



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM S – SECTION 3. LAND APPLICATION (2019 UPDATE)**

PERMIT NO.	REPORTING PERIOD: CALENDAR YEAR
FACILITY NAME	
<b>3.00 LAND APPLICATION - GENERAL</b>	
This section is based on Standard Conditions for NPDES Permits, Part III. For a copy, contact the department at (573) 522-4502. 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 _____ tons 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 <input type="checkbox"/> Yes <input type="checkbox"/> No Contract person <input type="checkbox"/> Yes <input type="checkbox"/> No Other, describe: _____
<b>3.10 APPLICABILITY (Per Section G of Part III Standard Conditions)</b>	
3.11	ARE ANY INDUSTRIAL SLUDGES LAND APPLIED BY THE PERMITTEE? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, complete the following: Permit No: _____ Type of Sludge _____ SIC Code _____
3.12	ARE ALTERNATE LIMITS OR EXCEPTIONS LISTED IN THE SPECIAL CONDITIONS SECTION OF THE PERMIT? <input type="checkbox"/> Yes <input type="checkbox"/> No If yes, attach explanation sheet.
3.13	IS SLUDGE RECEIVED FROM ANY OUT-OF-STATE GENERATORS? <input type="checkbox"/> Yes <input type="checkbox"/> No If this sludge is handled separately, complete separate Sections 2 and 3 of Form S for the out-of-state sludge.
<b>3.20 POLLUTANT LIMITATIONS</b>	
3.21	ARE METALS WITHIN THE CEILING CONCENTRATION LIMIT? <input type="checkbox"/> Yes <input type="checkbox"/> No If no, attach explanation sheet.
3.22	ARE METALS WITHIN THE LOW METALS CONCENTRATIONS? <input type="checkbox"/> Yes <input type="checkbox"/> 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. <input type="checkbox"/> Yes <input type="checkbox"/> 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: $\text{ppm (dry wt) in soil} \times 2 = \text{pounds per acre for 6 inches soil depth.}$

**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?

- 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. Record keeping:  Yes  No

If No, attach sheet with explanation

3.33 CLASS A SLUDGE:

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

<b>3.40 OPERATIONAL STANDARDS FOR CLASS B BIOSOLIDS.</b>	
<input type="checkbox"/> Class B pathogen reduction requirements were met by either fecal coliform limits under section 2D or a PSRP per 40 CFR 503. Attach supporting data and indicate process option used. <input type="checkbox"/> Class B pathogen requirements not currently met. Attach explanation and schedule of compliance.	
3.41	VECTOR ATTRACTION REDUCTION REQUIREMENTS WERE MET. <input type="checkbox"/> YES <input type="checkbox"/> NO
<b>3.50 MONITORING FREQUENCY</b>	
Attach a summary of the monitoring results on Form SA.	
3.51	SLUDGE TESTING FOR METALS, TOTAL PHOSPHORUS AND TOTAL POTASSIUM WAS PERFORMED: <input type="checkbox"/> once/year <input type="checkbox"/> four (4) times per year <input type="checkbox"/> six (6) times per year <input type="checkbox"/> twelve (12) times per year <input type="checkbox"/> other, specify: _____
3.52	PERMITTEE IS REQUIRED TO HAVE AN APPROVED PRETREATMENT PROGRAM. <input type="checkbox"/> YES <input type="checkbox"/> NO    If Yes, attach Form SB.
3.53	TOTAL SOLIDS TESTING WAS PERFORMED AT LEAST ONCE PER DAY DURING LAND APPLICATION PERIODS? <input type="checkbox"/> YES <input type="checkbox"/> NO    If No, attach explanation.
3.54	NITROGEN TESTING WAS PERFORMED PER THE FREQUENCY IN SC PART III. This frequency is _____. <input type="checkbox"/> YES <input type="checkbox"/> NO    If No, attach explanation.
3.55	TOTAL PHOSPHORUS AND TOTAL POTASSIUM WERE TESTED AT THE SAME FREQUENCY REQUIRED FOR METALS AS INDICATED IN SC PART III. <input type="checkbox"/> YES <input type="checkbox"/> NO    If No, attach explanation.
3.56	SOIL TESTING FOR PH AND CATION EXCHANGE CAPACITY (CEC) AND AVAILABLE PHOSPHORUS HAS BEEN CONDUCTED WITHIN THE LAST FIVE YEARS. <input type="checkbox"/> YES <input type="checkbox"/> 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? <input type="checkbox"/> YES <input type="checkbox"/> NO    If Yes, attach a summary using Form SB.
PERMIT NO	
REPORT PERIOD: CALENDAR YEAR	
FACILITY NAME	
<b>3.60 CERTIFICATION FOR LAND APPLICATION</b>	
Check all that apply. I certify under penalty of law that: <ul style="list-style-type: none"> <li><input type="checkbox"/> records on testing, and pollutant loadings, as listed above in Section 2, have been kept in accordance with 40 CFR 503.17,</li> <li><input type="checkbox"/> the management practices, as listed above in Section 2, have been met in accordance with 40 CFR 503.14</li> <li><input type="checkbox"/> 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.</li> <li><input type="checkbox"/> 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.</li> </ul>	
I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.	
NAME	OFFICIAL TITLE
SIGNATURE	DATE



MISSOURI DEPARTMENT OF NATURAL RESOURCES  
WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM SC – LAND APPLICATION OF BIOSOLIDS WITH LOW METALS CONCENTRATIONS  
(2019 UPDATE)**

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. MO - _____	REPORTING PERIOD: CALENDAR YEAR
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FACILITY NAME
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SITE NO.	OWNERS NAME
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LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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SITE NO.	OWNERS NAME
----------	-------------

LEGAL ____ ¼, ____ ¼, Sec __, T __, R __, County ____
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BIOSOLIDS ____ dt/ac/yr ____ acres	NITROGEN ____ lbs/ac/yr (TKN/PAN)
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CROPS GROWN	SOIL pH
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MISSOURI DEPARTMENT OF NATURAL RESOURCES  
 WATER PROTECTION PROGRAM, WATER POLLUTION BRANCH  
**FORM SD – CUMULATIVE METAL LOADINGS FOR LAND APPLICATION OF BIOSOLIDS**  
**(2019 UPDATE)**

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. <b>MO -</b>	REPORTING PERIOD: CALENDAR YEAR
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FACILITY NAME
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SITE NO.	LAND OWNERS NAME
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LEGAL ___ ¼, ___ ¼, Sec __, T __, R __, County __
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BIOSOLIDS ___ dt/ac/yr ___ acres	NITROGEN ___ lbs/ac/yr (TKN OR PAN)
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CROPS GROWN
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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*				%
TOTAL COPPER	LBS/ACRE*				%
TOTAL LEAD	LBS/ACRE*				%
TOTAL MERCURY	LBS/ACRE*				%
TOTAL NICKEL	LBS/ACRE*				%
TOTAL SELENIUM	LBS/ACRE*				%
TOTAL ZINC	LBS/ACRE*				%

\* 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.