate without penalty or termination costs if such funds are not appropriated and/or granted. In the event that funds are not appropriated and/or granted for the subgrant, the subgrantee shall not prohibit or otherwise limit the MDNR's right to pursue alternate solutions and remedies as deemed necessary for the conduct of state government affairs. The requirements stated in this paragraph shall apply to any amendment or the execution of any option to extend the subgrant.

S. **Eligibility, Debarment and Suspension.** By applying for this award, the subgrantee verifies that it, its board of directors, and all of its principals are currently in compliance with all state and federal environmental laws and court orders issued pursuant to those laws, and that all environmental violations have been resolved (for example, no pending or unresolved Notices of Violation (NOV)) at the time of application. If compliance issues exist, subgrantee shall disclose to the MDNR all pending or unresolved violations noted in an NOV, administrative order, or civil

and criminal lawsuit, but only where those alleged violations occurred in the past two years in the State of Missouri. The MDNR will not make any award at any time to any party which is debarred or suspended, under federal or state authority, or is otherwise excluded from or ineligible for participation in federal assistance under Executive Order 12549, "Debarment and Suspension." Subgrantee shall complete a Debarment/Suspension form when required by the MDNR. Furthermore, subgrantee is also responsible for written debarment/suspension certification of all subcontractors receiving funding through a federally funded grant.

T. **Restrictions on Lobbying.** No portion of this award may be expended by the recipient to pay any person for influencing or attempting to influence the executive or legislative branch with respect to the following actions: awarding of a contract; making of a grant; making of a loan; entering into a cooperative agreement; or the extension, continuation, renewal, amendment or modification of any of these as prohibited by Section 319, Public Law 101-121 (31 U.S.C. 1352).

In accordance with the Byrd Anti-Lobbying Amendment, any recipient who makes a prohibited expenditure under Title 40 CFR Part 34 or fails to file the required certification or lobbying forms shall be subject to a civil penalty of not less than $10,000 and not more than $100,000 for each such expenditure.

U. **Recycled Paper.** Consistent with Federal Executive Order 13101 and 13423 and EPA Executive Order 1000.25, the subgrantee shall use recycled paper consisting of at least 30% post consumer fiber and double sided printing for all reports which are prepared as a part of this grant award and delivered to the MDNR. The subgrantee must use recycled paper for any materials that it produces and makes available to any parties. The chasing arrows symbol representing the recycled content of the paper will be clearly displayed on at least one page of any materials provided to any parties.

V. **Contracting with Small and Minority Firms, Women's Business Enterprise, and Labor Surplus Area Firms.** In accordance with Missouri Executive Order No. 05-30 and federal administrative provisions, all subgrantees shall make every feasible effort to target the percentage of goods and services procured from certified minority business enterprises (MBE) and women business enterprises (WBE) to 10% and 5%, respectively, when utilizing subgrant funds to purchase supplies, equipment, construction and services related to this subgrant.

1. The subgrantee agrees to take all necessary affirmative steps required to assure that small and minority firms and women's business enterprises are used when possible as sources when procuring supplies, equipment, construction and services related to the subgrant. The subgrantee agrees to include information about these requirements in solicitation documents. Affirmative steps shall include:

    a. Placing qualified minority business and women's business enterprises on solicitation lists;

    b. Ensuring that minority business and women's business enterprises are solicited whenever they are potential sources;

    c. Dividing total requirements, when economically feasible, into small tasks or quantities to permit maximum participation by minority business and women's business enterprises;

    d. Establishing delivery schedules, where the requirements of work will permit participation by minority business and women's business enterprises;

    e. Using the services of the Small Business Administration and the Minority Business Development Agency of the U.S. Department of Commerce, and;

f. Requiring any prime contractor or other subgrantee, if subgrants are to be allowed, to take the affirmative steps in subparagraphs a. through e. of this section.

2. For EPA subgrants, the subgrantee agrees to submit to the MDNR grants manager a completed Form 5700-52A, U. S. Environmental Protection Agency MBE/WBE Utilization Under Federal Grants, Cooperative Agreement, and Interagency Agreements within 30 days after the end of each federal/state fiscal year or as determined by the MDNR.

3. For EPA subgrants, the subgrantee agrees to include disadvantaged business enterprises in the affirmative steps indicated above.

W. **Disputes.** Subgrantee and the MDNR should attempt to resolve disagreements concerning the administration or performance of the subgrant. If an agreement cannot be reached, the MDNR program director will provide a written decision. Such decision of the program director shall be final unless a request for review is submitted to the division director within ten (10) business days after the program director's decision. Such request shall include: (1) a copy of the program director's final decision; (2) a statement of the amount in dispute; (3) a brief description of the issue(s) involved; and (4) a concise statement of the objections to the final decision. A decision by the division director shall constitute final MDNR action.

X. **Termination**

1. Termination for Cause. The MDNR may terminate any subgrant, in whole or in part, at any time before the date of completion whenever it is determined that the subgrantee has failed to comply with the terms and conditions of the subgrant. The MDNR shall promptly notify the subgrantee in writing of such a determination and the reasons for the termination, together with the effective date. The MDNR reserves the right to withhold all or a portion of grant funds if the subgrantee violates any term or condition of this subgrant.

2. Termination for Convenience. Both the MDNR and subgrantee may terminate the subgrant, in whole or in part, when both parties agree that the continuation of the project would not produce beneficial results commensurate with the further expenditure of funds.

3. This agreement is not transferable to any person or entity.

Y. **Enforcement; Remedies for Noncompliance.** If a subgrantee falsifies any award document or materially fails to comply with any term of a grant, award, or subgrant, the MDNR may take one or more of the following actions, as appropriate:

1. Suspend or terminate, in whole or part, the current award or grant.;

2. Disallow all or part of the cost of the activity or action not in compliance;

3. Temporarily withhold cash payments pending subgrantee's correction of the deficiency;

4. Withhold further awards from the subgrantee;

5. Order subgrantee not to transfer ownership of assets purchased with grant money without prior MDNR approval; or

6. Take other remedies that may be legally available, including cost recovery, breach of contract, and suspension or debarment.

Z. **Subgrantee's Signature.** The subgrantee's signature on the application and the award documents signifies the subgrantee's agreement to all of the terms and conditions of the award.

AA. **Human Trafficking. This requirement applies to non-profit recipients or subrecipients.** The subgrantee, their employees, subrecipients under this award, and subrecipients' employees may not engage in severe forms of trafficking in persons during the period of time that the award is in effect; procure a commercial sex act during the period of time that the award is in effect; or use forced labor in the performance of the award or subawards under the award. The department has the right to terminate unilaterally: (1) implement section 106(g) of the Trafficking Victims Protection Act of 2000 (TVPA), noncompliance that are available to the subgrantee under this award.

BB. **Illegal Immigration.** As per HB 1549, 1771, 19395 & 2366 - Section 67.307 2. Any municipality that enacts or adopts a sanctuary policy will be ineligible for moneys provided through grants administered by any state agency or department until the policy is repealed or is no longer in effect.

CC. **Illegal Immigration – Missouri Statutes – RSMo 285.525 – 285.550 Effective January 1, 2009.** Effective January 1, 2009 and pursuant to RSMo 285.530 (1), no business entity or employer shall knowingly employ, hire for employment, or continue to employ an unauthorized alien to perform work within the state of Missouri.

DD. **Management Fees.** Management fees or similar charges in excess of the direct costs and approved indirect rates are not allowable. The term "management fees or similar charges" refers to expenses added to the direct costs in order to accumulate and reserve funds for ongoing business expenses, unforeseen liabilities, or for other similar costs which are not allowable under this agreement. Management fees or similar charges may not be used to improve or expand the project funded under this agreement, except to the extent the authorized as a direct cost of carrying out the scope of work.

EE. **Federal Funding Accountability and Transparency Act (FFATA) Requirements.** If the original award amount is less than $25,000 and an amendment increases the award amount to $25,000 or greater, the subrecipient must submit the following to the MDNR prior to MDNR signing the amendment (Subrecipient Informational Form – see Attachment 1):

- location of the entity receiving the award and primary location of performance under the award, including city, state, congressional district and county
- a unique identifier of the entity receiving the award – DUNS #
- a unique identifier of the parent entity of the recipient
- names and total compensation for the five most highly compensated officers for the preceding completed fiscal year

FF. **Executive Compensation.** If FFATA reporting requirements apply and if the award period will exceed 12 months, the subrecipient must provide to the MDNR updated compensation information for their five most highly compensated officers using the Subrecipient Informational Form for every 12 month period of the award agreement (Attachment 1).

II. Statutory Requirements

Subgrantees must comply with all federal state and local laws relating to employment, construction, research, environmental compliance, and other activities associated with grants from the MDNR. Failure to abide by these laws is sufficient grounds to cancel the award. For a copy of state and federal laws that typically apply to grants from the MDNR, contact the MDNR grants manager.

Any subgrantee, in connection with its application for financial assistance, shall include a certification that the subgrantee, its board of directors and principals are in compliance with the specific federal and state laws set out below. Further, the subgrantee shall report to the MDNR any instance in which the subgrantee or any member of its board of directors or principals is determined by any administrative agency or by any court in connection with any judicial proceeding to be in noncompliance with any of the specific federal or

state laws set forth below. Such report shall be submitted within ten (10) working days following such determination. Failure to comply with the reporting requirement may be grounds for termination of this subgrant or suspension or debarment of the subgrantee

A. Laws and regulations related to nondiscrimination:

1. Title VI of the Civil Rights Act of 1964 (P.L. 88-352) which prohibits discrimination on the basis of race, color or national origin;

2. Title VII of the Civil Rights Act of 1964 found at 42 U.S.C. §2000(e) et.seq. which prohibits discrimination on the basis of race, color, religion, national origin, or sex:

3. Title IX of the Education Amendments of 1972, as amended (U.S.C. §§ 1681-1683 and 1685-1686) which prohibits discrimination on the basis of sex;

4. Section 504 of the Rehabilitation Act of 1973, as amended (29 U.S.C. § 794), which prohibits discrimination on the basis of disability;

5. Age Discrimination Act of 1975, as amended (42 U.S.C. §§ 621-634), which prohibits discrimination on the basis of age;

6. Drug Abuse Office and Treatment Act of 1972 (P.L. 92-255), as amended, relating to nondiscrimination on the basis of drug abuse;

7. Comprehensive Alcohol Abuse and Alcoholism Prevention, Treatment and Rehabilitation Act of 1970 (P.L. 91-616), as amended, relating to nondiscrimination on the basis of alcohol abuse or alcoholism;

8. Sections 523 and 527 of the Public Health Service Act of 1912 (42 U.S.C. §§ 290 dd-3 and 290 ee-3), as amended, relating to confidentiality of alcohol and drug abuse patient records;

9. Title VIII of the Civil Rights Act of 1968 (42 U.S.C. § 3601 et seq.), as amended, relating to nondiscrimination in the sale, rental or financing of housing;

10. Chapter 213 of the Missouri Revised Statutes which prohibits discrimination on the basis of race, color, religion, national origin, sex, age, and disability.

11. The Americans with Disabilities Act (P. L. 101-336), 42 U. S. C. §12101 et seq., relating to nondiscrimination with respect to employment, public services, public accommodations and telecommunications.

12. Any other nondiscrimination provisions in the specific statute(s) and regulations under which application for federal assistance is being made.

13. The requirements of any other nondiscrimination statute(s) and regulations which may apply to the application.

B. State and Federal Environmental Laws:

1. The Federal Clean Air Act, 42 U.S.C. § 7606, as amended, prohibiting award of assistance by way of grant, loan, or contract to noncomplying facilities.

2. The Federal Water Pollution Control Act, 33 U.S.C. § 1368, as amended, prohibiting award of assistance by way of grant, loan, or contract to noncomplying facilities.

3. The National Environmental Policy Act of 1969, 42 U.S.C. § 4321 et seq., as amended, particularly as it relates to the assessment of the environmental impact of federally assisted projects.

4. The National Historic Preservation Act of 1966, 16 U.S.C. § 470 et seq., as amended, relating to the preservation of historic landmarks.

5. Earthquakes - Seismic Building and Construction Ordinances, §§ 319.200 - 319.207, RSMo (Cum. Supp. 1990), relating to the adoption of seismic design and construction ordinances by certain cities, towns, villages and counties.

6. The Missouri Clean Water Law, Sections 644.006 to 644.141, RSMo.

7. The Missouri Hazardous Waste Management Law, Section, 260.350 to 260.430, RSMo.

8. The Missouri Solid Waste Management Law, Sections 260.200 to 260.245, RSMo.

9. The Missouri Air Conservation Law, Sections 643.101 to 643.190, RSMo.

C. Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, 42 U.S.C. §§ 4601 and 4651 et seq., relating to acquisition of interest in real property or any displacement of persons, businesses, or farm operations.

D. The Hatch Act, 5 U.S.C. § 1501 et seq., as amended, relating to certain political activities of certain State and local employees.

E. The Archaeological and Historic Preservation Act of 1974 (Public Law 93-291) relating to potential loss or destruction of significant scientific, historical, or archaeological data in connection with federally assisted activities.

F. The Wild and Scenic Rivers Act of 1968 (16 U.S.C. § 1271 et seq.) related to protecting components or potential components of the national wild and scenic rivers system.

G. The flood insurance purchase requirements of § 102(a) of the Flood Disaster Protection Act of 1973 (Public Law 93-234) which requires Subgrantees in a special flood hazard area to participate in the program and to purchase flood insurance if the total cost of insurable construction and acquisition is $10,000 or more.

H. The Privacy Act of 1974, P.L. 93-579, as amended prohibiting the maintenance of information about any individual in a manner which would violate the provision of the Act.

I. Public Law 93-348 regarding the protection of human subjects involved in research, development and related activities supported by this award of assistance.

J. The Laboratory Animal Welfare Act of 1966 (P. L. 89-544), 7 U.S.C. § 2131 et seq., pertaining to the care, handling, and treatment of warm blooded animals held for research, teaching, or other activities supported by this award of assistance.

K. The following additional requirements apply to projects that involve construction:

1. The Davis-Bacon Act, as amended, 40 U.S.C. § 276a et seq., respecting wage rates for federally assisted construction contracts in excess of $2000.

2. The Copeland (Anti-Kickback) Act, 18 U.S.C. § 874, 40 U.S.C. § 276c.

3. The Contract Work Hours and Safety Standards Act, 40 U.S.C. § 327 et seq.