

**Chapter ATCP 51**  
**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) 224-4630  
[livestocksiting@wisconsin.gov](mailto:livestocksiting@wisconsin.gov)

## 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.

### **The Livestock Facility**

A livestock facility includes livestock, livestock structures, the land on which they are located (it does not include pastures or winter grazing areas). *Related livestock facilities* (see definition below) are treated as a single livestock facility, for purposes of local approval. However:

- A *separate species facility* (see definition below) may be treated as a separate livestock facility, even if it is owned by the same person and located on the same land parcel as another livestock facility.
- A mere acquisition of a neighboring livestock facility does not constitute an *expansion* unless more *animal units* are added to the combined facilities.

### **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, worksheets, maps and other attachments. But you are not required to submit duplicate copies of engineering design specifications.

### **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 <http://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, and issue its decision in writing. The approval must include a duplicate copy of the approved application, marked "approved." The duplicate copy shall include all the worksheets, maps, and other attachments included in the application, with the exception of the engineering design specifications. 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*):

**"Adjacent"** – Located on land parcels that touch each other, or on land parcels that are separated only by a river, stream, or transportation or utility right-of-way.

**"Affected Neighbors"** – Residences or *high-use buildings* within 2500 feet of any livestock structure at the proposed facility, 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 free-stalls and travel lanes. It does NOT include holding areas, feed alleys, storage areas or milking parlors.

**"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.

**“Complete application for local approval”** – An application that contains everything required under ss. [ATCP 51.30\(1\)](#) to (4).

**“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 non-farm 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 tax parcels on which the facility is located, but it does NOT include a parcel used only for *pasture* or as a *winter grazing area*. *Related livestock facilities* are considered a single “livestock facility,” except a livestock operator may elect to treat a *separate species facilities* as a separate livestock facility.

**“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 <http://www.datcp.state.wi.us> for more information. To register your *livestock facility*, go to <http://www.wiuid.org/>.

**“Qualified nutrient management planner”** – A person, other than the applicant, who is qualified under [ATCP 50.48](#).

**“Related livestock facilities”** – Two or more *livestock facilities* that are owned or managed by the same person and meet any of the following criteria:

- They are located on the same tax parcel or *adjacent* tax parcels.
- They use any of the same *livestock structures* to collect or store manure.
- They generate manure that is applied to the same parcel of land.

**“Separate Species Facility”** – A distinct part of a *livestock facility* that meets all of the following criteria:

- It has only one of the following types of livestock, and that type is not found in any other part of the *livestock facility*:
  - Cattle
  - Swine
  - Poultry
  - Sheep
  - Goats
- It has no more than 500 *animal units*.
- Its animal housing and manure storage structures, if any, are located at least 750 feet from *livestock structures* that are used by other parts of the *livestock facility*.

**“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 a concentrated animal feeding operation over 1000 *animal units*, or for operations of any size that discharge pollutants directly to waters of the state.

arm-lwr- 11/04 January, 2006				
 <b>Wisconsin Department of Agriculture, Trade and Consumer Protection</b> 2811 Agriculture Drive, PO Box 8911, Madison WI 53708-8911 Phone: (608) 224-4630 or livestocksting@wisconsin.gov				
<b>Application for Local Approval</b>			Wis. Statutes s. 93.90	
<b><i>New or Expanded Livestock Facility</i></b>			Wis. Adm. Code ch. ATCP 51	
<b>1. Legal Name of Applicant (Business Entity):</b>				
<b>2. Type of Business Entity:</b> 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:		
<b>3. Other names, if any, under which applicant does business (list all):</b>				
<b>4. Contact Individual:</b>		Name:		
Phone:		E-mail:		
<b>5. Business Address:</b> Street Address:				
City/Village/Town:		County:	State:	Zip:
<b>6. Principal Owners or Officers (list if applicant is an entity other than an individual):</b>				
Name:		Title:	Phone:	
Address:		City:	State:	Zip:
Name:		Title:	Phone:	
Address:		City:	State:	Zip:
Name:		Title:	Phone:	
Address:		City:	State:	Zip:
<b>7. Description of Proposed Livestock Facility</b>				
Check one: <input type="checkbox"/> <i>New Livestock Facility</i> <input type="checkbox"/> <i>Expanded Livestock Facility</i>			Premises ID:	
Address of Proposed Livestock Facility:				
City/Village/Town:		County:	State:	Zip:
Town #	Range # (E or W)	Section #	¼ Section #	

Application (continued)
<p><b>8. Total Animal Units</b></p> <p>Enter total <i>animal units</i> from <b>worksheet 1</b>:</p> <p><b>Total Animal Units:</b> _____. This is the maximum <i>livestock facility</i> size for which the applicant requests approval at this time.</p>
<p><b>9. Area Map of Livestock Facility</b></p> <p>Attach a scale map or aerial photo of the proposed <i>livestock facility</i> and surrounding area. The map or photo must be appropriately sized and marked, so that it clearly and legibly shows all of the following:</p> <ul style="list-style-type: none"> <li>• All existing and proposed <i>livestock structures</i>. Label each <i>livestock structure</i> to show structure type, and whether existing or proposed.</li> <li>• The area lying within 2 miles of any of the <i>livestock structures</i>. Show all existing buildings, property lines, roadways, and navigable waters lying within that area.</li> <li>• All residences and <i>high use buildings</i> within 2500 ft. of any <i>livestock structure</i>. 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.</li> <li>• Topographic lines at 10 ft. elevation intervals.</li> <li>• Map scale and north direction indicator.</li> </ul>
<p><b>10. Site Map of Livestock Facility</b></p> <p>Attach a scale map or aerial photo of the proposed <i>livestock facility</i> site. The map or photo shall be appropriately sized and marked, so that it clearly and legibly shows all of the following:</p> <ul style="list-style-type: none"> <li>• All existing and proposed <i>livestock structures</i>. Label each <i>livestock structure</i> to show structure type, and whether existing or proposed.</li> <li>• The area lying within 1,000 ft. of any of the <i>livestock structures</i>. Show all existing buildings, property lines, roadways, navigable waters, and known <i>karst features</i> within that area.</li> <li>• Topographic lines, at 2 ft. elevation intervals, for the area within 300 feet of the <i>livestock structures</i>.</li> <li>• Map scale and north direction indicator.</li> </ul>
<p><b>11. Location of Livestock Structures</b></p> <p>The applicant certifies that:</p> <ul style="list-style-type: none"> <li>• All <i>livestock structures</i> comply with applicable local property line and road setbacks (see <i>ATCP 51.12</i>).</li> <li>• All <i>waste storage structures</i> comply with setbacks in <i>ATCP 51.12(2)</i>.</li> <li>• All <i>livestock structures</i> comply with applicable local shoreland, wetland, and floodplain zoning ordinances (copies available from local government).</li> <li>• Wells comply with the Wisconsin well code (<i>NR 811</i> and <i>812</i>). <i>New or substantially altered livestock structures</i> are separated from existing wells (including neighbors' wells) by setback distances required in <i>NR 811</i> and <i>812</i>.</li> </ul>

**Application (continued)****12. Employee Training Plan**

Attach an Employee Training Plan for employees who will work at the *livestock facility*. Applicant determines 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 a 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*. Applicant determines plans 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. Odor Management Plan (Optional)**

An applicant required to complete the odor management worksheet may attach an *optional* odor management plan. The applicant determines plan contents, as long as the plan addresses all of the following: activities to reduce community conflict; practices used to reduce dust; practices used to reduce odor from feed storage leachate; practices used to conserve water; and practices used to reduce odor from dead animals.



## Application (continued)

**15. 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 Safety and Professional Services. 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 Safety and Professional Services.
- High capacity well regulations administered by *DNR*.

**16. 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.

<b>Application (continued)</b>	
<b>Authorized Signature:</b>	
<i>I certify that the information contained in this application (including worksheets and all attachments) is complete and accurate to the best of my knowledge.</i>	
_____ Signature of Applicant or Authorized Representative	_____ Date
_____ Print Name	_____ Title
<b>For Office Use Only:</b>	
<b>Application #:</b>	
<b>Date Application Received:</b>	
<b>Date Completeness Determined:</b>	<b>Date Notice Sent to Applicant:</b>
<b>Date Notice Sent to Adjacent Landowners:</b>	
<b>Decision Date:</b>	
<b>Approved or Disapproved:</b>	
<b>Date Appeal Filed (if any):</b>	

arm-lwr- 11/04 January 2006



**Wisconsin Department of Agriculture, Trade and Consumer Protection**  
 2811 Agriculture Drive, PO Box 8911, Madison WI 53708-8911  
 Phone: (608) 224-4630 or livestock@wisconsin.gov

### 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 at the proposed facility. 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.

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

Signature of Applicant or Authorized Representative

Date

Arm-lwr- 11/04 January 2006



**Wisconsin Department of Agriculture, Trade and Consumer Protection**  
 2811 Agriculture Drive, PO Box 8911, Madison WI 53708-8911  
 Phone: (608) 224-4630 or [livestocksiting@wisconsin.gov](mailto:livestocksiting@wisconsin.gov)

**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 affected neighbor.

If you checked any of the above boxes, just sign below and submit this page with your application. If you did NOT check any of the above boxes, you must complete this worksheet to calculate the odor score (Box 4) for your proposed *livestock facility*. To meet the odor management standard, you must have 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). However, you must still sign and submit this signature page. The spreadsheet is available at the *DATCP* website, <http://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*. Enter the Predicted Odor in Box 3 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: Enter your management credits in Box 2 (maximum 100 points).** All applicants may enter 80 points for completing required incident response and employee training plans (described on page A-3). Applicants completing an optional odor management plan (described on page A-3), may add an additional 20 points. Applicants determine plan contents, as long as the plan addresses the required topics.

**Step 4: Add Box 1 and Box 2. Subtract Box 3 and enter the total in Box 4. This is your Odor Score.**

+

-

=

**Box 1**  
**Separation Score**  
 (from Step 2)

**Box 2**  
**Management Score**  
 (from Step 3)

**Box 3**  
**Predicted Odor**  
 (from Step 1)

**Box 4**  
**Odor Score**

**A local government must approve a *livestock facility* with an odor score of 500 or more (Box 4). You may add odor control practices to increase your odor score to 500 or more. A local government may approve, but is not required to approve, a *livestock facility* with an odor score less than 500 but not less than 470.**

Signature of Applicant or Authorized Representative \_\_\_\_\_

Date \_\_\_\_\_

**Worksheet 2 (continued)**

**TABLE A: Predicted Odor from Livestock Structures**

**Instructions:** Complete Table A. You must measure all structures to the same affected neighbor. If the nearest neighbor is not the same for all livestock structures, you will need to complete the table once for each close neighbor. Compare the "H" Total of the table for each neighbor. The neighbor that has the lowest weighted distance is considered your nearest affected neighbor, and you should use that table to complete the odor worksheet. Enter the Column F total on page A-6 in **Box 3**. Enter the Column G result on page A-8 in **Table B, Step 1**. Add lines or use additional sheet, if needed, to list all structures.

**1. Animal Housing Areas – List each**

Column A Manure Management Type Enter your housing buildings and the related 4-letter code from Chart 2. You may exclude up to 1000 calf hutches and 4 structures less than the sq. footage listed in Chart 2.	Column B Odor Generation Number From Chart 2	Column C Housing Area (Ft <sup>2</sup> ) Use occupied animal area only. Exclude feed alleys, holding areas and milking parlors. Express in 10,000's. (Ex: 15,523 ft <sup>2</sup> = 1.55)	Column D Odor Control Practice Codes List all that apply to each housing area, from Chart 3	Column E Multiplier for Odor Control Practice List all that apply to each from Chart 3. Enter "1" if none.	Column F Predicted Odor Multiply columns B, C, and E	Column G Distance to Nearest Affected Neighbor(ft) Measure from corner of the bldg to corner of the neighbor's bldg. Measure all to the same neighbor.	Column H Weighted Distance (ft.) Multiply columns F & G
1A.							
1B.							
1C.							
1D.							
1E.							

**2. 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 Measure surface area (ft <sup>2</sup> ) when pit is filled to capacity, excluding freeboard. Enter in 10,000's. (Ex: 75,575 = 7.56)	Column D Odor Control Practice Codes List all that apply to each facility from Chart 3	Column E Multiplier for Odor Control Practice List all that apply to each from Chart 3. Enter "1" if none.	Column F Predicted Odor Multiply columns B, C, and E	Column G Distance to Nearest Affected Neighbor (ft) Measure from top inside edge to neighbor's bldg corner. Measure to the same neighbor.	Column H Weighted Distance (ft.) Multiply columns F & G
2A.							
2B.							
2C.							
2D.							

**3. 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 (ft <sup>2</sup> ) Enter in 10,000's (Ex: 7438 = .74)	Column D Odor Control Practice Codes List all that apply to each facility from Chart 3	Column E Multiplier for Odor Control Practice List all that apply to each from Chart 3. Enter "1" if none.	Column F Predicted Odor Multiply columns B, C, and E	Column G Distance to Nearest Affected Neighbor(ft) Measure from corner to corner. Measure all structures to the same neighbor.	Column H Weighted Distance (ft.) Multiply columns F & G
3A.							
3B.							
3C.							
					<b>F Total</b>	<b>G = (H Total) ÷ (F Total)</b>	<b>H Total</b>

Enter on page A-6, Box 3  
Enter on page A-8, Table B, Step 1

Worksheet 2 (continued)

Table B: Separation Score

INSTRUCTIONS		RESULTS
<b>Step 1:</b> Enter, at right, the result from Table A, Column G (page A-7).		<b>Distance (ft.) to Nearest Affected Neighbor:</b> _____
<b>Step 2:</b> Select multiplier based on the compass direction looking from the <i>livestock facility</i> to the nearest <i>affected neighbor</i> . Enter at right.		<b>Multiplier:</b> _____
<b>Compass Direction</b>	<b>Multiplier</b>	
North	1.0	
Northeast	1.0	
East	1.1	
Southeast	1.2	
South	1.2	
Southwest	1.2	
West	1.3	
Northwest	1.1	
<b>Step 3:</b> Calculate wind-adjusted separation distance (Distance to nearest <i>affected neighbor</i> x multiplier). Enter at right.		<b>Wind-Adjusted Separation Distance (ft.)</b> _____
<b>Step 4:</b> Determine <i>affected neighbor</i> density and enter at right:  <i>Low density</i> = No more than 5 residences and no <i>high-use buildings</i> within 1300 ft of each structure.  <i>High density</i> = 6 or more residences or at least one <i>high-use building</i> within 1300 ft of each structure.		<b>Low or High Density?</b> _____
<b>Step 5:</b> Use results above and Chart 1 to find your Separation Score. Enter at right and on Page A-6 in <b>Box 1</b> .		<b>Separation Score</b>

Chart 1: Separation Score

Wind-Adjusted Separation Distance (ft.)	Low Density	High Density
0-99	505	503
100-149	506	504
150-199	511	507
200-249	516	510
250-299	521	514
300-349	527	518
350-399	534	523
400-449	541	528
450-499	548	533
500-599	560	542
600-699	577	555
700-799	595	569
800-899	615	585
900-999	636	601
1000-1099	658	619
1100-1199	681	637
1200-1299	705	657
1300-1399	730	
1400-1499	756	
1500-1599	783	
1600-1699	810	
1700-1799	839	
1800-1899	868	
1900-1999	899	
2000-2099	930	
2100-2199	962	
2200-2299	994	
2300-2399	1027	
2400-2499	1061	
2500-2749	1123	
2750-2999	1214	
3000-3249	1309	

Worksheet 2 (continued)

Chart 2: Odor Generation Numbers

<b>Animal Housing Area Type</b>	<b>Housing/ Management Type Code</b>	<b>Manure Management Method</b>	<b>Odor Generation Number</b>	<b>Exempt Buildings Maximum Size (ft<sup>2</sup>) (May exclude up to 4)</b>
<b>Dairy Stanchion</b>	DSDC	Daily to weekly cleaning	2	7500
<b>Dairy Free Stall and Beef &amp; Dairy Heifers (Forage Ration)</b>	DBSS	Slatted floor (includes floor and pit below)	6	2500
	DBSC	Scrape	4	3500
	DBAF	Alley flush to storage	10	1500
	DBBP	Bedded pack	2	7500
<b>Beef Finishing (High Energy Ration)</b>	BFSF	Slatted floor (includes floor and pit below)	12	1000
	BFSC	Scrape	8	2000
	BFBP	Bedded pack	4	3500
<b>Pork Gestation/ Farrow/Nursery</b>	PGSF	Slatted floor (includes floor and pit below)	46	N/A
	PGPP	Pull plug to storage	22	N/A
<b>Pork Finishing</b>	PFSF	Slatted floor (includes floor and pit below)	34	N/A
	PFPP	Pull plug to storage	20	N/A
	PFSS	Scrape systems to storage	11	1500
	PFDB	Deep bedded	4	3500
<b>Poultry</b>	PBLT	Broiler (litter)	1	15000
	PDLQ	Ducks (liquid)	20	N/A
	PLAY	Layers	20	N/A
	PTDL	Turkey and Ducks (litter)	2	7500

<b>Type Codes</b>	<b>Waste Storage Facility Types</b> <i>Note: Storage under slatted floor is addressed under animal housing.</i>	<b>Odor Generation Number</b>
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

<b>Animal Lot Codes</b>	<b>Animal Lot Types</b>		<b>Odor Generation Number</b>
ALPV	<b>Paved</b>		4
UPDB	<b>Unpaved</b>	Dairy/Beef/Sheep/Goats	6
UPSW		Swine/Poultry	11

## Worksheet 2 (continued)

Chart 3: Odor Control Practices

Category	Practice Code	Practice Name (Practices must meet specifications on pages A-11 to A-13)	Multiplier*
<b>Animal Housing Area</b>			
<b>A</b>	A1	Diet manipulation	0.8
<b>B</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
	B5	Air Dam (for swine only)	0.9
<b>C</b>	C1	Windbreak (includes man-made berms)	0.9
<b>D</b>	D1	Frequent cleaning of animal housing area	0.9
<b>Waste Storage Facilities</b>			
<b>E</b> (Choose only 1)	E1	Anaerobic digestion	0.2
	E2	Chemical or biological additives	0.8
	E3	Compost	0.2
	E4	Solids Separation and Reduction	0.6
	E5	Water Treatment	0.1
<b>F</b> (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
<b>G</b>	G1	Windbreak (includes man-made berms)	0.9
<b>Animal Lots</b>			
<b>H</b> (Choose only 1)	H1	Frequent cleaning of <i>animal lot</i>	0.4
	H2	Drag <i>animal lot</i>	0.5
<b>I</b>	I1	<i>Animal lot</i> moisture control	0.8
<b>J</b>	J1	Windbreak (includes man-made berms)	0.9

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

**Innovative Odor Control Practices (all odor sources):**

You may take credit for odor control 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 control practices listed in Chart 3 (attach *DATCP* approval to your application).



### Odor Control Practice Specifications

Odor control 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/m<sup>2</sup>-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/m<sup>2</sup>-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:

- *Solids Separation and Reduction (see E4 below).*
- *Aeration (see F1 below).*
- *Anaerobic digestion (see E1 below).*

**Air Dam (B5)** – Erect and maintain a wall (typically a 10-foot x 10-foot pipe frame and tarpaulin) placed at the end of a swine-finishing building, immediately downwind of the exhaust to deflect air and odor plume. Replace material used for the barriers (tarpaulins on a frame of solid wood, for example) as needed, which may be from a few years to decades, depending on the material.

**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.

## Worksheet 2 (continued)

**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:

- *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° 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° C.). The digester must have appropriate 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.

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

**Water Treatment (E5)** – Install and use a physical, chemical or biological process that removes the majority of contaminants from the waste stream, resulting in a liquid effluent meeting surface water discharge standards. The remaining solid fraction or sludge must be accounted for based on its form, and the management it is subject to.

**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 limit disturbance to 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).

## Worksheet 2 (continued)

**Animal Lots**

**Frequent cleaning of animal lot (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 lot (H2)** – Drag manure in *animal lots* with harrow or disk at least once every 7 days during the months 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 s. [ATCP 50.70](#) or [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).

Arm-Iwr- 11/04 January 2006



**Wisconsin Department of Agriculture, Trade and Consumer Protection**

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 Phone: (608) 224-4630 or [livestocksiting@wisconsin.gov](mailto:livestocksiting@wisconsin.gov)

**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)
<i>Example:</i> Unit 1 – lagoon	5,000,000 gallons	<i>Animal waste</i>	4,000,000 gallons	7,000,000 gallons	260 days
		<i>Wastewater</i>	1,000,000 gallons		
		<i>Leachate</i>	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

<p>Arm-lwr- 11/04 January 2006</p> <p><b>Part B – Land Base for Applying Nutrients</b></p>	<p><b>Worksheet 3 (continued)</b></p>
<p>1. Enter total <i>animal units</i> in proposed <i>livestock facility</i> (from worksheet 1): _____.</p>	
<p>2. What percentage of the waste from the <i>livestock facility</i> will be:</p> <p>a. Applied to land: _____%. Attach map showing where waste will be applied to land.</p> <p>b. Processed and sold as commercial fertilizer, under a fertilizer license: _____%.</p> <p>c. Disposed of in other ways: _____%. Describe ways: _____</p>	
<p>3. Multiply the percent in line 2a by the number of <i>animal units</i> in line 1. Result (# of <i>animal units</i>): _____</p>	
<p>4. Total acres of cropland currently available for land application (owned, rented, or landspreading agreement): _____</p>	
<p>5. Divide # of acres in line 4 by # of <i>animal units</i> in line 3 to obtain ratio of acres to <i>animal units</i>: _____</p>	
<p>6. Is the ratio in line 5 equal to or greater than the applicable ratio in Table 1? _____</p> <p>If YES, and if the # of <i>animal units</i> in line 1 is less than 500, you need NOT complete Part C. Otherwise, complete Part C.</p>	

**Table 1: Acreage per *Animal Unit***

Animal Type	Acres per <i>Animal Unit</i> *
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

		Worksheet 3 (continued)	
arm-lwr- 11/04 January 2006			
<b>Part C – Nutrient Management Checklist</b>			
<b>Instructions:</b> All applicants must submit this checklist unless exempted under Part A or B. The checklist is based on the 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:	
		<b>Yes</b>	<b>NA</b>
<b>1. Are the following field features identified on maps or aerial photos?</b>			
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 ft 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 ft 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 ft of a municipal well, and soils listed in Appendix 1 of the Conservation Planning Technical Note WI-1.			
<b>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?</b>			
<b>3. Check the methods below used to determine field soil nutrient levels:</b>			
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.			
<b>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 A2809, Soil Test Recommendations for Field, Vegetable and Fruit Crops, and the 590 standard?</b>			
<b>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?</b>			
<b>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?</b>			
<b>7. Are areas of concentrated flow, resulting in reoccurring gullies, planned to be protected with perennial vegetative cover?</b>			
<b>8. Will nutrient applications on non-frozen soil within the SWQMA comply with the following?</b>			
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.			
<b>9. Is a narrative included which describes proposed manure collection, transportation, and application methods?</b>			

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-CPC, 2. ASA-CCA, 3. ASA-Professional Agronomist, 4. SSSA-Soil Scientist)

Signature of Applicant or Authorized Representative: \_\_\_\_\_

Arm-lwr- 11/04 January 2006



**Wisconsin Department of Agriculture, Trade and Consumer Protection**

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Phone: (608) 224-4630 or livestocksting@wisconsin.gov

**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

Arm-lwr- 11/04 January 2006


**Wisconsin Department of Agriculture, Trade and Consumer Protection**

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

Phone: (608) 224-4630 or livestocksting@wisconsin.gov

**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 Lots<sup>1</sup>**

**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 stream<sup>2</sup> or 1,000 feet of a lake. According to the *BARNY runoff model*, each of these *animal lots* has (or with minor alterations<sup>3</sup> 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 stream<sup>2</sup> or 1,000 feet of a lake. According to the *BARNY runoff model*, each *animal lot* has (or with minor alterations<sup>3</sup> 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.<sup>4</sup>
- 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.<sup>5</sup>

<sup>1</sup> Treat multiple lots as one *animal lot* if runoff from the *animals 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.

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

<sup>3</sup> "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.

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

<sup>5</sup> 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.



## Worksheet 5 (continued)

**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 (70% or higher moisture content) will be designed, constructed and maintained to the following standards [attach design specifications]:

- a) Surface water runoff will be diverted from entering the feed storage structure.<sup>1</sup>
- b) Surface discharge of leachate will be collected before it leaves the feed storage structure.<sup>2</sup>
- c) The top of the feed storage structure floor will be at least 3 vertical feet from groundwater and bedrock.<sup>3</sup>
- 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.<sup>2</sup>

### 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

<sup>1</sup> Runoff may be diverted by means of earthen diversions, curbs, walls, gutters, waterways or other practices, as appropriate.

<sup>2</sup> 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.

<sup>3</sup> A tile system or curtain drain may be used to intercept lateral groundwater seepage, as necessary, to achieve the required distance to groundwater.



# Livestock Facility Siting

## Siting Standards Protect the Public

- The standards were developed using sound science to protect water quality and manage odor
- The siting standards only apply to new and expanding livestock facilities in areas that require local approval
- Local governments may adopt more stringent standards to address unique local conditions, but should first try implementing the state standards. Implementation of standards such as nutrient management may provide adequate protection to deal with local concerns

Standard	Applies to	Requirements
<b>Animal Units (AU)</b>	All applicants	<ul style="list-style-type: none"> <li>• Calculate number of animal units</li> </ul>
<b>Odor Management</b>	Required <i>only of</i> applicants* within 2500 feet of their nearest neighbor that are <ul style="list-style-type: none"> <li>• New farms over 500 AU</li> <li>• Expanding farms over 1000 AU</li> </ul> * Exempt farms may voluntarily complete and comply with the odor standard.	<ul style="list-style-type: none"> <li>• Predict odor from facility structures based on structure types, odor control practices used and distance to neighbors</li> <li>• Achieve required odor score</li> <li>• Local discretion to award extra points</li> </ul>
<b>Waste and Nutrient Management**</b>	<ul style="list-style-type: none"> <li>• All applicants complete parts A&amp;B</li> <li>• Farms over 500 AU, and other farms if required from part B, must complete part C</li> </ul>	<ul style="list-style-type: none"> <li>• Calculate amount of waste and duration of waste storage</li> <li>• Identify land available for spreading</li> <li>• Complete nutrient management checklist</li> </ul>
<b>Waste Storage Facilities**</b>	All applicants with existing or planned manure storage facilities	<ul style="list-style-type: none"> <li>• Construct or alter facilities according to NRCS standards</li> <li>• Demonstrate that existing facilities do not leak and are not at risk of failure</li> <li>• Abandon facilities properly</li> </ul>
<b>Runoff Management**</b>	All applicants	<ul style="list-style-type: none"> <li>• Meet nonpoint pollution standards</li> <li>• Prevent runoff from feed storage</li> <li>• Prevent runoff from animal lots</li> </ul>
** May meet this requirement by submitting a WPDES permit for the same size facility		



## Livestock Facility Siting

### **Management Plans (Required)**

The following management plans are required to be submitted with the livestock facility siting application. An application must include the required plans in order to be considered complete.

#### **Employee Training Plan**

You must develop an employee training plan for employees who work at the livestock facility. The employee training plan is to ensure that facility employees are familiar with the practices that must be adhered to as part of the permit. The training plan will also ensure that employees are prepared to respond in case of an emergency. You can determine the plan contents, as long as the following minimum content is included:

**Training topics** (all employees may not need to be trained in all topics):

Topics must include, at a minimum:

- nutrient management,
- odor management,
- runoff management,
- manure and waste handling,
- employee safety; and
- environmental incident response.

**Employees to be trained:** Identify the job categories of employees to be trained (e.g. milker, feed manager, manure handler) and the number of employees in each job category to be trained.

*Note: If contract employees are used for tasks such as manure hauling and spreading, the facility operator should be sure that they are familiar with the facility's incident response procedures and have adequate training in manure transport, handling, and spreading.*

**Frequency of training:** Describe the frequency of training. At a minimum, there must be at least one training that covers each of the required training topics each year (trainings can cover all topics, or separate trainings can be held for each individual topic).

**Form of training:** Describe how the training will be delivered (e.g. video, classroom presentation, manual, demonstration, on-line workshop).

**Training presenters:** Indicate who will present the training. Presenters can include the livestock facility managers, consultants, professional educators, or others.

**Recordkeeping:** Describe the system that will be used to take and record attendance.

## Environmental Incident Response Plan

The purpose of the environmental incident response plan is to have emergency procedures in place in the event of an environmental incident such as a manure spill. The plan should be reviewed and updated regularly to ensure contact information is accurate and response procedures are adequate. Copies of the plan should be kept in easily accessible and known locations for reference in case of an incident. You can determine the plan contents, as long as the following minimum content is included:

### **Types of environmental incidents covered:**

The plan must include, at a minimum,

- Overflows and spills from waste storage facilities
- Catastrophic systems failures
- Manure spills during transport and application
- Movement of manure during or after application
- Catastrophic mortality disposal
- Odor complaints.

### **Contact names:**

Clearly identify:

- The names and business telephone number of at least one individual who will handle public questions and concerns related to the incidents.
- The names and telephone numbers of first responders (DNR, fire departments, contractors).

### **Incident response procedures:**

Clearly identify the livestock facility's emergency response procedures including:

- What the response procedures will be for different types of incidents covered in the plan. The procedures should include the names or job titles of employees and managers to be involved in the response.
- What records are needed, how and where they will be kept, and for how long.
- How and to whom the facility will report the incident.

## Resources

The following websites have good examples of emergency response plans

[http://www.lpes.org/Lessons/Lesson50/50\\_11\\_Spill\\_Response.pdf](http://www.lpes.org/Lessons/Lesson50/50_11_Spill_Response.pdf)

<http://www.age.uiuc.edu/bee/Outreach/lwmc/lwm46.htm>

# Employee Training Plan Farm A

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Training Goals, Objectives, Activities

Requirements, Standards, Procedures and Practices

Training Content

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    Odor Management

    Runoff Management

    Manure and Waste Handling

    Environmental Incident Response

    Employee / Work Place Safety

Employees to be Trained

Frequency and Form of Training

Training Presenters

Record Keeping

Feedback, evaluation and improvement

Example Checklists

    Manure Storage Facility

    Animal Lot

    Feed Storage Facility

## **Training Goals**

This training plan will enable employees and others to follow standards, procedures and practices to ensure that the livestock facility meets permit requirements and achieves other goals in this plan. [May expand to include other relevant goals if desired]

Specifically, training is required as part of the local permit issued in accordance with ATCP 51, Wis. Admin. Code (local siting permit), and this plan for training must include:

- Minimum content of training: 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 a 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.

## **Training Objectives**

The training program will enable employees and others to:

1. Understand and follow all standards, procedures and practices related to their assigned duties and tasks.
2. Understand basic permit requirements including more stringent local standards, and follow specific standards, procedures and practices to ensure compliance with these permits.
3. Receive current, science-based information to most effectively address key management issues, with specific focus on nutrient management, odor management, runoff management, manure and waste handling, employee safety, and environmental incident response.
4. Provide feedback concerning future training needs, and participate in the design of annual training activities.

[May add other objectives consistent with scope of the plan]

## **Training Activities**

Training activities will be designed to provide the necessary knowledge and skills tailored to specific needs of employees and others. Training approaches will be selected to ensure that information is effectively communicated, and may include classroom sessions, individual reading assignments and field exercises. Annual training activities will be customized to reflect changes in requirements, standards, procedures or practices; accommodate specific training needs; or provide new information critical to sound management of the livestock facility.

## **Requirements, standards, procedures and practices**

Employees and others will be provided training on the requirements of the local siting permit as these relate to their assigned duties and tasks. They will learn the applicable standards, procedures and practices to ensure compliance with permit requirements. They also will learn other standards, procedures and practices that apply to the livestock facility as required by this training plan.

Training will cover the use of checklists and other tools used to inspect and monitor farm operations (see attached sample checklists)

The livestock operator will make available written documentation that describes permit requirements, standards, procedures and practices.

## **Training Content**

### **Nutrient Management**

Standards, procedures and practices are in place for all forms of manure application and must be followed by all employees, farm personnel assistants, and others. Farm A's nutrient management plan is reviewed semi-annually by our crop manager and DNR representative. A copy of the plan will be available for review.

Training may include:

- Conservation planning
- Documenting manure applications – spreading logs and inspection sheets
- Recording and analyzing manure sample data
- Review soil fertility, crop rotations and yields

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas such as comprehensive nutrient management plans]

### **Odor Management**

Standards, procedures and practices are in place to minimize odor, and must be followed by employees, farm personnel assistants and others. Among other things, they ensure that odor control practices work properly.

Training may include:

- Overview of odor, its causes and basic control strategies
- Regular cleaning and maintenance procedures to control odor

- Step-by-step routines to implement control practices (e.g. frequent cleaning) required under a permit
- Responding to odor complaints

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas such as control of odor from land applied manure.]

### **Runoff Management**

Standards, procedures and practices are in place to control runoff from animal lots and feed storage areas, and must be followed by employees, farm personnel assistants and others. For example, feed storage bunker leachate must be collected and pumped to the manure storage facility. In addition, compliance must be maintained with certain performance standards required in the local siting permit.

Training may include:

- Cleaning and regular maintenance of gutters, diversions, drains and sediment basins.
- Proper feed bunker tire and plastic placement and removal
- Leachate collection system operation, including pump operation
- Cleaning of traffic areas and pads
- Maintenance (e.g. regarding, seeding) and mowing of filter strips and other grassed areas.

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas.]

### **Manure and Waste Handling**

Standards, procedures and practices are in place to ensure proper storage, transfer and hauling of manure and waste. These must be followed by employees, farm personnel assistants and others.

Training may include:

- Review schedule and procedures for inspection and monitoring of manure storage, including frequent monitoring of manure levels
- Identification and use of proper agitation points
- Routine maintenance of vegetative areas
- Review procedures for pump operation, hose placement and pickup, equipment cleanup
- Proper procedures for hauling and applying manure

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas]



## **Employee Safety**

Standards, procedures and practices are in place to ensure the health and safety of employees. These must be followed by employees, farm personnel assistants and others.

Training may include:

- Proper animal handling
- Proper equipment operations and certification where needed
- Accident reporting protocols
- Working in confined spaces
- Avoidance of dangerous conditions (including exposure to noxious gases)
- Maintaining fences, grates and protective areas

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas]

## **Environmental Incident Response**

Standards, procedures and practices are in place to ensure proper responses in the event of manure spill or other incident. These must be followed by employees, farm personnel assistants and others. A written document with response procedures and emergency contacts is readily available.

Training may include:

- Review of Environmental Incident Response Plan
- Spill reporting and intermediate action steps

[Need to modify or add training items specific to the livestock operation; may expand training category to allow for training in related areas.]

## **Employees To Be Trained**

List of all employees to be trained by job category and number of employees in this category:

Manager (2)  
Herdsman (1)  
Assistant Herdsman (1)  
Feeder (1)  
Milker (2)  
Manure Handler (1)

[Will need to customize this list to reflect employees and others who will receive training]

## **Form and Frequency of Training**

By position, the training for employees and others may include:

### **Managers**

Describe the form, timing and scope of training appropriate to position's duties and functions such as training on education on nutrient management.

### **Herdsman and Assistant Herdsman**

Describe the form, timing and scope of training appropriate to position's duties and functions such as training on cattle care and handling, and loading and transportation

### **Feeder**

Describe the form, timing and scope of training appropriate to position's duties and functions such as training on equipment safety, and operation and maintenance

### **Milker**

Describe the form, timing and scope of training appropriate to position's duties and functions such as training on cattle care and handling, equipment safety, and operation and maintenance

### **Manure Handler**

Describe the form, timing and scope of training appropriate to position's duties and functions such as training on handling procedures and emergency response steps

[Will need to customize to reflect form, trimming and scope of training]

## **Training Presenters**

Presenters may include:

Managers

Feed Consultants

Agronomy Consultant

University of Wisconsin Extension

Government Agency staff

Professional Associations

[Will need to customize this list to reflect presenters who may provide training]

## **Recording Attendance**

For each internal training, attendance will be recorded using a sign up sheet which will include the date of the training and the employees who attended. Similar methods will be used to verify other training received.

## Monthly Manure Storage Facility Checklist

Farm:

Facility ID:

Inspected by:

Date:

### **Manure/Effluent Level**

Date:

Last Observation Date:

Liquid level, ft:

Depth remaining, ft:

[May add other items consistent with operation]

<b>Other Observations</b>	<b>Yes</b>	<b>No</b>	<b>Corrective Action Taken/Planned</b>
Is liquid level marker visible?			
Does adequate freeboard exist (measured from lowest point in dam, berm, or spillway to liquid level)?			
Runoff holding pond: Is sufficient volume available for runoff from 25-yr, 24-hr storm?			
Manure pump/transfer pipes functioning?			
Recycle pumps/transfer pipes functioning?			

<b>Earthen Facility</b>	<b>Yes</b>	<b>No</b>	<b>Corrective Action Taken/Planned</b>
<b>Interior liner erosion observed . . .</b>			
Due wave action?			
In vicinity of inlets?			
In vicinity of outlets?			
Due to erosion from rainfall?			
Near agitation equipment access points?			
Cracking or damage to liner?			
<b>Signs of berm/dam damage due to . . .</b>			
Burrowing animals?			
Presence of trees?			
Presence of large weeds?			
Erosion or gullies?			
Poorly established sod?			
<b>Are there indications of . . .</b>			
Damp, soft, or slumping areas on berms?			
Seepage near toe of berm?			
Seepage around pipes through the berm?			

<b>Concrete/Steel Tanks</b>	<b>Yes</b>	<b>No</b>	<b>Corrective Action Taken/Planned</b>
<b>Signs of . . .</b>			
Cracks or structural damage?			
Leakage?			
Wet spots around base of tank?			
<b>Clean water diversion</b>			
Are perimeter drains plugged or blocked?			
Is roof water entering storage?			
Is field runoff entering storage?			
Are diversions/waterways maintained?			
<b>Visual appearance and safety</b>			
Is site neat and recently mowed?			
Is storage visually hidden from public?			
Are mortality or afterbirth observed?			
Are medical consumables observed?			
Is area fenced and properly marked?			
Is escape ladder available?			

### **Monthly Animal Lot Runoff Checklist**

Farm:  
Inspected by:

Lot ID:  
Date:

	<b>Yes</b>	<b>No</b>	<b>Corrective Action Taken/Planned</b>
Is filter strip repair required?			
Runoff control structures intact?			
Solids collection location needs to be cleaned?			
Cattle mound needs repair?			

[May add other items consistent with operation]

### **Monthly Feed Storage Facility Checklist**

Farm:  
Inspected by:

Facility ID:  
Date:

% moisture of feed placed in facility:

	<b>Yes</b>	<b>No</b>	<b>Corrective Action Taken/Planned</b>
Surface water diversion is operational?			
Leachate collection system, including pump, is operational?			
Does the collection structure need to be cleaned/pumped?			
Feed is adequately covered?			
Waste feed is properly stored?			

[May add other items consistent with operation]

# Environmental Incident Response Plan

## Farm A

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Environmental Incident Response Plan Summary

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    Accidental Entry to Manure Storage or Transfer Facilities

    Manure Storage Overflow

    Manure Storage Failure

    Manure Spill During Transport or Application

    Movement of Manure During or After Application

    Catastrophic Mortality Disposal

    Hazardous Material Spill

Emergency Accident Plan Incident Worksheet

Odor Management

Odor Monitoring Worksheet

***NOTE: The procedures outlined in this plan are provided as guidance, and should not be replicated without tailoring the plan to meet the individual conditions of the proposed facility. Before finalizing this plan, the livestock operator should verify that the procedures apply to the proposed facility, should supplement the specific procedures where necessary, and develop regular schedule for updating this plan.***

# Environmental Incident Response Plan Summary

Farm Name: Farm A

Owner/Operators: John Operator

Farm Address: 1890 N Agriculture Dr., WI 54221

Legal Description Town # 18N, Range # 22E, Section # 10, 1/4 Section # SW

Directions to Farm from Fire Dept.: Take County Hwy . . .

Attach map showing locations of structures (indicate location of doors), roads, manure storage, fertilizers, pesticides, agricultural chemicals, fuel storage, emergency response equipment, MSDS sheets, gas and electrical shutoffs, liquid propane, compressed gas, septic tank, topography, wells, surface waters, and other pertinent information.

---

## **Primary Farm Contacts**

John Operator, Farm Emergency Coordinator  
Joe Operator, Manager  
Office

## **Telephone**

920-123-4567  
920-765-4321  
920-120-0000

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## **Emergency Responder**

## **Name**

## **Telephone**

Fire/Rescue	Valders Fire Department	911 920-123-0000, non-emergency
Police	Manitowoc County Sheriff's Dept.	911 920-444-5555, non-emergency
Veterinarian	Hillside Veterinarian	920-888-8888
Manure Hauler	SPD Service	920-999-9999
On-Farm Equipment Operator	Larry Operator	920-111-1111
Excavation Contractor	Olson LLC	920-123-8888
Pumping Equipment	Evan Brothers	920-777-7777
Mortality Disposal Contractor	Golden Stock Removal	800-123-9874
DNR Hazardous Spill Line		800-943-0003

# Incident Response Procedures

## Personal Injury / Fire Emergency

### Contacts

Fire/Rescue		911
John Operator	Farm Emergency Coordinator	920-123-4567

### Emergency Information

First aid equipment	Office
Fire suppression equipment	Office & Vehicles
Hazardous / flammable materials on farm: (fuel, lubricants, bulk cleaning agents, etc.)	AST fuel tank storage

### Emergency Actions

1. Determine nature of emergency and type of assistance required.
2. Call 911.
3. Attempt to stabilize injured person without moving, unless necessary and safe to do so.
4. Start CPR.
5. Implement evacuation of people and livestock if appropriate.
6. Identify potential locations of hazardous or flammable materials and notify emergency personnel when they arrive.

[May add other information as it relates to the operation]

## **Accidental Entry to Manure Storage or Transfer Facilities**

### **Contacts**

Fire/Rescue

911

John Operator

Farm Emergency Coordinator

920-123-4567

### **Emergency Information**

Rescue equipment is located in the Office:

- Grab pole, ladder, flotation device, rope, first aid kit.

### **Emergency Actions**

1. Call for help.
2. Shut off manure transfer pump and agitator.
3. Locate emergency rescue equipment (grab pole, ladder, & flotation device) and attempt to reach victim.  
DO NOT enter a confined area where manure gases could accumulate without an appropriate respirator.
4. Initiate CPR if necessary.
5. Call 911.

[May add other information as it relates to the operation]



## **Manure Storage Overflow**

### **Contacts**

John Operator	Farm Emergency Coordinator	920-123-4567
Manure Hauler	SPD Service	920-999-9999
On-Farm Equipment Operator	Larry Operator	920-111-1111
Excavation Contractor	Olson LLC	920-123-8888
Pumping Equipment	Evan Brothers	920-777-7777
DNR Hazardous Spill Line		800-943-0003

### **Emergency Information**

- Utilize the nearest soil source on the farm for fill.
- Construct temporary manure containment dikes as required to contain the spill

### **Emergency Actions** [May add other information as it relates to the operation]

1. Contact Farm Emergency Coordinator
2. Stop the flow
3. Assess the situation and make appropriate calls.
4. Notify DNR spill hotline 1-800-943-0003
5. Begin clean-up.
6. If required, call manure hauler to bring agitation pump and tanker, call for front end loader and backhoe.
7. Construct a temporary dike below the manure storage from earth fill, corn silage or other available materials if manure is flowing toward a defined waterway or drainage outlet.
8. Use soil fill or corn silage to add temporary fill to the top of the manure storage facility berm to stop the manure overflow, if occurring from a defined location.
9. Place agitation pump in pit at designated pumping location and begin loading tankers.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for prearranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.

### **Manure Storage Leakage**

Leakage from base or sidewall of a manure storage structure are often seepage rather than flowing leaks. Responses are as follows:

- Dig a small well or ditch to catch all seepage, put in a submersible pump, and pump back into lagoon.
- If holes are caused by burrowing animals, trap or remove animals, fill holes, and compact with a clay-type soil.
- Other holes may be likewise temporarily plugged with clay soil.

**Contact engineer to develop a plan to repair the facility, and verify repairs are adequate**

## **Manure Storage Failure**

### **Contacts**

John Operator	Farm Emergency Coordinator	920-123-4567
Manure Hauler	SPD Service	920-999-9999
On-Farm Equipment Operator	Larry Operator	920-111-1111
Excavation Contractor	Olson LLC	920-123-8888
Pumping Equipment	Evan Brothers	920-777-7777
DNR Hazardous Spill Line		800-943-0003

### **Emergency Information**

- Front end loader is parked at the bunker silos
- Utilize the nearest soil source on the farm for emergency fill.
- Construct temporary manure containment dikes as required to contain the spill

### **Emergency Actions**

1. Contact Farm Emergency Coordinator.
2. Stop all additional flow to the storage structure (waterers, flush system, etc). Prevent surface water from entering the system.
3. Assess the situation and make appropriate calls.
4. Notify DNR spill hotline 1-800-943-0003.
5. Begin clean-up. Call front end loader operator and excavator if needed.
6. Construct a temporary dike below the manure storage from earth fill, corn silage or other available materials if manure is flowing toward a defined waterway or drainage outlet.
7. Attempt to place temporary fill in the area of dike failure.
8. Call manure hauler to bring agitation pump and tanker.
9. Place agitation pump in pit at designated pumping location as soon as possible and begin loading tankers.
10. Land apply manure on fields approved for manure application in the nutrient management plan. Apply at the established rates. Or transfer manure to neighbor for prearranged storage.
11. Collect manure and contaminated soil from overflow area and from behind temporary dike. Land apply materials on fields approved for manure application in the nutrient management plan. Apply at the established rates. Remove temporary dike from the field and temporary fill from the manure storage facility berm.
12. Conduct engineering analysis of manure storage facility and develop repair plan. Obtain necessary approval for repair plan.
13. Repair manure storage facility.
14. Document actions. [May add other information as it relates to the operation]

## **Manure Spill During Transport or Application**

### **Contacts**

John Operator	Farm Emergency Coordinator	920-123-4567
Manure Hauler	SPD Service	920-999-9999
On-Farm Equipment Operator	Larry Operator	920-111-1111
DNR Hazardous Spill Line		800-943-0003
Police	Manitowoc County Sheriff's Dept.	911 920-444-5555, non-emergency

### **Emergency Information**

- Identify location of spill.
- Clean up equipment needed – skid loader/front end loader, corn silage/bedding or water tanker, manure spreader.

### **Emergency Actions** [May add other information as it relates to the operation]

1. Eliminate the source.
  - Stop manure application or pumps.
  - Close valves. Separate pipes, creating an air gap and stopping flow.
  - Transfer manure/liquid to another basin or lagoon.
2. Contain the spill, if possible.
  - Create a containment dam in the field, ditch or stream.
  - In a field, use tillage equipment to slow the flow
  - Check for tile flows.
  - Construct a temporary holding basin down slope.
  - If possible, place soil over the point of seepage, ensuring that you do not drive over or compact the seepage point.
3. Assess the extent of the spill and note any obvious damages.
  - Did or could the spill reach any surface waters, well casings or other sensitive areas?
  - How much was released? What time?
4. Contact the appropriate agencies, including sheriff's department if traffic control is needed.
5. Clean up the spill and make repairs. Did any damage occur (employee injury, fish kills, or property damage)?
6. Land apply materials collected manure and contaminated soil on fields approved for manure application in the nutrient management plan. Apply at the established rates.
6. Document and review actions taken to contain or minimize the spill.

## **Movement of Manure During or After Application**

### **Emergency Actions**

1. Stop land applying manure. Assess needs and call for help. Review steps listed above.
2. If possible, incorporate manure with tillage or till ground down slope of applied manure to reduce runoff.
3. Construct a temporary berm to prevent runoff of manure, if necessary.
4. Evaluate the application rates for fields where runoff occurred. Recalibrate spreader if necessary.

## **Catastrophic Mortality Disposal**

### **Contacts**

John Operator	Farm Emergency Coordinator	920-123-4567
Veterinarian	Hillside Veterinarian	920-888-8888
Mortality Disposal Contractor	Golden Stock Removal	800-123-9874
Excavation Contractor	Olson LLC	920-123-8888

### **Emergency Actions**

1. Contact veterinarian if death is suspicious or animal displayed unusual symptoms.
2. Remove mortality from the livestock production area. Place in designated mortality storage area (secure from scavengers and having appropriate runoff controls).
3. Contact mortality disposal contractor to arrange pick up within 24 hours.
4. If directed by the State Veterinarian, implement disease outbreak procedures as required. This may include killing exposed animals, burning carcasses, and burial of ashes in the catastrophic mortality burial area.

[May add other information as it relates to the operation]

## **Hazardous Material Spill**

### **Contacts**

Fire/Rescue/Hazardous Material Response Unit	911
John Operator                      Farm Emergency Coordinator	920-123-4567
DNR Hazardous Spill Line	800-943-0003

### **Spill Information**

First aid equipment	Office
Fire suppression equipment	Office & Vehicles
Personal Protection Equipment	Office
Hazardous / flammable materials on farm (fuel, lubricants, bulk cleaning agents, etc.)	AST fuel tank storage

### **Emergency Actions**

1. Identify the hazardous material that has been spilled. Assess need for safety equipment.
2. Stop the flow. Turn off all pumps.
3. Assess the situation and make appropriate calls.
4. Flammable materials: Shut off power to area from a remote location. Eliminate sources of ignition.
5. Evacuate people and livestock as appropriate.
6. Contain the spill and begin cleanup.
7. Prevent hazardous materials from leaving spill site by construction temporary dikes if necessary.
8. Once the situation has been stabilized collect hazardous material using approved methods and dispose of contaminated soil according to regulations.
9. Document actions.

[May add other information as it relates to the operation]

# **Emergency Accident Plan Incident Worksheet**

Incident Date / Time:

Location:

People / Agencies Involved:

Type of Incident:

Worksheet completed By:

Signature: \_\_\_\_\_

Date Completed: \_\_\_\_\_

[May add other information as it relates to the operation]

## **Odor Management**

### **Contact**

John Operator

Farm Emergency Coordinator

920-123-4567

### **Odor Monitoring Program Actions**

1. After a complaint is placed fill out the Odor Monitoring Worksheet. Insert as much detail as possible.
2. Review activities to reduce odors:
  - a. Manure agitation.
  - b. Inject manure directly into soil.
  - c. Clean feed bunkers.
  - d. Arrange for timely mortality removal.
3. Steps to establish working relationship with neighbors and community members:
  - a. Provide notice to neighbors prior to land application of manure.
  - b. Avoid spreading manure during holidays and community events.
  - c. Clean roads if operations have deposited manure or mud is on it.
  - d. Participate in local activities such as 4-H, dairy days, or school events. Host a community picnic or open house.
4. Monitor effectiveness of odor control technologies and management.
  - a. Record the amount of odor present as determined by managers.
  - b. Number of complaints filed.

[May add other information as it relates to the operation]

# Odor Monitoring Worksheet

Date Complaint Received:

Time:

Form Completed By:

Complaint Received From:

Address:

Phone Number:

Comments:

Weather Conditions:

Sunny

Partly

Cloudy

Mostly

Cloudy

Overcast

Hazy

Temperature:

Relative Humidity:

Precipitation:

None

Fog

Rain

Sleet

Snow

Wind Direction, Blowing From:

N

NW

NE

W

E

SW

SE

S

Wind Speed:

Calm

Light Breeze

Moderate Wind

Strong Wind

Odor Source:

Description:

Nuisance Potential:

Actions taken to reduce conflict:

[May add other information as it relates to the operation]





## Setback Requirements

The setback requirements in the rule address the location of livestock structures at a facility with respect to property lines, road right-of-ways, and for the protection of surface and ground water resources.

*The rule does not establish state-mandated setback requirements.* Instead, the rule establishes a state maximum which local governments may not exceed. The local setback distances already established by ordinance still apply up to these state maximums. In many cases, these existing local setbacks are lower than the state maximums.

### Setback requirements for NEW livestock structures:

#### 1. Property line setbacks:

- Local setbacks, up to 100 feet from a property line (for facilities of <1000 a.u.)
- Local setbacks, up to 200 feet from a property line (for facilities with at least 1000 a.u.)
- At least 350 feet from a property line for a new waste storage structure
  - An applicant may add one new storage structure, within 350 feet of a road right of way or property line, if the new structure is:
    - no closer to the road right of way or property line than a "grandfathered" existing structure,
    - no larger than the existing structure, and is
    - no more than 50 feet from the existing grandfathered structure

#### 2. Public road right-of-way setbacks:

- Local setbacks, up to 100 feet from public road right-of-way (for facilities of <1000 a.u.)
- Local setbacks, up to 150 feet from public road right-of-way (for facilities with at least 1000 a.u.)
- At least 350 feet from a public road right-of-way for a new waste storage structure
  - An applicant may add one new storage structure, within 350 feet of a road right of way or property line, if the new structure is:
    - no closer to the road right of way or property line than a "grandfathered" existing structure,
    - no larger than the existing structure, and is
    - no more 50 feet from the existing grandfathered structure

#### 3. Comply with existing water quality ordinances and well code:

- Local shoreland zoning ordinances
- Local wetland zoning ordinances
- Local floodplain zoning ordinances
- State well code (NR 811 and 812)

## **Setback requirements for EXISTING livestock structures:**

Existing livestock structures are not subject to the same setback distances as new livestock structures. In this sense, these existing livestock structures are “grandfathered.”

Grandfathered structures are allowed to expand so long as the expansion will not further encroach on public road right-of-ways and property lines, or otherwise violate local water quality ordinances and the state well code. An applicant should be aware that existing waste structures can only be continued in use if they are shown to be in compliance with NRCS technical standards.

## **To determine the local setbacks for your livestock structures, contact:**

- County office, if county ordinance regulates siting
- Town office, if siting is regulated at the local town level

## **For more information about standards under the Wisconsin Well Code:**

- NR 811 and NR 812 of the Wisconsin Administrative Code, located on the Internet at <http://www.legis.state.wi.us/rsb/code/>

For more information about livestock siting contact the program manager at 608-224-4613.



## Livestock Facility Siting

### **Animal Units (Worksheet 1)**

The livestock siting law primarily applies to livestock operations over 500 animal units (AU). Some local governments with a preexisting ordinance elected to grandfather a lower permit threshold prior to the November 1, 2006 deadline, all ordinances adopted after this date must begin permitting at 500 or more AU. The animal equivalency factors used to calculate the size of an operation in animal units can be found in the application Worksheet 1:

[http://datcp.wi.gov/uploads/Environment/pdf/atcp051\\_app\\_a.pdf](http://datcp.wi.gov/uploads/Environment/pdf/atcp051_app_a.pdf)

### **How will we know when a facility adds enough animal units to need a permit?**

It is the livestock operator's responsibility to get a permit when required. If you determine that a livestock operator has added more animal units than allowed without getting a permit, the full range of local options are available, including issuing stop-work orders and assessing fines until a permit is issued. Some local governments may choose to establish a livestock registration system that reflects each facility's animal unit count as of the effective date of the siting rule or your ordinance, whichever is later.

### **I currently have a WPDES permit for my facility and would like to expand my operation. What do I do?**

You must complete the livestock siting application if local approval is required. Your farm may submit your WPDES permit in lieu of Worksheets 3, 4 and 5 if your WPDES permit was issued to cover the number of animal units you are planning to add to your operation.

WPDES permits allow expansions of your livestock facility within certain parameters. If your WPDES permit does not cover the full number of animal units that you are planning to expand your facility to, and you are expanding by 20%, you must complete the full siting application.

If you have a WPDES permit for your facility, as well as a local permit for your facility, you must complete a new siting application for any expansion that exceeds the number in your local permit.



## Livestock Facility Siting

### **Odor Management Standard (Worksheet 2)**

#### **Why do we need standards for odor?**

Odor is a very real and often highly charged issue for farmers, neighbors and local government in terms of health risks, perceived and real, and nuisance suits. Currently, many local governments have enacted ordinances that control livestock facility siting and odor from livestock facilities on a locally specific basis.

The odor standards set forth in the siting rule creates a more uniform approach to the regulation of odor associated with livestock operations. The intent of the standard is to simplify existing local approval processes for both livestock operators and local governments.

#### **How does the odor standard work?**

- Uses a predictive model to estimate odor from manure storage, housing and lots.
- Requires practices if a proposed facility does not have adequate distance from neighbors
- Provides a range of practices too choose from, including low cost options to manage odor
- Protects future expansions by fixing the closest neighbor at the time of the original application
- A one-time determination that does not allow for continuous odor monitoring for enforcement purposes

#### **Am I exempt from the odor standard?**

There are many facilities that are exempt from the odor standard. Your facility is exempt if:

- You are expanding your facility and will have fewer than 1,000 animal units; or
- You are building a new facility and will have fewer than 500 animal units; or
- All of the livestock structures associated with your facility will be located at least 2,500 feet from the nearest affected neighbor.

**You may voluntarily complete and comply with the odor standard even if exempt.**

#### **How do I know if my proposed facility will meet the odor standard?**

It is easy to calculate your facility's odor score by using information that is already available. To obtain an odor score, you will need your facility's predicted odor, separation score, and management score.

**Predicted Odor:** To determine this score, you will need to know the following information about your livestock operation:

- The type and size of animal housing, waste storage, and animal lots you use;
- The types of odor management practices that you use or plan to use; and
- The distance of each of your structures to your nearest affected neighbor.

The application provides odor generation numbers for each structure as well as a list of qualifying odor management practices.

**Separation Score:** Three easy factors are used to calculate your separation score:

- The average weighted distance (in feet) from your facility to your nearest affected neighbor (calculated from the predicted odor information);
- The compass direction from your facility to your nearest neighbor; and
- The density of your neighbors.

**Management Score:** Each applicant receives 80 points for completing the required employee training and incident response plans. Applicants may receive an additional 20 points for completing an optional advanced odor management plan

**Odor Score:** The odor score is the sum of your separation and management scores minus predicted odor. A score of 500 or more passes the odor standard. Local governments have limited discretion to award additional points to applicants to help them pass the standard.

Applicants have the option of completing the worksheet included in the application, or substituting the results from an automated spreadsheet available at: [www.datcp.state.wi.us](http://www.datcp.state.wi.us).

**What if my farm is large and my facility structures are not all in the same area? Do I have to calculate one “predicted odor” score and one total “odor score?”**

No. If your livestock facility structures are located in “clusters” that are 750 feet or more apart, you may calculate an odor score for each cluster.

**What if I want to use an odor control practice not included on the list of approved practices?**

Applicants can apply to DATCP for approval to use an innovative odor control best management practice. DATCP will consider the practice and approve or disapprove it. Approved practices will be awarded an odor reduction factor. Local governments must allow the use of practices that have been approved by DATCP.

For more information about the livestock siting odor standard contact Steve Struss at 608-224-4629.

### Siting Data Collection Sheet

Facility Name \_\_\_\_\_

Date: \_\_\_\_\_

County \_\_\_\_\_

T \_\_ N, R \_\_ E, Sec. \_\_\_\_

Animal units \_\_\_\_\_

Housing: Type _____	Area _____	Dist. to Neighbor _____
	(occupied area only)	
Type _____	Area _____	Dist. to Neighbor _____
Type _____	Area _____	Dist. to Neighbor _____
Type _____	Area _____	Dist. to Neighbor _____
Type _____	Area _____	Dist. to Neighbor _____
Type _____	Area _____	Dist. to Neighbor _____
Type _____	Area _____	Dist. to Neighbor _____

Bedding: Sand      Straw      Bedded Pack      Other \_\_\_\_\_

Manure management: Scrape to storage      Flush      Daily to weekly haul      Slatted floor

Storage: Type _____	Area* _____	Dist. to Neighbor _____
Type _____	Area* _____	Dist. to Neighbor _____
Type _____	Area* _____	Dist. to Neighbor _____
Type _____	Area* _____	Dist. to Neighbor _____

Feedlots: Paved Lot Area \_\_\_\_\_ Dist. to Neighbor \_\_\_\_\_

Unpaved Lot Area \_\_\_\_\_ Dist. to Neighbor \_\_\_\_\_

Direction of nearest neighbor N NE E SE S SW W NW

Density (number of neighbors within 1,300 feet) \_\_\_\_\_

Current odor control practices or credits (if any):

Housing: \_\_\_\_\_ Storage: \_\_\_\_\_ Lots: \_\_\_\_\_

\* Measured at the surface of the waste when the facility is at its maximum operating level



## Livestock Facility Siting

### ***Odor Management Plan***

#### **Is an odor management plan required?**

No. An odor management plan is optional. Applicants that are required or choose to meet the odor standard may write and follow an odor management plan in order to receive credit towards meeting the standard.

#### **What must an odor management plan contain?**

An odor management plan must address all of the following:

- Activities to reduce community conflict
- Practices to reduce dust
- Practices to reduce odor from feed storage leachate
- Practices to conserve water
- Practices to reduce odor from dead animals

#### **Can a local government require specific activities in the odor management plan?**

No. Applicants determine plan contents, as long as the plan addresses all of the required components. However, applicants may wish to consult with the local government to discuss what activities and practices to include in the plan.

#### **How much credit does an applicant receive for writing and following an odor management plan?**

An applicant that writes and agrees to follow an optional odor management plan will receive 20 points credit towards meeting the odor management standard.

#### **What types of activities may help to reduce community conflict?**

Many activities can help reduce community conflict over livestock facilities. While this list is not inclusive, some activities operators have successfully used to help reduce community conflict include:

- Providing car wash coupons to neighbors
- Giving neighbors notice before agitating manure pits or spreading manure
- Not spreading manure during holidays, community events and neighbor celebrations
- Cleaning roads if manure or mud is on it
- Hosting a community picnic or open house

**For more information contact the livestock siting program manager at 608-224-4613.**

**Department of Agriculture, Trade and Consumer Protection**  
**Application Form**  
**Review of Innovative Odor Control Practice**

The Department of Agriculture, Trade and Consumer Protection (DATCP) requests submittal of this checklist and related documentation in order to obtain the information necessary to evaluate an innovative odor control practice according to ATCP 51.14(5)(c). Scientific evidence to substantiate that the innovative practice reduces odors is required for evaluation.

The department will not begin review of a request for approval until a complete application is submitted. An application is complete when each question in this form is fully answered, and all available documentation is provided where required. The department will send notice if additional information is needed. Failure to submit a complete application is grounds for denial.

Documentation submitted to the department is the basis for the technical review of the practice, however the department reserves the right to further investigate odor reduction claims (e.g. consult with outside experts, request independent testing, visit sites and take odor samples).

Submit this form to:

Tim Jackson, DATCP 2811 Agriculture Drive, P.O. Box 8911, Madison, WI 53707-8911 phone 608-224-4630 or via email [timothy.jackson@wisconsin.gov](mailto:timothy.jackson@wisconsin.gov)

If the odor control practice is approved, the department will assign an odor reduction factor to be used when completing the odor standard for local approval under ATCP 51. Department approval is required before the reduction factor for an innovative odor practice can be claimed in a local application. A copy of the DATCP approval of the innovative practice must be attached to the odor worksheet.

For info on the livestock facility siting law visit <https://livestocksiting.wi.gov>

**Section 1 – Contact Information**

Legal name of applicant (business entity)

Address

Contact individual

Contact phone number

Technical contact individual (person familiar with odor practice)

Technical contact phone number

Email

Website

Page 1 of 4



**Section 2 – Structure(s) Where Odor Are Controlled by the Innovative Practice**

Check the last column for the description that best fits the structure affected by the practice.

<b>Animal Housing</b>	<b>Dairy Stanchion</b>	Daily to weekly cleaning	<input type="checkbox"/>
	<b>Dairy Free Stall and Beef &amp; Dairy Heifers (Forage Ration)</b>	Slatted floor (includes floor and pit below)	<input type="checkbox"/>
		Scrape	<input type="checkbox"/>
		Alley flush to storage	<input type="checkbox"/>
		Bedded pack	<input type="checkbox"/>
	<b>Beef Finishing (High Energy Ration)</b>	Slatted floor (includes floor and pit below)	<input type="checkbox"/>
		Scrape	<input type="checkbox"/>
		Bedded pack	<input type="checkbox"/>
	<b>Pork Gestation/ Farrow/ Nursery</b>	Slatted floor (includes floor and pit below)	<input type="checkbox"/>
		Pull plug to storage	<input type="checkbox"/>
	<b>Pork Finishing</b>	Slatted floor (includes floor and pit below)	<input type="checkbox"/>
		Pull plug to storage	<input type="checkbox"/>
		Scrape systems to storage	<input type="checkbox"/>
		Deep bedded	<input type="checkbox"/>
	<b>Poultry</b>	Broiler (litter)	<input type="checkbox"/>
		Ducks (liquid)	<input type="checkbox"/>
Layers		<input type="checkbox"/>	
Turkey and Ducks (litter)		<input type="checkbox"/>	
<b>Manure Storage</b>	Solid (stack)	<input type="checkbox"/>	
	Long term (6 months or longer)	<input type="checkbox"/>	
	Short term (less than 6 months)	<input type="checkbox"/>	
<b>Animal Lots</b>	<b>Paved</b>		<input type="checkbox"/>
	<b>Unpaved</b>	Dairy/Beef/Sheep/Goats	<input type="checkbox"/>
		Swine/Poultry	<input type="checkbox"/>

**Section 3 – Categorize and Describe the Practice**

1. Select the description(s) that best categorize the proposed innovative practice.

- Diet manipulation
- Dust suppression
- Exhaust air treatment
- Dilution or treatment of flush water
- Anaerobic digestion
- Chemical or biological additives
- Solid separation and reduction

- Water treatment
- Aerobic treatment
- Aeration
- Covers
- Manure transfer
- Moisture control
- Other: Attach description

2. Describe the components of the proposed odor innovation and how these function to reduce odor. Detail each step in the process.
3. Provide schematic drawings and specifications of the practice.
4. What are the known limitations or risks related to the use of this practice?
5. Describe the regular maintenance activities required to keep this practice functioning?
6. Explain how the proposed innovation differs from similar odor control practices listed in Worksheet 2 in ATCP 51 Appendix A. Provide details to explain how the proposed practice represents an innovation in terms of odor reduction compared to recognized practices.

**Section 4 – Performance and Supporting Documentation**

1. Describe all measurable outcomes that result from the use of this practice. For example, if the practice involves removal of manure solids, provide the percentage of solids in the final treated product.
2. Explain how these outcomes result in odor reduction using the best available science to support the claim.
3. Answer the following questions regarding documented performance of the practice.
  - a. Is there manufacturer’s published literature regarding odor control of the practice?  
 Yes  No   
 If “yes,” please attach.
  - b. Was the practice independently evaluated to substantiate its efficacy in controlling odor?  
 Yes  No   
 If “yes,” please provide the contact information of each laboratory, facility or other entity conducting an evaluation, and attach the results of all evaluations.
  - c. Have scientific peer reviewed papers been published concerning the odor control effectiveness of this practice? Yes  No   
 If “yes,” please attach.

- d. Has the practice been evaluated in a farm setting? Yes  No   
 If “yes,” please complete the table for each farm where the practice has been installed, and attach the results of all evaluations.

Facility Name	Facility Address	Facility Contact	Phone Number	Operational Status

- e. Has the odor control practice only been used in industries other than agriculture?  
 Yes  No   
 If yes, provide research, testing results and other documentation showing the effectiveness of the practice in controlling odor. Also provide explanations of how the technology can be transferred and applied to achieve similar results on the farm.
- f. Have federal, state or local agencies reviewed the effectiveness of this practice for odor control? Yes  No   
 If “yes,” please attach contact information for agencies/organizations that have evaluated the practice and the results of those reviews.

**Submit a list of attachments and documentation with this application**

**Authorized Signature:**

*I certify that the information contained in this application (including 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:**

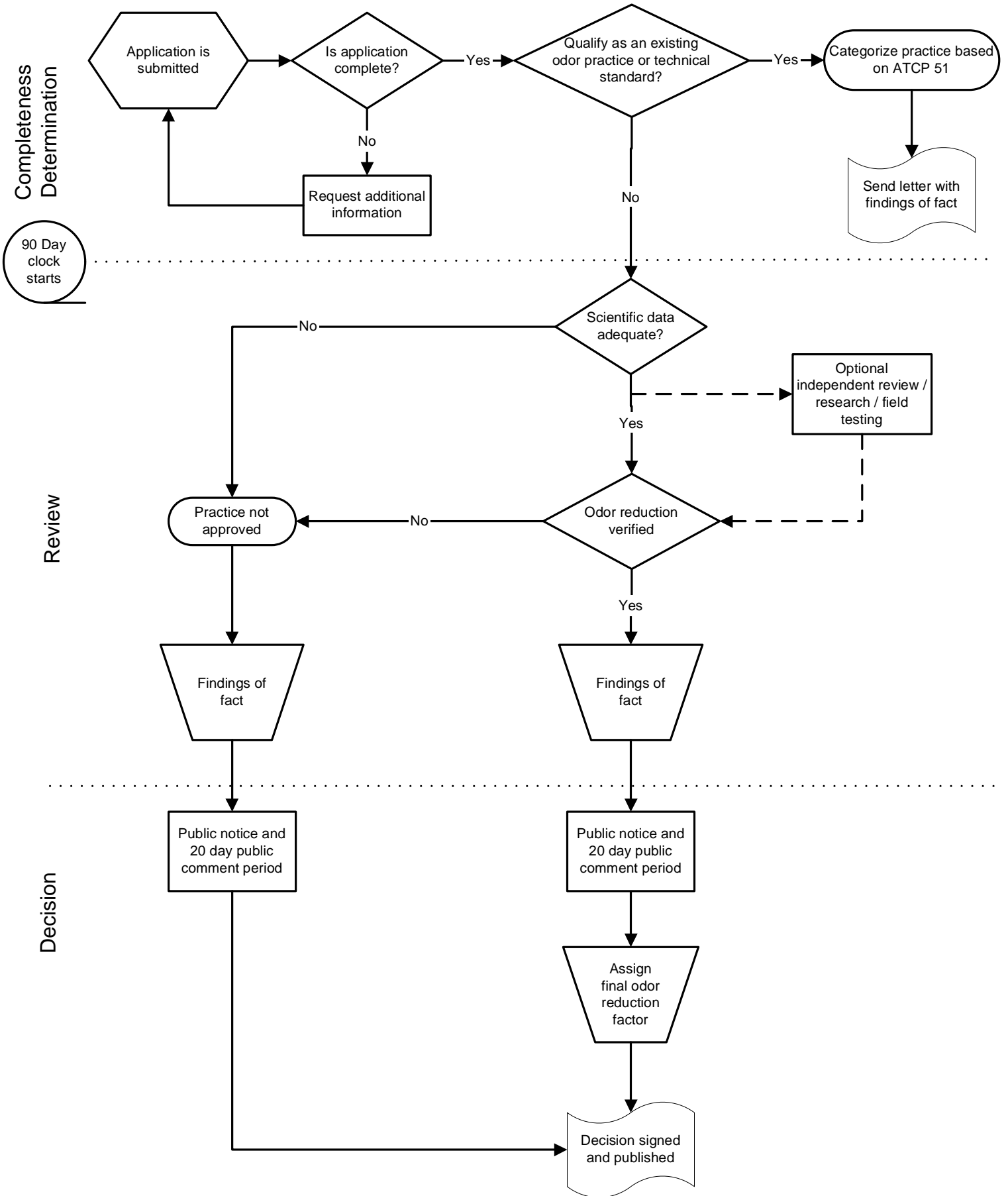
**Date Completeness Determined:**

**Date Notice Sent to Applicant:**

**FINAL DECISION:**  Approve  Deny **Final Decision Date:**

**Date Decision Sent:**

# Flow Chart for Review of Innovative Odor Control Practices DATCP July 2008





## Livestock Facility Siting

### **Waste and Nutrient Management (Worksheet 3)**

#### **Who must complete the Waste and Nutrient Management Worksheet?**

All applicants must complete Parts A and B. Applicants over 500 animal units (AU), and those under 500 AU that do not meet the required land base ratio in Part B must complete Part C (Nutrient Management Checklist).

#### **Does the application require a P-based or N-based Nutrient Management Plan?**

Applicants must meet the NRCS 590 technical standard (September 2005), which is based on Phosphorus limitations.

#### **I write my own nutrient management plan. Can I certify my own checklist?**

No. The nutrient management checklist must be signed by both the applicant and by a qualified planner other than the applicant. To find a qualified nutrient management planner, use these certifications websites. Wisconsin qualified planners are: American Society of Agronomy *Certified Crop Advisors* and *Professional Agronomists*; Soil Science Society of America *Soil Scientists* <https://www.soils.org/certifications/>; or National Association of Independent Crop Consultants *Certified Professional Crop Consultants* <http://www.naicc.org/Directory/bystate.cfm?c=wi>.

#### **Is cost-sharing available?**

Cost-sharing may be available to help you complete a nutrient management plan, but is not required. Check with your county land conservation department or NRCS office for cost-sharing availability.

#### **I have a WPDES permit. Do I need to complete this worksheet?**

Applicants with a WPDES permit that covers the animal units included in the expanded facility may substitute the WPDES permit in lieu of completing the checklist.

#### **Does this standard prohibit winter spreading?**

No. The Nutrient Management checklist requires compliance with the NRCS 590 technical standard, which limits winter spreading, but does not prohibit it. Applicants may want to consider writing and following a winter spreading plan that identifies the least risky areas to spread manure in the winter, if winter spreading may occur.

#### **Do I have to own all the land used for spreading manure?**

No. The standard requires that you have adequate land base available to meet the nutrient management checklist. Land can be owned, rented, or under contract.

#### **Can a local government require me to submit the full nutrient management plan?**

No, however a local government can require the nutrient management planner to submit documentation to substantiate any of the checklist items. A local government can also require submissions of annual updates to the plan.

For more information about nutrient management planning contact DATCP's nutrient management specialists at 608-224-4605 or 608-224-4524.

# Wisconsin Manure Quantity Estimation

V 09/01/03

Name: \_\_\_\_\_ Date: \_\_\_\_\_

Animal	Size	Daily Manure Production To Apply						Annual Manure Production To Apply					
		Solid		Liquid				Number x	Daily x	365 Day x	%	=	Total
	Lbs	Lbs/day	ft <sup>3</sup> /day	MWPS ft <sup>3</sup> /day x WI dairy & beef dilution factor	ft <sup>3</sup> /day & WI dilution	MWPS gal./day x WI dairy & beef dilution factor	gal./day & WI dilution	of Head	Total Tons or Gal.	Total	Collected	=	Total Tons or Gal.
<b>Dairy</b>													
Calf	150	13	0.200	.21*1.8=	.37	1.53*1.8=	2.80						
Calf	250	21	0.320	.33*1.8=	.60	2.47*1.8=	4.50						
Heifer	750	65	1.000	1.03*1.8=	1.85	7.70*1.8=	13.8						
Lact. Cows	1000	106	1.700	1.71*1.8=	3.07	12.7*1.8=	23.0						
	1400	148	2.400	2.38*1.8=	4.28	17.7*1.8=	32.0						
Dry Cows	1000	82	1.300	1.30*1.8=	2.35	9.7*1.8=	18.0						
	1400	115	1.820	1.82*1.8=	3.33	13.6*1.8=	25.0						
<b>Beef</b>													
Calf	450	26	0.420	.415*3.2=	1.3	3.1*3.2=	9.9						
High Forage	750	62	1.000	1.00*3.2=	3.2	7.5*3.2=	24.0						
High Forage	1100	92	1.400	1.48*3.2=	4.8	11*3.2=	35.0						
High Energy	750	54	0.870	.87*3.2=	2.7	6.5*3.2=	20.8						
High Energy	1100	80	1.260	1.27*3.2=	4.1	9.5*3.2=	30.5						
Beef Cow	1000	63	1.000	1.00*3.2=	3.2	7.5*3.2=	24.0						
<b>Swine</b>													
Nursery Pig	25	2.7	0.040		.04		.30						
Grow-Finish Pig	150	9.5	0.150		.17		1.20						
Gestating Sow	275	7.5	0.120		.14		1.00						
Sow & Litter	375	22.5	0.360		.42		3.00						
Boar	350	7.2	0.120		.14		1.00						
<b>Poultry / Other</b>													
Layers	4	0.26	0.004		.004		.03						
Broilers	2	0.18	0.003		.003		.02						
Turkeys	20	0.9	0.014		.015		.11						
Duck	6	0.33	0.005		.006		.04						
Sheep	100	4	0.060		.055		.40						
Horse	1000	50	0.800		.827		5.98						

Source: Midwest Plan Service publication number MWPS-18 "Manure Characteristics" Section 1, copyright 2000. Solid volumes are as excreted. The liquid dairy and beef values are computed from the MWPS daily production and have approximately equal nutrient values annually as solid manure. MWPS liquid dairy and beef factors are multiplied by 1.8 and 3.2 respectively. Dilution on your operation may be substantially different. Use manure analysis and manure storage volumes to determine manure production whenever possible.

Manure quantities are likely to be more accurate estimated from storage size:

What is the manure storage pit size? \_\_\_\_\_ gallons or tons?

Multiply pit size x Number of times emptied/yr? \_\_\_\_\_ = Total annual manure collection

# Available Manure Nutrients

V 09/01/03

Manure analysis testing for available nutrients in (lbs./ton or lbs./1000 gallons) N \_\_\_ P<sub>2</sub>O<sub>5</sub> \_\_\_ K<sub>2</sub>O \_\_\_

## Manure book values for available nutrients in (lbs./ton or lbs./1000 gallons)

Species/ Management	Total Available Nutrients from Solid Manure lbs./ton				Species/ Management	Total Available Nutrients from Liquid Manure lbs./ 1,000 gallons			
	N	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O		N	N	P <sub>2</sub> O <sub>5</sub>	K <sub>2</sub> O
	Surface applied	Incorporated by 3 <sup>rd</sup> day				Surface applied	Incorporated by 3 <sup>rd</sup> day		

### One Year of Application

Dairy	3	4	3	7	Dairy	7	10	5	16
Beef	4	5	5	9	Veal calf	6	8	6	20
Swine	7	9	6	7	Beef	5	7	5	16
Duck	9	10	13	24	Swine indoor pit	25	33	25	24
Chicken	20	24	30	24	Swine outdoor pit	17	22	10	16
Turkey	20	24	24	24	Swine farrow nursery indoor pit	13	16	14	18
Sheep	7	9	11	32	Poultry	8	10	6	10
Horse	3	4	4	8					

### Two Consecutive Years of Application

Dairy	4	5	4	8	Dairy	10	12	6	18
Beef	5	6	6	10	Veal calf	8	9	7	23
Swine	8	11	7	8	Beef	7	9	6	18
Duck	10	12	15	27	Swine indoor pit	30	38	29	27
Chicken	24	28	35	27	Swine outdoor pit	20	26	11	18
Turkey	24	28	28	27	Swine farrow nursery indoor pit	15	19	16	20
Sheep	9	12	13	36	Poultry	10	11	7	11
Horse	4	5	4	9					

### Three or More Consecutive Years of Application

Dairy	5	6	4	9	Dairy	11	13	7	19
Beef	6	7	7	10	Veal calf	8	10	8	24
Swine	9	11	8	9	Beef	8	10	7	19
Duck	11	13	16	29	Swine indoor pit	33	40	32	29
Chicken	26	30	38	29	Swine outdoor pit	22	27	12	19
Turkey	26	30	30	29	Swine farrow nursery indoor pit	16	20	17	21
Sheep	10	13	14	38	Poultry	10	12	8	11
Horse	4	5	5	10					

Figures are rounded to the nearest whole pound. Manure book values table replaces UWEX Publication A-2809 (1998)

## Wisconsin Certified Laboratories

A Wisconsin nutrient management plan must be based on soil tests conducted at the soil testing laboratory certified by the Department of Agriculture, Trade and Consumer Protection. This requirement ensures soil test results and recommendations will be generated through analytical procedures approved by the University of Wisconsin. The results are consistent. Laboratories must perform with a certain level of success, to remain certified.

The following soil testing laboratories are Wisconsin DATCP certified. The laboratories participating in the Manure Analysis Proficiency (MAP) program are indicated below to provide quality control to the Laboratory Analysis Industry. You can learn more about the MAP program and find other participating laboratories at <http://ghex.colostate.edu/map/>.

UW Soil & Plant Analysis Laboratory  
5711 Mineral Point Rd  
Madison, WI 53705  
(608)262-4364  
soil-lab@uwmadmail.services.wisc.edu

UW Soil & Forage Lab  
8396 Yellowstone Dr.  
Marshfield, WI 54449  
(715)387-2523  
jbpeter1@facstaff.wisc.edu  
MAP participant

Agsources Soil & Forage Lab  
106 N. Cecil Street  
Bonduel, WI 54107  
(715)758-2178  
aglab@agsources.com  
MAP participant

Rock River Laboratory  
PO Box 169  
Watertown, WI 53904  
(920)261-0446  
rrllab@execpc.com  
MAP participant

Dairyland Laboratories  
217 E. Main Street  
Arcadia, WI 54612  
(608)323-2123  
info@dairylandlabs.com  
MAP participant

A&L Great Lakes  
Laboratories  
3505 Conestoga Dr.  
Fort Wayne, IN 46808  
(219)483-4759  
lparker@algreatlakes.com  
MAP participant

Mowers Soil Testing Plus, Inc.  
117 E Main St  
Toulon, IL 61483  
(309)286-2761  
swiedman@mowersplus.com

Logan Labs  
P.O. Box 1455  
184 West Main Street  
Russells Point, OH 43348  
Ph: (937) 842-6100



## Natural Resources Conservation Service

### CONSERVATION PRACTICE STANDARD

### NUTRIENT MANAGEMENT

#### CODE 590

#### (ac)

#### DEFINITION

Manage rate, source, placement, and timing of plant nutrients and soil amendments while reducing environmental impacts.

#### PURPOSE

This practice is used to accomplish one or more of the following purposes:

- Improve plant health and productivity.
- Reduce excess nutrients in surface and ground water.
- Reduce emissions of objectionable odors.
- Reduce emissions of particulate matter (PM) and PM precursors.
- Reduce emissions of greenhouse gases (GHG).
- Reduce emissions of ozone precursors.
- Reduce the risk of potential pathogens from manure, biosolids, or compost application from reaching surface and ground water.
- Improve or maintain soil organic matter.

#### CONDITIONS WHERE PRACTICE APPLIES

All fields where plant nutrients and soil amendments are applied. Does not apply to one-time nutrient applications at establishment of permanent vegetation.

#### CRITERIA

##### **General Criteria Applicable to All Purposes**

Develop a nutrient management plan for nitrogen (N), phosphorus (P), and potassium (K), which accounts for all known measurable sources and removal of these nutrients.

Sources of nutrients include, but are not limited to, commercial fertilizers (including starter and in-furrow starter/pop-up fertilizer), animal manures, legume fixation credits, green manures, plant or crop residues, compost, organic by-products, municipal and industrial biosolids, wastewater, organic materials, estimated plant available soil nutrients, and irrigation water.

When irrigating, apply irrigation water in a manner that reduces the risk of nutrient loss to surface and ground water.

Follow all applicable State requirements and regulations when applying nutrients near areas prone to contamination, such as designated water quality sensitive areas, (e.g., lakes, ponds, rivers and streams,



sinkholes, wellheads, classic gullies, ditches, or surface inlets) that run unmitigated to surface or groundwater.

### **Soil and tissue testing and analysis**

Base the nutrient management plan on current soil test results in accordance with land grant university (LGU) guidance, or industry practice when recognized by the LGU. Use soil tests no older than 2 years when developing new nutrient management plans. Use tissue testing, when applicable, for monitoring or adjusting the nutrient management plan in accordance with LGU guidance, or industry practice when recognized by the LGU.

For nutrient management plan revisions and maintenance, take soil tests on an interval recommended by the LGU or as required by local rules and regulations.

Collect, prepare, store, and ship all soil and tissue samples following LGU guidance or industry practice. The test analyses must include pertinent information for monitoring or amending the annual nutrient plan. Follow LGU guidelines regarding required analyses and test interpretations.

For soil test analyses, use laboratories successfully meeting the requirements and performance standards of the North American Proficiency Testing Program under the auspices of the Soil Science Society of America and NRCS or use an alternative NRCS- or State-approved certification program that considers laboratory performance and proficiency to assure accuracy of soil test results. Alternative certification programs must have solid stakeholder support (e.g., State department of agriculture, LGU, water quality control entity, NRCS State staff, growers, and others) and be State or regional in scope.

Maintain soil pH within ranges which enhance the adequate level for plant or crop nutrient availability and utilization. Refer to State LGU documentation for guidance.

### **Manure, organic by-product, and biosolids testing and analysis**

Collect, prepare, store, and ship all manure, organic by-products, and biosolids following LGU guidance or industry practice when recognized by the LGU. In the absence of such guidance, test at least annually, or more frequently if needed to account for operational changes (e.g., feed management, animal type, manure handling strategy, etc.) impacting manure nutrient concentrations. If no operational changes occur and operations can document a stable level of nutrient concentrations for the preceding 3 consecutive years, manure may be tested less frequently, unless Federal, State, or local regulations require more frequent testing. Follow LGU guidelines regarding required analyses and test interpretations. Analyze, as a minimum, total N, total P or  $P_2O_5$ , total K or  $K_2O$ , and percent solids.

When planning for new or modified livestock operations, and manure tests are not available yet, use the output and analyses from similar operations in the geographical area if they accurately estimate nutrient output from the proposed operation or use "book values" recognized by the NRCS (e.g., NRCS Agricultural Waste Management Field Handbook) and the LGU.

For manure analyses, use laboratories successfully meeting the requirements and performance standards of the Manure Testing Laboratory Certification program under the auspices of the Minnesota Department of Agriculture or other NRCS-approved program that considers laboratory performance and proficiency to assure accurate manure test results.

For nutrient management plans developed as a component of a comprehensive nutrient management plan for an animal feeding operation (AFO) follow policy in NRCS directive General Manual (GM) 190, Part 405, "Comprehensive Nutrient Management Plans." These plans must include documentation of all nutrient imports, exports, and on-farm transfers.

### **Nutrient loss risk assessments**

Use current NRCS-approved nitrogen, phosphorus, and soil erosion risk assessment tools to assess the site-specific risk of nutrient and soil loss.

Complete an NRCS-approved nutrient risk assessment for N on all fields where nutrient management is planned unless the State NRCS, in cooperation with State water quality control authorities, has determined specific conditions where N leaching is not a risk to water quality, including drinking water.

Complete an NRCS-approved nutrient risk assessment for P when any of the following conditions are met—

- P application rate exceeds LGU fertility rate guidelines for the planned crop(s).
- The planned area is within a P-impaired watershed.
- The site-specific conditions equating to low risk of P loss have not been determined by the NRCS in cooperation with the State water quality control authority.

Any fields excluded from a P risk assessment must have a documented agronomic need for P, based on soil test P and LGU nutrient recommendations.

For fields receiving manure, where P risk assessment results equate to—

- **LOW risk.**—Manure can be applied at rates to supply P at greater than crop requirement not to exceed the N requirement for the succeeding crop.
- **MODERATE risk.**—Manure can be applied at rates not to exceed crop P removal rate or the soil test P recommended rate for the planned crops in rotation.
- **HIGH risk.**—Manure can be applied at rates not to exceed crop P removal rate if the following requirements are met:
  - A soil P drawdown strategy has been developed, documented, and implemented for the crop rotation.
  - Implementation of all mitigation practices determined to be needed by site-specific assessments for nutrients and soil loss to protect water quality.
  - Any deviation from these high-risk requirements that would increase the risk of P runoff requires the approval of the Chief of the NRCS.

### **The 4Rs of nutrient stewardship**

Manage nutrients based on the 4Rs of nutrient stewardship—apply the right nutrient source at the right rate at the right time in the right place—to improve nutrient use efficiency by the crop and to reduce nutrient losses to surface and groundwater and to the atmosphere.

#### Nutrient source

Choose nutrient sources compatible with application timing, tillage and planting system, soil properties, crop, crop rotation, soil organic content, and local climate to minimize risk to the environment.

Determine nutrient values of all nutrient sources (e.g. commercial fertilizers, manure, organic by-products, biosolids) prior to land application.

Determine nutrient contribution of cover crops, previous crop residues, and soil organic matter.

For operations following USDA's National Organic Program, apply and manage nutrient sources according to program regulations.

For enhanced efficiency fertilizer (EEF) products, use products defined by the Association of American Plant Food Control Officials as EEF and recommended for use by the State LGU.

In areas where salinity is a concern, select nutrient sources that limit the buildup of soil salts. When manures are applied, and soil salinity is a concern, monitor salt concentrations to prevent potential plant or crop damage and reduced soil quality.

Apply manure or organic by-products on legumes at rates no greater than the LGU estimated N removal rates in harvested plant biomass, not to exceed P risk assessment limitations.

For any single application of nutrients applied as liquid (e.g., liquid manure, nutrients in irrigation water, fertigation)—

- Do not exceed the soil's infiltration rate or water holding capacity.
- Apply so that nutrients move no deeper than the current crop rooting depth.
- Avoid runoff or loss to subsurface tile drains.

#### Nutrient rate

Plan nutrient application rates for N, P, and K using LGU recommendations or industry practices when recognized by the LGU. Lower-than-recommended nutrient application rates are permissible if the client's objectives are met.

At a minimum, determine the rate based on crop/cropping sequence, current soil test results, and NRCS-approved nutrient risk assessments. Where applicable, use realistic yield goals.

For new crops or varieties where LGU guidance is unavailable, industry-demonstrated yield and nutrient uptake information may be used.

Estimate realistic yield potentials or realistic yield goals using LGU procedures or based on historical yield or growth data, soil productivity information, climatic conditions, nutrient test results, level of management, and/or local research results considering comparable management and production conditions.

#### Nutrient application timing and placement

Consider the nutrient source, management and production system limitations, soil properties, weather conditions, drainage system, soil biology, and nutrient risk assessment to develop optimal timing of nutrients. For N, time the application as closely as practical with plant and crop uptake. For P, time planned surface application when runoff potential is low. Time the application of all nutrients to minimize potential for soil compaction.

For crop rotations or multiple crops grown in one year, do not apply additional P if it was already added in an amount sufficient to supply all crop nutrient needs.

To avoid salt damage, follow LGU recommendations for the timing, placement, and rate of applied N and K in starter fertilizer or follow industry practice recognized by the LGU.

Do not surface apply nutrients when there is a risk of runoff, including when—

- Soils are frozen.
- Soils are snow-covered.
- The top 2 inches of soil are saturated.

Exceptions for the above criteria related to surface-applied nutrients when there is a risk of runoff can be made when specified conditions are met and adequate conservation measures are installed to prevent the offsite delivery of nutrients. NRCS, in cooperation with the State water quality control authority, will define adequate treatment levels and specified conditions for applications of manure if soils are frozen and/or snow covered or the top 2 inches of soil are saturated. At a minimum, must consider the following site and management factors:

- Climate (long-term)
- Weather (short-term)
- Soil characteristics
- Slope

- Areas of concentrated flow
- Organic residue and living covers
- Amount and source of nutrients to be applied
- Setback distances to protect local water quality

#### **Additional Criteria to Minimize Agricultural Nonpoint Source Pollution of Surface and Groundwater**

Apply conservation practices to avoid nutrient loss and control and trap nutrients before they can leave the field(s) by surface, leaching, or subsurface drainage (e.g., tile, karst) when there is a significant risk of transport of nutrients.

#### **Additional Criteria to Reduce the Risk of Potential Pathogens From Manure, Biosolids, or Compost Application From Reaching Surface and Groundwater**

When applicable, follow proper biosecurity measures as provided in NRCS directives GM-130, Part 403, Subpart H, "Biosecurity Preparedness and Response."

Follow all applicable Federal, Tribal, State, and local laws and policies concerning the application of manure, biosolids, or compost in the production of fresh, edible crops.

Apply manure, biosolids, or compost with minimal soil disturbance or by injection into the soil unless it is being applied to an actively growing crop, a minimum of 30 percent residue exists, or there is a living cover that has a fibrous root system with 75 percent or more cover. Do not surface apply manure if a storm event is forecast within 24 hours.

#### **Additional Criteria to Reduce Emissions of Objectionable Odors, PM and PM Precursors, and GHG and Ozone Precursors**

To address air quality concerns caused by odor, N, sulfur, and particulate emissions; adjust the source, timing, amount, and placement of nutrients to reduce the negative impact of these emissions on the environment and human health.

Do not surface apply solid nutrient sources, including commercial fertilizers, manure, or organic by-products of similar dryness/density when there is a high probability that wind will blow the material and emissions offsite. Do not surface apply liquid nutrient sources when there is a high probability that wind will blow the liquid droplets applied from sprinklers or other applicable methods offsite.

Reduce the potential for volatilization by applying sources subject to volatilization during cooler, higher humidity conditions or by placement that minimizes vulnerability to volatilization.

#### **Additional Criteria to Improve or Maintain Organic Matter**

Design the plant or crop management systems so the soil conditioning index (SCI) organic matter subfactor is positive.

Apply manure, compost, or other organic nutrient sources at a rate and with minimal disturbance that will improve soil organic matter without exceeding acceptable risk of N or P loss.

For low residue plant or cropping systems, apply adequate nutrients to optimize plant or crop residue production to maintain or increase soil organic matter.

### **CONSIDERATIONS**

#### **General Considerations**

Consider development of nutrient management plans by conservation management unit (CMU). A CMU is a field, group of fields, or other land units of the same land use and having similar treatment needs and planned management. A CMU is a grouping by the planner to simplify planning activities and facilitate development of conservation management systems. A CMU has definitive boundaries such as fencing, drainage, vegetation, topography, or soil lines.

Develop site-specific yield maps using a yield monitoring system, multispectral imagery or other methods. Use the data to further delineate low- and high-yield areas, or zones, and make the necessary management changes. Use variable rate nutrient application based on site-specific factor variability. See NRCS directive Agronomy Technical Note (TN) 190, AGR.3, "Precision Nutrient Management Planning."

Use the adaptive nutrient management learning process to improve nutrient use efficiency on farms as outlined in NRCS' national nutrient policy in GM-190, Part 402, "Nutrient Management." Consider using an adaptive approach to adjust nutrient rate, timing, form, and placement as soil biologic functions and soil organic matter changes over time. See NRCS directive Agronomy Technical Note (TN) 190, AGR.7, "Adaptive Nutrient Management Process."

When developing new nutrient management plans, consider using soil test information no older than 1 year rather than 2 years.

Develop a whole farm nutrient budget (nutrient mass balance), including all imported and exported nutrients. Imports may include feed, fertilizer, animals and bedding, while exports may include crop removal, animal products, animal sales, manure, and compost.

Modify animal feed diets to reduce the nutrient content of manure following guidance contained in Conservation Practice Standard (CPS) Feed Management (Code 592).

Provide a nutrient analysis of all nutrient source exports (manure or other materials).

Excessive levels of some nutrients can cause induced deficiencies of other nutrients, (e.g., high soil test P levels can result in zinc deficiency in corn).

Use soil tests, plant tissue analyses, and field observations to check for secondary plant nutrient deficiencies or toxicity that may impact plant growth or availability of the primary nutrients.

Do not apply K in situations where an excess (greater than soil test K recommendation) causes nutrient imbalances in crops or forages.

Use bioreactors and multistage drainage strategies to mitigate nutrient loss pathways, as applicable.

Use legume crops and cover crops to provide N through biological fixation. Cover crops with a carbon to nitrogen ratio below 20:1 can release a large amount of soluble N after being plowed or tilled into the soil when an actively growing crop is not present to take up nutrients, leading to increased risks of nitrate movement and nitrous oxide emissions. The nitrous oxide emissions often occur in high soil moisture conditions, such as when a legume cover crop is plowed down in fall or early spring. To avoid these losses, use grass-legume or grass-legume-forbs mixtures with a more balanced carbon to nitrogen ratio.

Use winter hardy grass cover crops to take up excess N after the cash crop growing season and promote contribution of the nitrogen to next plant or crop.

Use conservation practices that slow runoff, reduce erosion, and increase infiltration (e.g., filter strip, contour farming, or contour buffer strips).

Use application methods, timing, technologies or strategies to reduce the risk of nutrient movement or loss, such as—

- Split nutrient applications.
- Banded applications.
- Injection of nutrients below the soil surface.
- Incorporate surface-applied nutrient sources when precipitation capable of producing runoff or erosion is forecast within the time of a planned application.
- High-efficiency irrigation systems and technology.

- Enhanced efficiency fertilizers
  - Slow or controlled release fertilizers
  - Nitrification inhibitors
  - Urease inhibitors.
- Drainage water management.
- Tissue testing, chlorophyll meters, or real-time sensors.
- Pathogen management considerations.

When a recycled product (e.g., compost) is to be used as a nutrient source on food crops or as food for humans or animals, make sure that pathogen levels have been reduced to acceptable levels (reference the Food and Drug Administration's Food Safety Modernization Act at [www.fda.gov/FSMA](http://www.fda.gov/FSMA)). When the recycled product has come from another farming operation, implement biosecurity measures and evaluate the risk of pathogen transfer that could cause plant or animal diseases.

Use manure treatment systems that reduce pathogen content from manure.

Implementing a soil health management system that reduces tillage or other soil disturbance, includes a diverse rotation of crops and cover crops, keeps roots growing throughout the year, and keeps the soils covered to reduce nutrient losses, and improves—

- Nutrient use efficiency, rooting depth, and availability of nutrients.
- Soil organic matter levels.
- Availability of nutrients from organic sources.
- Aggregate stability and soil structure.
- Infiltration, drainage, and aeration of the soil profile.
- Soil biological activity.
- Water use efficiency and available moisture.

Use targeted or prescribed livestock grazing to enhance nutrient cycling and improve soil nutrient cycling functions.

Elevated soil test P levels may lead to reduced mycorrhizal fungal associations and immobilize some micronutrients, such as iron, zinc, and copper.

Apply manure, compost, or other nutrient sources with minimal soil disturbance and at a rate that will improve soil organic matter without exceeding acceptable risk of N or P loss.

## **PLANS AND SPECIFICATIONS**

In the nutrient management plan, document—

- Aerial site photograph(s), imagery, topography, or site map(s).
- Soil survey map of the site.
- Soil information including: soil type, surface texture, drainage class, permeability, available water capacity, depth to water table, restrictive features, and flooding and ponding frequency.
- Location of designated sensitive areas and the associated nutrient application restrictions and setbacks.
- Location of nearby residences, or other locations where humans may be present on a regular basis, that may be impacted if odors or PM are transported to those locations.
- Results of approved risk assessment tools for N, P, and erosion losses.
- Documentation establishing the application site presents a low risk for P transport to local water if P is applied in excess of crop requirement.

- Current and planned plant production sequence or crop rotation.
- All available test results (e.g. soil, water, compost, manure, organic by-product, and plant tissue sample analyses) upon which the nutrient budget and management plan are based.
- When soil P levels are increasing above an agronomic level, include a discussion of the risk associated with P accumulation and a proposed P draw-down strategy.
- Realistic yield goals for the crops (where applicable for developing the nutrient management plan).
- Nutrient recommendations for N, P, and K for the entire plant production sequence or crop rotation.
- Listing, quantification, application method and timing for all nutrient sources (including all enhanced efficiency fertilizer products) that are planned for use and documentation of all nutrient imports, exports, and onsite transfers.
- Guidance for implementation, operation and maintenance, and recordkeeping.

For variable rate nutrient management plans, also include—

- Geo-referenced field boundary and data collected that was processed and analyzed as a GIS layer or layers to generate nutrient or soil amendment recommendations per management zone. Must include site-specific yield maps using soils data, current soil test results, and a yield monitoring system with GPS receiver to correlate field location with yield.
- Nutrient recommendation guidance and recommendation equations used to convert the GIS base data layer or layers to a nutrient source material recommendation GIS layer or layers.
- After implementation, provide application records per management zone or as applied map within individual field boundaries (or electronic records) documenting source, timing, method, and rate of all nutrient or soil amendment applications.

If increases in soil P levels are expected above an agronomic level (i.e., when N-based rates are used), document—

- Soil P levels at which it is desirable to convert to P-based planning.
- A long-term strategy and proposed implementation timeline for soil test P drawdown from the production and harvesting of crops.
- Management activities or techniques used to reduce the potential for P transport and loss.
- For AFOs, a quantification of manure produced in excess of crop nutrient requirements.

## **OPERATION AND MAINTENANCE**

Review or revise plans periodically to determine if adjustments or modifications are needed. At a minimum, review and revise plans as needed with each soil test cycle, changes in manure management, volume or analysis, plants and crops, or plant and crop management.

Monitor fields receiving animal manures and biosolids for the accumulation of heavy metals and P in accordance with LGU guidance and State law.

For animal feeding operation, significant changes in animal numbers, management, and feed management will necessitate additional manure analyses to establish a revised average nutrient content.

Calibrate application equipment to ensure accurate distribution of material at planned rates. For products too dangerous to calibrate, follow LGU or equipment manufacturer guidance on proper equipment design, plumbing, and maintenance.

Document the nutrient application rate. When the applied rate differs from the planned rate, provide appropriate documentation to explain the difference.

Protect workers from and avoid unnecessary contact with nutrient sources. Take extra caution when handling anhydrous ammonia or when managing organic wastes stored in unventilated tanks, impoundments, or other enclosures.

Use material generated from cleaning nutrient application equipment in an environmentally safe manner. Collect, store, or field apply excess material in an appropriate manner.

Recycle or dispose of nutrient containers in compliance with State and local guidelines or regulations.

Maintain records for at least 5 years to document plan implementation and maintenance. Records must include—

- All test results (soil, water, compost, manure, organic by-product, and plant tissue sample analyses) upon which the nutrient management plan is based.
- Listing and quantification of all nutrient sources (including all enhanced efficiency fertilizer products) that are planned for use and documentation of all nutrient imports, exports and onsite transfers.
- Date(s), method(s), and location(s) of all nutrient applications.
- Weather conditions and soil moisture at the time of application, elapsed time from manure application to rainfall or irrigation event(s).
- Plants and crops planted, planting and harvest dates, yields, nutrient analyses of harvested biomass, and plant or crop residues removed.
- Dates of plan review, name of reviewer, and recommended adjustments resulting from the review.

For variable rate nutrient management plans, also include—

- Maps identifying the variable application location, source, timing, amount, and placement of all plant and crop nutrients applied.
- GPS-based yield maps for crops where yields can be digitally collected.

## REFERENCES

Association of American Plant Food Control Officials (AAPFCO). 2017. AAPFCO Official Publication no. 70. AAPFCO Inc., Little Rock, AR.

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## Livestock Facility Siting

### **Waste Storage Standard (Worksheet 4)**

#### **How does this standard affect my existing waste storage facility?**

Applicants with an existing waste storage structures must have the worksheet completed and signed by a registered professional engineer or a certified agricultural engineering practitioner. They must certify that the structure was constructed to the NRCS design specifications in place when the structure was built, and that it has no apparent signs of structural failure or significant leakage.

#### **What if the engineer finds leaks or structural failure?**

If an engineer finds signs of structural failure or significant leakage, the applicant can repair the structure or abandon it according to NRCS technical standard 360. Costs to repair a structure can range from \$2000 for minor repairs to over \$250,000 if a complete rebuild, with liner, is required. Costs to abandon a facility can range from \$2500 to \$10,000. Cost-sharing to abandon a waste storage structure may be available, but is not required.

#### **What standard must I meet if I build a new waste storage facility?**

New waste storage facilities must meet be designed, constructed, and maintained according to the NRCS technical standard 313 (November 2004).

#### **Are there any required setbacks for waste storage facilities?**

The siting rule requires *new* waste storage facilities be setback at least 350' from roads and property lines. If a county or town allows a smaller minimum setback, the smaller setback would apply.

You may build one new waste storage facility parallel to an existing facility, as long as the existing facility remains in use, and the new facility is no large than the existing facility and is located within 50' of the existing structure.

#### **Can I expand an existing waste storage facility that does not meet the 350' setback?**

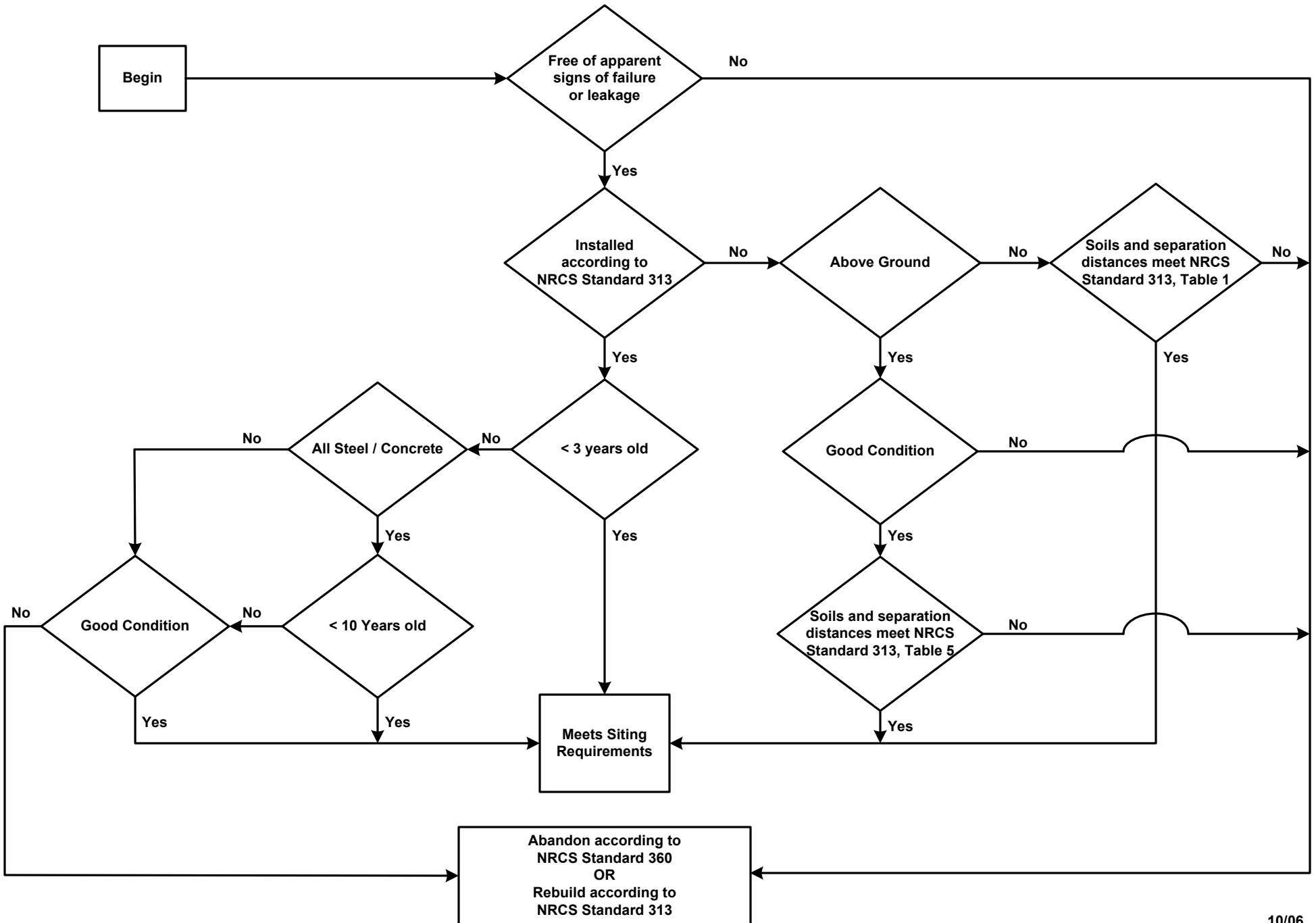
You may expand an existing waste storage facility that does not meet the 350' setback requirement, as long as you expand the existing facility away from the setback.

#### **What standard must I meet if I want to close or abandon a waste storage facility?**

If a waste storage facility is closed as part of construction or expansion of a livestock facility, it must meet NRC technical standards 360 (December 2002).

For more information contact the livestock siting program manager at 608-224-4613.

# Is The Existing Waste Storage Facility Adequate?





## Livestock Facility Siting

### Runoff Management (Worksheet 5)

#### How much runoff are we allowed to have from our animal lots?

It varies. **New and substantially altered animal lots** must be constructed according to NRCS technical standard 635 (January 2002).

For **existing animal lots**, you must use the BARNY model to measure runoff at the end of the treatment area. P runoff cannot exceed 5 lbs per year for lots near surface water (within 300 feet of a stream or 1000 feet of a lake), and 15lbs per year for all other animal lots. No animal lots can discharge to a direct conduit to groundwater.

The BARNY model is available on the DATCP website at [www.datcp.state.wi.us/arm/agriculture/land-water/livestock\\_siting/application\\_materials.jsp](http://www.datcp.state.wi.us/arm/agriculture/land-water/livestock_siting/application_materials.jsp)

#### What facilities must meet the feed storage standard?

The feed storage standard only applies to facilities storing and handling high moisture feed ( $\geq 70\%$ ).

#### What does the feed storage standard require?

Leachate from feed storage facilities can pollute surface and groundwater. **Existing** paved or bunker feed storage structures must direct surface water from entering the structures and most collected leachate before it leaves the bunker or structure, if the paved area exceeds 1 acre. Leachate must be stored and disposed of to prevent discharge to waters of the state.

**New or substantially altered** feed storage structures that will store or handle high moisture feed must be designed, constructed and maintained to meet the standards listed in the worksheet. New and substantially altered structures must meet a higher standard than existing structures.

#### Does my facility have to meet the agricultural performance standards?

Yes. Some of the performance standards, such as nutrient management, are included as separate worksheets in the siting application. Other performance standards are required as part of the runoff management worksheet. By signing the runoff management worksheet, you are agreeing that your facility will be designed, constructed, and maintained to meet the required standards.

#### Is cost-sharing required to help me meet the runoff standards?

Your facility may be eligible for cost-sharing if it is available. However, a local government is not required to offer you cost-sharing. Check with your county land conservation department or NRCS office for more information about cost-sharing availability.

#### Who has to sign this worksheet?

The runoff management worksheet must be signed by both the applicant and a professional engineer or certified agricultural practitioner.

For more information contact the livestock siting program manager at 608-224-4613.

## ATCP 51 Application Review Checklist Completeness Determination

This review is confined to considerations related to completeness of the application, including selective checks for consistency. This completeness review does not include an evaluation of the underlying documentation submitted with the application (e.g. plans and specifications) to determine compliance with state standards. Review for compliance with the siting standards is the next step after the completeness determination.

Applicant (Livestock Facility Name):

Local unit of government:

The application was provided by (e.g. applicant / consultant / political subdivision):

Date application and related documentation was submitted to DATCP:

Reviewed by (staff):

Date review completed:

### Review of Application, Worksheets and Attachments

(numbers refer to sections of the referenced application materials)

#### Application Form pages 390-11 to 390-20

##### Completeness Considerations

	<b>Complete</b>	<b>Incomplete</b>	<b>Not submitted</b>
1) Area map # 9 – legible, scaled properly, appropriately labeled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2) Site map (plan) # 10 - legible, scaled properly, appropriately labeled	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3) Location of livestock structures # 11 - map or narrative	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4) Employee Training Plan # 12 - addresses required elements	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5) Environmental Incident Response Plan # 13 - addresses required elements.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6) Optional Odor Management Plan # 14 - addresses required elements (only submitted if credit taken on Worksheet 2)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7) Page 390-20 is signed (last page)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

#### Worksheet 1 – Animal Units

##### Completeness Considerations

	<b>Complete</b>	<b>Incomplete</b>	<b>Not submitted</b>
8) Animal units for each livestock type are calculated, and all types are summed for a total	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
9) Total animal units calculated in Worksheet 1 is consistent with the maximum number of animal units listed in # 8 on p. 390-17	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
10) Worksheet is signed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

**Worksheet 2 – Odor Management**

Completeness Considerations

**Complete      Incomplete      Not submitted**

11) Facility is exempt and the appropriate box checked  
 Note: Expanding facilities under 1000 AU, new facilities under 500 AU, and any facility greater than 2500 feet from nearest affected neighbor are exempt, but may voluntarily complete and comply with this standard

12) Tables A and B are completed, or a copy of the spreadsheet printout is attached (skip this if exempt)

13) Worksheet is signed

**Notes:**

**WPDES permit substitution for Worksheets 3, 4, and 5**

(If completed, skip sections of this checklist for Worksheets 3, 4, and 5)

Completeness Considerations

**Complete      Incomplete      Not applicable**

14) A current WPDES permit is attached (at minimum includes a cover letter demonstrating the permit has not expired)

15) The WPDES permit covers an equal or greater number of animal units housed in the same locations proposed in the siting application

**Notes:**

**Worksheet 3 – Waste and Nutrient Management**

Completeness Considerations

**Complete      Incomplete      Not submitted**

16) Worksheet 3 Part A

17) Worksheet 3 Part B, including maps required by # 2

18) Worksheet 3 Part B - animal unit number in # 1 is consistent with the maximum animal unit number in Worksheet 1 and # 8 on p. 390-17

19) Worksheet 3 Parts A and B are signed

20) Worksheet 3 Part C (required when > 500 AU or less than the ratio in Worksheet 3 Part B # 6)

21) Worksheet 3 Part C is signed by a Qualified Nutrient Management Planner

22) The total acres of cropland available for land application listed in Worksheet 3 Part B # 4 is consistent with the total acres listed in Worksheet 3 Part C

23) Worksheet 3 Part C is signed if required

**Notes:**

**Worksheet 4 – Waste Storage Facilities**

Completeness Considerations

	<b>Complete</b>	<b>Incomplete</b>	<b>Not submitted</b>
24) All new or substantially altered storage facilities are identified, and design specifications attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
25) All existing storage facilities are identified, and the appropriate verification checkbox marked	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
26) Closure specifications are attached (if applicable)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
27) Combined useable storage capacity is consistent with the total waste storage capacity on Worksheet 3 Part A (sum of numbers in column A)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
28) Signed by registered professional engineer (whose license number and seal are provided) or a certified agricultural engineering practitioner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

**Worksheet 5 – Runoff Management**

Completeness Considerations

	<b>Complete</b>	<b>Incomplete</b>	<b>Not submitted</b>
29) All the following are identified (map or narrative): new or substantially altered animal lots, existing animal lots, new or substantially altered feed storage, existing feed storage	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
30) For each new and substantially altered animal lot (# 1), design specifications are attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
31) An explanation is attached for any existing lots with minor alterations (# 2 and # 3)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
32) For each new and substantially altered feed storage for high moisture feed (# 3), design specifications are attached	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
33) Signed by registered professional engineer (whose license number and seal are provided) or a certified agricultural engineering practitioner	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
34) Worksheet is signed by applicant	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

**If applicable, additional documentation for more stringent requirements (can only be required if the local government meets requirements for more stringent regulation)**

Completeness Considerations

	<b>Complete</b>	<b>Incomplete</b>	<b>Not submitted</b>
35) Required submissions are provided	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
36) Design specifications are attached (if required)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**Notes:**

I:\lw\LIVESTOCK FACILITY SITING\Information and Education\checklists\Completeness Review  
Checklist 4-2009.doc