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Details:

(FORM UPDATED: 07/12/2010)

WISCONSIN STATE LEGISLATURE ... PUBLIC HEARING - COMMITTEE RECORDS

2005-06

(session year)

Assembly

(Assembly, Senate or Joint)

Committee on ... Agriculture (AC-Ag)

COMMITTEE NOTICES ...

- Committee Reports ... **CR**
- Executive Sessions ... **ES**
- Public Hearings ... **PH**
- Record of Comm. Proceedings ... **RCP**

INFORMATION COLLECTED BY COMMITTEE FOR AND AGAINST PROPOSAL

- Appointments ... **Appt**
- Clearinghouse Rules ... **CRule**
- Hearing Records ... bills and resolutions
 - (**ab** = Assembly Bill) (**ar** = Assembly Resolution) (**ajr** = Assembly Joint Resolution)
 - (**sb** = Senate Bill) (**sr** = Senate Resolution) (**sjr** = Senate Joint Resolution)
- Miscellaneous ... **Misc**

Appendix A

APPLICATION FORM AND WORKSHEETS

Application for Local Approval *New or Expanded Livestock Facility*



Wisconsin Department of Agriculture, Trade and Consumer Protection
2811 Agriculture Drive
P.O. Box 8911
Madison, WI 53708-8911
(608) 224-4622
(608) 224-4500

Introduction

Use this application form to obtain local approval for a new or expanded livestock facility (cattle, swine, poultry, sheep or goats) that will exceed 500 “animal units” (or a lower threshold established by local zoning ordinance prior to July 19, 2003).

Some local governments require local approval, but others do not. Check with your local government (county and town or municipality) to see if local approval is required in your area. In some cases, you may need local approval from more than one local government (for example, the county and the town, or 2 towns if your livestock facility straddles the town line). But the application and approval process should be the same.

The construction of a new or altered *livestock structure* does not, by itself, constitute an “expansion” (unless there will also be an increase in *animal units*). If you already have a permit or local approval, you may not need another approval unless your planned expansion exceeds the number of animals previously authorized by your local government.

Local approval, if required, is governed by statewide uniform standards in Wisconsin Statutes s. 93.90 and Wisconsin Administrative Code chapter *ATCP 51*. This application documents compliance with those standards.

Completing the Application

If local approval is required, complete this entire application form (including the worksheets). Follow the instructions in the application form. Attach all of the supplementary documentation required. Your application must be complete, credible and internally consistent.

The application form and worksheets ask for information to show compliance with Wisconsin livestock facility siting standards. A local government has *very limited* authority to modify the standards by local ordinance (modifications, if any, must be reflected in the local version of this application form).

As part of your application, you must specify the number of *animal units* that you will keep at a new or expanded livestock facility. If the local government approves your requested number, this will be the maximum number that you may keep for 90 days or more in any 12-month period.

A local government may require you to submit up to 4 duplicate copies of the complete application and worksheets. But you are not required to submit duplicate copies of attachments such as maps, photographs, engineering design specifications, incident response plans or employee training plans.

Worksheets

This application includes the following worksheets:

- *Animal units* (worksheet 1)
- Odor management (worksheet 2)
- Waste and nutrient management (worksheet 3)
- Waste storage facilities (worksheet 4)
- Runoff management (worksheet 5)

Complete the worksheets following all instructions (including those on each worksheet). You may use a convenient automated spreadsheet in place of Tables A and B of *worksheet 2* if you prefer (results are identical). The spreadsheet is available at www.datcp.state.wi.us.

If the Wisconsin Department of Natural Resources (*DNR*) has issued a Wisconsin Pollutant Discharge Elimination System (*WPDES*) permit for your proposed livestock facility, you can check a box on worksheets 3, 4 and 5, and submit a copy of that permit with the worksheets. A *WPDES* permit does not affect the requirements for completing worksheets 1 and 2.

Fees

A local government may require a fee to offset its reasonable costs to review and process this application. The fee, if any, must be established by local ordinance and may not exceed \$1,000. A local government may NOT charge any other fee, or require you to post any bond or security.

Local Approval Process

If you complete the application properly, the local government **MUST APPROVE** the proposed livestock facility unless it finds, based on clear and convincing evidence in the local record, that the facility fails to meet the state standards.

Within 45 days after you submit your application, the local government must notify you whether your application is complete. If you failed to complete part of the application, you must submit the missing information. The local government must grant or deny the application within 90 days after it declares the application complete. The local government must make a record of its decision making process, and the evidence supporting its decision. The record must include your application.

Appeal of Local Decision

If you disagree with the local government's decision on your application, you may appeal that decision to the Wisconsin Livestock Facility Siting Review Board ("Board"). Other "aggrieved persons" may also appeal to the Board. An "aggrieved person" includes any person who resides or owns land within 2 miles of your proposed livestock facility.

You must file your appeal within 30 days after the local government issues its decision (or, if you pursue a local administrative appeal process first, within 30 days after that appeal process is complete). The Board will review the local decision based on the evidence in the local record (it will not hold a new hearing or accept new testimony or evidence). You must file your appeal in writing at the following address:

Wisconsin Livestock Facility Siting Review Board
c/o Secretary, Department of Agriculture, Trade and Consumer Protection
P.O. Box 8911
Madison, WI 53708-8911

Terms Used in this Application Form

In this application form, you will see a number of *italicized* terms. Those terms are defined below (for more specific definitions, see *ATCP 51*):

“Affected Neighbors” – Residences or *high-use buildings*, other than those owned by the applicant or by persons who have agreed to exclude them from the applicant’s odor score calculation. The total odor score for a *livestock facility* depends, in part, on the proximity and density of “affected neighbors.”

“Animal housing area” – That portion of an animal housing structure to which animals have access, and in which manure may accumulate. “Animal housing area” includes holding areas, free-stalls and travel lanes. It does NOT include feed alleys, storage areas or milking parlors (other than holding areas).

“Animal lot” -- A feedlot, barnyard or other outdoor facility where livestock are concentrated for feeding or other purposes. Pastures and winter grazing areas are NOT “animal lots.” Treat multiple “animal lots” as a single “animal lot” if runoff from the animal lots drains to the same treatment area or if runoff from the animal lot treatment areas converges or reaches the same surface water within 200 feet of any of those treatment areas.

“Animal units” – Equivalent units of *livestock*. The number of animals constituting an “animal unit” varies by species. For example, one milking dairy cow equals 1.4 “animal units.” A beef animal over 600 lbs. equals 1.0 “animal units.” A pig over 55 lbs. equals 0.4 “animal units.” A laying chicken equals 0.01 “animal unit.” The number of “animal units” kept at a *livestock facility* means the largest number of “animal units” that will be at the *livestock facility* on at least 90 days in any 12-month period. Calculate “animal units” according to Worksheet 1.

“BARNY runoff model” – The Wisconsin version of a model that is commonly used to predict nutrient runoff from *animal lots*. An Excel computer spreadsheet version is available on the DATCP website (engineering directory).

“Certified agricultural engineering practitioner” – A practitioner who is properly qualified under *ATCP 50.46*.

“Cluster” – Any group of one or more *livestock structures* within a *livestock facility*. If you wish to do so, you may calculate separate odor scores for “clusters” that are separated by more than 750 feet.

“DATCP” – Wisconsin Department of Agriculture, Trade and Consumer Protection. The application form cites DATCP rules including Wis. Adm. Code chs. *ATCP 51* (livestock facility siting), *ATCP 50* (soil and water resource management) and *ATCP 17* (livestock premises registration).

“DNR” – Wisconsin Department of Natural Resources. The application form cites DNR rules including Wis. Adm. Code chs. *NR 243* (*WPDES* permits), *NR 811* (community wells) and *NR 812* (private wells)

“Expanded livestock facility” -- The entire *livestock facility* created by an *expansion*, including new, existing and altered *livestock structures* (existing structures are subject to less rigorous standards). Your application must indicate the maximum number of *animal units* that you will keep at the “expanded livestock facility.”

“Expansion” – An increase in the largest number of *animal units* kept at a *livestock facility* on at least 90 days in any 12-month period. The acquisition of an existing livestock facility, by the operator of an adjacent facility, is not an “expansion” unless the operator increases the largest

number of animal units kept at the combined livestock facilities on at least 90 days in any 12-month period.

“High-use building” – A residential building that has at least 6 distinct dwelling units; a restaurant, hotel, motel, or tourist rooming house; a school building; a hospital or licensed care facility; or a business or workplace that is open at least 40 hours a week. The odor score for your *livestock facility* depends, in part, on the proximity and density of neighboring “high-use buildings.”

“Karst features” – Sinkholes, fractured bedrock or like features that may result in direct pollution runoff to groundwater.

“Livestock” – Cattle, swine, poultry, sheep or goats.

“Livestock facility” – A feedlot, dairy farm, or other operation where *livestock* are or will be fed, confined, maintained, or stabled for a total of 45 days or more in any 12-month period. A “livestock facility” includes all of the land parcels on which the facility is located, but it does NOT include a parcel used only for *pasture* or as a *winter grazing area*. Treat multiple “livestock facilities” as a single “livestock facility” if any of the following apply:

- The “livestock facilities” are located on land parcels that touch each other (or are separated only by a stream, road or utility corridor).
- You use some of the same *livestock structures* to collect or store manure from the “livestock facilities.”
- Manure from the “livestock facilities” is applied to the same land.

“Livestock structure” – A building or structure such as a barn, milking parlor, feed storage facility, feeding facility, *animal lot* or *waste storage structure*. *Pastures*, *winter grazing areas* and machine sheds are NOT “livestock structures.”

“Local approval” – A license, permit, special zoning exception, conditional use permit, or other local authorization for a *new* or *expanded livestock facility*. This application form applies, regardless of the form of local approval. However, this application form does NOT cover any of the following permits (for which separate requirements may apply):

- Building, electrical or plumbing permits (if local standards are consistent with state code).
- Manure storage system permits (see *ATCP 50.56*), UNLESS construction is part of a *new* or *expanded livestock facility*.
- Permits required by certain local ordinances related to shoreland zoning, floodplain zoning, construction site erosion control or stormwater management.

“New livestock facility” – A *livestock facility* used for the first time, or for the first time in at least 5 years.

“NRCS” – The Natural Resource Conservation Service of the United States Department of Agriculture. Wisconsin livestock siting standards refer to NRCS Technical Guide standards.

“Pasture” – Land on which livestock graze or otherwise seek feed in a manner that maintains the vegetative cover over all of the grazing or feeding area.

“Premises ID” – The unique ID number assigned to your *livestock facility* under the Wisconsin Livestock Premises Registration Program (*ATCP 17*). Go to www.datcp.state.wi.us for more information. To register your livestock facility, go to <http://www.wiid.org/>.

“Qualified nutrient management planner” -- A person, other than the applicant, who is qualified under *ATCP 50.48*.

“Substantially altered” livestock structure – A *livestock structure* that undergoes a material change in construction or use such as:

- An increase in the capacity of a *waste storage facility*.
- The addition of a liner to a *waste storage facility*
- An increase of more than 20% in the area or capacity of a *livestock structure* used to house, feed, or confine livestock or to store livestock feed.
- An increase of more than 20% in the number of *animal units* that will be kept in a *livestock structure* on at least 90 days in any 12- month period.

“Waste storage structure” – An embankment structure, excavated pit, dugout or fabricated structure that is used to store manure, milking center waste or other organic waste generated by a *livestock facility*. For the purposes of waste storage structure setback (application form, A-2) and worksheet 2, “a waste storage structure” does not include a structure used to collect and store waste under an animal housing facility, or a manure digester consisting of a sealed structure in which manure is subjected to managed biological decomposition.

“Waste storage facility” -- A *waste storage structure* and any attached piping or equipment used to load or unload the structure.

“Winter grazing area” – Cropland or *pasture* where *livestock* feed on dormant vegetation or crop residue, with or without supplementary feed, during the period October 1 to April 30. “Winter grazing area” does *not* include any of the following:

- An area, other than a *pasture*, where *livestock* are kept during the period from May 1 to September 30.
- An area which at any time has an average of more than 4 *animal units* per acre.
- An area from which *livestock* have unrestricted access to navigable waters of the state.
- An area in which manure deposited by livestock causes nutrient levels to exceed standards in *ATCP 51.16*.

“WPDES permit” – Wisconsin Pollutant Discharge Elimination System permit issued by DNR for concentrated animal feeding operation over 1000 *animal units*, or for operations of any size that discharge pollutants directly to waters of the state.


Wisconsin Department of Agriculture, Trade and Consumer Protection

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Phone: (608) 224-4622 or (608) 224-4500

**Application for Local Approval
New or Expanded Livestock Facility**

Wis. Statutes s. 93.90

Wis. Adm. Code ch. ATCP 51

1. Legal Name of Applicant (Business Entity):			
2. Type of Business Entity: check one			
<input type="checkbox"/> Individual	<input type="checkbox"/> Corporation	<input type="checkbox"/> Partnership	<input type="checkbox"/> Cooperative
<input type="checkbox"/> LLC	<input type="checkbox"/> Trust	<input type="checkbox"/> Other	Describe:
3. Other names, if any, under which applicant does business (list all):			
4. Contact Individual:		Name:	
Phone:		E-mail:	
5. Business Address: Street Address:			
City/Village/Town:		County:	State: Zip:
6. Principal Owners or Officers (list if applicant is an entity other than an individual):			
Name:		Title:	Phone:
Address:		City:	State: Zip:
Name:		Title:	Phone:
Address:		City:	State: Zip:
Name:		Title:	Phone:
Address:		City:	State: Zip:
7. Description of Proposed Livestock Facility			
Check one: <input type="checkbox"/> New Livestock Facility <input type="checkbox"/> Expanded Livestock Facility		Premises ID:	
Address of Proposed Livestock Facility:			
City/Village/Town:		County:	State: Zip:
Town #	Range # (E or W)	Section #	¼ Section #

8. Total Animal Units

Enter total *animal units* from **worksheet 1**:

Total Animal Units: _____. This is the maximum *livestock facility* size for which the applicant requests approval at this time.

9. Area Map of Livestock Facility

Attach a scale map or aerial photo of the proposed *livestock facility* and surrounding area. The map or photo must be appropriately sized and marked, so that it clearly and legibly shows all of the following:

- All existing and proposed *livestock structures*. Label each *livestock structure* to show structure type, and whether existing or proposed.
- The area lying within 2 miles of any of the *livestock structures*. Show all existing buildings, property lines, roadways, and navigable waters lying within that area.
- All residences and *high use buildings* within 3,000 ft. of any *livestock structure*. Show which (if any) of those buildings are owned by the applicant, or by persons who have agreed to exclude the buildings from the applicant's odor worksheet calculations.
- Topographic lines at 10 ft. elevation intervals.
- Map scale and north direction indicator.

10. Site Map of Livestock Facility

Attach a scale map or aerial photo of the proposed *livestock facility* site. The map or photo shall be appropriately sized and marked, so that it clearly and legibly shows all of the following:

- All existing and proposed *livestock structures*. Label each *livestock structure* to show structure type, and whether existing or proposed.
- The area lying within 1,000 ft. of any of the *livestock structures*. Show all existing buildings, property lines, roadways, navigable waters, and known *karst features* within that area.
- Topographic lines, at 2 ft. elevation intervals, for the area within 300 feet of the *livestock structures*.
- Map scale and north direction indicator.

11. Location of Livestock Structures

The applicant certifies that:

- All *livestock structures* comply with applicable local property line and road setbacks (see *ATCP 51.12*).
- All *waste storage structures* comply with setbacks in *ATCP 51.12(2)*.
- All *livestock structures* comply with applicable local shoreland, wetland, and floodplain zoning ordinances (copies available from local government).
- Wells comply with the Wisconsin well code (*NR 811* and *812*). *New or substantially altered livestock structures* are separated from existing wells (including neighbors' wells) by setback distances required in *NR 811* and *812*.

12. Employee Training Plan

Attach an Employee Training Plan for employees who will work at the *livestock facility*. You determine plan contents, as long as the plan identifies all of the following:

- Training topics including, at a minimum, nutrient management, odor management, runoff management, manure and waste handling, employee safety, and environmental incident response.
- The number and job categories of employees to be trained.
- The form and frequency of training, which at minimum must include a plan for at least one training per year.
- Training presenters (these may include *livestock facility* managers, consultants or professional educators).
- A system for taking and recording attendance.

13. Environmental Incident Response Plan

Attach an Environmental Incident Response Plan for the *livestock facility*. You determine plan contents, as long as the plan identifies all of the following:

- Types of environmental incidents covered. These must include, at a minimum, overflows and spills from waste storage facilities, catastrophic system failures, manure spills during transport and application, movement of manure during or after application, catastrophic mortality disposal emergency, and odor complaints.
- The name and business telephone number of at least one individual who will handle public questions and concerns related to environmental incidents.
- The names and telephone numbers of first responders (e.g. DNR, fire departments, excavation contractors)
- Incident response procedures, including emergency response, recordkeeping and reporting procedures.

14. Other Laws

The following laws, among others, may apply to the operation of a *livestock facility*. Local approval of a *livestock facility* siting application is NOT based on these laws, except as specifically provided in *ATCP 51*. However, violations may have other legal consequences:

- Soil conservation and nonpoint pollution laws (contact your county land conservation department). Livestock facilities that have 1,000 or more animal units, or that discharge pollutants directly to waters of the state, must also obtain a *WPDES* permit from *DNR*.
- Pesticide and agricultural chemical laws administered by *DATCP*.
- Animal disease control laws administered by *DATCP*.
- Animal mortality laws administered by *DATCP*.
- Vehicle weight limits and state prohibitions against spilling waste on roads.
- Food safety and animal health licenses administered by *DATCP*. All livestock operations must register, and some (such as dairy farms) must hold a state license.
- Air pollution control regulations administered by *DNR*.
- Building, electrical, plumbing and sanitation codes administered by the Wisconsin Department of Commerce. A local authority may disapprove a proposed livestock facility that violates a conforming local code.
- Construction site erosion control laws administered by *DNR*.
- Local erosion control and stormwater management ordinances.
- Petroleum storage laws administered by the Wisconsin Department of Commerce.
- High capacity well regulations administered by *DNR*.

15. Worksheets

Complete worksheets as required (follow instructions on each worksheet) and attach to application.

Worksheet 1 – Animal Units.

Worksheet 2 – Odor Management.

Worksheet 3 – Waste and Nutrient Management. If you hold a *WPDES* permit from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application.

Worksheet 4 – Waste Storage Facilities. If you hold a *WPDES* permit from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application.

Worksheet 5 – Runoff Management. If you hold a *WPDES* permit from *DNR* for the same proposed *livestock facility* (for an equal or greater number of *animal units*), check the appropriate box on this worksheet, and submit a copy of the permit with this application.

Authorized Signature:

I certify that the information contained in this application (including worksheets and all attachments) is complete and accurate to the best of my knowledge.

Signature of Applicant or Authorized Representative

Date

Print Name

Title

For Office Use Only:

Application #

Date Application Received:

Date of Notice Confirming Complete Application:

Decision Date:

Approved or Disapproved:


Wisconsin Department of Agriculture, Trade and Consumer Protection

2811 Agriculture Drive, PO Box 8911, Madison WI 53708-8911

Phone: (608) 224-4622 or (608) 224-4500

Worksheet 1 - Animal Units

Instructions: Use this worksheet to determine the number of *animal units* for which you request approval. You may request approval for a number that is large enough to accommodate current *and potential future* expansions. If the local government approves the requested number of *animal units*, that is the maximum number that you may keep for 90 days or more in any 12-month period. You may not exceed that number without additional approval.

To complete this worksheet:

1. Identify each type of *livestock* that you might keep. Enter the maximum number of animals of each type that you might keep for at least 90 days in any 12-month period.
2. Multiply the number of animals of each type by the relevant Animal Unit Factor to obtain *animal units* of each type.
3. Sum the *animal units* for all *livestock* types to obtain the Total *Animal Units* for which you request approval.

Livestock Type		Animal Unit Factor	Animal Units For Proposed Facility	
<i>Example - Milking & Dry Cows</i>			1.4 x	800 = 1120 AU
Dairy Cattle	Milking and Dry Cows	1.4	1.4 x	=
	Heifers (800 lbs. to 1200 lbs.)	1.1	1.1 x	=
	Heifers (400 lbs. to 800 lbs.)	0.6	0.6 x	=
	Calves (up to 400 lbs.)	0.2	0.2 x	=
Beef	Steers or Cows (600 lbs. to market)	1.0	1.0 x	=
	Calves (under 600 lbs.)	0.5	0.5 x	=
	Bulls (each)	1.4	1.4 x	=
Swine	Pigs (55 lbs. to market)	0.4	0.4 x	=
	Pigs (up to 55 lbs.)	0.1	0.1 x	=
	Sows (each)	0.4	0.4 x	=
	Boars (each)	0.5	0.5 x	=
Poultry	Layers (each)	0.01	0.01 x	=
	Broilers (each)	0.005	0.005 x	=
	Broilers - continuous overflow watering	0.01	0.01 x	=
	Layers or Broilers - liquid manure system	0.033	0.033 x	=
	Ducks - wet lot (each)	0.2	0.2 x	=
	Ducks - dry lot (each)	0.01	0.01 x	=
	Turkeys (each)	0.018	0.018 x	=
Sheep (each)		0.1	0.1 x	=
Goats (each)		0.1	0.1 x	=
Total Animal Units for Which Applicant Requests Approval			=	

Signature of Applicant or Authorized Representative

Date



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Worksheet 2 - Odor Management

Instructions: This worksheet addresses odor from *livestock structures*. You are NOT required to complete this worksheet if any of the following apply (check box if applicable):

- I am requesting approval for a *new livestock facility* with fewer than 500 animal units.
- I am requesting approval for an *expanded livestock facility* with fewer than 1,000 animal units.
- All *livestock structures* will be at least 2500 ft. from the nearest residence or *high-use building* (does not include an *affiliated residence* or *high-use building*).

If you checked any of the above boxes, just sign below and submit this page with your application (do not complete worksheet steps). If you did NOT check any of the above boxes, you must complete this worksheet to calculate the predicted odor (Box 2) and total odor score (Box 3) for your proposed *livestock facility*. To meet odor management standards, you must have a predicted odor of 350 or less, and a total odor score of 500 or more.

If *livestock structures* are located in *clusters* that are separated by more than 750 feet, you may elect to complete a separate worksheet for each *cluster*. If you choose that option, each *cluster* must meet the odor management standard.

A complete worksheet must include Tables A and B. You may use a convenient automated spreadsheet in place of Tables A and B if you prefer (submit spreadsheet output instead of tables, results will be identical). The spreadsheet is available at the DATCP website, www.datcp.state.wi.us.

TO COMPLETE THIS WORKSHEET, FOLLOW THESE STEPS:

Step 1: Complete Table A to determine the Predicted Odor from your *livestock structures*. Be sure to account for the odor management practices you will use. Enter the Predicted Odor in Box 2 below (NOT Box 1).

Step 2: Complete Table B to determine your Separation Score. Enter your Separation Score in Box 1 below (NOT Box 2).

Step 3: Subtract Box 2 from Box 1. Enter the total in Box 3. This is your Total Odor Score.

$$\begin{array}{ccc}
 \boxed{} & - & \boxed{} & = & \boxed{} \\
 \text{Box 1} & & \text{Box 2} & & \text{Box 3} \\
 \text{Separation Score} & & \text{Predicted Odor} & & \text{Total Odor Score} \\
 \text{(from Step 2)} & & \text{(from Step 1)} & &
 \end{array}$$

A local government must approve a *livestock facility* with a predicted odor of 350 or less (Box 2) and an total odor score of 500 or more (Box 3). You may add odor management practices to lower your predicted odor to 350 or less, or increase your total odor score to 500 or more. A local government may approve, but is not required to approve, a *livestock facility* with (i) an odor score less than 500 but not less than 470, or (ii) a predicted odor greater than 350 but not greater than 380.

 Signature of Applicant or Authorized Representative

 Date

TABLE A: Predicted Odor from Livestock Structures

Worksheet 2 (continued)

Instructions: Complete Table A. Enter Col. F Total on page A-6 in Box 2 (NOT Box 1). Enter Column G result on page A-8 in Table B, Step 1.

Animal Housing Areas – List each

Column A Housing/Management Type (Enter relevant 4-letter code from Chart 2)	Column B Odor Generation Number (from Chart 2)	Column C Animal Housing Area Size (sq. ft.) (Express in 10,000's, round up to 2 decimal places) (Example: 15,523 sq. ft. = 1.55)	Column D Odor Management Practice Codes (list all that apply to each housing area, from Chart 3)	Column E Multiplier for Odor Mgmt Practice (list all that apply to each housing area, from Chart 3. Enter "1" if no practices.)	Column F Predicted Odor (multiply columns B, C, and E)	Column G Distance to Nearest Affected Neighbor (in feet)	Column H Weighted Distance (ft.) (multiply columns F and G)
1.							
2.							
3.							
4.							
5.							
6.							
7.							

Waste Storage Facilities – List each

Column A Waste Storage Type (Enter 4-letter type code from Chart 2)	Column B Odor Generation Number (from Chart 2)	Column C Exposed Surface Area (sq. ft.) (in 10,000's) (Ex: 75,575 = 7.56)	Column D Odor Management Practice Codes (list all that apply to each facility from Chart 3)	Column E Multiplier for Odor Mgmt Practice (list all that apply to each facility from Chart 3. Enter "1" if no practices)	Column F Predicted Odor (multiply columns B, C, and E)	Column G Distance to Nearest Affected Neighbor (in feet)	Column H Weighted Distance (ft.) (multiply columns F and G)
1.							
2.							
3.							
4.							

Animal Lots – list each

Column A Animal Lot Type (Enter 4-letter type code from Chart 2)	Column B Odor Generation Number (from Chart 2)	Column C Animal Lot Area (sq. ft.) (in 10,000's) (ex: 7438 = .74)	Column D Odor Management Practice Codes (list all that apply to each facility from Chart 3)	Column E Multiplier for Odor Mgmt Practice (list all that apply to each facility from Chart 3. Enter "1" if no practices.)	Column F Predicted Odor (multiply columns B, C, and E)	Column G Distance to Nearest Affected Neighbor (in feet)	Column H Weighted Distance (ft.) (multiply columns F and G)	
1.								
2.								
3.								
					Column F Total (multiply columns B, C, and E)	Column G Distance to Nearest Affected Neighbor (in feet)	Column H Total (H Total) ÷ (F Total)	Column H Total (multiply columns F and G)

Enter on page A-6, Box 2

Enter on page A-8, Table B, Step 1

Table B: Separation Score

INSTRUCTIONS		RESULTS																		
<p>Step 1: Enter, at right, the result from Table A, column G (page A-7).</p>		<p>Distance (ft.) to Nearest Affected Neighbor:</p> <p>_____</p>																		
<p>Step 2: Select multiplier based on the compass direction looking from the <i>livestock facility</i> to the nearest <i>affected neighbor</i>. Enter at right.</p> <table border="1" data-bbox="121 594 548 1094"> <thead> <tr> <th>Compass Direction</th> <th>Multiplier</th> </tr> </thead> <tbody> <tr><td>North</td><td>1.0</td></tr> <tr><td>Northeast</td><td>1.0</td></tr> <tr><td>East</td><td>1.1</td></tr> <tr><td>Southeast</td><td>1.2</td></tr> <tr><td>South</td><td>1.2</td></tr> <tr><td>Southwest</td><td>1.2</td></tr> <tr><td>West</td><td>1.3</td></tr> <tr><td>Northwest</td><td>1.1</td></tr> </tbody> </table>		Compass Direction	Multiplier	North	1.0	Northeast	1.0	East	1.1	Southeast	1.2	South	1.2	Southwest	1.2	West	1.3	Northwest	1.1	<p>Multiplier:</p> <p>_____</p>
Compass Direction	Multiplier																			
North	1.0																			
Northeast	1.0																			
East	1.1																			
Southeast	1.2																			
South	1.2																			
Southwest	1.2																			
West	1.3																			
Northwest	1.1																			
<p>Step 3: Calculate wind-adjusted separation distance (Distance to nearest <i>affected neighbor</i> x multiplier). Enter at right.</p>		<p>Wind-adjusted Separation Distance (ft.)</p> <p>_____</p>																		
<p>Step 4: Determine <i>affected neighbor</i> density and enter at right:</p> <p><i>Low density</i> = No more than 5 residences and no <i>high-use buildings</i> within 1300 ft of the point used in Step 1</p> <p><i>High density</i> = 6 or more residences or at least one <i>high-use buildings</i> within 1300 ft of the point used in Step 1.</p>		<p>Low or High Density?</p> <p>_____</p>																		
<p>Step 5: Use results above and Chart 1 to find your Separation Score. Enter at right and on Page A-6 in Box 1 (not Box 2).</p>		<p>Separation Score</p>																		

Chart 1: Separation Score

Wind-Adjusted Separation Distance (ft.)	Low Density	High Density
0-99	585	583
100-149	586	584
150-199	591	587
200-249	596	590
250-299	601	594
300-349	607	598
350-399	614	603
400-449	621	608
450-499	628	613
500-599	640	622
600-699	657	635
700-799	675	649
800-899	695	665
900-999	716	681
1000-1099	738	699
1100-1199	761	717
1200-1299	785	737
1300-1399	810	
1400-1499	836	
1500-1599	863	
1600-1699	890	
1700-1799	919	
1800-1899	948	
1900-1999	979	
2000-2099	1010	
2100-2199	1042	
2200-2299	1074	
2300-2399	1107	
2400-2499	1141	
2500-2749	1203	
2750-2999	1294	
3000-3249	1389	

Chart 2: Odor Generation Numbers

Animal Housing Area Type	Housing/ Management Type Code	Manure Management Method	Odor Generation Number
Dairy Stanchion	DSDH	Daily to weekly haul	2
Dairy Free Stall and Beef & Dairy Heifers (Forage Ration)	DBSS	Slatted floor (includes floor surface and pit below)	6
	DBSH	Scrape to storage, or daily to weekly haul	4
	DBAF	Alley flush to storage	10
	DBBP	Bedded pack	2
Beef Finishing (High Energy Ration)	BFSF	Slatted floor (includes floor surface and pit below)	12
	BFSH	Scrape to storage, or daily to weekly haul	8
	BFBP	Bedded pack	4
Pork Gestation/ Farrow/ Nursery	PGSF	Slatted floor (includes floor surface and pit below)	46
	PGPP	Pull plug to storage	22
Pork Finishing	PFSF	Slatted floor (includes floor surface and pit below)	34
	PFPP	Pull plug to storage	20
	PFSS	Scrape systems to storage	11
	PFDB	Deep bedded	4
Poultry	PBLT	Broiler (litter)	1
	PDLQ	Ducks (liquid)	20
	PLAY	Layers	20
	PTDL	Turkey and Ducks (litter)	2

Type Codes	Waste Storage Facility Types <i>Note: Storage under slatted floor is addressed under animal housing.</i>	Odor Generation Number
WSSS	Solid (stack)	2
WSLT	Long term (6 months or longer as determined in Column E of worksheet 3)	13
WSST	Short term (less than 6 months as determined in Column E of worksheet 3)	28

Animal Lot Codes	Animal Lot Types	Odor Generation Number
ALPV	Paved	4
UPDB	Unpaved	Dairy/Beef/Sheep/Goats
UPSW		Swine/Poultry

Chart 3: Odor Management Practices

Category	Practice Code	Practice Name (Practices must meet specifications on pages A-11 to A-13)	Multiplier*
Animal Housing Area			
A	A1	Diet manipulation	0.8
B (Choose only 1)	B1	Bio-filter	0.1
	B2	Vegetable oil sprinkling (for swine only)	0.4
	B3	Fresh water flush	0.4
	B4	Treated water flush	0.7
C	C1	Windbreak	0.9
D	D1	Frequent cleaning of animal housing area	0.9
Waste Storage Facilities			
E (Choose only 1)	E1	Anaerobic digestion	0.2
	E2	Chemical or biological additives	0.8
	E3	Compost	0.2
	E4	Dilution	0.6
F (Choose only 1)	F1	Aeration	0.3
	F2	Bio cover	0.4
	F3	Geotextile cover	0.5
	F4	Impermeable cover	0.1
	F5	Natural crust	0.3
	F6	Bottom fill	0.9
G	G1	Windbreak	0.9
Animal Lots			
H (Choose only 1)	H1	Frequent cleaning of animal lot	0.4
	H2	Drag animal lot	0.5
I	I1	Animal lot moisture control	0.8
J	J1	Windbreak	0.9

*Smaller multiplier = more odor controlled (e.g. a multiplier of 0.4 represents a 60% control).

Innovative Odor Management Practices (all odor sources):

You may take credit for odor management practices not listed in Chart 3 if *DATCP* pre-approves a multiplier for each of those practices. Follow the procedure in *ATCP 51.14(5)(c)* to obtain *DATCP* approval. If you obtain *DATCP* approval, you may include the approved practice and multiplier in odor worksheet calculations, in the same manner as for odor management practices listed in Chart 3 (attach *DATCP* approval to your application).

Odor Management Practice Specifications

Odor management practices identified in Chart 3 must meet the following specifications:

Animal Housing

Diet manipulation (A1) – Limit protein in animal diet by one of the following means:

- Match nutrient supply with animal requirements.
- Formulate low-protein amino acid supplemented diets.
- Add phytase enzyme ingredients.
- Process ingredients in ways that limit protein content of processed feed.
- Use phase feeding.
- Use split sex feeding.
- Minimize feed wastage.

Bio-filter (B1) – Vent air from *animal housing areas* through a bio-filter consisting of compost and wood chips, mixed at a rate of 30:70 to 50:50 (ratio by weight of compost to wood chips). The mixture must be at least 40% moisture by weight. The bio-filter must be 10" to 18" thick, and must have an area of at least 50 to 85 sq. ft. per 1000 cu. ft. per minute (cfm) of airflow.

Vegetable oil sprinkling (B2) – Sprinkle vegetable oil on floors in *animal housing areas* (swine) each day. Apply oil at start-up rate of approximately 40 milliliters per square meter per day (mL/m²-day) in the first 1-2 days of each production cycle. During the remainder of each production cycle, apply oil at maintenance rate of 5 mL/m²-day. Avoid oil applications to pens near fans, to areas near heaters, and to areas surrounding feeders.

Fresh water flush (B3) – Use fresh water to flush manure from floors of *animal housing areas* into collection or *waste storage structures*. Flush at least 3 times a day, and more often if necessary, to prevent manure from drying and sticking to floors. Flush must be adequate to remove manure solids effectively.

Treated water flush (B4) – Use treated manure effluent to flush manure from floors of *animal housing areas* into collection or *waste storage structures*. Flush at least 3 times a day, and more often if necessary, to prevent manure from drying and sticking to floors. Flush with waste storage effluent treated by one of the following means:

- *Dilution* (see E4 below).
- *Aeration* (see F1 below).
- *Anaerobic digestion* (see E1 below).

Windbreak (C1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the animal housing. A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow-growing species, that are well suited for the site. Windbreaks must be designed and constructed according to NRCS Technical Guide Standard 380 (June 2002).

Frequent cleaning of animal housing area (D1) – Scrape and remove manure from *animal housing areas* at least 3 times a day.

Waste Storage Facilities

Anaerobic digestion (E1) – Subject manure to managed biological decomposition within a sealed oxygen-free container ("digester"). Anaerobic digestion must meet design and operational standards necessary to achieve adequate odor control, including requirements for solids concentration, flow rates, retention time, and minimum temperatures. Systems must meet the following:

Worksheet 2 (continued)

- *Plug flow digester.* Treats manure with a total solids concentration of 8 to 14%. Must be kept in the digester for at least 20 days at a temperature of 95° to 104° F. (35° to 40° degrees C). The digester's ratio of flow path width to fluid depth must be between 3.5:1 and 5:1.
- *Complete mix digester.* Treats manure with a total solids concentration of 2.5 to 10%. Must be kept in the digester for at least 17 days at a temperature of 95° to 104° F. (35° to 40° degrees C.). The digester must have appropriated mixing devices to ensure complete mixing.
- *Fixed film digester.* Treats manure with a total solids concentration of not more than 5%. Must be kept in the digester for 1 to 6 days at a temperature of 59° to 99° F (15° to 39° C). Microbial support material must have at least 3-inch openings.
- *Other systems.* Use proprietary design and performance specifications that are commonly accepted and provide adequate odor mitigation.

Chemical or biological additives (E2) – Apply, to stored manure, chemical or biological additives that are scientifically proven to be effective in reducing odor from that manure when applied under applicable conditions and in applicable amounts.

Compost (E3) – Aerobically treat solid or semi-solid manure to create compost. Compost must have a carbon:nitrogen ratio of 25:1 to 40:1, and must consist of at least 40 to 60% moisture by weight. Composted material must be held at a temperature of more than 130° F. (54° C.) for more than 5 days.

Dilution (E4) – Reduce the solid content of stored manure to an average of less than 2% solids through separation, multi-tiered pits or other means.

Aeration (F1) – Use aeration equipment to maintain aerobic activity in stored manure. Aeration must maintain an average of 2 milligrams of dissolved oxygen per liter of manure stored in the upper foot of manure stored in the aerated structure between April and October.

Bio-cover (F2) – Cover the surface of waste storage structure with an 8” to 12” thick blanket of dry wheat, barley or good quality straw. The blanket must cover nearly all of the waste surface between the months of April and October. Add to the blanket as necessary (typically every 6 weeks to 4 months) to maintain the required cover.

Geotextile cover (F3) – Cover the surface of waste storage structure with a geotextile membrane that is at least 2.4 mm thick. The membrane must cover nearly all of waste surface between the months of April and October.

Impermeable cover (F4) – Cover the surface of waste storage structure with an impermeable barrier that prevents gas from escaping. Gas must be drawn off, and either treated or burned.

Natural crust (F5) – Maintain a natural crust of dry manure on the surface of stored manure. The natural crust must cover a substantial amount of the surface area of the stored manure, for most of the time between the months of April and October.

Bottom fill (F6) – Add manure to a liquid *manure storage structure* from the bottom so as to not disturb the surface of the stored manure.

Windbreak (G1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the waste *storage facility*. A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow-growing species, that are well suited for the site. Windbreaks must be designed and constructed according to *NRCS Technical Guide Standard 380* (June 2002).

Animal Lots

Frequent cleaning of animal lots (H1) – Scrape and remove manure from *animal lot* surfaces at least once every 3 days. You may leave an undisturbed, compacted manure layer (1 to 2 inches thick) on the surface of unpaved *animal lots* to provide good surface sealing.

Drag animal lots (H2) – Drag manure in *animal lots* with harrow or disk at least once every 7 days during the months period of April through October, to aerate and dry the manure.

Animal lot moisture control (I1) – Prevent runoff water from flowing onto *animal lots* from roofs and other surfaces. Use diversions or roof runoff systems identified in *ATCP 50.70* or *ATCP 50.85*. *Animal lots* must have a grade of at least one percent to promote drainage and drying.

Windbreak (J1) – Maintain a solid or porous windbreak, 10 to 50 feet from the odor source, which reduces forward momentum of airflow and vertically disperses the odor plume. The length of a windbreak shall be at least half of the perimeter of the *animal lot*. A windbreak may be constructed of vegetation or other materials. Vegetation windbreaks must contain at least 3 rows of trees and shrubs, of both fast and slow-growing species, that are well suited for the site. Windbreaks must be designed and constructed according to *NRCS Technical Guide Standard 380* (June 2002).



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Worksheet 3 - Waste and Nutrient Management

Part A. Waste Generation and Storage Summary

Instructions: You must complete Parts A and B of this worksheet. If your *livestock facility* will have fewer than 500 *animal units* you may be exempt from Part C, depending on results of Part B. If Part C applies, it must be signed by a *qualified nutrient management planner* (you must also sign).

You are NOT required to complete this worksheet if you already hold a *WPDES* permit for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES* permit with your application.

I enclose a copy of my *WPDES* permit in place of Worksheet 3.

Specify a single livestock type (dairy, beef, swine, etc.). *Use a separate worksheet for each livestock type.*

Livestock Type: _____

Description of Storage	Column A Waste Storage Capacity (Gallons or Tons)	Column B Source of Waste (Animal Waste, Wastewater, Leachate, etc)	Column C Average Annual Volume of Waste Produced from Each Source (Gallons or Tons)	Column D Total Average Annual Volume Waste Produced (Gallons or Tons)	Column E Storage Duration in Days (Column A divided by Column D times 365 days)
Example: Unit 1 - lagoon	5,000,000 gallons	Animal waste	4,000,000 gallons	7,000,000 gallons	260 days
		Wastewater	1,000,000 gallons		
		Leachate	2,000,000 gallons		
Unit 1					
Unit 2					
Unit 3					

Applicant affirms that the information provided in Part A is accurate.

 Signature of Applicant or Authorized Representative

 Date

Part B – Land Base for Applying Nutrients

1. Enter total *animal units* in proposed *livestock facility* (from worksheet 1): _____.

2. What percentage of the waste from the *livestock facility* will be:
 a. Applied to land: _____%. Attach map showing where waste will be applied to land.
 b. Processed and sold as commercial fertilizer, under a fertilizer license: _____%.
 c. Disposed of in other ways: _____%. Describe ways: _____.

3. Multiply the percent in line 2a by the number of *animal units* in line 1. Result (# of *animal units*): _____.

4. Acres of cropland currently available for land application (owned, rented, or landspreading agreement): _____.

5. Divide # of acres in line 4 by # of *animal units* in line 3 to obtain ratio of acres to *animal units*: _____.

6. Is the ratio in line 5 equal to or greater than the applicable ratio in Table 1? _____.

If YES, and if the # of *animal units* in line 1 is less than 500, you need NOT complete Part C. Otherwise, complete Part C.

Table 1: Acreage per Animal Unit

Animal Type	Acres per Animal Unit
Dairy	1.5
Beef	1.5
Swine	1.0
Chickens/Ducks	2.5
Turkeys	5.5
Sheep/Goats	2.0

* NOTE: A *livestock facility* is NOT required to attain or exceed this ratio of acres to *animal units*. But IF your *livestock facility* will attain or exceed this ratio and will have fewer than 500 *animal units*, you need NOT complete Part C of this worksheet.

Applicant affirms that the information provided in Part B is accurate.

 Signature of Applicant or Authorized Representative

 Date

Part C – Nutrient Management Checklist

Instructions: All applicants must submit this checklist unless exempted under Part A or B.
The checklist is based on *NRCS Technical Guide Nutrient Management Standard 590* (September 2005)

County Name:	Date Submitted:	Township (T. _____ N., S.) – (R. _____ E., W.)	
Cropland Acres: (owned, rented, or with manure spreading agreement)		Name of livestock operator submitting checklist:	
		Yes	NA
1. Are the following field features identified on maps or aerial photos? .			
a) Field location, soil survey map unit(s), field boundary, and field identification number			
b) Areas prohibited from receiving nutrient applications: Surface water, established concentrated flow channels with perennial cover, permanent non-harvested vegetative buffer, non-farmed wetlands, sinkholes, lands where established vegetation is not removed, nonmetallic mines, and fields eroding at a rate exceeding tolerable soil loss (T)			
c) Areas within 50 feet of a potable drinking water well where mechanically-applied manure is prohibited.			
d) Areas prohibited from receiving winter nutrient applications: Slopes > 9% (12% if contour-cropped); Surface Water Quality Management Area (SWQMA) defined as land within 1,000 ft of lakes and ponds or within 300 ft of perennial streams draining to these waters, unless manure is deposited through winter gleaning/pasturing of plant residue and not exceeding the N and P requirements of this standard			
e) Areas where winter applications are restricted unless effectively incorporated within 72 hours: Land contributing runoff within 200 feet upslope of direct conduits to groundwater such as a well, sinkhole, fractured bedrock at the surface, tile inlet, or nonmetallic mine			
f) Sites vulnerable to N leaching: Areas within 1,000 feet of a municipal well, and soils listed in Appendix 1 of the Conservation Planning Technical Note WI-1			
2. Are erosion controls implemented so the crop rotation will not exceed T on fields that receive nutrients according to the conservation plan or WI P Index model?			
3. Check the methods below used to determine field soil nutrient levels:			
a) Soil samples were collected and analyzed within the last 4 years according to UW Publication A2100 recommendations			
b) For fields not meeting (a.) above, soil test phosphorus levels are assumed to be greater than 100 ppm soil test P. *			
c) For fields not meeting (a.) above, preliminary estimates of soil nutrients were determined using limited soil sampling (> 5 acre per sample) but analyzed by a DATCP certified laboratory. *			
*For fields with soil nutrient levels determined under (b) or (c), the applicant must collect and analyze soil samples meeting the requirements of A2100 within 12 months of siting approval, and revise the nutrient management plan accordingly.			
4. Using the field's predominant soil series and realistic yield goals, are planned nutrient application rates, timing, and methods of all forms of N, P, and K listed in the plan and consistent with UW Publication A 2809, <i>Soil Test Recommendations for Field, Vegetable and Fruit Crops</i>, and the 590 standard?			
5. Do manure production and collection estimates correspond to the acreage needed in the plan? Are manure application rates realistic for the calibrated equipment used?			
6. Is a single phosphorus (P) assessment of either the P Index or soil test P management strategy uniformly applied to all fields within a tract?			
7. Are areas of concentrated flow, resulting in reoccurring gullies, planned to be protected with perennial vegetative cover?			
8. Will nutrient applications on non-frozen soil within the SWQMA comply with the following?			
a) Unincorporated liquid manure on unsaturated soils will be applied according to Table 1 of the 590 standard to minimize runoff			
b) One or more of the following practices will be used: 1) Install/maintain permanent vegetative buffers, or 2) Maintain greater than 30% crop residue or vegetative coverage on the surface after nutrient application, or 3) Incorporate nutrients leaving adequate residue to meet tolerable soil loss, or 4) Establish fall cover crops promptly following application			
9. Is a narrative included which describes proposed manure collection, transportation, and application methods?			

I certify that the documentation supporting this checklist is complete and accurate:

Signature of *Qualified Nutrient Management Planner*, other than applicant: _____
(qualified by 1. NAICC-CPCC, 2. ASA-CCA, 3. ASA-Professional Agronomist, 4. SSSA-Soil Scientist)

Signature of Applicant or Authorized Representative: _____



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Worksheet 4 - Waste Storage Facilities

Instructions: This worksheet must be signed by a registered professional engineer or *certified agricultural engineering practitioner*. This worksheet must identify every *waste storage facility* in the proposed *livestock facility* (including storage structures and transfer systems).

You are NOT required to complete this worksheet if you already hold a *WPDES* permit for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES* permit with your application.

I enclose a copy of my *WPDES* permit in place of Worksheet 4.

New or Substantially Altered Facilities: Design specifications for the following *new* or *substantially altered waste storage facilities* comply with *NRCS* Technical Guide Standards 313 (November 2004) and 634 (November 2004). [Identify each facility and attach design specifications for each facility.]

Existing Facilities Retained: The following *waste storage facilities* will continue in use without being *substantially altered*. Each facility meets one of the following:

The facility (list each facility _____) was constructed of concrete or steel or both, was constructed within the last 10 years according to then-existing *NRCS* technical standards, and shows no apparent signs of structural failure or significant leakage.

The facility (list each facility _____) was constructed within the last 3 years according to then-existing *NRCS* technical standards, and shows no apparent signs of structural failure or significant leakage.

The facility (list each facility _____) was constructed to *NRCS* technical standards that existed at the time of construction, is in good condition and repair and shows no apparent signs of structural failure or significant leakage.

The facility (list each facility _____) is in good condition and repair, shows no apparent signs of structural failure or significant leakage, and is located on a site at which the soils and separation distances to groundwater comply with *NRCS* technical guide manure storage facility standard 313, table 1 (November, 2004).

The facility (list each facility _____) is in good condition and repair, shows no apparent signs of structural failure or significant leakage, is located entirely above ground, and is located on a site at which the soils comply with *NRCS* Technical Guide Manure Storage Facility Standard 313, Table 5 (November, 2004).

Facilities To Be Abandoned: The following *waste storage facilities* will be closed according to a closure plan that complies with *NRCS* Technical Guide Standard 360 (June 2001). [Attach closure plan for each facility.]

Total Storage Capacity: The *waste storage facilities* in the proposed *livestock facility* have a combined useable storage capacity of _____ gallons or tons (cannot include required "freeboard" in useable capacity).

Professional Engineer's
Embossed Seal

Print Name of Engineer (include WI License No.) or *Certified Agricultural Engineering Practitioner*

Signature of Engineer or Practitioner

Date

Name of Firm and Address



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Worksheet 5 - Runoff Management

Instructions: This worksheet must be signed by a registered professional engineer or *certified agricultural engineering practitioner* (you must also sign). Signers attest to statements in this worksheet. You are responsible for compliance.

You are NOT required to complete this worksheet if you already hold a *WPDES* permit for the proposed *livestock facility* (for the same or greater number of *animal units*). Simply check the following box, sign at the bottom of this page, and include a copy of the *WPDES* permit with your application.

I enclose a copy of my *WPDES* permit in place of Worksheet 5.

Animal Lots¹

1. New or Substantially Altered Animal Lots: All new or substantially altered animal lots will be constructed according to the attached design specifications that comply with *NRCS* Technical Guide Standard 635 (January, 2002). [Identify animal lots and attach design specifications for each *animal lot*.]

2. Existing Animal Lots Near Surface Waters: The following *animal lots* are located within 300 feet of a stream² or 1,000 feet of a lake. According to the *BARNY runoff model*, each of these *animal lots* has (or with minor alterations³ will have) predicted average annual phosphorus runoff of less than 5 lbs. per year (measured at the end of the treatment area). Runoff does not discharge to any direct conduit to groundwater. [Identify *animal lots* and minor alterations if any.]

3. Other Existing Animal Lots: The following *animal lots* are NOT located within 300 feet of a stream² or 1,000 feet of a lake. According to the *BARNY runoff model*, each *animal lot* has (or with minor alterations³ will have), a treatment area that reduces phosphorus runoff to an average of less than 15 lbs. per year (measured at the end of the treatment area). Runoff does not discharge to any direct conduit to groundwater. [Identify *animal lots* and minor alterations if any.]

Feed Storage

1. General. The operator agrees to manage feed storage to prevent significant discharge of leachate or polluted runoff to waters of the state.

2. Existing Feed Storage (High Moisture Feed). Existing paved areas and bunkers that may be used to store or handle high moisture feed (70% or higher moisture content) will meet the following standards:

- a) Surface water runoff will be diverted from entering the paved area or bunker.⁴
- b) Surface discharge of leachate will be collected before it leaves any paved area or bunker, if the paved area covers more than one acre. Collected leachate will be stored and disposed of in a manner that prevents discharge to waters of the state.⁵

¹ Treat multiple lots as one animal lot if runoff from the animal lots drains to the same treatment area or if runoff from the animal lot treatment areas converges or reaches the same surface water within 200 feet of any of those treatment areas.

² Indicated by a solid or dashed blue line on a 1:24,000 scale USGS topographic map.

³ "Minor alterations" are repairs or improvements that do not result in a *substantially altered animal lot*. "Minor alterations" may include conservation practices such as runoff diversions, contouring, and planting vegetation.

⁴ Runoff may be diverted by means of earthen diversions, curbs, walls, gutters, waterways or other practices, as appropriate.

⁵ Use safe methods to dispose of collected leachate. For example, leachate may be transferred to *waste storage structures* and then applied to land at agronomic rates.

- 3. New or Substantially Altered Feed Storage Structures (High Moisture Feed):** *New or substantially altered* feed storage structures (buildings, silos, bunkers or paved areas) used to store or handle high moisture feed (6570% or higher moisture content) will be designed, constructed and maintained to the following standards [attach design
- a) Surface water runoff will be diverted from entering the feed storage structure.¹
 - b) Surface discharge of leachate will be collected before it leaves the feed storage structure.²
 - c) The top of the feed storage structure floor will be at least 3 vertical feet from groundwater and bedrock.³
 - d) Any feed storage structure with an area greater than 10,000 sq. ft. will have a subsurface drainage system to collect leachate that may leak through the structure floor. The subsurface drainage system must consist of drainfill material below the surface material, a tile drainage network designed to collect the leachate and deliver it to storage, and a subliner. The tile drainage network must, at a minimum, be installed at the perimeter of the structure only on the downgradient side(s). The sub-liner must, at a minimum, consist of one of the following:
 - Two feet of soil, either in place or installed, having a minimum of 50% fine soil particles (that pass a #200 soil sieve).
 - Two feet of soil, either in place or installed, having a minimum of 30% fine soil particles (that pass a #200 soil sieve) and a minimum PI (plasticity index) of 7.
 - A 40 mil liner of HDPE, EPDM or PVC.
 - A geosynthetic clay liner.
 - e) Collected leachate will be stored and disposed of in a manner that prevents discharge to waters of the state.²

Nonpoint Pollution Standards

The livestock facility will be designed, constructed and maintained to do all of the following:

- 1. Divert runoff from contact with *animal lots, waste storage facilities*, paved feed storage areas or manure piles within 300 ft. of a stream or 1,000 ft. of a lake.
- 2. Avoid having any unconfined manure pile within 300 ft. of a stream or 1,000 ft. of a lake.
- 3. Prevent any overflow of *waste storage facilities*.
- 4. Restrict livestock access to waters of the state, as necessary to maintain adequate vegetative cover on banks adjoining the water (this does not apply to properly designed, installed and maintained livestock or farm equipment crossings).

Signature of Applicant or Authorized Representative

Date

Professional Engineer's
Embossed Seal

Print Name of Engineer (include WI License No.) or Certified Practitioner

Signature of Engineer or Practitioner

Date

Name of Firm and Address

¹ Runoff may be diverted by means of earthen diversions, curbs, walls, gutters, waterways or other practices, as appropriate.
² Use safe methods to dispose of collected leachate. For example, leachate may be transferred to waste storage and then applied to land at agronomic rates.
³ A tile system or curtain drain may be used to intercept lateral groundwater seepage, as necessary, to achieve the required distance to groundwater.