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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | Biosolids Annual Report  Minnesota’s Biosolids Program  Figure 11 |

## The yearly completion and submittal of this form, including the certification statements, will fulfill the requirements of Minn. R. Chapter 7041 for annual reporting of biosolids landspreading activities. This form must be submitted to the Minnesota Pollution Control Agency (MPCA) at the address above **by December 31 following the cropping year**. *When bulk biosolids are applied, this form must be prepared by, or under the supervision of, a Type IV certified operator or inspector.*

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| **Reporting period: September 1,** |  | **through August 31,** |  |

## Facility information

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| --- | --- | --- | --- |
| **Facility name:** |  | **NPDES or SDS Permit number:** |  |
| **Contact person:** |  | **Phone number:** |  |
| **Work address:** |  | | |
| **Email address:** |  | | |

**Check here if biosolids were not land applied during this cropping year:**

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Total quantity of biosolids land applied as bulk material: | | |  | Gallons or | | |  | | | Wet tons **and** | | |  | | | Dry tons |
| Total quantity of Class A biosolids sold or given away in bags or other containers: | | | | | |  | | | | | Dry tons | | | | | |
| Total quantity of biosolids transferred to another facility: | | |  | | Dry tons **or** | | | |  | | | Gallons | | | | |
| Transferred to what facility: |  | Contact person/phone # of facility: | | | | | |  | | | | | | / |  | |

## Reporting of biosolids information

**Pathogen reduction**

Select the option/s used to meet pathogen reduction requirements:

**Class B Options:**

1.  Geometric mean of fecal coliform determined

2. Process to Significantly Reduce Pathogens (PSRP) monitored:

Aerobic  Anaerobic  Air dry  Compost  Lime

3.  Process determined equivalent to a PSRP process monitored

**Class A Options:** (1 - 6 listed under 7041.1300, subp. 2, C)

1  2  3  4  5  6

Describe how the Class A or Class B pathogen reduction requirement is met. For example, indicate what information was used and how it was evaluated to determine compliance.   
**(Do not submit daily data.)**

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**Vector attraction reductions**

Select the option/s by which vector attraction reduction was met: (For a detailed description of these options, see your Biosolids Manual or Minn. R. Chapter 7041.1400, subp. 2)

A. 38% Volatile Solids Reduction (VSR)

B. Bench Scale - Anaerobically Digested

C. Bench Scale - Aerobically Digested

D. SOUR Test: 1.5 mg oxygen/hour at 20C

E. Composted (aerobic/high temperature)

F. Lime or Alkaline Stabilization

G. Dried to 75% - for Stabilized Solids

H. Dried to 90% - for Unstabilized Solids

I. Injected

J. Incorporated within six hours of application

For options A through H only, describe how the option was met. If VSR is calculated, indicate which equation was used, i.e., Van Kleek.

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**Biosolids Analysis**

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| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Sample #** | **Sample #** | **Sample #** | **Sample #** | **Sample #** | **Sample #** | **Average** |
| **Date/s of Sampling** |  |  |  |  |  |  |  |
| **Date Sent to Lab** |  |  |  |  |  |  |  |
| **Total Solids (%)** |  |  |  |  |  |  |  |
| **Total Volatile Solids (%)** |  |  |  |  |  |  |  |
| **Kjeldahl Nitrogen (%)** |  |  |  |  |  |  |  |
| **Ammonia Nitrogen (%)** |  |  |  |  |  |  |  |
| **Phosphorus (%)** |  |  |  |  |  |  |  |
| **Potassium (%)** |  |  |  |  |  |  |  |
| **pH** |  |  |  |  |  |  |  |
| **Arsenic (mg/kg)** |  |  |  |  |  |  |  |
| **Cadmium (mg/kg)** |  |  |  |  |  |  |  |
| **Copper (mg/kg)** |  |  |  |  |  |  |  |
| **Lead (mg/kg)** |  |  |  |  |  |  |  |
| **Mercury (mg/kg)** |  |  |  |  |  |  |  |
| **Molybdenum (mg/kg)** |  |  |  |  |  |  |  |
| **Nickel (mg/kg)** |  |  |  |  |  |  |  |
| **Selenium (mg/kg)** |  |  |  |  |  |  |  |
| **Zinc (mg/kg)** |  |  |  |  |  |  |  |

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| --- | --- |
| **Parameter** | **Concentration (mg/kg)** |
| Arsenic | 38 |
| Cadmium | 43 |
| Copper | 2150 |
| Lead | 420 |
| Mercury | 28 |
| Molybdenum | 38 |
| Nickel | 210 |
| Selenium | 50 |
| Zinc | 3750 |

**Greater sampling frequency**

Compare your average biosolids values with those in the table on the left. List any parameters that have average values greater than the values in the table.

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These parameters must be analyzed two times their minimum sampling frequency during **next year’s cropping season**. Your minimum sampling frequency depends on the quantity of biosolids land applied.

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| **Your minimum biosolids sampling frequency** | **=** |  |
| **Two times minimum biosolids sampling frequency** | **=** |  |

## Site specific information

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| --- | --- | --- | --- |
| **Site Code (each site follows column down)**: |  |  |  |
| Landowner: |  |  |  |
| Actual Acreage Receiving Biosolids: |  |  |  |
| Last Cropping Year Field Was Applied To: |  |  |  |
| Crop Grown This Year: |  |  |  |
| Realistic Yield Goal (yield /acre): |  |  |  |
| Crop Grown Previous Year: |  |  |  |
| Soil Organic Matter\*: |  |  |  |
| MANA Rate (lbs./acre): |  |  |  |
| Which Months Biosolids Were Land Applied: |  |  |  |

\*Use last soil test taken for organic matter content. Soil testing is required once in the three-year time period prior to land application unless stipulated otherwise in a permit or site approval letter. If soil tests were required to be taken for this reporting year, complete the following:

|  |  |  |  |
| --- | --- | --- | --- |
| **Soil Test** Date Sampled: |  |  |  |
| Texture: |  |  |  |
| Organic Matter: |  |  |  |
| Phosphorus: |  |  |  |
| Potassium: |  |  |  |
| pH: |  |  |  |
| Soluble Salts: |  |  |  |

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| --- | --- | --- | --- |
| **Application rates and methods:** | | | |
| Sample # or average used in following calculations: |  |  |  |
| Gallons **or** wet tons applied **per acre** this year: |  |  |  |
| Dry tons applied **per acre** this year: |  |  |  |
| Method: Surface/Inject/Incorporate (0 to 48 hrs.): |  |  |  |
| **Nitrogen applied *(pounds/acre)*** |  | | |
| Available nitrogen applied in biosolids this year: |  |  |  |
| Carry-over nitrogen from 1 year ago: |  |  |  |
| Carry-over nitrogen from 2 years ago: |  |  |  |
| Nitrogen applied from other sources: |  |  |  |
| **Total** nitrogen applied: |  |  |  |

**Metals applied this year and cumulative *(pounds/acre)***

**Concentration (mg/kg) X .002 X Dry tons/acre = pounds/acre of metal.**For cumulative metals, add all past metal loadings together.

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| --- | --- | --- | --- | --- | --- | --- |
| **Parameter** | This Year | Cumulative | This Year | Cumulative | This Year | Cumulative |
| Arsenic |  |  |  |  |  |  |
| Cadmium |  |  |  |  |  |  |
| Copper |  |  |  |  |  |  |
| Lead |  |  |  |  |  |  |
| Mercury |  |  |  |  |  |  |
| Molybdenum |  |  |  |  |  |  |
| Nickel |  |  |  |  |  |  |
| Selenium |  |  |  |  |  |  |
| Zinc |  |  |  |  |  |  |

## Certification statements for managing biosolids

**Statement #1: Certification that preparer has checked if site has reached cumulative pollutant loading rate.**

This certification statement is not included on the annual report form. Copies are found in Figure 12 of the Land Application of Biosolids manual (see Minn. R. ch. 7041.1000, subp. 2, item B, for the requirement and 7041.1600, subp. 3, item M, for the certification statement.) Keep these signed certification statements in your records, but you do not need to include them with the annual report.

**Statement #2: Certification that a Type IV operator or inspector prepared the annual report.**

I certify that the attached forms were prepared by myself or under my supervision.

|  |  |  |  |
| --- | --- | --- | --- |
|  |  |  |  |
|  | *Signature of Type IV Certified Operator or Inspector* |  | *Date* |

**Statement #3: Certification that pathogen reduction (for all facilities) and vector attraction reduction  
Options A through H (if chosen) were used — signed by biosolids preparer.**

**Plain language:** I have supervised preparing information that is used to determine if our biosolids program complies with the pathogen reduction and vector attraction reduction (VAR) requirements of the biosolids rules. Specifically, Item       *[insert one of items A through H —* *see page 1 of annual report for a list of options]* of Minn. R. ch. 7041.1400, subp. 2, was used to meet VAR requirements. In addition, those who gathered and evaluated this information are qualified to do so. I understand that I may be penalized for false certification.

**Actual statement from rule:**  I certify, under penalty of law, that the information that will be used to determine compliance with the Pathogen Requirements in Minn. R. ch. 7041.1300, subp. 2, or 7041.1300, subp. 3, and the VAR requirement in       *[insert one* *of the vector attraction reduction requirements in Minn. R. ch. 7041.1400, subp. 2, A-H, if one of those requirements is met]* has been prepared under my direction and *supervision* in accordance with the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the pathogen requirements (and vector attraction reduction requirements, if applicable) have been met. I am aware that there are significant penalties for false certification, including the possibility of fine and imprisonment.

|  |  |  |  |
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|  |  |  |  |
|  | *Signature of Type IV Certified Operator or Inspector* |  | *Date* |

**Statement #4: Certification that management practices and vector attraction reduction Options I or J  
(if chosen) were used — signed by biosolids applier.**

**Plain language:** I supervised preparing information that is used to determine if our biosolids program complies with the management practices, site restrictions and VAR requirements of the biosolids rules. Specifically, Item       *[insert I for injection*   
*or J for incorporating within 6 hours of application]* of Minn. R. ch. 7041.1400, subp. 2, was used to meet VAR requirements. In addition, those who gathered and evaluated this information are qualified to do so. I understand that I may be penalized for false certification.

**Actual statement from rule:** I certify, under *penalty* of law, that the information that will be used to determine compliance with the Management Practices in Minn. R. ch. 7041.1200, the Site Restrictions in Minn. R. ch. 7041.1300, subp. 3, item D, and the VAR requirement in       *[insert Minn. R. ch. 7041.1400, subp. 2, I or J, if applicable]* for each site on which bulk biosolids is applied has been prepared under my direction and supervision according to the system designed to ensure that qualified personnel properly gather and evaluate the information used to determine that the management practices and site restrictions have been met. I am aware that there are significant penalties for false certification including the possibility of fine and imprisonment.

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| --- | --- | --- | --- |
|  |  |  |  |
|  | *Signature of Type IV Certified Operator or Inspector* |  | *Date* |

**Management practices were met by:** (Check appropriate boxes for compliance descriptions, or if needed, add your own description. *For example, mineland reclamation may not follow all agricultural site practices, such as those for slope.)*

Biosolids were applied on sites approved by the MPCA according to Minn. R. ch. 7041.0800.

Biosolids were applied according to the soil, slope, and separation distance requirements of Minn. R. ch. 7041.1200.

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A detailed description of how agronomic rate requirements were met is on page 3 of this Annual Report.

The farmer was notified of the applicable site restrictions for harvesting crops, grazing and public access.