

APPENDIX E

Record Keeping Forms

Land Application Record Keeping

Record Keeping (Maintain for 5 years)

Maintaining records to document plan implementation. As applicable, records include:

- ❑ Soil test results and recommendations for nutrient application.
- ❑ Quantities, analyses and sources of nutrients and manure applied.
- ❑ Dates and methods of nutrient and manure applications.
- ❑ Crops planted, planting and harvest dates, yields, and crop residues removed.
- ❑ Results of water, plant, and organic by-product analyses.
- ❑ Dates of review and person performing the review, and recommendations that resulted from the review.

Operation and Maintenance

- a. Review the Manure and Nutrient Management Plan component annually and make adjustments when needed.
- b. Calibrate application equipment to ensure uniform distribution and accurate application rates (SEE APPENDIX D).
- c. Inspect and repair manure hauling and application equipment to minimize potential of accidental spillage.
- d. Protect fertilizer storage areas from weather to minimize runoff, leakage, and lost of material.
- e. Avoid unnecessary exposure to fertilizer and organic waste (bio-solids), and wear protective clothing when necessary.
- f. Observe set backs required for nutrient applications (specified in this plan) adjacent to water bodies, drainage ways, sink holes, and other sensitive areas.
- g. Maintain records of manure and nutrient applications for 5 years (SEE SECTION 7).
- h. Clean up residual materials from equipment and dispose of properly.

Summary:

This Plan only applies to the fields and conditions stated in this Plan. If changes occur in your livestock operations or fields contact the NRCS/SWCD Office to get this Plan revised.

- ❑ **Manure and Wastewater Storage and Handling**
- ❑ **Manure and Fertilizer Applications**
- ❑ **Crop History**

Documentation will include:

- Annual manure tests for nutrient contents for each manure storage containment.
- Current soil test results, in accordance with Nutrient Management Code 590.
- Application records for each manure or commercial fertilizer application event, including:
 - Containment source or type and form of commercial fertilizer.
 - Field(s) where manure or organic by-products are applied.
 - Amount applied per acre.
 - Time and date of application.
 - Weather conditions during nutrient application.
 - General soil moisture condition at time of application (i.e., saturated, wet, moist, dry).
- Application method and equipment used.
- Crops planted and planting and/or harvesting dates, by field-
- Records that address manure and wastewater storage containment structures:
 - .Dates of emptying, level before emptying, and level after emptying, and .Discharge or overflow events, including level before and after event.
- Transfer of manure off-site or to third parties:
 - Manure nutrient content.
 - Amount of manure transferred.
 - Date of transfer.
 - Recipient of manure.
- Activities associated with emergency spill response plan.
- Records associated with any reviews by NRCS, third-party consultants, or representatives of regulatory agencies:
 - Dates of review.
 - Name of reviewer and purpose of the review.
 - Recommendations or follow-up requirements resulting from the review. Actions taken as a result of the review.
- Records of maintenance performed associated with operation and maintenance plans.
- Nutrient application equipment calibration.
- Changes made in CNMP.

Summary of Maps You Have Available

Form 1-A

[illegible]

What Should Be Included in an Emergency Response Plan?

Environmental Protection/Emergency Response Plan Contents
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- ☐ **Emergency Phone Number List Posted at Each Phone**
An emergency phone notification list, which includes telephone number of the operator, local offices for fire dept, sheriff dept., EMS, Public Health Office, Illinois Emergency Management Agency; Illinois Department of Agriculture, and Illinois Environmental Protection Agency.
- ☐ **General Farm Information Sheet**
Fill in all general farm information.
- ☐ **Designated Spokesperson**—if desired
To be prepared in case of an environmental impact, have a plan for contacting the media following an incident. Sooner or later, they will learn of the problem anyway. Assign a spokesperson to meet with the news media when they arrive at the scene. That way, the story that is printed may focus on your organized and effective response rather than on the magnitude of the problem.
- ☐ **Farm Map**
Include a drawing with written directions to your farm location.
- ☐ **Facility Map**
Draw facility layout including location of: telephone locations, location of shutoffs for water, electric, natural gas and propane tanks, recycle systems, schematic of waste management system, pumping pits, **areas of no entrance without assisted breathing devices**, hazardous materials, ingress/egress for emergency vehicles, identity of immediately adjacent landowners with emergency phone numbers.
- ☐ **Topographic Map**
Maps of the facility and surrounding areas including drainage patterns and locations of spoil materials for forming emergency dikes, location of surface waters, waterways, wells, and any other environmentally sensitive areas.
- ☐ **Effluent Spill Emergency Response Information Sheet**
Information that includes second and third contact people.
- ☐ **Runoff Retention Plan**
Instructions detailing the **Action Plan** to be taken in an emergency involving effluent spill, discharge, leak, etc.
- ☐ **Pre-Arranged Sample Land Access Agreement**
List of neighboring landowners and their emergency phone numbers.
- ☐ **Location of Pre-Arranged Emergency Supply Equipment and Supplies**
List of equipment owners who have agreed to assist in an emergency and inventory of equipment on site that can be used (including location).

- ☐ **Lagoon Pumping Services**
List of companies available on short notice.
- ☐ **Fire Emergency Response Information Sheet**
Information that includes names of your electric and propane companies plus a list of any hazardous materials you may have on your farm.
- ☐ **Fire Emergency Response Plan**
Action plan in the event of a fire.
- ☐ **Power Outage Information Sheet**
Information about your power company, electrical service, generators, etc., including the name of your electrician.
- ☐ **Personal Information**
Please list any medical conditions you or your farm personnel may have that emergency medical personnel should be made aware (for example, diabetes, heart or respiratory problems, medications, etc.). Keep confidential from other employees.
- ☐ **Medical Emergency Response Plan**
Action plan in the event of a medical emergency.

Tips on Organizing Your Plan

I. Fire alarm status. This information should be placed prominently by the phone(s) for emergency use.

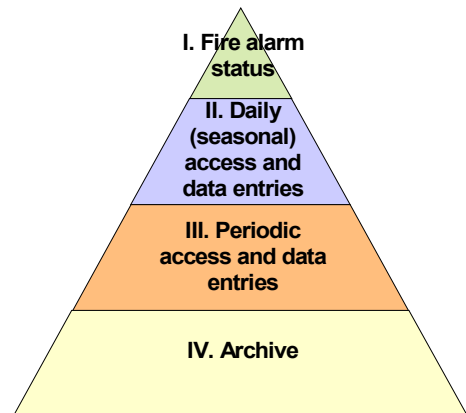
- A. Phone numbers
- B. Farm directions
- C. Locations of key controls, components
- D. Emergency procedures
- E. Other emergency response information

II. Daily (seasonal) access and data entries. This section will be accessed frequently throughout the year.

- A. Weather records
- B. Manure land application
 - 1. Field maps and related information
 - 2. Crop rotations
 - 3. Field management and manure application practices
 - 4. Current year application rates planned: manure and commercial fertilizer
 - 5. Application records
 - 6. Field sketches for start/stop application, notes
- C. Facilities and equipment logs
 - 1. Water line and watering devices inspections
 - 2. Manure storages inspections
 - 3. Manure storage pumping levels
 - 4. Storm water pollution prevention system
 - 5. Application equipment inspection logs
 - 6. Subsurface drainage system inspection logs
 - 7. Equipment (manure handling system and other) maintenance logs

III. Periodic access and data entries. This section will be accessed for making decisions during the current year.

- A. Manure analyses
- B. Soil tests and plant tissue tests
- C. Calibration of application equipment



IV. Archive (yearly update)(separate binder)

Part I: Livestock Management Facility

- A. Buildings, feedlots, and storm water drainage
 - 1. Description for each building or feedlot
 - 2. Map(s) for the facility
 - 3. Storm water plan(s) for the facility
- B. Mortality disposal and manure storages
 - 1. Mortality disposal description
 - 2. Manure Storage 1
 - a. Page 1, manure storage description and dimensions
 - b. Pages 2 and 3, calculated storage period
 - c. Manure nutrient content: sample
 - d. Manure storage inspection checklist (previous years)
 - e. Monitoring well and perimeter drainage water analyses
 - 3. Manure Storage 2, etc.

Part II: Manure Application

- C. Mortality disposal
- D. Fields information
 - 1. Crop rotations: summary
 - 2. Soil sampling procedures
 - 3. Field 1
 - a. Year 01
 - b. Year 02
 - c. Year 03
 - d. Year 04
 - 4. Field 2
 - a. Year 01
 - b. Year 02, etc.
- E. Manure lease agreements
- F. Transfer of manure to recipients

Part III: Administration

- G. Plan certifications and permits
 - 1. Manure storage structures construction certificates
 - 2. Lagoon closure
 - 3. LMFA plan certification
 - 4. CNMP certification
 - 5. NPDES permit
- H. Training records
- I. Responses to emergencies

Step 2: General Facility Information

Form 2-A Instructions: Facility Information

Fill in or attach on **Form 2-A** the following information:

1. Name, address and phone number of the company/owner of the livestock facility
2. Name, address and phone number of the managers/operators if different than the owners
3. Address, phone number, and plat location of the facility; and directions from the nearest post office (also include latitude/longitude of entrance to the facility/production area)
4. Any Certified Livestock Manager certificates for facility staff, NPDES permits and/or other construction permits or certifications that are related to the facilities operation (Consider putting them in 3-hole punched individual sheet protectors.)
5. Identity of the person(s) responsible for putting together the manure management plan and its annual updates
6. Name and address and a copy of the certificate of any person with certification who wrote some or all of the plan

Also, think about how to direct emergency services personnel to the facility. If this would be different from directions from the post office, write a separate paragraph labeled “How to get here in an emergency” and describe the route in as precise and direct a manner as possible. Put yourself in the place of an employee who is placing a phone call to emergency personnel, without the benefit of a 911 operator.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Fire Alarm Status—top of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

General Facility Information

Form 2-A

Owner/Company Information

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: (____) _____

Ownership status: ☐ Federal: ☐ State: ☐ Public: ☐ Private

Manager/Operator Information

Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Phone: (____) _____

Facility Information

Address: _____

Plat location: _____

Directions from nearest post office (also include latitude/longitude of entrance to the production area):

Phone: (____) _____ Emergency contact: _____

State and federal manure plan certifications: Include in your plan 3-ring binder your copies of the Certified Livestock Manager certification for any employees so certified, NPDES permit, and any other permits or certifications.

Identify here who wrote the manure management plan and does the annual updates.

If someone certified wrote the plan, attach copy of the certification, and identify the agency that provided the certification.

Step 3: Facility/Production Area Information

Form 3-A Instructions: Facility Working and Design Capacity

Fill in the following information about your livestock: species, stage of production, general size, number of animals and number of animal units at the facility.

1. **Number of Form 3-A's to use for your facility?**—In most cases one form can be used, but if this plan includes livestock at two or more separate livestock facilities, a separate page should be used for each facility. Use an additional form if in doubt.
2. **Column A**—Identify in this column on **Form 3-A** the number of days per year (for each species and stage of growth) livestock are contributing manure to your manure storages.
3. **Column C**—Write in the average weight of your livestock (for each species and stage of growth).
4. **Column E**—Either mark the appropriate box for the day and month you are using to report your inventory (number of head), or mark the box for “average” for each species and stage of growth.
5. **Column F**—Identify your maximum inventory numbers (number of head) or the percentage variation during the year from Column E for each species and stage of growth.
6. **Column G**—To determine your CNMP animal units multiply Column D times Column E, then divide by 1,000 pounds for each species and stage of growth.
7. **LMFA Animal Unit Table**—
 - Design capacity column—For each species and stage of growth identify the design capacity of their buildings or feedlots. Use additional forms if necessary.
 - Total Animal Units column—Compute the product of the multiplier and the design capacity for each species and stage of growth, and write the results in this column.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Archive (Yearly Update)*—*base of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

Facility/Production Area Map and Item List

1. Provide a detailed map (or sketch) of the facility/production area. A sample map is included in [Appendix A](#). As you complete the following forms in Step 3, you will identify on your map many of the items listed below if they apply to your facility. Make sure the items below in bold are marked on your map also (if applicable). This can be accomplished by using either a sketch or marking on an aerial map.
 - A topographic map of the facility/production area must also be provided. You may want to make a separate topographic map to show detail more clearly, or you can combine the topographic lines and the facility features on one map.
 - You should also include a copy of your facility/production area map with your Emergency Response Plan. For clarity in the ER Plan map, you might want to use a copy of your facility/production area map without all the items marked on it that are required in Step 3.

Animal Structures and Feedlots
<i>Confinement buildings</i>
Feedlots
Milking parlor
Materials and materials handling
Chemical storages
Composting sites
Fuel storages
Grain bins
Hazardous materials other than farm chemicals
<i>Lagoons and holding ponds</i>
Manure pipes (show direction of flow)
Manure re-charge/recycle pipes (show direction of flow)
Manure stacking areas
<i>Manure storages</i>
Mortality sheds
Septic systems
Settling basins
Silos
<i>Storage buildings</i>
Vegetative filters [§]
Wastewater drains and lines
Fresh water
Filter Strips [†]
<i>Ponds</i>
Storm water drains and lines
<i>Wells</i>
Other fresh water
Roads
Access roads
Roads
Other structures
Facility office
Residences
Other structures

[†]Filter strips are used to remove sediment from **storm water** before it enters streams or other waters of the State.

[§]Vegetative filters are used to remove nutrients from **feedlot runoff** and provide infiltration of water into the filter soil itself except in storm events exceeding the vegetative filter strip's design storm.

Form 3-B Instructions: Storm Water Pollution Prevention Plan

1. Use the map(s) (aerial and topographic or contour) collected above to identify the direction(s) of water drainage for your facility/production area. This will be your storm water prevention plan map.
2. Identify on this map any storm water contributing areas.
3. Using this map, identify the storm water pollution prevention structures your facility utilizes in this plan.
 - Mark the checkbox under “Y” if you have the structure listed, and then using the Map Legend code, identify the location of those structures on your storm water pollution prevention plan map.
 - If your facility could utilize an item on **Form 3-B** but does not, mark the checkbox under “N.”
 - If your facility *could not* utilize an item on **Form 3-B**, mark the checkbox under “NA.”

Form 3-C Instructions: Facility/Production Area Storm Water Pollution Prevention Plan

Using **Form 3-C** list the storm water pollution prevention best management practices that will be utilized in this plan and or are already being utilized.

- Mark the checkbox under “Y” if you are utilizing those practices. If you have any of the last four items, use the Map Legend code to identify the location of those items on your storm water pollution prevention plan map.
 - If your facility could utilize an item on **Form 3-C** but does not, mark the checkbox under “N.”
 - If your facility does not store or contain any hazardous materials or chemicals or have fueling areas (last 4 items) mark the checkbox under “NA.”
1. If there is new construction that involves disturbing more than one acre of land, include a copy of your [NPDES Storm Water Permit](#).
 2. Use additional pages, as necessary, to describe any aspect of your storm water pollution prevention plan not adequately described by **Forms 3-B and 3-C**.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Facility Information—Storm water plan, in the Archive (Yearly Update)—base of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

Forms 3-D, E, F and G Instructions:

Mortality Disposal Method(s) and Pollution Prevention Plan

1. Describe your mortality disposal process using the **Form 3-D** checklist.
2. Mark the location of your mortality site on your storm water pollution prevention plan map.
3. Using **Form 3-E**, identify the mortality discharge prevention best management practices your facility utilizes in this plan.
 - Mark the checkbox under “Y” if you utilize that practice, and then using the Map Legend code, identify the location of those practices on your storm water pollution prevention plan map.
 - If your facility could utilize an item on **Form 3-B** that is connected with your facilities disposal method but does not, mark the checkbox under “N.”
 - Mark the checkbox under “NA” if a practice is not connected with a mortality disposal method your facility utilizes; for example, check the NA box for incinerators if you compost.
4. Use the Mortality records worksheets (**Form 3-F and Form 3-G**) to record details of the disposal of mortalities. If you have computer records that quantify your mortalities on a monthly or annual basis, make a copy to include in this plan, but be sure to identify either the number of head or average size (weight).
5. Use additional pages, as necessary, to describe any aspect of your mortality management plan not adequately described by **Form 3-D**.
6. For reference, the Workbook CD contains a copy of the [Illinois Dead Animal Disposal Act](#).

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Archive (Yearly Update)*—*base of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

Form 3-H Instructions:

Chemical Waste and Raw Material Discharge Prevention Plan

1. Using **Form 3-H**, identify the chemical wastes and raw materials discharge prevention best management practices your facility utilizes in this plan.
2. Mark the checkbox under “Y” if you utilize that practice, and then using the Map Legend code, identify the location of those practices on your storm water pollution prevention plan map.
3. If your facility could utilize an item on **Form 3-H** that is connected with your facilities disposal method but does not, mark the checkbox under “N.”
4. Mark the checkbox under “NA” if a practice refers to something not kept at your facility, e.g. fuel, chemicals, silage, milk, etc.

Form 3-I Instructions: Use Exclusion (Fencing from Surface Water)

1. Using **Form 3-I**, identify the fencing practices your facility utilizes in this plan to control livestock access to any surface waters of the State that run through the facility (for example, a stream running through a feedlot).
 - Mark the checkbox under “Y” if you utilize that fencing practice, and then using the Map Legend code, identify the location of those practices on your storm water pollution prevention plan map.
 - If your facility could utilize an item on **Form 3-I** but does not, mark the checkbox under “N.” Only mark “No” if you have livestock with access to surface water, but you do not use that specific practice.
 - If your facility is total indoor confinement and fencing from surface water is not an issue, then mark all the checkboxes under “NA.”

Form 3-J Instructions: Temporary Manure Stack Discharge Prevention

1. Using **Form 3-J**, identify the temporary manure stack discharge prevention practices your facility utilizes in this plan.
 - Mark the checkbox under “Y” if you utilize that practice, and then using the Map Legend code, identify the location of those practices on your storm water pollution prevention plan map.
 - If your facility utilizes temporary manure stacks, but you do not use some of the items listed on **Form 3-J**, mark the checkbox under “N.”
 - If your facility never temporarily stores/stacks manure outside and as a result discharge from such stacks does not occur, then mark all the checkboxes under “NA.”

Facility Working and Design Capacity

Form 3-A

Building(s) or feedlot name: _____

Animal numbers (design capacity of building or feedlot) *"fill in blanks."* (Animal stage of production and average animal size, pounds, and number of animals).

Column A	Column B	Column C	Column D	Column E	Column F	Column G
Days in Use/Year	Species	Stage of Production	Average Weight	<input type="checkbox"/> 12/31 inventory <input type="checkbox"/> __/__/__ inventory (mm/dd) <input type="checkbox"/> Average Inventory	Max. # Inventory (or % variation from average)	CNMP*** Animal Units (Column D × E / 1,000 lb.)
	Beef					
	Dairy	Mature				
	Dairy	Heifers				
	Veal Calves					
	Turkeys					
	Chicken	Broilers				
	Chicken	Layers				
	Swine	Sows/gestation*				
	Swine	Unweaned pigs**				
	Swine	Nursery**				
	Swine	Boars/culls*				
	Swine	Finisher*				
	Horses					
	Other					

* pigs over 55 lbs. ** pigs under 55 lbs CNMP*** Comprehensive Nutrient Management Plan

Illinois LMFA Animal Units Table

Species	Production Phase	Multiplier	Design Capacity	Total Animal Units
Dairy	Milking dairy cows	× 1.4		
	Young dairy calves	× 0.6		
Beef	Brood cows, slaughter and feeder cattle	× 1.0		
Swine	Pigs under 55 lbs	× 0.03		
	Pigs over 55 lbs	× 0.4		
Turkeys		× 0.02		
Laying hens or broilers - (other manure handling systems)		× 0.005		
Laying hens or broilers (continuous overflow watering)		× 0.01		
Laying hens or broilers (liquid manure handling system)		× 0.03		

Storm Water Pollution Prevention Plan

Form 3-B

Y	N	NA	Map Legend*	Physical Structures
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-1	Collection basins —Permanent structures in which large spills or contaminated storm water is contained and stored before cleanup or treatment. Collection basins are designed to receive spills, leaks, etc., and to prevent pollutants from being released into the environment. Collection basins can receive and contain materials from many locations across a facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-2	Curbing —A barrier that surrounds an area of concern. Unlike diking, curbing is unable to contain large spills and is usually implemented on a small-scale basis. However, curbing is common at many facilities and in small areas where liquids are handled and transferred.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-3	Containment diking —Containment dikes are temporary or permanent earth or concrete berms or retaining walls that are designed to hold spills. Diking can be used at any facility, but is most common for controlling large spills or releases from liquid storage and transfer areas. Diking can provide one of the best protective measures against the contamination of storm water because it surrounds the area of concern and keeps spilled materials separated from the storm water outside of the diked area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-4	Diversions —A diversion is a channel constructed across the slope, generally with a supporting ridge on the lower side, for the purpose of changing the direction of flow of storm water.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-5	Dry extended detention ponds —Dry extended detention ponds (a.k.a. dry ponds, extended detention basins, detention ponds, extended detention ponds) are basins whose outlets have been designed to detain the storm water runoff from a water quality design storm for some minimum time (e.g., 24 hours) to allow particles and associated pollutants to settle. Unlike wet ponds, these facilities do not have a large permanent pool. However, they are often designed with small pools at the inlet and outlet of the basin. They can also be used to provide flood control by including additional flood detention storage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-6	Wet ponds —Wet ponds (a.k.a. storm water ponds, retention ponds, wet extended detention ponds) are constructed basins that have a permanent pool of water throughout the year (or at least throughout the wet season). Ponds treat incoming storm water runoff by settling and algal uptake. The primary removal mechanism is settling as storm water runoff resides in this pool, and pollutant uptake, particularly of nutrients, also occurs through biological activity in the pond.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-7	Infiltration basin —An infiltration basin is a shallow impoundment that is designed to infiltrate storm water into the ground water. This practice is believed to have a high pollutant removal efficiency and can help recharge the ground water, thus restoring low flows to stream systems.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-8	Infiltration trench —An infiltration trench (a.k.a. infiltration galley) is a rock-filled trench with no outlet that receives storm water runoff. Storm water runoff passes through some combination of pretreatment measures, such as a swale and detention basin, and into the trench. There, runoff is stored in the void space between the stones and infiltrates through the bottom and into the soil matrix. The primary pollutant removal mechanism of this practice is filtering through the soil.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-9	Storm water wetland —Storm water wetlands (a.k.a. constructed wetlands) are structural practices similar to wet ponds that incorporate wetland plants into the design. As storm water runoff flows through the wetland, pollutant removal is achieved through settling and biological uptake within the practice. Storm water wetlands are designed specifically for the purpose of treating storm water runoff, and typically have less biodiversity than natural wetlands in terms of both plant and animal life.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-10	Grassed waterways/swales —A series of vegetated, open channel management practices designed specifically to treat and attenuate storm water runoff for a specified water quality volume. As storm water runoff flows through these channels, it is treated through filtering by the vegetation in the channel, filtering through a subsoil matrix, and/or infiltration into the underlying soils. Variations of the grassed swale include the grassed channel, dry swale, and wet swale.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-11	Grassed filter strip —Grassed filter strips (vegetated filter strips, filter strips, and grassed filters) are vegetated surfaces that are designed to treat sheet flow from adjacent surfaces. Filter strips function by slowing runoff velocities and filtering out sediment and other pollutants, and by providing some infiltration into underlying soils.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-12	Catch basin —A catch basin (a.k.a. storm drain inlet, curb inlet) is an inlet to the storm drain system that typically includes a grate or curb inlet and a sump to capture sediment, debris, and associated pollutants. They are also used in combined sewer overflow (CSO) watersheds to capture floatables and settle some solids. Catch basins act as pretreatment for other treatment practices by capturing large sediments.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-13	In-line storage —In-line storage refers to a number of practices designed to use the storage within the storm drain system to detain flows. Storage is achieved by placing devices in the storm drain system to restrict the rate of flow. Devices can slow the rate of flow by backing up flow, as in the case of a dam or weir, or through the use of vortex valves, devices that reduce flow rates by creating a helical flow path in the structure.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3B-14	Other practices

* Mark the map legend codes on facility/production area maps where appropriate.

Facility/Production Area Storm Water Pollution Prevention Plan

Form 3-C

Mark those BMP's listed below that are applicable to any part of your operation.

Y	N	NA	Map Legend	Management/Operational Practices
				Diversions (Terrace-like structures can also function as diversions.)
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Temporary diversions are used only where the drainage area is less than 5 acres.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Diversions that are part of a pollution abatement system have a minimum capacity for the peak discharge from a 10-year frequency, 24-hour duration storm.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Diversions designed to protect areas such as buildings, roads, and animal waste management systems have a minimum capacity for the peak discharge from a storm frequency consistent with the hazard involved but not less than a 25-year frequency, 24-hour duration storm. Freeboard is not less than 0.3 ft.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The location of a diversion and outlet is in compliance with applicable state drainage and water conveyance laws.** Diversions do not outlet on public roads, highways, or other public utility, or the written approval of the appropriate authorities has been obtained.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Where movement of sediment into the channel can be a problem, the design includes extra capacity for sediment or periodic removal; and where applicable, such sediment removal is outlined in the operation and maintenance plan.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		The outlet conveys runoff to a point where outflow will not cause damage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Periodic inspections, especially immediately following significant storms, are performed. Damaged components of the diversion are promptly repaired or replaced as necessary.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Diversion capacity, ridge height, and outlet elevations are maintained, especially where high sediment yielding areas are in the drainage area above the diversion.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Each inlet for underground outlets is kept clean and sediment buildup redistributed so that the inlet is at the lowest point.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Sediment is redistributed as necessary to maintain the capacity of the diversion.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Vegetation on diversions is maintained and trees and brush controlled by hand, chemical and/or mechanical means.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Machinery is kept away from steep sloped ridges. Equipment operators are informed of all potential hazards.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3C-1	Hazardous materials storage —Proper storage of hazardous materials. Practices such as covering hazardous materials, or even storing them properly, can have dramatic impacts.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3C-2	Fueling areas —Absorbent used for fueling areas will be packaged in small bags for convenient use and small drums will be available for storage. Absorbent materials will not be washed down the floor drain or into the storm sewer.

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3C-3	Chemical spills —Emergency spill containment and cleanup kits will be located at the facility site. The contents of the kit will be appropriate to the type and quantities of chemical or goods stored at the facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3C-4	Other practices (describe)

** [See Illinois Drainage Law Part 1](#) on the Workbook CD for details on landowner rights and responsibilities regarding drainage.

[Diversion - NRCS Practice Standard Code 362](#), Roof [Runoff Structure - NRCS Practice Standard Code 558](#)

Mortality Disposal Operations

Form 3-D

- ☐ If a rendering service is used, completely describe how often they pick up, where mortalities are kept until pick up, security, etc. **Use Forms 3-F and 3-G** to record mortalities.

- ☐ If mortalities are composted, completely describe (how constructed - dimensions, roof, floor, material used, etc.) composting operation and the facilities operation and maintenance, including daily activities, temperature readings, approximate pounds of mortalities per month, location of compost site, carbon source, recipe, etc. **Use Forms 3-F and 3-G** to record mortalities.

- ☐ If an incinerator is used, provide a complete description of the operation and maintenance of the incinerator, including approximate pounds per month incinerated and location of the incinerator. Also include a copy of the IEPA incinerator approval, etc. **Use Forms 3-F and 3-G** to record mortalities.

- ☐ If burial is used provide a complete description of procedures including location of past and current burial sites (map showing the sites should be included), how many pounds are buried at each site, field drainage, water table, etc. **Use Forms 3-F and 3-G** to record mortalities.

Mortality Discharge Prevention Best Management Practices

Form 3-E

Mark those BMP's listed below that are applicable to any part of your operation.

Y	N	NA	Map Legend*	Practices
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-1	Location —The facility is down gradient (slope) from all springs and/or wells.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Location —The animal mortality facility is located outside the 100-year floodplain.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Location —Due to site restrictions, the facility is within a floodplain, and the facility is protected from inundation or damage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Location —The facility is located as close to the source of mortality as practical, considering bio-security issues and the need to keep the facility out of sight of the general public.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Liner —Seepage from mortality facilities could create a potential water quality problem, and a clay liner or other acceptable liner technology is used beneath the facility to contain seepage.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-2	Freezers —Freezer units are sized to accommodate the normal maximum volume of mortality to be expected in the interval between emptying. Freezer volume includes the expected mortality rate of the animal, the period of time between emptying where mortality is given on a per day basis, the average weight of the animal between emptying, and a conversion factor for weight to volume. Capacity calculations are supported by a removal schedule supplied by an integrator or approved vendor.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-3	Incinerators —Incinerator is dual burning Type 4 (human and animal remains) approved for use within the state. Permit for operation (IEPA Bureau of Air) is on file at the site.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Incinerators —Minimum incinerator capacity is based on the average daily weight of animal mortality and the length of time the incinerator will be operated each day.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Incinerators —Incineration ash is properly handled so as not to cause pollution.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Incinerators —Ground under incinerator is managed to prevent storm water runoff, either by berms or containment of that runoff.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Runoff —All mortality areas are managed to prevent storm water runoff, either by using berms or containment of that runoff.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Roofs —Facility has a roof to manage storm water and prevent storm water from entering mortality management area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Inspection and maintenance —At each operation or use, the animal mortality facility is inspected to note any maintenance needs or indicators of operation problems.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Biosecurity —Biosecurity concerns are addressed in all aspects of planning, installation, and operation and maintenance of the animal mortality facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-4	Visual screens —Vegetative screens, topography, and buildings are used to shield the animal disposal facility from public view and to minimize visual impact.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-5	Safety —Safety devices such as fencing, warning signs, and freezer locks are in place where appropriate.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3E-6	Other (list)

* Mark the map legend codes on facility/production area maps where appropriate.

Form 3-F

Month/Year: _____

[illegible]

** Burial Method—include a map showing burial locations and # of pounds buried at each site.

Yearly Mortality Summary Table

Form 3-G

Year: _____

	Number	Size (Weight)	Total
Rendered			
Composted*			
Incinerated			
Buried**			
Other			
Total			

* Include sample information (N, P, and K) if spread on fields

** Include a map showing burial locations and number of pounds buried at each site.

Chemical Wastes and Raw Materials Discharge Prevention

Form 3-H

Mark those BMP's listed below that are applicable for your operation.

Y	N	NA	Map Legend*	Construction and Post-Construction Storm Water Pollution Prevention Plan
			3H-1	Storage containers for gasoline, diesel fuel, kerosene, and other liquid fuels are free of leaks.
			3H-2	Vehicle and portable container filling areas near the fuel storage containers are constructed so as to allow immediate containment and cleanup of fuel spills.
			3H-3	Specific areas are designated for equipment maintenance and repair, and the areas include appropriate waste receptacles for spent oils, gasoline, grease and solvents. Housekeeping plan includes regular collection and disposal schedules.
				Storage areas are protected from storm water in accordance with the manufacturers' guidelines for the following materials:
			3H-4	<ul style="list-style-type: none"> Oils, grease, and solvents
			3H-5	<ul style="list-style-type: none"> Paints, stains, brush cleaners and similar materials
			3H-6	<ul style="list-style-type: none"> Crop protection chemicals (herbicides, pesticides)
			3H-7	<ul style="list-style-type: none"> Fertilizers (liquid, dry bulk, dry bagged)
			3H-8	<ul style="list-style-type: none"> Animal treatment non-medicinal (disinfectants, foot baths, dips)
			3H-9	<ul style="list-style-type: none"> Cleaning and sanitizing materials
			3H-10	<ul style="list-style-type: none"> Pharmaceuticals
			3H-11	<ul style="list-style-type: none"> Acids or other potentially toxic water pollutants (list _____)
				The following sites are covered (e.g. roofed or other rainproof covering) or are constructed so as to drain to regularly maintained sediment control devices designed to accommodate such discharges:
			3H-12	<ul style="list-style-type: none"> Materials handling equipment storage sites. <i>Example: Bucket loader used for silage and commodities loading, mixing. Show where loader is stored, and if stored outside, what happens to storm water contaminated with raw materials.</i>
			3H-13	<ul style="list-style-type: none"> Shipping and receiving areas. <i>Example: a concrete apron outside the shed has storm water diverted around it and water off the apron goes into a grassed infiltration area.</i>
			3H-14	<ul style="list-style-type: none"> Storage for raw materials used in the manufacture of concrete including sand, aggregate, cement, water and admixtures
			3H-15	<ul style="list-style-type: none"> Storage for other raw construction materials (list _____)
			3H-16	<ul style="list-style-type: none"> Storage for other waste generated off-site

				The following raw materials or products are handled at the facility and are covered (e.g. roofed or other rainproof covering) or storages are constructed so as to drain contaminated storm water to appropriate containment areas:
			3H-17	<ul style="list-style-type: none"> • Feed
			3H-18	<ul style="list-style-type: none"> • Whey
			3H-19	<ul style="list-style-type: none"> • Silage leachate. <i>Example: Silage leachate is directed to a temporary storage tank that is emptied as necessary and contents land-applied.</i>
			3H-20	<ul style="list-style-type: none"> • Other leachate (describe _____)
			3H-21	<ul style="list-style-type: none"> • Byproducts used for feed. <i>Example: Distillers grains are brought in by semi-load and stored on a concrete pad; storm water from the pad is drained to an earthen storage for later land application.</i>
			3H-22	<ul style="list-style-type: none"> • Milk <i>Example: Non-saleable milk is land-applied at or below agronomic rates.</i>
			3H-23	<ul style="list-style-type: none"> • Eggs
			3H-24	<ul style="list-style-type: none"> • Other (list _____)
				Routine housekeeping plan includes cleanup of spilled raw materials so as to minimize storm water contamination. <i>Example: Cleaning up spilled feed beneath bulk bins.</i>
			3H-25	Equipment wash down areas are located on-site only in areas which drain to regularly maintained storages designed to accommodate such discharges. <i>Example: Truck wash for hauling animals drains to feedlot holding pond.</i>
				The storm water pollution prevention plan for access roads used to bring in or carry out raw materials, waste materials, by-products, or products that are used or created by the facility consists of:
				<ul style="list-style-type: none"> • Any spilled materials on or alongside the road(s) are routinely cleaned up and properly disposed of
				<ul style="list-style-type: none"> • Vegetation in drainage channels alongside the road(s) is maintained by mowing, sediment removal, and/or re-seeding as required
				Adequately maintained sanitary facilities (toilets and septic systems) are provided.
			3H-26	Other practices (list _____)

* Mark the map legend codes on facility/production area maps where appropriate.

Use Exclusion (Fencing Livestock from Surface Water)

Form 3-I

Mark those BMP's listed below that are applicable for this part of your operation.

Y	N	NA	Map Legend*	Practices
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3I-1	A minimal area along streams and ponds is left for livestock access and watering. Access is limited and the area is stabilized from erosion.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Fencing materials consist of woven wire, barbed wire, or electrified high tensile wire and are constructed as outlined in the NRCS Conservation Practice Standard, Fence – Practice Code 382 .
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Provisions are made for surface and subsurface drainage, as needed, and for disposal of runoff without causing erosion or water quality impairment.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		All treatment areas are shaped to prevent ponding of water.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3I-2	Barriers and access ramps are periodically inspected and repairs performed as needed.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3I-3	Other practices (describe)

* Mark the map legend codes on facility/production area maps where appropriate.

[Fence—NRCS Practice Standard Code 382](#) and [Use Exclusion—NRCS Practice Standard Code 472](#).

Temporary Manure Stack Discharge Prevention

Form 3-J

Mark those BMP's listed below that are applicable for this part of your operation.

Y	N	NA	Map Legend*	Practices
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-1	Location —Temporary manure stack is located down gradient (slope) from wells and springs.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Location —Manure stack is located over soil surface that is highly impermeable and no aquifer material is within five feet of the bottom of the stack.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Location —Manure stack is constructed more than 100 feet from non-potable water wells, 200 feet from potable water supply wells, and 400 feet from community water supply wells.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Operation —Manure stack is completely emptied within a six-month period.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-2	Water diversions —Manure stack has adequate diversion dikes, walls or curbs that will prevent excessive outside surface waters from flowing through the stack area.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		Runoff —There is negligible outside surface water that can flow through or otherwise contact the manure stack.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-3	Runoff disposal —The runoff from the manure stack drains to a livestock waste-handling facility.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-4	Cover —Temporary manure stack is covered with a roof, tarp, or other device to keep precipitation off the manure.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-5	Liner —Manure stack is located over shallow aquifer material, in a karst area, or within 400 feet of a natural depression in a karst area; and is lined with appropriate clay, geosynthetic, or other liner material to protect groundwater.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	3J-6	Other practices (describe)

* Mark the map legend codes on facility/production area maps where appropriate.

Step 5: Manure Storage Information

An annual manure analysis is required of all different types of manure produced by animals in the operation. This analysis will be used to calculate the nutrient recommendations for crops in your plan. The following procedures shall be followed:

1. Livestock waste sampling shall be performed under the direction of a Certified Livestock Manager to ensure a representative sample from the livestock waste storage facility and to preserve the integrity of the sample.
2. The livestock waste handling facility owner or operator shall annually obtain a laboratory analysis of the nutrient content of the livestock manure to be applied to land as provided within the manure management plan. Livestock manure shall be sampled during the application process. Multiple sub-samples shall be obtained and may be combined into one sample for analysis so that a representative sample is used for preparation of the manure management plan. Results of a sample taken during manure field application the previous year can be used for plan preparation, unless there has been a change in the manure management practice (for example, how manure is stored, feed, type of waterers, type and/or age of animals, etc.) during the year.
3. The laboratory analysis of the livestock manure sample shall include, but not be limited to, total nitrogen, ammonium nitrogen, total phosphorus, total potassium and percent total solids. (You may need to specifically ask your lab for all the items on the list, as not all labs provide them all routinely).
4. Manure sampling suggestions can be found in [Appendix F](#). Also included is an incomplete list of laboratories that perform manure analysis.

Form 5-A Instructions: Manure Sampling Analysis Results

1. Describe the manure sampling procedure; name the certified livestock manager who supervised the sampling and which laboratory did the analysis.
 - Include copies of the lab manure analyses with this form and put them in your plan (for NPDES permits these must be kept 5 years).
 - The manure analyses in **Form 5-A** will be those used to calculate manure application rates in subsequent steps.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Periodic Access and Data Entries (Yearly Update)*—level three of the Pyramid.
- Update this section when changes occur; do not wait until your annual plan update.

Manure Sample Analysis Results—Summary of All Manure Storages

Form 5-A

Year: _____

Attach lab results to this form

Storage name (same name as Form 4-A)	<input type="checkbox"/> Lab Sample date <input type="checkbox"/> Farm sampling date	Sampling method	Total N	Ammonium-N	<input type="checkbox"/> P ₂ O ₅ <input type="checkbox"/> Total P	<input type="checkbox"/> K ₂ O <input type="checkbox"/> Total K	% Total Solids	Other nutrients (list) (Optional)	Notes	Sampling supervised by:	Lab name and ID#
	M/D/Y	Insert code	<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent		<input type="checkbox"/> lb/1000 gal. <input type="checkbox"/> lb/ton <input type="checkbox"/> ppm <input type="checkbox"/> percent	Comment here on possible unusual sample numbers. Feeding changes, water dilution, etc.	Check (✓) if this person is a Certified Livestock Mgr	

SAMPLING METHODS (INSERT APPROPRIATE CODE LETTERS)

S: Representative sample of solid or semi-solid manure from dry stack, bedded pack, etc.

MX: Mixed sample after agitation

TC: Top to bottom composite from tank, pit, etc.

Stratified sample of tank, pit, etc.

TT top, TM middle, TB bottom

LS: Lagoon supernatant (liquid)

LG: Lagoon sludge

LC: Lagoon supernatant and sludge combined sample

O: Other (explain) _____

Step 6: Field Maps

Form 6-A Instructions: Field Maps

1. Include aerial photos *and topographic maps* outlining fields available and intended for livestock manure applications with available acreage listed. Mark the items listed below as applicable.
 - Also include soil maps for all fields available and intended for livestock manure applications.
 - Two sample aerial maps of one field are included in [Appendix G](#).
 - For each field, mark the above items and include a rough determination of the appropriate setbacks for wells, surface waters, residences, and populated areas.
 - Aerial and topographic maps of all fields available and intended for livestock waste applications are essential. You can obtain these maps by contacting your county FSA office.
 - Avoid aerial map copies that are so dark or light that field boundaries, wooded areas, and residences are difficult to distinguish.
 - If you have good quality aerials and topographic maps that you don't want marked up, make copies to mark-up for your plan.
 - Plat maps also can be helpful.
 - GPS maps (yield monitor, soil test maps) help in some instances.
 - Quad maps of your fields can be downloaded and printed off the Internet, or you can order them through your FSA office.
 - You can obtain soil maps by contacting your FSA office.
 - Develop and include a map legend to assist anyone (employee or commercial manure applicator) that looks at your field maps to understand what you have marked on those maps, i.e. ▲ = non-farm residence ■ = potable well, etc. or use legend example on page 54.

Map Legend*	Map Checklist
6A-1	Agricultural drainage wells
6A-2	Buffer strips
6A-3	Common places of assembly
6A-4	Conservation practices (already applied and planned)
6A-5	Drainage ditches
6A-6	Drinking water sources
6A-7	Filter strips
6A-8	Grassed waterways
6A-9	Lakes
6A-10	Manure stockpiling areas
6A-11	Non-farm businesses
6A-12	Other water sources
6A-13	Ponds
6A-14	Residences
6A-15	Rivers
6A-16	Sinkholes (or other conduits to surface water)
6A-17	Springs
6A-18	Streams
6A-19	Subsurface drainage intakes
6A-20	Vegetative filters (for feedlot runoff treatment)
6A-21	Wells (potable and non-potable)
6A-22	Other_____

* Mark the map legend codes on the application field maps where appropriate.

Form 6-B Instructions: Field Summary Legend

- List all fields available and intended for livestock manure applications, including the field name, FSA farm #, FSA tract # and FSA Field #.
 - Pick one of these descriptors to use consistently throughout your plan!!**

Form 6-C Instructions: Application Field Assessments and Practice

1. The purpose of this form is to identify and prioritize the proper management of application fields that are most likely to contribute significant amounts of nitrogen and phosphorus to surface waters of the State. You only need to complete **Form 6-C** once, although you should update the information for fields where practices are changed. Use as many copies of this form as necessary to enter the information for all the fields over which you have control and to which you plan to apply manure. In some cases, you may need to break a field into subfields (CMU's or conservation management units).
2. To complete this part of the workbook, you should collect and refer to any recently completed soil conservation plan materials for the fields involved. You will need soil erosion assessments (related to the "T" or tons/acre-year target soil erosion), information about the soil types, and soil phosphorus test results. In some cases you may not have sufficient soil conservation plan information for one or more fields yet; you will mark those instances and have the opportunity to work on that later.

Enter the field name. Be sure to use the same field name designation you chose on **Form 6-B**.

Subsurface drainage: Mark **Y**(yes) or **N**(no) for each field to indicate where functioning tile drainage systems are located.

Predominant soil types: Enter the soil map symbol(s) for the predominant soils in the field.

Nitrate loss assessment: You may estimate the nitrate loss for each application field by one of two methods:

1. Use the nitrate loss rating for the soil from Chapter 11 of the Illinois on-line Agronomy Handbook <http://www.ag.uiuc.edu/iah/>. This gives a single rating—Low, Medium, or High—for the soil type, independent of management.
2. Use the matrix below based on soil texture and your planned management of nitrogen applications. Note that the nitrate loss estimate may vary for the field from one crop year to the next, depending on management strategies and manure application timing.

Mark which assessment method you used for the field (1 or 2), and the resulting nitrate loss assessment code **L** [low], **M** [medium], or **H** [high].

	Soil Texture ²		
Application Timing ¹	Coarse	Medium	Fine
Fall with an inhibitor > 60° F	High	High	High
Fall with an inhibitor < 60° F	High	Medium	Medium
Fall without an inhibitor > 50° F	High	High	High
Fall without an inhibitor < 50° F	High	Medium	Medium
Spring without an inhibitor	Medium	Medium	Medium-Low

Spring with an inhibitor	Medium-Low	Low	Low
Spring split applied or sidedress	Medium-Low	Low	Low

Footnotes:

1. Temperatures refer to soil temperature measured at the 4" depth. For this assessment, inhibitors refer to nitrification inhibitors.
2. Soil Texture:
 - Coarse - sand, loamy sand, sandy loam
 - Medium- silt, silt loam, loam
 - Fine- silty clay loam, silty clay, clay, clay loam, sandy clay, loam, sandy clay

Phosphorus risk assessment: Check the appropriate box for the P risk assessment you are using. The IL-NRCS [Codes 590](#) and [630](#) steps are listed below. If you check the box for “Other,” you should attach the appropriate documentation.

If you checked “[NRCS 590](#) and [630](#),” apply the risk assessment grid below to rate each application field, using the following instructions.

Soil erosion (RUSLE-2): Sheet and rill erosion as estimated by the most current version of the Revised Universal Soil Loss Equation. This rating is based on many factors and is specific to the field and its long-term management. If you know the estimated soil loss related to T for the predominant soil type in this field, enter the phosphorus risk potential (**L** [low], **M** [medium], or **H** [high]). If you do not have this information, enter **U**[unknown].

Connectivity to water: The more closely connected the runoff is from the field via concentrated flow (from a defined grassed waterway or surface drain) to surface water, the higher the potential for phosphorus transport. From the risk assessment grid, enter the phosphorus risk potential (**L**[ow], **M**[edium], or **H**[igh]). *Example: A field is within 300 feet of a stream via concentrated flow through a grassed waterway. Enter M (for Medium).*

Runoff potential: this factor represents the site’s runoff vulnerability. Using the hydrologic group for the predominant soil type(s) in the field and the grid, enter the phosphorus risk potential (**L**[low], **M**[medium], or **H**[high]). *Example: A field in Hancock County has the predominant soil type Keomah silt loam. The soil is Hydrologic Group C, so the runoff potential is **H** (for High).*

Soil test phosphorus: From the risk assessment grid, enter the phosphorus risk potential (**L**[low], **M**[medium], or **H**[high]). *Example: The median soil test level for a field (or subfield in question) is 60 lb/ac, so enter M (for Medium).*

Phosphorus inputs: This represents the combined effect of application method and application rate on the potential for phosphorus to be transported in runoff in both dissolved and sediment-bound phases. Phosphorus application rate is expressed in terms of the University of Illinois maintenance phosphorus recommendations applicable to crops/yields grown on the site being evaluated. See [Appendix H](#) for crop maintenance recommendations. Phosphorus may be in the form of commercial fertilizer or organic materials such as manure, animal waste lagoon supernatant, wastewater from municipal or agricultural sources or nonagricultural biosolids such as sewage sludge or landscape waste. When using the P Input Matrix, it is assumed that soil incorporation is performed prior to runoff events. Instances where incorporation is typically not

performed prior to runoff events will be considered as non-incorporated surface applications. From the risk assessment grid, enter the phosphorus risk potential (**L**[low], **M**[medium], or **H**[high]). In some cases you may need to enter a range, if you know you will be using a variety of application methods. For the application rate, use your planned multi-year average phosphorus application, not the single-year rate. *Example: A field will have manure spread on it at or below the U of I recommendation, on a two-year averaged phosphorus limited rate. Over the span of the crop rotation, the manure will probably be incorporated more than 3 inches deep some years and surface applied without incorporation in others. Enter L-M (for Low to Medium).*

Risk Factor		Phosphorus Risk Potential			Phosphorus Risk for Site (Low, Medium, High)
		Low	Medium	High	
Soil Erosion (RUSLE2)*		<= T	> T to <= 2T	> 2T	
Connectivity to Water ^{1/}		> 1000 feet	200-1000 feet	< 200 feet	
Runoff Potential ^{2/}		Hydrologic A	Hydrologic B	Hydrologic C & D	
Soil Test Phosphorus ^{3/}		< 35 lb/ac	35-70 lb/ac	> 70 lb/ac	
Phosphorus Inputs ^{4/}	Incorporate or Inject > 3" deep	All application rates			
	Incorporate < 3" deep	<= U of I recommendation	> UI to 150% UI recommendation	> 150% U of I recommendation	
	Non-incorporated surface application		<= U of I recommendation	> U of I recommendation	

Footnotes:

- * or most current RUSLE model.
- 1. Distance to water body, waterway, or tile inlet
- 2. Use hydrologic group of soil
- 3. Seven-inch sample depth
- 4. Use matrix of application method and Phosphorus application rate

Conservation practices: If you plan to enter, or have already entered into, an agreement with NRCS to implement a conservation practice for the field, mark **A** (applied) or **P** (planned). Otherwise mark **NA**.

Other provisions for fields that will receive manure: Mark **A** (applied) if you already follow this practice for the field. Mark **P** (planned) if you do not follow the practice now but plan to implement it. If it does not apply to this field, mark **NA**. For plans that must meet compliance with specific regulations, note that marking **P** (planned) or **NA** may not be options for some practices. *Example: A field lies in a 10-year flood plain, and manure has been applied in past years to standing crops in the field, using a traveling gun irrigation system. The facility is required to have a plan under the LMFA. The irrigation must be terminated and some soil*

*injection or incorporation method of manure application must be used. Mark **P** (planned) until the change is made, then mark **A** (applied).*

Plan for application of manure or wastewater to frozen or snow covered ground: Mark **A** (applied) if you already follow this practice for the field; **P** (planned) if you do not follow the practice now but plan to implement it. If it does not apply to this field, mark NA. For plans that must meet compliance with specific regulations, note that marking **P** (planned) or NA may not be options for some practices. For those practices that have a blank percentage, fill in the percentage that applies to your use of the practice. If individual fields have different percentages, enter the percentage in the field block along with the letter code. *Example: You normally apply manure on frozen fields in winter, but only on land having a minimum of 30% crop residue or standing vegetative cover (including some permanent pasture). Put 30% in the blank , and indicate in the columns for the respective fields **A** (applied).*

Form 6-D Instructions: Summary Table of Soil Samples For All Fields

1. Complete **Form 6-D** for each field available and intended for livestock manure applications. Soil sampling is required every 4 years (*Illinois Agronomy Handbook* recommendation) for each field available and intended for livestock manure applications. Soil sampling suggestions can be found in [Appendix I](#). Also included is an incomplete list of laboratories that do soil analysis ([Appendix I](#)).
 - Fill in the field name (see **Form 6-B**) for each field.
 - Mark Yes or No as to whether you followed the *Illinois Agronomy Handbook* soil sampling procedures. These procedures can also be found in [Appendix I](#). If you marked No, describe your soil sampling procedures. *Example: If you are not following the Illinois Agronomy handbook recommendations: 1).If using a larger sampling grid and you have history; 2) You sample by soil type instead of a fixed grid.*
 - Identify either the date the sample was taken or the date on the lab analysis.
 - Fill in the median soil test values for ph, P (Elemental Phosphorus) and K (Potassium) for each field in either ppm (parts per million) or lbs/acre (pounds per acre) on which you will base your manure and fertilizer application rates. Check the box for which units you are reporting in.
 - Identify for each field the grid size used in the soil sampling procedure. Also attach a map for each field showing grid sampling locations.
 - Fill in the name of the soil test lab that did the soil analysis.
 - Identify the person or company that did the actual soil sampling.
 - Using the codes at the bottom of **Form 6-E** to fill in the soil protocols used by the lab that performed the soil analysis.
 - Attach a copy of the lab analysis for each field to the Crop rotation form for each field in your plan.

Form 6-E Instructions: Sub-Surface Drainage Inspection and Monitoring Plan

1. Complete **Form 6-E** to represent you plan for all fields having tile drainage.
2. Use this form to outline your plan for maintaining and monitoring the performance of the subsurface drainage systems in your application fields. The form is organized to cover common Illinois crop rotations; you may need to use more than one copy of the form if not all of your tiled fields are managed the same.
3. The codes at the bottom of the table can be used to indicate the timing of your management plan events. Create other codes if necessary.

Form 6-F Instructions: Inspection, Monitoring, Management, and Repair of Subsurface Tile Drainage.

1. If you have no fields that are tile drained, mark the box at the top of the form.
3. For all tile-drained fields that will receive manure applications, record the inspection results on **Form 6-F**. Record monitoring results as applicable. *Example: Your plan indicates that you will monitor tile flow in row crop fields by sampling during or immediately after manure application. You perform the sampling and record the laboratory analyses on the form under “monitoring results.”*

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Periodic Access and Data Entries (Yearly Update)*—level three of the Pyramid.
- Update this section when changes occur; do not wait until your annual plan update.

HINT: You will find that as you put together your plan and accumulate multiple pieces of paper about each field, that it will be easier to use, explain, and understand a given field’s information if all of the information about each field is packaged together. This allows you, an employee, custom applicator, or whomever to look at the whole package for any given field. This is important, as much of the work with managing manure is done on a per field basis.

Field Summary Legend

Form 6-B

Circle the column heading to indicate the “field descriptor” that you will use throughout your plan when you see the words “field name.”

FSA Farm #	FSA Tract #	FSA Field #	Field Name	County Plat Map Description

Application Field Assessments and Practices

Form 6-C

Fields for application of manure		Field	Field	Field	Field	Field
Field name (See Form 6-B)						
Subsurface drainage (tile) system? (Y/N) (See Form 6-E)						
Predominant soil(s) types						
Use the nitrate loss and phosphorus risk assessment worksheets to determine low, medium, or high for each field.						
Nitrate loss assessment						
Phosphorus risk assessment (see matrix and list L-M-H)(NRCS 590 and 630 <input type="checkbox"/> Other <input type="checkbox"/>)						
Soil erosion (RUSLE-2)						
Connectivity to water						
Runoff potential						
Soil test phosphorus						
Phosphorus inputs						
For the following conservation practices check those that apply to each field.						
Conservation crop rotation NRCS Code 328						
Contour buffer strips NRCS Code 332						
Contour strip cropping NRCS Code 585						
Cover crop NRCS Code 340						
Filter strip NRCS Code 393						
Grassed waterway NRCS Code 412						
Irrigation water management NRCS Code 449						
Residue management No Till/Strip Till NRCS Code 329A						
Residue management Mulch Till NRCS Code 329B						

Residue management Ridge Till	NRCS Code 329C						
Riparian forest buffer	NRCS Code 391						
Terrace	NRCS Code 600						
Other provisions for fields that will receive manure. Fill in blanks where needed. (regulation listed below)							
Livestock waste applied within ¼ mile of any residence not part of the facility shall be injected or incorporated on the day of application. However, livestock management facilities and livestock waste handling facilities that have irrigation systems in operation prior to May 21, 1996, or existing facilities applying waste to frozen ground are not subject to this.	LMFA						
Livestock waste may not be applied within 200 feet of surface water unless the water is upgrade or there is adequate diking and waste will not be applied within 150 feet of potable water supply wells.	LMFA						
Livestock waste may not be applied in a 10-year flood plain unless the injection or incorporation method of application is used.	LMFA						
Livestock waste may not be applied in waterways. For the purpose of this Part, a grassed area serving as a waterway may receive livestock waste through an irrigation system if there is no runoff, the distance from applied livestock waste to surface water is greater than 200 feet, the distance from applied waste to potable water supply wells is greater than 150 feet; the distance from applied livestock waste to a non-potable, an abandoned or plugged well, a drainage well, or an injection well is greater than 100 feet; and precipitation is not expected within 24 hours.	LMFA						
Livestock waste may not be applied during a rainfall or to saturated soil, and a conservative waste-loading rate will be used in the case of high water table or shallow earth cover to fractured bedrock. Caution should be exercised in applying livestock wastes, particularly on porous soils, so as not to cause nitrate or bacteria contamination of groundwater.	LMFA						
Livestock waste shall not be applied within 100 feet of down gradient (slope) open subsurface drainage intakes, agricultural drainage wells, sinkholes, waterways or other conduits to surface waters, unless a 35-foot vegetative buffer exists between the land application area and the waterways, open subsurface drainage intakes, agricultural drainage wells, sinkholes or other conduits to surface water. NOTE: The NRCS standards 590 and 633 or the waste management plan provisions of 8 Ill. Adm. Code 255, Subpart H: Waste Management Plan may have provisions that are more restrictive. <i>** NPDES permit holders must comply with this.</i>	NPDES						
If using 35-foot buffer setback, that buffer has a perennial cover.	NPDES						
Livestock wastes shall not be discharged to waters of the State	NPDES						
Livestock waste application shall not be permitted upon land that has been saturated by rainfall within the 24-hour period preceding the time of application.	NPDES						

Livestock waste application shall not be permitted on land with ponded water.	NPDES					
Livestock waste application shall not be permitted on land during precipitation when the land is saturated or when precipitation will produce runoff of livestock waste.	NPDES					
Livestock waste shall not be applied to frozen, snow-covered or ice-covered land if the application of the livestock waste will produce runoff to waters of the State.	NPDES					
<i>Where application of manure and/or wastewater to frozen, ice covered or snow covered land is part of the plan, practices that affect timing, application rates and methods, form (liquid v. dry); and site-specific conservation practices. Check all that apply.</i>						
• Apply manure and/or wastewater only on land that is less than ____% slope.	NPDES					
• Apply only dry manure	NPDES					
• Application rate on frozen, ice- or snow-covered ground reduced to ____% of the planned agronomic rate for the field(s)	NPDES					
• Application only on land having greater than ____% minimum crop residue, or standing vegetative cover	NPDES					
• Vegetative buffer areas maintained down slope of land application	NPDES					
• Soil conservation plan indicates erosion for areas used is less than "T"	NPDES					
• Remove snow from land area prior to manure application	NPDES					
• Other practices _____ _____						

Summary Table of Soil Samples for All Fields

Form 6-D

Year: _____

Field Name (See Form 6-A)	IL Agronomy Handbook Procedures Used*		<input type="checkbox"/> Lab Sample date <input type="checkbox"/> Farm sampling date	Soil Sample Results:			Grid Size (acres)	Soil Test Lab	Soil Samples Collected By	Soil Lab Protocols Used (Use code from below)
	Y	N		pH	<input type="checkbox"/> ppm <input type="checkbox"/> lbs/acre	P				
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								
	Y	N								

* A copy of the IAH soils sampling procedures is in [Appendix I](#). If other soil sampling procedures are used, describe on another piece of paper.

Legend of soil testing protocols

- A. Bray P1
- B. Mehlich 3
- C.
- D.

Subsurface Drainage Inspection and Monitoring Plan

Form 6-E

Inspection and monitoring activity ¹	Crop						
	Permanent pasture or other permanent vegetation	Winter cover crop	Winter wheat	Double crop soybeans or other summer planted crop	Corn, full-season soybeans, grain sorghum, other row crops	Hay (alfalfa, grass, other)	Other crop _____
Inspect tile inlets for breakage or plugging							
Inspect tile outlets for breakage or plugging							
Inspect field for ponding, blowouts or other loss of tile function							
Other inspection (tile system structural) _____							
Monitor tile outlets for flow prior to manure application							
Monitor tile outlets for contaminated discharge during and after manure application							
Monitor tile outlet liquid for specific analytes: nitrate, etc.							
Other monitoring of tile flow contamination _____							

1 Use the codes to indicate when each inspection and monitoring will be performed for each crop. Use multiple codes if applicable. Enter "NA" in the box if the item does not apply to that crop.

PT Prior to spring tillage and planting
 PC Before plant canopy closure
 PM Prior to manure application
 MA During and immediately following manure application
 GS During crop growing season
 H During harvest
 PH After harvest and before fall tillage operations
 W During the winter
 Q Quarterly
 Other _____

Inspection, Monitoring, Management, and Repair of Subsurface Tile Drainage

Form 6-F

☐ Not applicable – fields have no subsurface tile drainage.

Field Name (See Form 6-B)	Inspected Date & Time	Inspected by (Name)	Repairs Needed		Repair Description	Date Repairs Completed	Monitoring Date & Time	Monitoring Results	Notes
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					
			Y	N					

Step 7: Lease Agreements for Application Fields

Instructions:

1. For application fields **not owned or rented**, copies of waste application agreements between the owner or operator of the livestock facility and the owner of the land where the livestock will be applied and included in your plan.
 - Have a signed copy of a lease agreement for each field you will be applying manure to that you do not own or rent, and include in your plan.
 - To be blunt this means that if YOU do not own it (or rent it), you are required to have a lease agreement, even if the owner is your mother or brother. If you own a part of their fields, then you do not need a lease. No more handshake deals; the concern is that you have enough fields secured and available to apply ALL your manure *every* year.
 - See [Appendix J](#) for information about what you should consider when putting together a lease and a few examples of lease agreements.
 - **This is a legal document, and as such you would be very wise to seek the advice of an attorney to put together an agreement that will not only provide what you want, but also protect your interests.**
 - On fields you lease, sometimes the landowner may not provide the crop yield information or soil test results for those fields. In that case, to calculate the manure application rate, use data from UI Bulletins 810 and 811 and based on the predominant soil type in the field. Both the University of Illinois Extension Bulletin 810—Optimum Crop Productivity Ratings for Illinois Soils—August 2000 and Bulletin 811—Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils—August 2000 can be ordered at 1-800-347-8557. The *Illinois Agronomy Handbook* website <http://www.ag.uiuc.edu/iah>—has PDF files of both bulletins available for free download in the Chapter 11-Soil Fertility.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Archive (Yearly Update)*—base of the Pyramid.
- Update this section when changes occur; do not wait until your annual plan update.

Step 8: Proven Yield Justification

Form 8-A Instructions: Proven Yield Justification

1. Complete **Form 8-A** listing each field by name (**See Form 3-B**), and identify the crop, proven yield, and source for the proven yield figure.
2. The proven crop yield goals shall be determined by obtaining an average yield over a five-year period from the field where livestock manure is to be applied.
3. The following listing of sources of data shall be utilized to determine the targeted crop yield goal.
 - a) **Proven yield**—The proven yield shall be determined by obtaining an average yield over a five-year period from the field where livestock waste is to be applied. The owner or operator shall indicate the method used to determine the proven yield. Data from years with crop disasters may be discarded. Proven yields shall be used unless there is a sound agronomic basis for predicting a different targeted crop yield goal.
 - b) **Crop insurance yields**—A copy of the crop insurance yields shall be included in the plan.
 - c) **Farm Service Agency**—United States Department of Agriculture yields. A copy of the assigned crop yields shall be included in the plan.
 - d) **Soils based yield data** from the Natural Resources Conservation Service of the United States Department of Agriculture shall be used if the owner or operator cannot obtain a targeted crop yield goal pursuant to (a) above. A soil map of the application areas shall be included in the plan. The targeted crop yield goal shall be determined by a weighted average of the soil interpretation yield estimates for the areas that will receive livestock waste. (*Use only if all other options are unavailable*).
4. **Nitrogen and phosphorus fertilization rates** for the targeted crop yield goal may be obtained from the *Illinois Agronomy Handbook*, Ill. Adm. Code 560.
5. Attach any supporting documentation.
6. Enter data for all the crops for which you have data; if desired, use multiple sources (*Example: have corn and soybean crop insurance yields, and want to show grain sorghum data from UI Bulletin 810 based on the predominant soil type in the field—refer to **Form 6-C** for the predominant soil type in the field*).
7. For additional information, see University of Illinois Extension Bulletin 810—Optimum Crop productivity Ratings for Illinois Soil—August 2000 or Bulletin 811—Average Crop, Pasture, and Forestry Productivity Ratings for Illinois Soils—August 2000; both can be ordered at 1-800-347-8557 or <http://www.ag.uiuc.edu/iah>—*Illinois Agronomy Handbook* website—Soil Fertility Chapter 11 PDF files available.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Daily (Seasonal) Access and Data Entries—level two or level three of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

Form 8-A

From the list below, write the number of the yield data source in the Source column for that field.

[illegible]

- 70

Step 11: Manure Storage Inspection

All **manure storages** (covered and uncovered, inside or outside, above or below grade) are to be inspected for integrity, leaks, depth, etc. on a **weekly basis**. Rainfall records are required for facilities with uncovered outside storages.

Form 11-A Instructions: Weekly Checklist—Earthen Wastewater and Manure Storage Facility

1. This form is for use with an outside uncovered manure storage. A written checklist log must be kept. One form can generally be used for each month.
 - Fill in the month-year and the name of the manure storage. *Multiple storages require multiple inspection forms (See Form 4-A).*
 - Fill in the date and time of the inspection, the name of the person doing the inspection, precipitation amount since the last inspection (7 days ago), the present freeboard, and the amount of rainfall since the first of the month.
 - **Form 11-A** includes many of the items that should be monitored, but you may want or need to customize this form for your purposes.
 - If a deficiency is noted during the inspection, mark that checkbox, and describe the deficiency in a note at the bottom of the page. The Date of Corrective Action and the Date Finished for that corrective action also need to be filled in. If the corrective action took longer than 30 days to be completed, state the reasons why at the bottom of the page.
 - The person doing the inspection can use the Comments section at the bottom of the page to record any relevant notes or concerns.

Form 11-B Instructions: Weekly Below Grade Concrete Storages and Treatment Storages

1. This form is for use with manure storages primarily below confinement buildings (pits) or covered outside storages. A written checklist log must be kept. One form can generally be used for each month.
 - Fill in the month-year and the name of the manure storage. *Multiple storages require multiple inspection forms (See Form 4-A).*
 - Fill in the date and time of the inspection, the name of the person doing the inspection and the present freeboard.
 - **Form 11-B** includes many of the items that should be monitored, but you may want or need to customize this form for your purposes.
 - If a deficiency is noted during the inspection, mark that checkbox, and describe the deficiency in a note at the bottom of the page. The Date of Corrective Action and the Date Finished for that corrective action need to also be filled in. If the corrective action took longer than 30 days to be completed, state the reasons why at the bottom of the page.
 - The person doing the inspection can use the Comments section at the bottom of the page to record any relevant notes or concerns.

Form 11-C Instructions: Weekly Above Grade Tanks (Glass-lined Steel or Concrete)

1. This form is for use primarily with manure storages that are above grade and are glass-lined steel or concrete structures, for example, Slurrystores. A written checklist log must be kept. One form can generally be used for each month.
 - Fill in the month-year and the name of the manure storage. *Multiple storages require multiple inspection forms (See Form 4-A).*
 - Fill in the date and time of the inspection, the name of the person doing the inspection and the present freeboard.
 - **Form 11-B** includes many of the items that should be monitored, but you may want or need to customize this form for your purposes.
 - If a deficiency is noted during the inspection, mark that checkbox, and describe the deficiency in a note at the bottom of the page. The Date of Corrective Action and the Date Finished for that corrective action need to also be filled in. If the corrective action took longer than 30 days to be completed, state the reasons why at the bottom of the page.
 - The person doing the inspection can use the Comments section at the bottom of the page to record any relevant notes or concerns.

Form 11-D Instructions: Other Manure Storage Best Management Practices

1. This form is a list of best management practices related to the operation of manure storages. You may or may not utilize these BMP's.
 - Mark the checkbox under “Y” if you utilize that practice.
 - If your facility could utilize the bmp on **Form 11-D**, but does not, mark the checkbox under “N.”
 - Mark the checkbox under “NA” if the BMP on **Form 11-D**, is not applicable for your manure storage, for example, check the NA box for Secondary Containment if you have not been required to have a secondary containment by a professional geologist or professional engineer.

Form 11-E Instructions: Rainfall Records

1. If your facility has and maintains a National Weather Service standard rain gauge or its equivalent, all precipitation events must be monitored and recorded.
 - If your facility does not use a NWS rain gauge, check the box for “do not have.”
 - If your facility does, check the box “have,” and record precipitation events on the form listed below. *Note: rainfall events are to be recorded, not rainfall occurring in 24 hour period (may have several in one, 24-hour period).*

Form 11-F Instructions: Daily Storage Inspection Log

1. If your manure storage level rises above the minimum allowable freeboard for your storage, **Form 11-F** must be filled out daily until the storage level decreases below the safe freeboard.
 - Fill in the name of the storage.
 - Fill in the date and time of the inspection, the name of the person doing the inspection, precipitation amount in last 24 hours, and the current freeboard.
 - Mark whether you are required to have a 100-year or 25-year, 24-hour capacity, and describe what actions you are taking to restore the proper freeboard.

Form 11-G Instructions: Manure Storage Pumping Levels Log

1. While emptying your manure storages you are required to maintain a log of the pumping levels for each manure storage, as each is pumped down.
 - Fill in the name of the storage.
 - **Column 1-3**—Fill in the date and time, and the name of the person making the entry.
 - **Column 4**—Fill in the level before pumping begins.
 - **Column 5**—Fill in the level after pumping.
 - **Column 6**—Check this box for each pumping event if applicable. *Example: As one pit is pumped empty, another pit is pumped into it.*

Form 11-H Instructions: Manure Handling System Maintenance Record

1. A record of maintenance activity on manure handling equipment must be maintained. This would include pumps, scrapers, piping, valves, etc. *Example: It does not apply to mobile field application equipment, but if your facility has piping (above or below ground) that you use to move manure from your manure storages to locations in or near the fields for field application, those pipes would be covered on Form 11-H.*
 - **Columns 1 and 2**—Fill in the date of the maintenance and the person’s name recording it.
 - **Column 3**—Fill in the location of this equipment.
 - **Column 4**—Fill in the type of equipment that had maintenance.
 - **Column 5**—Fill in the type of work that was done.

Form 11-I Instructions: Weekly Storm Water/Pollution Prevention System Inspection Form

1. The storm water pollution prevention system must be inspected on a weekly basis to ensure its integrity. A written checklist log must be kept. One form can generally be used for two months.
 - Fill in the date and time of the inspection and the name of the person doing the inspection.
 - **Form 11-I** includes many of the items that should be monitored, but you may want or need to customize this form for your purposes.
 - If a deficiency is noted during the inspection, mark that checkbox, and describe the deficiency in a note at the bottom of the page. The Date of Corrective Action and the Date Finished for that corrective action need to also be filled in. If the corrective action took longer than 30 days to be completed, state the reasons why at the bottom of the page.
 - The person doing the inspection can use the Comments section at the bottom of the page to record any relevant notes or concerns.

Form 11-J Instructions: Daily Water Line Inspection Form

1. The facility/production area fresh water lines must be inspected on a daily basis to minimize leaks. A written checklist log must be kept. One form can be used for one week.
 - Fill in the date and time of the inspection and the name of the person doing the inspection.
 - Since every facility is different, **Form 11-J** has listed Zone 1, Zone 2, and Zone 3 for areas to inspect. You may want or need to customize this form for your purposes, using or including other descriptors. If you use Zones, mark those Zones on your storm water pollution prevention plan.
 - Flow meter—If you have a flow meter connected to your freshwater lines, the daily recording of those numbers could in some cases qualify as an inspection.
 - Pressure gauge—If you have a pressure gauge connected to your freshwater lines, the daily recording of those numbers could in some cases qualify as an inspection. However, minor leaks will not be detected by a pressure gauge reading; leaks should still be noted and repaired.
 - If a deficiency is noted during the inspection, mark that checkbox, and describe the deficiency in a note at the bottom of the page. The Date of Corrective Action and the Date Finished for that corrective action need to also be filled in. If the corrective action took longer than 30 days to be completed, state the reasons why at the bottom of the page.
 - The person doing the inspection can use the Comments section at the bottom of the page to record any relevant notes or concerns.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Daily (Seasonal) Access II-C*.
- Update this section when changes occur; do not wait until your annual plan update.

Weekly Checklist: Earthen Wastewater and Manure Storage Facility

Form 11-A

(Separate page for each facility)

Month/Year: _____ Storage Name: _____ P = Pass F = Fail

Date & Time of Inspection	Deficiency noted*					
Inspected by (Name)						
Precipitation amount						
Freeboard (ft)—height to overflow						
Previous month rainfall amount						
Seepage on outside of berm	<input type="checkbox"/>	P F	P F	P F	P F	P F
Wave damage or erosion evident	<input type="checkbox"/>	P F	P F	P F	P F	P F
Stop/start pumping marked on staff gauge	<input type="checkbox"/>	P F	P F	P F	P F	P F
Damp, soft areas, slumps or bulges	<input type="checkbox"/>	P F	P F	P F	P F	P F
Rodent burrows or cracks	<input type="checkbox"/>	P F	P F	P F	P F	P F
Grass mowed	<input type="checkbox"/>	P F	P F	P F	P F	P F
Tree/bush growth	<input type="checkbox"/>	P F	P F	P F	P F	P F
Liner in good condition	<input type="checkbox"/>	P F	P F	P F	P F	P F
<input type="checkbox"/> NA						
If fence and gate—good condition	<input type="checkbox"/>	P F	P F	P F	P F	P F
<input type="checkbox"/> NA						

Date of Corrective Action _____ Date Finished _____

If corrective action took longer than 30 days to complete, then state reason(s) why. Comments:

Weekly Checklist:

Below Grade Concrete Storages and Treatment Storages

(Separate page for each facility)

Form 11-B

Month/Year: _____ Storage Name: _____ P = Pass F = Fail

Date & Time of Inspection	Deficiency noted*					
Inspected by (Name)						
Freeboard (ft)—height to overflow						
Staff or Level gauge visible	<input type="checkbox"/>	P F	P F	P F	P F	P F
Any evidence of manure leaking	<input type="checkbox"/>	P F	P F	P F	P F	P F
Footing drains—evidence of manure	<input type="checkbox"/>	P F	P F	P F	P F	P F
Ponding next to pit	<input type="checkbox"/>	P F	P F	P F	P F	P F
Gutters & downspouts drain away from storages	<input type="checkbox"/>	P F	P F	P F	P F	P F
Pumpouts broken near grade	<input type="checkbox"/>	P F	P F	P F	P F	P F
Other water entry routes to storages	<input type="checkbox"/>	P F	P F	P F	P F	P F
Cracks in concrete	<input type="checkbox"/>	P F	P F	P F	P F	P F
	Hairline					
	1/8 inch					
	¼ inch					
	> ¼ inch					

Date of Corrective Action _____ Date Finished _____

If corrective action took longer than 30 days to complete, then state reason(s) why.

Comments:

Weekly Checklist: Above Grade Tanks (Glass-lined Steel or Concrete)

Form 11-C

(Separate page for each facility)

Month/Year: _____ Storage Name: _____ P = Pass F = Fail

Date & Time of Inspection	Deficiency noted*					
Inspected by (Name)						
Freeboard (ft) —height to overflow						
Staff or Level gauge visible	<input type="checkbox"/>	P F	P F	P F	P F	P F
Foundation ring seepage	<input type="checkbox"/>	P F	P F	P F	P F	P F
Wall sheets seepage	<input type="checkbox"/>	P F	P F	P F	P F	P F
Roof—no holes or gaps evident	<input type="checkbox"/>	P F	P F	P F	P F	P F
<input type="checkbox"/> NA						
Pumps & valves—leaking	<input type="checkbox"/>	P F	P F	P F	P F	P F
Shut offs tamper proof	<input type="checkbox"/>	P F	P F	P F	P F	P F
Secondary containment:						
Storm water drained	<input type="checkbox"/>	P F	P F	P F	P F	P F
Storm water valve shut	<input type="checkbox"/>	P F	P F	P F	P F	P F
Cracks in concrete						
Hairline	<input type="checkbox"/>	P F	P F	P F	P F	P F
1/8 inch	<input type="checkbox"/>	P F	P F	P F	P F	P F
¼ inch	<input type="checkbox"/>	P F	P F	P F	P F	P F
> ¼ inch	<input type="checkbox"/>	P F	P F	P F	P F	P F

Date of Corrective Action _____ Date Finished _____

* If corrective action took longer than 30 days to complete, then state reason(s) why. Comments:

Other Manure Storage Best Management Practices

Form 11-D

Y	N	NA	Practice
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	No outlet automatically releases storage from the required design volume. Manually operated outlets are of permanent type designed to resist corrosion and plugging.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Non-polluted runoff is excluded from the structure to the fullest extent possible, except where its storage is advantageous to the operation of the agricultural waste management system (e.g. needed for dilution of manure).
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	An auxiliary (emergency) spillway is part of the berm.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Reinforced embankment, such as additional top width, flattened and/or armored downstream side slopes, is provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	To minimize the potential for accidental release of manure through gravity outlets, outlet gate lock(s) or locked gate housing is provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Freeboard, in addition to the minimum required, is provided by storage design.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Storage for wet year rather than normal year precipitation is provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Secondary containment is provided. ¹
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Alarm system for overflow or other release is provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Another means of safely emptying the required volume is provided.
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Other practices (describe) _____ _____

¹—The Illinois Livestock Management Facilities Act allows for the inclusion of secondary containment if recommended by a Professional Geologist or Professional Engineer.

Rainfall Records

Form 11-E

We

☐ have

☐ do not have

a rain gauge at our facility that we use to monitor and record precipitation.

[illegible]

Daily Storage Inspection Log

Form 11-F

Storage name: _____

If daily inspection is required, use the form below.

	Date & Time of Inspection	Inspection by (Name)	Precipitation amount	Freeboard (ft) —height to overflow
Day 1				
Day 2				
Day 3				
Day 4				
Day 5				
Day 6				
Day 7				

Describe steps taken to dewater so a

☐ 100-year or

☐ 25-year, 24-hour capacity

is restored:

Manure Storage Pumping Levels Log

Form 11-G

All liquid and semi-solid storages

Storage name: _____

Date & Time	Recorded by (Name)	Level Before Pumping*	Level After Pumping*	Substantial manure additions occurred during this pumping period
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
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				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>
				<input type="checkbox"/>

* Uncovered outside storages require weekly freeboard records (**See Form 11-A**). These two columns should be synchronized with those records.

(Example: pump, scraper, piping, valves, etc.)

[illegible]

Weekly Storm Water/Pollution Prevention System Inspection Form

Form 11-I

P = Pass F = Fail

		Week 1	Week 2	Week 3	Week 4	Week 5	Week 6	Week 7	Week 8
Date & Time of Inspection	Deficiency noted								
Inspected by (Name)									
Roof guttering & downspouts	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Storm water diversions	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Channels	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Grassed filter strips	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Detention basins	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Containment diking	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Grassed waterways/ swales	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F
Other	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F	P F

Date of Corrective Action _____ Date Finished _____

* If corrective action took longer than 30 days to complete, then state reason(s) why.

Daily Water Supply Line Inspection Form

Form 11-J

P = Pass F = Fail

		Mon	Tues	Wed	Thurs	Fri	Sat	Sun
Date & Time of Inspection	Deficiency noted							
Inspected by (Name)								
Zone 1**	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F
Zone 2**	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F
Zone 3**	<input type="checkbox"/>	P F	P F	P F	P F	P F	P F	P F
Flow meter (write down your daily readings in the daily column)	<input type="checkbox"/>							
Pressure gauge (write down your daily readings in the daily column)	<input type="checkbox"/>							

Date of Corrective Action _____

Date Finished _____

* If corrective action took longer than 30 days to complete, then state reason(s) why.

** If you use the zone 1, zone 2, zone 3 descriptors, the zones you use must be identified on your facility map Form 3-B.

Step 12: Records of Manure Application

Form 12-A Instructions: Field Application Record

1. Records of all livestock manure applications are to be kept. Use **Form 12-A** to keep track of all your manure applications by field (one form per field). Record the off-site transfer of manure on **Form 12-B**.
 - **Column 1**—Record the date and time of each application event.
 - **Column 2**—Record the name of the person writing this all down.
 - **Column 3**—Record the number of loads by making tally marks in the box.
 - **Column 4**—Record the amount of manure applied in either gallons or tons.
 - **Column 5**—Record the number of acres on which manure was applied. This will be the size of the field minus any setbacks.
 - **Column 6**—Record the application rate per acre in either gallons or tons.
 - **Column 7**—Identify the manure storage source for this manure.
 - **Column 8**—Identify the application method(s) used to apply this manure. For center pivot irrigation systems that span more than one field, enter the systems and the respective fields on **Form 6-B**, Field Summary Legend, and use a descriptive name for each system in the “field name” column.
 - **Column 9**—Record the wind speed and direction when this application is taking place.
 - **Column 10**—Record the weather conditions, using the codes at the bottom of the page.
 - **Column 11**—Record the relative humidity or dew point when this application is taking place. Weather records—average wind speed and direction, temperature, and dew point—are available electronically on a one-day delay at www.sws.uiuc.edu/warm.
 - **Column 12**—Record the soil moisture at the time this manure is being applied using the codes at the bottom of the page.
 - **Column 13**—Record the precipitation at the time this manure is being applied during the previous and post 24 hours.
 - **Column 14**—Circle “Y” if you will use data from this field application event to verify your equipment calibration in Step 14. Otherwise circle “N”.
 - **Column 15**—As manure is being applied, if there is or is not any evidence of leakage, mark Y or N. If marked Yes, use **Form 12-C** to document.
2. This form in some way should be utilized during application to keep track, make notes, etc. that later can be consolidated on to **Form 12-A** (multiple pages may be necessary) and included in the plan. Do not rely on your memory while applying—make notes!!!

Hint: Use a clipboard—it is harder to lose and easier to write on.

Form 12-B Instructions: Off-Site Transfer of Manure to Third Parties

1. Record all transfers of manure to third parties (off your facility or fields).
 - Record the date of the transfer.
 - Record the amount of manure transferred in either gallons or tons.
 - Record from which manure storage the manure was transferred.
 - You are required to give the third party a copy of the best management practices for the application of manure; check the box when you have done so. See [Appendix L](#) for a recommended list.
 - Record the name and address of the third party receiving the manure.
 - Record any notes about the transfer that might be relevant.

Form 12-C Instructions: Leak Inspection Log for Application

1. Manure application equipment, when used, must be inspected for leaks.
 - Use **Form 12-C** to record those inspections.
 - Fill in the date and time of the inspection and the name of the person that did the inspection.
 - Fill in the name or type of equipment inspected.
 - Fill in information about any leak repairs that were necessary.
 - Make any relevant notes.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Daily (Seasonal) Access and Data Entries—level two of the Pyramid*.
- Update this section when changes occur; do not wait until your annual plan update.

Field Application Record

Form 12-A

(For Off-site transfer use Form 12-B)

Field Name: _____

Year: _____

Date & Time	Recorded by (Name)	Number of loads - Tally	Total Amount (gal/tons)	Acres Receiving Manure	Rate gal/ton per acre	Which Manure Storage?	Application Method ¹	Wind Direction & Speed	Weather Conditions ² †	Temperature	<input type="checkbox"/> Relative Humidity or <input type="checkbox"/> Dew Point	Soil Moisture ³	24 hr Precip.		Accuracy for Calibration (see Step 13)	Evidence of leaking equipment ⁴
													Previous	Post		
															Y N	Y N
															Y N	Y N
															Y N	Y N

1—Application methods: B = Broadcast, not incorporated the same day; BI = Broadcast, incorporated the same day; K = Knife injected; S = Sweep injected; I = Irrigation (See instructions if using center pivot.)

2—Weather conditions descriptions could include: S = sunny, PS = partly sunny, PC = partly cloudy, C = cloudy, OC = overcast

3—Soil moisture codes: D = Dry; Saturated = S; Pondered = PN; Frozen = FR; Snow-covered = SC

4—If yes, use Form 12-C. to show record of repairs.

†—See USA Today for sample codes.

Off-Site Transfer of Manure to Third Parties

Form 12-B

Date of transfer	Amount of manure transferred Gal/tons	From Which Storage	Manure analysis received by 3 rd party	BMP's received by 3 rd party	Name & Address of Recipient	Notes
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		
			<input type="checkbox"/>	<input type="checkbox"/>		

Suggested BMP's to be given are included in [Appendix L](#), Nutrient Management—[NRCS Practice Standard Code 590](#), [Waste Utilization](#)—[NRCS Practice Standard Code 633](#).

Leak Inspection Log for Application Equipment

Form 12-C

Date & Time	Inspected by (Name)	Equipment	Leak Repair	Notes

Work with your equipment dealer for suggestions on inspection and regular maintenance for specific equipment.
If the last column on **Form 12-A** is marked "yes," provide information on this form.

Step 13: Manure Applicator Equipment Calibration

Form 13-A Instructions: Calibration Method Used

1. Identify the calibration method you use to calibrate your manure application equipment.

Form 13-B Instructions: Land Area Method of Calibration

1. If you use the land area method of calibration, use **Form 13-B**.
 - Record the name of the field (See **Form 3-B**).
 - Record the date and time the calibration was done.
 - Record the name of the person recording this information.
 - Record the total amount of manure (in either gallons or tons) you will be using.
 - Record the total number acres that manure will be applied to.
 - Record the application rate you calculated.

Form 13-C Instructions: Calibration—Show Calculations

1. You are required to show the calculations you made when you calibrated your equipment.
 - [Appendix M](#) contains information about different formulas and methods for calibrating manure application equipment for several different application methods.
 - Using **Form 13-C** record the date and the name of the Certified Livestock Manager that supervised the calibration and calculations.
 - Identify the equipment you are calibrating.
 - On **Form 13-C** or on a separate page, show your calculations for calibrating your application equipment and record your application rate.

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Daily (Seasonal) Access and Data Entries—level two of the Pyramid*.
- Update this section when you do your annual plan update.

Check Calibration Method Used

Form 13-A

(One sheet for each method used)

Date: _____

Method Used	Calibration Methods	Equipment & Travel Speed/Gear	Information You Need
<input type="checkbox"/>	Liquid manure in storage (Note: tanker, towed hose, or irrigation)		<ul style="list-style-type: none"> Total gallons spread Total acres receiving manure
<input type="checkbox"/>	Liquid manure in spreader		<ul style="list-style-type: none"> Gallons in spreader load Distance driven and width spread
<input type="checkbox"/>	Liquid manure in spreader		<ul style="list-style-type: none"> Pounds in spreader load Distance driven and width spread
<input type="checkbox"/>	Liquid manure via towed-hose: flow meter or pump mfg's chart		<ul style="list-style-type: none"> Liquid flow rate to toolbar Ground speed Width spread
<input type="checkbox"/>	Solid/semi-solid manure in storage		<ul style="list-style-type: none"> Cubic feet spread Total acres receiving manure
<input type="checkbox"/>	Solid manure in spreader		<ul style="list-style-type: none"> Spreader volume, bushels Distance driven and width spread
<input type="checkbox"/>	Solid manure in spreader		<ul style="list-style-type: none"> Pounds/tons in spreader load Distance driven and width spread
<input type="checkbox"/>	Solid manure in spreader		<ul style="list-style-type: none"> Area of drive-over sheet Net weight of manure deposited on sheet (averaged)
<input type="checkbox"/>	5-gallon bucket		Net weight of manure in bucket
<input type="checkbox"/>	Liquid manure via sprinkle irrigation		Inches collected in gauges

Form 13-B

[illegible]

Calibration—Show Calculations

Form 13-C

One sheet for each calibration performed. Show calculations based on the method checked.

Date: _____

CLM: _____

Equipment identification (e.g., XYZ spreader, etc.): _____

Rate =

Step 14: Emergency Response Plans

Below are instructions for filling out the forms that will make up your Emergency Response Plan. For more information about how to stop, contain, and clean up a spill, see [Appendix N](#).

PLEASE FILL IN ALL INFORMATION SHEETS AS THOROUGHLY AND NEATLY AS POSSIBLE. IN SOME CIRCUMSTANCES THE FORMS MAY REQUEST THE SAME INFORMATION MORE THAN ONCE. THIS WILL ALLOW THE EMERGENCY RESPONSE TEAM TO RESPOND TO SPECIFIC TYPES OF EMERGENCIES IN A PROFESSIONAL MANNER WITH THE PROPER INFORMATION.

Location of your Emergency Response Plan—Consider placing a *copy* of your plan in a safe/secure location away from your confinement buildings (maybe even away from your office), so that it would be available to any emergency responders.

Form 14-A Instructions: Emergency Phone Number List

1. Using **Form 14-A**, fill in the appropriate names and phone numbers for your facility.
 - The Owner, Certified Livestock Manager, and Operator may be one person. If that is the case, at least one other person (two is better) should also be listed with phone numbers in case the first person on the list is unreachable and or out of town. Who should be called and in what order, in the event of an emergency.
 - Spills must be reported to Illinois Emergency Management Agency as soon as practical. See [Appendix N](#) for spill reporting requirements. Definition: a spill is more than 25 gallons that is not recovered.
 - The IL EPA Regional Ag Engineer's name and phone number can be found at the IL EPA website <http://www.epa.state.il.us/water/cafo/regions/index.html>. In the event of a spill, call the regional ag engineer right after calling the IEMA 800 phone number. IEMA should relay the call to him.
 - Particularly if your facility is not in a 911 area, written directions are a must.
 - Designated Spokesperson: Consider contacting the media. Sooner or later, they will learn of the problem anyway. Assign a spokesperson to meet with the news media when they arrive at the scene. That way, the story that is printed may focus on your organized and effective response rather than the magnitude of the problem.
 - Supplemental phone numbers. This is a suggested list, you may have others to include.
 - **Post this List in each building and/or by each phone. Also, provide a copy for employees or commercial applicators spreading manure.** Make multiple copies and laminate them or put in a sheet protector and post in each building and/or by each phone. If cell phones are predominantly used, consider making a business card size list of emergency phone numbers each employee can carry at all times.

Form 14-B Instructions: Facility (Production Area) Map

1. Use a copy of your facility map from **Form 3-B** (ideally before you added in all the Step 3 items) and sketch in the location of the listed items on **Form 14-B**. This map can be an aerial map or topographic map, but a topographic map is also needed if you use an aerial map. See [Appendix O](#) for an ER plan sample map.
 - Topographic Map—using the topographic map used in **Form 3-B**, add the following: surrounding areas including drainage patterns and locations of spoil materials for forming emergency dikes, location of surface waters, waterways, wells, and any other environmentally sensitive areas.

Form 14-C, D, and E Instructions: Effluent Spill Emergency Response Plan

1. Using possible scenarios on **Forms 14-C, D, and E** as guidelines (or similar ones relevant to your facility, manure storage and handling operation, and equipment) write out instructions detailing the **ACTION PLAN** you (and or your employees) will follow to stop, contain, and clean up a spill in an emergency involving effluent spill, discharge, leaks, etc.
 - See [Appendix N](#) for actual spill response action items and priorities that may assist you in developing your plan.
 - This plan will be of little value **IF** you are the only one that knows its contents. Periodically review this plan with your employees to make sure they know not only what to do, but maybe more importantly, they know what **YOU** want them to do. They won't know unless you tell (or train) them.

Form 14-F Instructions: Pre-Arranged Sample Land Access Agreement

1. Using Form 14-F and reviewing your facility (production area) map for direction an effluent spill might flow, identify those potentially affected neighbors and strongly consider having a pre-arranged and signed access agreement to their property in the event of a spill. The agreement should say something to the effect that you have permission to enter their property to contain and cleanup a spill, and that you will restore their property to the way it was before the spill and/or reimburse them for any losses.
 - Fill in the appropriate names and phone numbers of neighboring landowners, if applicable.
 - During the emergency is not the time to be trying to figure this out.
PRE-ARRANGEMENTS CAN KEEP FUTURE PROBLEMS FROM ARISING AFTER THE EMERGENCY IS OVER! BE A GOOD NEIGHBOR!!

Form 14-F, continued **Instructions: Location of Pre-Arranged Emergency Equipment and Supplies**

1. List equipment owners who have agreed to assist in an emergency, and have an inventory of equipment on site that can be used (including its location). List any arrangements made with other producers and neighbors to share personnel and/or equipment and supplies and land access during an emergency.
 - To deal with an emergency quickly and effectively, most operations (pork especially, i.e. liquid manure) may need assistance from other individuals. Therefore, it is essential that prior arrangements be made so that every person involved will know what to do when an emergency arises. Identify other nearby producers or farmers who can quickly bring equipment such as tractors with plows, backhoes, bulldozers, or even personnel with shovels, to help in the event of an emergency. You can establish reciprocal agreements with these producers and form a response team to deal with any emergency that occurs in a certain area.
 - In some cases, you or emergency response personnel may need to contact businesses that have equipment to respond to an effluent spill. It is very important to have a pre-arranged written agreement with those businesses that could be called on during an emergency. Terms of these arrangements should include such things as financial compensation and description of equipment that will be used.
 - Available 24 hours a day. Include phone numbers and primary contacts. Put the list in the order you want equipment operators contacted. Post a copy in each animal building on site, in the site office, and in the owner's residence. Preferably posted by a phone, or main doorway if no phone i.e. with the Emergency Phone Number List.

Form 14-G **Instructions: Fire Emergency Response Information Sheet**

1. Using **Form 14-G**, fill out the relevant information about your operation including: names, phone numbers, account numbers of your electric and gas and propane companies; make a list of any hazardous materials or fuels you may have on your farm.

Form 14-H **Instructions: Fire Emergency Response Plan**

1. Using **Form 14-H** think through your instructions for an action plan to be taken in the event of a fire and how you want your employees to respond to minimize property and livestock loss while maintaining their safety. A fire starting in different places might require different responses and decisions as to what can be done or saved.
 - Some livestock operations have given copies of their plans (or at least the facility map) to the local fire department and/or invited them out for a tour. Their familiarity with your operation, building layout, and any hazardous materials may help them fight any fire safely and efficiently.

Form 14-I Instructions: Power Outage Information Sheet

1. Using **Form 14-I**, fill out the relevant information about your operation including: names, phone numbers, and account numbers for the power company, electrical service company, generator service company, etc.
 - Generators—If your facility has a generator(s) does someone inspect it routinely to make sure it is full of fuel, extra fuel is available, and that it runs?
Who is responsible for starting it?
Who is responsible for operating the double-throw disconnect to the electric service?

Form 14-J Instructions: Personal Information (Not Required)

1. Consider keeping an individual list of any medical conditions you or your farm personnel may have that emergency medical personnel should be made aware (for example, diabetes, heart or respiratory problems, medications, etc.). Have them sign a form releasing the information. Your employees may not be comfortable with such a list; if so, at least make sure you have written down the names and phone numbers of their doctors.
2. **Keep the information confidential from other employees, and do not submit it to state or federal agencies.**

Form 14-K Instructions: Medical Emergency Response Plan

1. Action plan in the event of a medical emergency.
 - Do any employees have first aid training?
 - Do all employees know where first aid kits are located?
 - Have all employees been made aware of potential safety and health hazards in your operation? This could be a set form or checklist that you go over with new employees.
 - If your facility has confined spaces (many do), do you have confined space equipment, confined space entry procedures and confined space entry rescue training?

Form 14-L Instructions: Employee Emergency Response Training Records

1. Using **Form 14-L** keep track of meetings you have with employees (or send your employees to) about emergency response training. This might include meetings with local fire protection districts, Certified Livestock Manager workshops, field days, periodically taking employees on a facility tour to refresh their familiarity with safety and health hazards, emergency response equipment and/or procedures, etc.
 - Do you have a company policy on training?
 - Do you have a company policy on retraining? How often?

ORGANIZATION TIPS:

- Place this information in the producer manual in the section called *Fire Alarm Status—level two of the Pyramid*.
- Update this information when changes need to be made.

Date: _____

Form 14-A

Emergency Phone Numbers

Farm name: _____

Owner's name: _____ Phone: (____) _____

Operator's name: _____ Phone: (____) _____

Certified Livestock Manager: _____ Phone: (____) _____

Ambulance (EMS) Phone: (____) _____

Fire Dept. Phone: (____) _____ County Sheriff Phone: (____) _____

Illinois Emergency Management Agency, Phone: 1-800-782-7860 (Within area code 217 dial 782-7860)

IL EPA Regional Ag Engineer (Name): _____
Phone: (____) _____

Media Spokesperson for the Facility (Name): _____
Phone: (____) _____

Map Directions

Please draw a map with written directions to the farm¹:

¹ Provide enough description that anybody could direct someone to the site by telephone.

Supplemental Phone Numbers:

Illinois EPA Phone: 217-782-3397

Illinois Dept. of Agriculture Phone: 217-785-2427

Illinois Bureau of Animal Welfare Phone: 217-785-2427

Facility veterinarian _____

State Veterinarian _____

Public Health Dept. Phone: (____) _____

Natural Resources Conservation Service Phone: (____) _____

Facility (Production Area) Map

Form 14-B

Attach a topographic map of the facility (production area). Indicate on the map the location of the items listed below. Also, indicate location of materials that could be used for temporary berms, for example, dirt piles, old hay bales, sawdust, etc., ingress/egress for emergency vehicles, identity of immediately adjacent landowners with their emergency phone numbers.

	Emergency Response Map Checklist
<input type="checkbox"/>	Areas of no entrance without assisted breathing devices
<input type="checkbox"/>	Chemical storages
<input type="checkbox"/>	Direction of effluent flow in the event of a spill
<input type="checkbox"/>	Electric lines and shutoff
<input type="checkbox"/>	Electric panels in each building
<input type="checkbox"/>	Emergency generator
<input type="checkbox"/>	Facility buildings
<input type="checkbox"/>	Fire Extinguishers and or other fire fighting equipment
<input type="checkbox"/>	First Aid kits
<input type="checkbox"/>	Flushing system pipes and directional flow
<input type="checkbox"/>	Fuel storages
<input type="checkbox"/>	Gas lines and shutoff
<input type="checkbox"/>	Hazardous materials
<input type="checkbox"/>	Lagoons
<input type="checkbox"/>	Livestock buildings
<input type="checkbox"/>	Manure pipes and directional flow
<input type="checkbox"/>	Manure storages
<input type="checkbox"/>	Materials for temporary berms (dirt piles, old hay bales, sawdust, etc.
<input type="checkbox"/>	Phones
<input type="checkbox"/>	Propane tanks
<input type="checkbox"/>	Property boundaries
<input type="checkbox"/>	Pumping equipment and lift stations
<input type="checkbox"/>	Residences
<input type="checkbox"/>	Streams
<input type="checkbox"/>	Wells (potable and non-potable)
<input type="checkbox"/>	Other _____

Aerial Map

Aerial maps of the facility (production area) and surrounding areas including drainage patterns and locations of spoil materials for forming emergency dikes, location of surface waters, waterways, wells, and any other environmentally sensitive areas.

Map should include area outside the production area (facility) property lines that shows environmentally sensitive areas (for example, surface water, etc.) that could be affected in an emergency. Also identify property lines on the maps.

Date:

Form 14-C

Emergency Action Plan for:

Dike overtopping or eroding or above ground storage leak:

Emergency Actions:

Date:

Form 14-D

Emergency Action Plan for:

Lagoons, ponds or pits are full and planned application areas not available:

Emergency Actions:

Date: _____

Form 14-E

Emergency Action Plan for:

Spill during delivery of liquids to field—specify situation:

Emergency Actions:

Date: _____

Form 14-F

Pre-Arranged Emergency Response Agreements

Pre-Arranged Sample Land Access Agreement

Contact #1 _____

Contact #2 _____

Land Access Agreement

This document will serve as an access agreement between _____

(hereafter called PRODUCER) and _____

(hereafter called NEIGHBOR). In the unlikely event that a manure discharge originating from PRODUCER'S property enters NEIGHBOR'S property, NEIGHBOR hereby grants permission to PRODUCER or his agents to enter NEIGHBOR'S property and take any reasonable steps to control, contain, and remediate the manure discharge. PRODUCER agrees to restore NEIGHBOR'S property to its original condition.

Signed _____
(PRODUCER)

Phone: (____) _____

Signed _____
(NEIGHBOR)

Phone: (____) _____

Location of Pre-Arranged Emergency Equipment and Supplies

Owner	Phone	Location
Irrigation Pumps		
Dozer/Track Loader		
Backhoe		
Vacuum Slurry Tank		
Lagoon Pumping Services (large pumps available on short notice)		

Date: _____

Form 14-G

Fire Emergency Response Information Sheet

Farm Name: _____

Farm Fire Protection District: _____

911 Coordinates for farm _____

Owner/Operator: _____ Phone: (____) _____

2nd Contact Person: Name: _____ Phone: (____) _____

3rd Contact Person: Name: _____ Phone: (____) _____

Electric Power Company: _____ Phone: (____) _____

Account Number: _____ Meter number: _____

Is there a disconnect between the meter base and the buildings? Y N

Location of disconnect (mark on the Emergency Response Plan facility map).

Natural Gas Company: _____ Phone: (____) _____

Account Number: _____ Meter number: _____

Propane Company: _____ Phone: (____) _____

Account Number: _____

Location and size of propane tanks (**marked on the Emergency Response Plan facility map**).

Other fuels and locations (**marked on the Emergency Response Plan facility map**).

Fire detection equipment checked on a schedule. Y N

Fire extinguishers re-charge date checked on a schedule. Y N

Location of fire extinguishers (**marked on the Emergency Response Plan facility map**).

Are hazardous materials stored in the facilities? Y N

Location and list of materials (**marked on the Emergency Response Plan facility map**).

Emergency egress routes marked? Y N

Date:

Form 14-H

Emergency Action Plan for:

Facility fire:

Emergency Actions:

Date: _____

Form 14-I

Power Outage Information Sheet

Farm Name: _____

Farm Fire Protection District: _____

911 Coordinates for farm _____

Owner/Operator: _____ Phone: (____) _____

2nd Contact Person: Name: _____ Phone: (____) _____

3rd Contact Person: Name: _____ Phone: (____) _____

Electric Power Company: _____ Phone: (____) _____

Account Number: _____ Meter number: _____

Size of Electrical Service: _____ amps or _____ KVA

Do you have a standby alternator? Y N

If so, is there a double-throw disconnect to isolate the farm from the utility during alternator operation?
Y N

Do you have a disconnect between meter base and panel? Y N

Emergency egress routes marked? Y N

Location of electrical panels in all buildings (**mark on your Emergency Response Plan facility map**).

Name and number of electricians who perform electrical service on your barns:

Name: _____ Phone: (____) _____

Name: _____ Phone: (____) _____

Date:

Form 14-K

Emergency Action Plans for:

Serious injury to persons:

Emergency Actions:

Serious illness/disease incident:

Heart Attack:

Diabetes—Low Sugar:

Overcome by Manure Gas:

Emergency Actions:

Confined space entry or rescue:

Emergency Actions:

Employee Emergency Response Training Records

Form 14-L

Year: _____

Date & Time of Training	Employee's Name	Employee's Signature	Location of Training	Training Subject	Trainer's or Supervisor's Signature

Signature Page

I certify that the information provided on these forms/worksheets is an accurate and true representation of my livestock facility. I understand that if there is a substantive change in my operation (more livestock, decrease in manure storage or number of fields), I will re-submit these forms with changes to Illinois EPA (if I have a NPDES permit), Illinois Department of Agriculture (if I am over 1,000 animal units) or to my local NRCS office (if I have a CNMP that was used to obtain EQUIP funds within the last 10 years).

Owner/Manager

Certified Plan Writer (if used)

Date

Date

Appendix E - Record Keeping - Manure and Wastewater Storage and Handling - Record Keeping

Type and Number of Animals	Date	Date	Date	Date	Date	Date						
1.	#	#	#	#	#	#						
2.	#	#	#	#	#	#						
3.	#	#	#	#	#	#						
4.	#	#	#	#	#	#						
5.	#	#	#	#	#	#						
Type of Inspections Completed	Date	Date	Date	Date	Date	Date						
1.	#	#	#	#	#	#						
2.	#	#	#	#	#	#						
3.	#	#	#	#	#	#						
4.	#	#	#	#	#	#						
Type of Repairs Completed	Date	Date	Date	Date	Date	Date						
1.												
2.												
3.												
4.												
Type Manure or Waste Removed	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.	Date	Amt.
1.												
2.												
3.												
4.												
5.												
Type of Manure Transported Off the Farm	Where	Date	Amount.	Where	Date	Amount.	Where	Date	Amount.			
1.												
2.												
3.												
4.												

Comments / Notes:

Appendix E - Fertilizer and Manure Application Record

Farm Name: _____

[illegible]

Comments / Notes:

Appendix E - Crops Record Keeping. (Year _____)

[illegible]

Crop Yield Summary (Year _____)

[illegible]

Daily Application Log For Solids

Date	Field ID	Acres Used	Manure Source	Loads Applied	Rate / acre	Wind Direc.	Wind Speed	Air Temp	Soil Moist.

**Make note of AM and PM climatic conditions.

Make and model of Spreader

List Capacity _____ cu. Yds.

Daily Application Log for Liquid Manure

[illegible]

****Make note of AM and PM climatic conditions.**

Make and model of Spreader

List Capacity _____ gals

Annual Manure Application Summary

[illegible]

Manure Containment Liquid Level & Berm Inspection Report

[illegible]

Note: Use one report sheet per site.

Manure Application -- Load Record Log

Date		Tank Size	
Driver		Time on Job	
Driver		Time on Job	
Driver		Time on Job	
Time of Day	Loads Hauled	Manure Source	Field Id
Midnight - 2 AM			
2 AM - 4 AM			
4 AM - 6 AM			
6 AM - 8 AM			
8 AM - 10 AM			
10 AM - NOON			
NOON - 2 PM			
2 PM - 4 PM			
4 PM - 6 PM			
6 PM - 8 PM			
8 PM - 10 PM			
10 PM - Midnight			
Field Drawing/Comments:			

Composter Record

[illegible]