

# Sample Forms for Manure Application Records

## Purpose

The purpose of this section is to provide sample forms for meeting the record-keeping requirements of the U.S. Environmental Protection Agency's (EPA's) National Pollutant Discharge Elimination System (NPDES) permit program for Concentrated Animal Feeding Operations (CAFOs).

## Warning

Many organic and inorganic nutrient planning processes are state specific. In addition, individual state permitting authorities may require additional records beyond those required by EPA regulations. If appropriate records and planning procedures are available in your state, those records and procedures should be used instead of these sample records. If no alternative exists, the attached forms provide a starting point.

## Regulations

New EPA regulations supporting the NPDES program define required record-keeping activities that must be in place no later than December 31, 2006. The EPA rules require producers to record and maintain records on file for at least five year on the following topics:

- Expected crop yields.
- Dates manure, litter, or process wastewater is applied to each field.
- Weather conditions at the time of application and 24 hours before and after application.
- Test methods used to sample and analyze soil and manure, litter, or process wastewater.
- Results from manure, litter, and process water and soil sampling.
- Explanation of the basis for determining manure application rates.
- Calculations showing the total nitrogen (N) and phosphorus (P) to be applied to each field, including sources other than manure, litter, or process water.
- Total amount of N and P actually applied to each field, including documentation of calculations for the total amount applied.
- Methods used to apply the manure, litter, or process water.
- Dates of manure application equipment inspection.

In addition, the EPA rules require that a producer maintain on-site a copy of his site-specific nutrient management plan. Finally, large CAFOs only (see *CAFO Fact Sheet #2: Am I a CAFO?*) are required to maintain records on the transfer of manure or process wastewater to other persons provide them with current nutrient analysis and document recipient information in records.

## Sample Records

1. Planned Nutrient Application Rates:
  - Crop available manure nitrogen (Form 1a)
  - Annual field plan for N (Form 1b)
  - Annual field plan for P (Form 1c)
  - Field-Specific Nutrient Application Plan (Form 1d)
2. Manure application field records (Forms 2, 3, 4, and 5)
3. Additional crop, soil, and water nutrient status indicators (Form 6)
4. Continuing education summary record (Form 7)
5. Off-farm transfers of manure (Form 8)
6. Livestock waste discharge notification reports (Form 9)
7. Post-cropping season summary of crop yields, manure analysis, and application rates (Form 10)
8. Crop yield records (Form 11)

*The attached records can be modified to meet individual record-keeping needs. They can be unlocked for modification by accessing "View" ..., "Toolbars" ..., "Forms," and then clicking on the "Lock" symbol.*

# Planned Nutrient Application Rate: Instructions for Crop Available Manure Nitrogen (Form 1a)

## Purpose

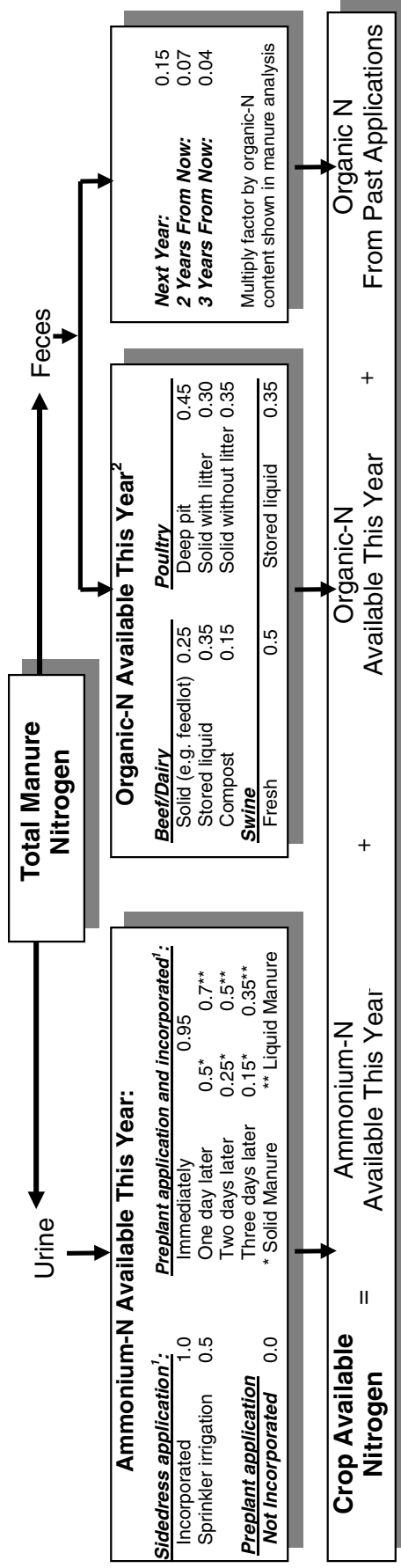
This worksheet will estimate a crop available nitrogen credit for a known (calibrated) manure application rate.

## Steps

- Col. a: This "Option #" is used to reference the selected manure application option.
- Col. b: Enter description of manure source (e.g. lagoon, below barn pit, open lot), season of application, and timing of incorporation.
- Col. c: Enter the planned application rate. Application equipment should be calibrated to achieve approximately the desired rate, Col. d: Enter the manure's ammonium-N from lab analysis.

- Col. e: Fill in the ammonium-N availability factor based on the most applicable situation from the left box in Figure 1.
- Col. f: Calculate crop available ammonium-N (Col. c x Col. d x Col. e)
- Col. g: Enter the organic-N in the manure from lab analysis (Total N - Ammonium N).
- Col. h: Enter the organic-N availability factor from the middle box in Figure 1.
- Col. i: Calculate the crop available organic-N (Col. f x Col. g x Col. h).
- Col. k, l, and m: Organic-N available over the next three years can be estimated by multiplying the appropriate availability factor in the right hand box of Figure 1 by the value in Col. i.
- This procedure should be repeated for each manure application system (or piece of equipment), each application rate, and timing of incorporation.

Figure 1. Availability factors for manure nitrogen. Values from figure should be entered into Form 1a. If available, replace values below with state specific values for crop available nitrogen.



<sup>1</sup>Incorporation can be accomplished by tillage or by a 0.50 inch or greater rainfall.

<sup>2</sup>Organic-N availability assumes spring seeded crops such as corn and soybeans. For spring seeded crops such as wheat, barley, and oats, multiply organic-N availability factor by 0.7.



# Planned Nutrient Application Rate: Instructions for Annual Field Plan for Nitrogen (Form 1b)

## Purpose

This planning guide will determine the amount of nitrogen that will be needed (including manure nitrogen) to meet crop nitrogen requirements. All crop nitrogen annual planning documents are organized to maintain multiple years of records for a single field on one page. Make additional copies of Form 1b so that one copy is available for each field or management area receiving manure.

## Instructions

At the top of each page: Identify the field or management area. Enter the soil test organic matter<sup>1</sup>, the irrigation water nitrate concentration (if irrigated), and the acre-inches of water usually applied by mid season (e.g., end of silking in corn).

Cols. c & d: Planned crop and expected yield. Expected yield should be the average yield of the past five harvests of this crop on this field (excluding years with unusual stress), multiplied by 1.05.

Col. e: Soil test nitrate-N<sup>1</sup> (in ppm) is the weighted average of the pre-plant soil test nitrate-N in the root zone - a minimum of 24" deep.

Col. f: Enter the total nitrogen need for the crop to be grown. This estimate may include credits for soil organic matter nitrogen release and soil test nitrate. If a nitrogen recommendation table for a crop is not available, you may substitute crop estimate nitrogen removal. Review individual state land-grant university recommendations.

Col. g: Enter the total of values from prior manure applications from 1a, Columns k, l, and m. (Leave this column blank the first year you use this form unless you have actual values to enter.)

Col. h: Enter an irrigation credit by multiplying the nitrate-N concentration of the irrigation water by the acre-inches of water usually applied by mid season (e.g., end of silking in corn) and by the conversion factor 0.227.

Example: Irrig. credit (lbs. N/ac.) = 9 inches applied X 10 ppm Nitrate-N X 0.227 = 20.

Col. i: Enter any legume or green manure nitrogen credit.

Col. j: Enter fertilizer N applied since the last harvest (e.g., as 11-52-0) or planned in addition to manure nitrogen (e.g., starter N).

Col. k: Net nitrogen need before applying manure. Column f - Columns g, h, i, and j.

Col. l: Enter the line number from Form 1a, Column a of the manure source, rate and incorporation schedule planned to be applied to this field. If none is to be applied this year, enter zeros in Columns l, m, and n.

Col. m: Enter the planned manure application rate that will meet most or all of the nitrogen needs in Column k.

Col. n: Enter the nitrogen available at the manure application rate in Column m. If this is significantly above the nitrogen need (Column k), then recalculate the line in Form 1a, reducing application rates or delaying incorporation if possible.

Col. o: Extra fertilizer N needed to meet crop needs (Column k - Column n). If net nitrogen is within " 20 lbs., no adjustment is necessary. A larger negative number suggests the need for a lower manure or commercial fertilizer application rate. A positive number suggests the need for more manure or fertilizer.



## Planned Nutrient Application Rate: Instructions for Annual Field Plan for Phosphorus (Form 1c)

### Purpose

This optional planning guide will determine if phosphorus (including manure nitrogen) is being applied in approximate balance with crop phosphorus requirements or removal. All phosphorus annual planning documents are organized to maintain multiple year's records for a single field on one page. Make additional copies of Form 1c so that one blank form is available for each field receiving manure.

### Instructions

Fill in the field or management area name at the top of the page.

Col. a: One line will represent each crop year.

Col. b: Identify manure handling systems supplying manure.

Col. c: Enter the planned manure application rate and check the correct terms.

Col. d: Enter the phosphorus concentration from manure analysis. If manure analysis is not available, Reference Table R-2 may provide an approximate nutrient concentration.

Col. e: Enter the phosphorus availability factor. If the Bray 1 or Mehlich III phosphorus soil test is < 30 ppm, or the Olsen test is < 20 ppm (in col. i), assume phosphorus availability to the crop is 0.7 the first year (the rest is available the next year – 0.3). If soil test P levels are greater than these values, assume all the P is available the first year (1.0). Soil test level does not impact manure phosphorus availability. Higher soil P levels provide a safety factor if all manure P does not become available for crop use.

Col. f: Calculate the manure phosphorus credit (Cols. c x d x e).

Crop phosphorus balance may be estimated as follows:

Cols. g & h: Enter the planned crop and expected yield. Expected yield should be estimated as the average of the past five years of this crop in this field multiplied by 1.05. (Exclude years with unusual stress.)

Col. i: Enter this year's soil test results in ppm, and analysis method.

Col. j: Look up the P ( $P_2O_5$ ) recommendation for Column i. If a P recommendation table is not available for this crop, then go to Column l instead.

Col. k: Enter any planned fertilizer  $P_2O_5$  application.

Col. l: (Use Columns l and m only if there is no P recommendation table.)

Enter the phosphorus removal rate.

Col. m: Multiply Column l by the Expected Yield to provide a rough estimate of crop P requirement. However, a soil test recommendation is always the preferred method of estimating crop requirements.

Col. n: Construct a phosphorus ( $P_2O_5$ ) balance for this field by subtracting the Soil Test Recommendation from the planned fertilizer and manure credits (Cols. f + k - j) [or subtract the Total Phosphorus Removal if no soil test is available ( Cols. f + k - m)].

Balance = All Manure and Fertilizer P (P Recommendation). If the balance is negative, then additional commercial fertilizer or manure is required to meet the phosphorus needs of the crop this year. If the balance is positive by more than 25 pounds and the P Index for this field is High or Very High, reduce the manure application rate.

Col. o: Calculate the potential soil test increase or decrease by dividing Column n by 20. If Column o is positive, the soil test will increase; if negative, the soil test will decrease. Actual changes in soil phosphorus levels may not be accurately reflected by this calculation due to the complexities of soil chemistry for phosphorus.



# Instructions for Planned Nutrient Application Rate: Field-Specific Nutrient Application Plan (Form 1d)

## Purpose

The results of the nitrogen and phosphorus management plans should be summarized into an Action Plan that is carried to the field for defining:

- Which fields are to receive manure from which storage system;
- How much manure and other nutrients are to be applied;
- When manure should be applied and incorporated.

## Instructions

1. Suggested manure application rate, estimated for individual fields in Form 1b (nitrogen based), should be transferred to the Action Plan. If soil P Index is High or Very High, manure application rates based on a phosphorus balance (Form 1c) or no manure application would be recommended. Assumptions relative to incorporation of manure were made in Form 1a. Recommendations for incorporation recorded in the Action Plan should be compatible with those assumptions.
2. Suggested timing of manure application is based on risk of runoff, availability of crop land, labor availability and other factors. For fields with high P Index levels, winter months would be undesirable for land application. For fields susceptible to compaction, wet months (e.g., spring months) also might be unacceptable.
3. Where manure and other nutrient credits do not meet crop nutrient requirements, additional commercial fertilizer may be needed. Check Forms 1b and 1c for commercial fertilizer recommendations.
4. For a desired application rate, identify the appropriate equipment operational settings (table at bottom of Form 1d) that will produce the desired manure application rate. If these settings are unknown, the equipment will need to be calibrated and those operational settings identified for future reference.



# Form 2. Solid Manure Application Field Record

Farm Owner: \_\_\_\_\_ Livestock/Poultry Facility: \_\_\_\_\_ Year: \_\_\_\_\_

Manure Spreader: \_\_\_\_\_ Net Load Capacity: \_\_\_\_\_ tons

Date/ Time	Field ID or Management Area	Number of Loads	Is Manure Incorporated into Soil? Yes, ___ days later No, ___ days later	Area Covered (acres)	Setbacks Maintained <sup>1</sup>	Weather Conditions			Soil/Field Conditions	Operator Initials
						24 hrs. Prior	Today	24 hrs. After		
<i>Sample</i>	<i>Home 80</i>	<i>     </i>	<i>X</i> Yes, <i>1</i> days later No, ___ days later	<i>12 ac.</i>	<i>50' from Cove Creek</i>	<i>Sunny No Rain</i>	<i>Cloudy No Rain</i>	<i>Cloudy 0.25" Rain</i>	___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	<i>MRK</i>
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	
			___ Yes, ___ days later ___ No, ___ days later						___ Frozen ___ Snow-covered ___ Wet ___ Moist ___ Dry	

1. Permitted operations: 100-foot minimum setback is required between the edge of a stream channel, pond, or lake and the manure application. With a 35-foot buffer, manure application can be made to the edge of the buffer. Setbacks should be illustrated on an aerial map.

# Form 3. Slurry or Sludge Application Field Record

Farm Owner: \_\_\_\_\_ Livestock/Poultry Facility: \_\_\_\_\_ Year: \_\_\_\_\_  
 Manure Applicator: \_\_\_\_\_ Net Load Capacity: \_\_\_\_\_ gallons

Date/ Time	Field ID	Number of Loads	Is Storage Agitated At Pump Out? Yes ___ No ___	Is Manure Incorporated into Soil? Yes, ___ days later ___ No ___	Area Covered (acres)	Setbacks Maintained <sup>1</sup>	Weather Conditions		Soil/Field Conditions	Operator Initials
							24 hrs. Prior	24 hrs. After		
<i>Sample</i>	<i>Pivot 1</i>	<i>     </i> <i>  </i>	<i>X</i> Yes ___ No ___	<i>X</i> Yes, ___ days later ___ No ___	<i>8</i> acre	<i>50' from Cow Creek</i>	<i>Sunny</i> <i>No Rain</i>	<i>Cloudy</i> <i>No Rain</i>	<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	<i>gmk</i>
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	
			Yes ___ No ___	Yes, ___ days later ___ No ___	acre				<i>Frozen ___ Snow-covered ___</i> <i>Wet ___ Moist ___</i>	

1. Permitted operations: 100-foot minimum setback is required between the edge of a stream channel, pond, or lake and the manure application. With a 35-foot buffer, manure application can be made to the edge of the buffer. Setbacks should be illustrated on an aerial map

# Form 4. Towed Hose or Irrigation System Field Record of Manure Application

Farm Owner: \_\_\_\_\_ Livestock/Poultry Facility: \_\_\_\_\_ Year: \_\_\_\_\_

Manure Applicator: \_\_\_\_\_ Manure Pumping Rate: \_\_\_\_\_ gpm

Date/ Time	Field ID	Operating Hours Begin                      End	Rate of Clean Water Addition	Is Storage Agitated At Pump Out?	Is Manure Incorporated into Soil?	Area Covered (acres)	Setbacks Maintained <sup>1</sup>	Weather Conditions		Soil/Field Conditions	Operator Initials
								24 hrs. Prior	24 hrs. After		
Sample 3/30/00	Pivot 1	8:00 am _____ pm _____	2 to 1	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No	<input checked="" type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	150 ac.	50' from Cove Creek	Sunny No Rain	Cloudy 0.25" Rain	Frozen _____ Snow-covered _____ Wet _____ Moist _____ <input checked="" type="checkbox"/> Dry	RK
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	
		_____ am _____ pm _____	to 1	<input type="checkbox"/> Yes <input type="checkbox"/> No	<input type="checkbox"/> Yes, _____ days later <input type="checkbox"/> No	ac.				Frozen _____ Snow-covered _____ Wet _____ Moist _____ _____ Dry	

1. Permitted operations: 100-foot minimum setback is required between the edge of a stream channel, pond, or lake and the manure application. With a 35-foot buffer, manure application can be made to the edge of the buffer. Setbacks should be illustrated on an aerial map.

# Form 5. Irrigation Field Record of Manure Application (If Application Rate is Known)

Farm Owner: \_\_\_\_\_ Livestock/Poultry Facility: \_\_\_\_\_ Year: \_\_\_\_\_  
 Manure Applicator: \_\_\_\_\_ Manure Pumping Rate: \_\_\_\_\_ gpm or \_\_\_\_\_ ac-inches/hr

Date/ Time	Field ID	Depth of Irrigation Application (inches)	Rate of Clean Water Addition	Is Storage Agitated At Pump Out?	Is Manure Incorporated into Soil?	Area Covered (acres)	Setbacks Maintained <sup>1</sup>	Weather Conditions			Soil/Field Conditions	Operator Initials
								24 hrs. Prior	Today	24 hrs. After		
<b>Sample</b> <b>3/50/00</b>	<b>Pivot 1</b>	<b>0.75</b> inch(es)	<b>2</b> to 1	Yes ___ No <input checked="" type="checkbox"/>	Yes ___ No <input checked="" type="checkbox"/> days later	<b>150</b> ac.		<b>Sunny</b> <b>No Rain</b>	<b>Cloudy</b> <b>No Rain</b>	<b>Cloudy</b> <b>0.25" Rain</b>	Frozen ___ Wet ___ Snow-covered ___ Moist <input checked="" type="checkbox"/> Dry ___	<b>RK</b>
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	
		inch(es)	to 1	Yes ___ No ___	Yes ___ No ___ days later	ac.					Frozen ___ Wet ___ Snow-covered ___ Moist ___ Dry ___	

1. Permitted operations: 100-foot minimum setback is required between the edge of a stream channel, pond, or lake and the manure application. With a 35-foot buffer, manure application can be made to the edge of the buffer. Setbacks should be illustrated on an aerial map.







## Form 8. Manure Transfer to Off-Farm Users

Method of verification of manure transfer amounts: \_\_\_\_\_ Scale \_\_\_\_\_ Flow meter \_\_\_\_\_ Count of loads \_\_\_\_\_ Other: \_\_\_\_\_

Date	Off-Farm User Name/Address	Employee Making Entry	Amount of Transfer			Manure Analysis			Total Nutrient Transfer		Was Current Manure Analysis Supplied?
			<input checked="" type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	N	P <sub>2</sub> O <sub>5</sub>	N (lbs)	P <sub>2</sub> O <sub>5</sub> (lbs)		
Mar. 6-9, 2001	John Corn Grower, RR 2, Aughton NE	Jim Part Time	<input checked="" type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	16	19	<input checked="" type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in	32,000	58,000	<input checked="" type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No
<b>TOTAL</b>			<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.	<input type="checkbox"/> Tons <input type="checkbox"/> Gals. <input type="checkbox"/> Ac-In.			<input type="checkbox"/> Lbs./ton <input type="checkbox"/> Lbs./1000 gal <input type="checkbox"/> Lbs./ac-in			<input type="checkbox"/> Yes <input type="checkbox"/> No



## Instructions for Livestock Waste Discharge Notification (Form 9)

### **Purpose**

The following form may be used in reporting any discharge, either planned or accidental, from a livestock waste control facility.

### **Instructions**

- Step 1. If a discharge occurs, initiate the steps identified in your Emergency Response Plan.
- Step 2. Within 24 hours, notify the permitting authority of the discharge.
- Step 3. Complete the following form and deliver to the permitting authority at the address listed below within seven days of the discharge.
- Step 4. If you observe dead fish that could have resulted from the discharge, contact the permitting authority immediately.

# Form 9: Livestock Waste Discharge Notification

Adapted from NDEQ fact sheet "Livestock Waste Discharge Notification," September 2001.

NAME: \_\_\_\_\_  
Permitted Operation Name

OWNER/MANAGER: \_\_\_\_\_

ADDRESS: \_\_\_\_\_  
P.O. Box, Street Address  
\_\_\_\_\_  
City, State, and Zip Code

## Legal Description of Operation

\_\_\_\_\_, \_\_\_\_\_, of \_\_\_\_\_, \_\_\_\_\_ N, \_\_\_\_\_  E or  W, \_\_\_\_\_ County  
1/4 1/4 Section Township Range

Do you have an **NPDES** Permit? \_\_\_\_\_ Yes \_\_\_\_\_ No If yes, Permit No. \_\_\_\_\_

Complete the following and submit a map or drawing of the operation, LWCF, discharge flow pattern, and stream:

- List reason(s) for discharge (i.e., power failure, large storm or chronic wet period, leak or break in water supply system, component failure of the waste control facility; and/or releases during land application due to equipment failure, accidents, or irrigation equipment failure):  
\_\_\_\_\_  
\_\_\_\_\_
- The discharge flowed into \_\_\_\_\_ and  
(name of ditch, drainage way, stream)  
into \_\_\_\_\_  
(name of primary stream)
- Did the discharge flow directly into surface water or did the discharge flow over cropland prior to discharging to surface water? \_\_\_\_\_
- The approximate width and depth of the surface water (which the discharge entered):  
\_\_\_\_\_ (width in feet) and \_\_\_\_\_ (depth in feet)
- Date and time the discharge started and ended. Please indicate whether the start time was the actual time or was when the discharge was discovered. \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
- The average flow of the discharge was: \_\_\_\_\_ (gallons/minute)
- Estimated total volume of discharge (cu.-ft.): \_\_\_\_\_ (L x W x D)





# Instructions for Post Cropping Season Summary (Form 10 & 11)

## Purpose

1. Summarize actual manure application rate and manure analysis based on field records and equipment calibration records.
2. Modify future years' nitrogen credit and modify future recommended application rates.

## Instructions

### Form 10

1. Enter planned manure application rate from Form 1d and actual application amounts from field records (Forms 2 - 5).
2. Enter planned manure nutrient concentrations from Form 1b (nitrogen) and Form 1c (phosphorus) and actual manure nutrient concentration from manure sample report.
3. Enter moisture content from manure sample report.
4. Is actual nitrogen and phosphorus application rate (manure application rate X nutrient concentration) within 25% of planned application rates. If a discrepancy exists, is it due to:
  - application rate? Consider recalibrating manure application equipment or adjusting application rate used in planning to reflect the most recent calibration check.
  - manure nutrient concentration and manure moisture content? Variations in manure moisture are the most common cause for changes in manure nutrient concentration. Is it possible to get a representative manure sample just prior to application so that application rates can be adjusted? Can you predict when manure may be drier (higher nutrient concentration) or wetter (lower nutrient concentration) and make last minute adjustments to planned application rates?
5. Was the check of nitrogen made in time to adjust any commercial nitrogen fertilizer application?
6. A manure nitrogen application rate significantly different from the planned application rate may require an adjustment in the estimated manure nitrogen availability for next year's crop. Review your calculations of organic-N availability for next year completed in Form 1a for changes from the original plan.

### Form 11

1. Update record of crops grown and actual yields for individual fields using Form 31 or comparable records.

# Form 10. Post Cropping Season Summary: Actual Nutrient Application Rate

Year: \_\_\_\_\_

Field ID or Management Area	a. Manure Application Rate		Manure Moisture Content (%)	b. Organic-N Content of Manure		Organic N Application Rate <sup>1</sup> (a x b)		c. Ammonium-N Content of Manure		Ammonium-N Application Rate <sup>1</sup> (a x c)		d. P <sub>2</sub> O <sub>5</sub> Content of Manure		P <sub>2</sub> O <sub>5</sub> Application Rate (a x d)	
	Planned	Actual		Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual	Planned	Actual
<i>Sample</i>	25	29	75%	12	17	25 x 12 x 0.25 = 75	29 x 17 x 0.25 = 123	2	4	25 x 2 x 0 = 0	29 x 2 x 0 = 0	18	21	25 x 18 = 450	29 x 21 = 609

1. To improve the accuracy of the ammonium and organic nitrogen comparison of planned and actual application rates, you may want to include the appropriate crop availability factors. Those factors can be located in *Figure 1, page 48*.

## Form 11. Post Cropping Season Summary of Crop Yields

Field or Management Area: \_\_\_\_\_

Crop Year	Cropping Information			Soils Analysis Information		
	Crop	Yield	Source <sup>1</sup>	% OM	Soil P	Soil Nitrate and Sample Depth
20						
20						
20						
20						
20						
20						
20						
20						
20						
20						

Field or Management Area: \_\_\_\_\_

Crop Year	Cropping Information			Soils Analysis Information		
	Crop	Yield	Source <sup>1</sup>	% OM	Soil P	Soil Nitrate and Sample Depth
20						
20						
20						
20						
20						
20						
20						
20						
20						
20						

Field or Management Area: \_\_\_\_\_

Crop Year	Cropping Information			Soils Analysis Information		
	Crop	Yield	Source <sup>1</sup>	% OM	Soil P	Soil Nitrate and Sample Depth
20						
20						
20						
20						
20						
20						
20						
20						
20						
20						

1. The source for crop yields. Certified or independently validated crop yields such as FSA records may be required.