|  |  |
| --- | --- |
| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | Records when manure ownership is transferred 300 or more animal units  Feedlot Program  Records for feedlot owners (manure generator) and commercial applicators  Doc Type: Permit Information Form |

Instructions:This record keeping form is for feedlot owners that transfer the ownership of manure generated by 300 animal units or more. The form must be completed by the feedlot owner, where the manure is generated, and the manure applicator. It can also be used by commercial applicators to complete their record keeping requirements.

You will need to make three copies of this form for each transfer. Triplicate copies are available.

Copy 1: Kept by feedlot owner where manure is generated after completion of step #1.

Copy 2: Kept by applicator after completion of step #3.

Copy 3: Returned to feedlot owner where manure was generated after completion of step #3*.*

## Step 1: Manure generation *(Completed by feedlot owner where manure is generated)*

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| Facility name where manure generated: | | |  | | | | |
| Facility address: | |  | | | | | |
| City: |  | | | State: |  | Zip: |  |

Manure analysis results *(Must be representative of manure transferred)*

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Manure source: | | | |  | | | | | | | | | Date analyzed (mm/dd/yyyy): | | | | | |  |
| N: |  | | | | P2O5: |  | | K2O: |  | | Units:  lb/ton  lb/1000 gallons | | | | | | | | |
| **Name of company or individual taking manure from feedlot**: | | | | | | | | | | | | | |  | | | | | |
| Address: | | |  | | | | | | | | | | | | | | | | |
| City: | |  | | | | | | | | | | State: | | |  | | Zip: | |  |
| Total quantity transferred: | | | | | | |  | | | tons  gallons | | | | | | Date(s) transferred: | |  | |

## Step 2: Short-term stockpiling *(Completed by owner of the stockpile - Provide form to person applying manure.)*

If no stockpile, go to step 3.

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Stockpile location(s)** | | | | **Quantity stockpiled** (tons) | **Date stockpile established** (mm/dd/yyyy) | **Date land applied** (mm/dd/yyyy) |
| **County** | **Township** | **Section** | **Quarter** |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |
|  |  |  |  |  |  |  |

## Step 3: Manure application *(Completed by person applying manure.)*

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Name of company or individual that applied manure: | | |  | | | | | |
| Address: | |  | | | | | | |
| City: |  | | | State: |  | | Zip: |  |
| Minnesota Department of Agriculture commercial applicator license number (if used): | | | | | |  | | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Field ID** | **County** | **Township** | **Section** | **Application rate**  (tons or gallons/ac) | **Application method** (see choices below) |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |
|  |  |  |  |  |  |

**Application methods:** Incorp. within 12 hours., Incorp. 12 – 96 hours, Incorp. after 96 hours, Sweep injection, Knife injection

|  |  |  |  |
| --- | --- | --- | --- |
| **Manure analysis** | | | |
| **N** |  | **P** |  | **K** |  |

Minimum state requirements for applying manure

***Provide this information to the manure recipient***

**I. Nitrogen rate limits**

Limit rates so that estimated plant-available N from all manure and fertilizer sources combined does not exceed the nitrogen recommendations of the University of Minnesota. For corn crops, rates should be consistent with the MRTN.

* 195 lbs/N for corn following corn (as of 2020)

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Calculating N available this year from manure applied to the previous crop** | | | | | | | | |
|  | **÷** | 1000 | **X** |  | **X** |  | **=** |  | |
| Application rate last year (tons or gal/acre) |  | Liquid only |  | Availability factor  0.15 for swine 0.25 for all others |  | N Test  last year |  | N available  this year  (lbs/acre) | |

* 150 lbs/N for corn following soybeans (as of 2020)

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Calculating a manure application rate for the upcoming crop** | | | | | | | | | |
|  | **÷** |  | **÷** |  | **X** | 1000 | **=** |  |
| Desired amount of N from manure |  | Availability factor  (# from table 1/100) |  | Manure N Test |  | Liquid only |  | Application Rate (tons or gal/acre) |

All sources of nitrogen must be considered when calculating nitrogen application rates. This includes residual nitrogen from alfalfa grown two years ago, commercial fertilizer (starter or supplemental), nitrates in groundwater, and manure applied last year.

Crop-available manure N applied to legumes cannot exceed legume nitrogen removal rates; 3.5 lbs N per bushel of soybeans, 50 lbs N per ton of alfalfa, 27 lbs N per ton grass hay.

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Calculating N available from manure applied for the upcoming crop** | | | | | | | | |
|  | **÷** | 1000 | **X** |  | **X** |  | **=** |  |
| Application rate  (tons or gal/acre) |  | Liquid only |  | Availability factor  (# from table 1/100) |  | N Test  this year |  | N available  this year  (lbs/acre) |

*Summer applications* – Plant a cover crop where manure is applied in June, July, or August to harvested fields that would otherwise remain without crop cover for the rest of the growing season.

**II. Manure application setbacks**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Table 1. Percent of total manure nitrogen available the first year** | | | | | |
|  | **Broadcast** | | | **Injection** | |
| **Animal Type** | Incorporation after 4 days | Incorporation 12 - 96 hrs | Incorporation within 12 hrs | Knife | Sweep |
| Beef | 25 | 45 | 60 | 50 | 60 |
| Dairy | 20 | 40 | 55 | 50 | 55 |
| Swine | 35 | 55 | 75 | 70 | 80 |
| Poultry | 45 | 55 | 70 | 70 | 70 |
|  |  |  |  |  |  |
| **If you have a manure spill contact  the state duty officer at 1-800-422-0798** | | | | | |

Manure application must comply with the following setbacks. County setbacks may be more restrictive.

|  |  |  |
| --- | --- | --- |
| **Feature** | **Surface application** | **Incorporation  within 24 hrs** |
| Lakes, streams | 300′\* | 25′ |
| Wetlands (10+ ac) | 300′\* | 25′ |
| Drainage ditches w/o berms | 300′\* | 25′ |
| Open Tile Intakes | 300′ | 0′ |
| Sinkholes w/o berms  Downslope  Upslope | 50′  300′ | 50′  50′ |
| Wells and quarries | 50′ | 50′ |
| *\* 100*′ *vegetated buffer can be used instead of 300*′ *setback for  non-winter applications (50*′ *buffer for wetlands/ditches)* | | |

**III. Soil phosphorus (P) management**

*Soil P testing* – Test soils for P at least once every four years.

*Avoid P build-up within 300 feet of waters\**– Where soils test P levels exceed 21 Bray P-1 or 16 Olsen, the rate and frequency of manure applications must not allow soil phosphorus build-up over a six year period, unless a 50-100′ vegetative buffer is established along the waters. Single year applications can be based on nitrogen if the remaining phosphorus is removed by subsequent crops.

*Avoid extremely high P soils* – Avoid manure application onto fields where soils exceed:

* 150 ppm Bray P-1 or 120 ppm Olsen
* 75 ppm Bray P-1 or 60 ppm Olsen within 300 feet of water or tile intakes.

*\* “waters” refers to lakes, streams, intermittent streams, wetlands over 10 acres, and drainage ditches without protective berms.*

**IV. Manure recipient record keeping requirements**

The cropland manager must keep records of the following for at least three years (six years if applying near waters):

|  |  |
| --- | --- |
| * Manure test dates and results | * Carry-over N from previous manure applications |
| * Field ID and acreage | * Date and rate of manure application |
| * Soil P test dates and results | * Method of application and incorporation timing |
| * Crop grown and yield goal | * Manure N and P2O5 available |
| * Previous crop grown | * Fertilizer N and P2O5 applied |
| * N recommendation for the crop grown | * Total lbs N available/acre (all sources) |
| * N from irrigation water | * Total lbs P2O5 available/acre (all sources) |

**V. Short-term stockpiling practices**

Follow all stockpiling setbacks for waters and conduits to waters (ranging from 50 to 300 feet); avoid sandy soils and high water table soils (<2′); avoid slopes over 6%; use diversions if slopes exceed 2%; and keep records as required in Minn. R. 7020.2125. The stockpile size must not exceed the amount of manure needed to supply nutrient needs to the tract of land where applied.

**More information:** For more information, contact the MPCA or visit the website at <https://www.pca.state.mn.us/water/feedlots>.