Introduction and Instructions for the

Manure Management Plan Form

Iowa law requires certain confinement feeding operations to develop and obtain Department of Natural Resources (DNR) approval of a manure management plan (MMP), to apply manure in accordance with the plan, to submit annual updates of the manure management plan, to pay an annual compliance fee and to provide copies of the manure management plan to the counties where the operation is located and where manure is applied. Manure management plans submitted to the DNR must use the attached forms. Submit one copy of the MMP to the DNR, two if you are applying for a construction permit. Additionally, submit one copy to the county where the facility is located, one to each county where manure will be applied, and keep a copy within 30 miles of the operation. It is recommended that one copy be kept for your manure applicator.

These forms are not intended for use if manure is being sold. Plans involving the sale of manure should be developed in accordance with the requirements of DNR rules 567 Iowa Administrative Code 65.17(2). These rules are found in Appendix A.9 of these forms. Forms can be found on the DNR website at http://www.iowadnr.gov/Environment/LandStewardship/AnimalFeedingOperations/Confinements/ManureManagement.aspx .

Who Needs to Submit a Plan and Annual Updates?

- Owners of confinement animal feeding operations constructed or expanded after May 31, 1985 (unless the operation is a small animal feeding operation[1]);
- If you are constructing a manure storage structure or a confinement building – you must submit an original manure management plan (unless the operation is a small animal feeding operation[1]);
- Owners of out-of-state confinement operations that apply manure in Iowa (unless the operation is a small animal feeding operation[1]).

Instructions for Use of These Forms

- Make additional copies of pages 2 and 3 as needed.
- A copy of the manure management plan and attachments listed on the following page must be provided to the county where the facility is located and each county where manure is applied. Submit a signed copy of the **Verification of County Receipt for MMP** to the DNR for each county involved. Use the form for non-permitted sites Verification of County Receipt (Form 542-8046) **OR** if a construction permit is required, use the Construction Application Package and use fee forms for construction permit sites (Form 542-1428).
- In addition to the required forms, information indicated on the following page must be submitted to DNR and maintained as part of the current manure management plan.

SECTION A:

Attachments to be submitted to the county and maintained with the current MMP within thirty miles of the site (in addition to required forms): *These items are not required to be submitted to DNR.*

- A plat map which shows the location of the confinement feeding operation and of all fields being used for manure application;
- Aerial photos (available from the county Farm Services Agency office) or similar photos of all fields being used for manure application. For each field, mark the field boundaries, areas not available or unsuitable for manure application, and areas where specific restrictions on manure application apply;

[1] **Small animal feeding operation:** an animal feeding operation which has an animal unit capacity of 500 au or less.

- Information documenting the optimum yields calculated for the manure application fields (if required – see endnote "h");
- Operations using irrigation to apply manure must provide information indicating how they will comply with applicable restrictions and requirements, and any additional methods or practices that will be used to reduce potential odors.

SECTION B:

Attachments to be submitted to DNR (in addition to required forms):

With Annual Updates

- The **Annual Compliance Fee form** – Annual Compliance Fee (Form 542-8064) rev. 3/06 and a check for the amount due ($0.15 per animal unit);
- MMP Short Form 2 (Form 542-8162)

With an Original MMP (new construction or expansion) and with an Original P Index-Based MMP

- A plat map which shows the location of the confinement operation.
- Written manure application agreements for all fields identified in the plan that are not owned or rented for crop production purposes by the owner of the confinement feeding operation;
- Manure sampling results, if sample results were used to determine the manure's nutrient content for this plan;
- When the P index is required, the MMP must include the NRCS P index "detailed report" from the Iowa P index calculator (available at http://www.ia.nrcs.usda.gov/) with a P index for each field and a document (e.g. RUSLE2 profile erosion calculation record) indicating the inputs and results of RUSLE2 for each field in the plan. The "detailed report" should be submitted with this form once every 4 years as the update.
- **For permitted sites only:** The aerial photos of the manure application fields must be submitted for permitted sites.
- The Filing Fee form [for facilities filing an MMP **for construction, expansion or modification or** filing an **original (first-time)** MMP] and a check for the $250 filing fee and the indemnity fee if required: *(No indemnity fee applies if the operation was constructed or expanded prior to May 31, 1995 and no construction permit was required.)*
    - For **non-permitted sites**: Indemnity fee and MMP filing fee and form (Form 542-4021) rev 3/06.
    - For **permitted sites** - please follow instructions in the Construction Permit Application form (Form 542-1428).
    - Verification form of county receipt for non-permitted sites, OR if applying for a construction permit, follow the instructions on the application (Form 542-8046).
- DNR may request submittal of the attachments listed in Section A that are maintained with the current MMP.

Plan Updates & Recordkeeping

Prior to making changes in an operation's manure management practices, the operation must update the plan to show the proposed changes. Updates that occur after the submittal of the plan should be maintained on site and indicated with the next annual update to DNR and the counties.

Records of manure application must be maintained within thirty miles of the confinement site, and must be available for DNR inspection. For a list of record keeping requirements, see 65.17(13) of appendix A9. Records must be maintained for five years after the year of manure application or for the length of the crop rotation, whichever is greater.

Assistance

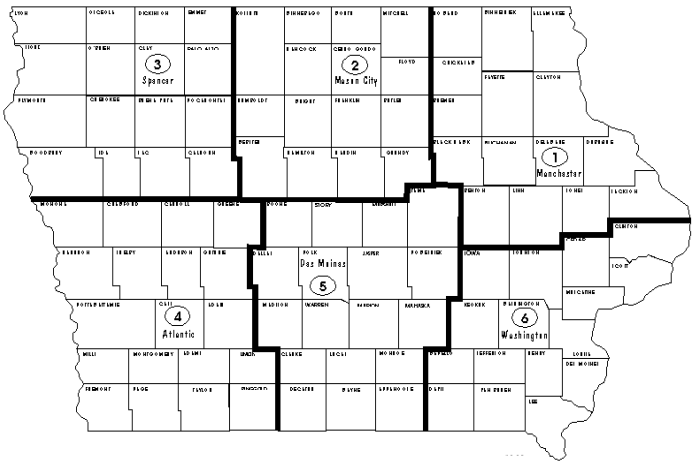
Assistance in developing a manure management plan may be available from a number of sources, including private consultants, Iowa State University Extension, and USDA's Natural Resources Conservation Service. Some of these sources will prepare a complete plan for an operation, while others will only provide general assistance. Contact your county extension or NRCS office to determine the assistance they will provide, as well as to obtain a list of consultants who will prepare plans. If you have specific questions about the Manure

Management Plan forms, contact your regional DNR field office. See attached map for contact information and to determine the appropriate office.

Mail Plan and Attachments

Please mail the plan, attachments and annual updates to the appropriate Iowa Department of Natural Resources field office (See map below). If submitting a construction permit application, follow instructions on the application form (Form 542-1428). Questions on permits? Please call 712-262-4177.

IOWA DEPARTMENT OF NATURAL RESOURCES
Environmental Services Division Field Office Locations



DNR Environmental Services Division

Field Office #1
909 West Main, Ste 4
Manchester, IA 52057
563-927-2640

Field Office #2
2300 15th St SW
Mason City, IA 50401
641-424-4073

Field Office #3
1900 N. Grand Ave.
Spencer, IA 51301
712-262-4177

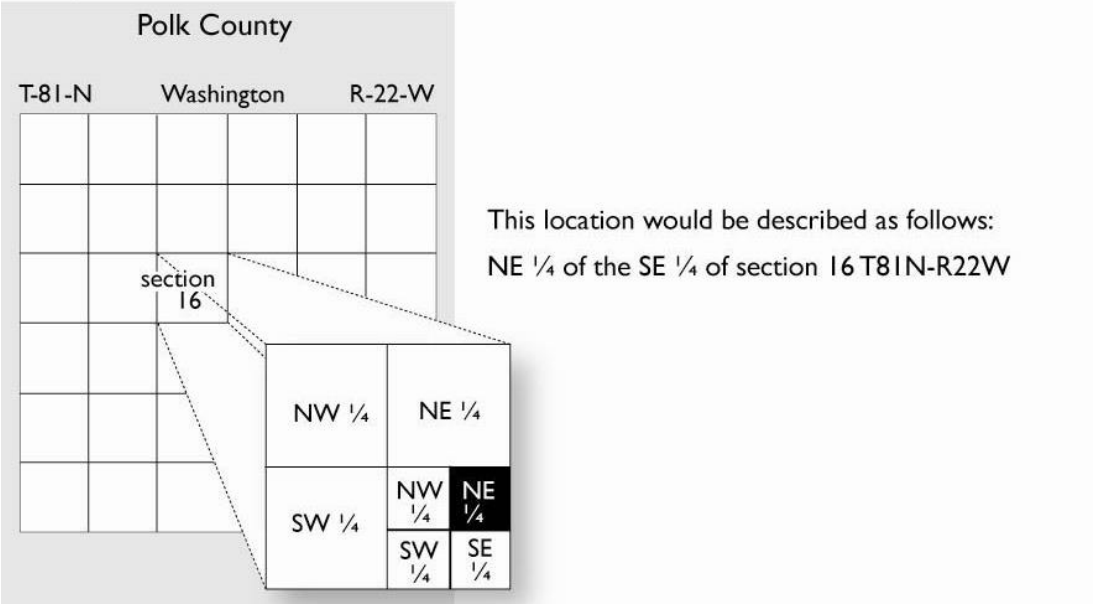
Field Office #4
1401 Sunnyside Lane
Atlantic, IA 50022
712-243-1934

Field Office #5
7900 Hickman Rd Ste 200
Windsor Heights, IA 50324
515-725-0268

Field Office #6
1023 W. Madison
Washington, IA 52353
319-653-2135

Example of Legal Description for Facility

Please refer to the example below when describing the location of your operation on Page 1. This property is located in Washington Township, Polk County.



Manure Management Plan Form
Operation Information

Instructions: Complete this form for your animal feeding operation. Endnotes are provided on pages 4-6.

The information within this form, and the attachments, describes my animal feeding operation, my manure storage and handling system, and my planned manure management system. I (we) will manage the manure, and the nutrients it contains, as described within this nutrient management plan and any revisions of the plan, individual field information, and field summary sheet, and in accordance with current rules and regulations. Deviations permitted by Iowa law will be documented and maintained in my records.

_____ _____ **Date:** _____

(Signature) **(Print Name)**

Name of operation: _____ **Facility ID No.** ___ ___ ___ ___ ___

Location of the operation: _____

(911 Address)

***** An example of a legal description is available on page 3 of the Introduction and Instructions.

_____ _____ _____

(Town) (State) (Zip Code)

_____ ¼ of the _____ ¼ of Sec _____ T _____ R_____ _____ _____

(1/4 1/4) (1/4) (Section) (Tier) (Range) (Township Name) (County)

Owner and Contacts of the animal feeding operation:

Owner _____ Phone _____

Address _____

Email (optional) _____ Cell phone (optional) _____

Contact person (if different than owner) _____ Phone _____

Address _____

Email (optional) _____ Cell phone (optional) _____

Contract Company _____ Phone _____

Address _____

This nutrient management plan is for: (check one)

☐ existing operation, not expanding ☐ existing operation, expanding

☐ existing operation, new owner ☐ new operation

Construction and Expansion Dates: _____ date of initial construction

_____ _____ _____ and date(s) of all expansion(s)

Table 1. Information about livestock production and nutrient management system

1	2	3	4	5	6	7	8
Animal Type/Production phase[a]	Max Number of Animals Confined (head)	Manure Storage Structure[b]	N^c	$P_2O_5{}^c$	gal/space/day or ton/space/yr[d]	Days/yr Facility Occupied	Annual Manure Production[e] (gal or tons)
			lb/1000 gal / lb/ton				
						Total Gallons	
						Total Tons	

Estimate of Annual Animal Production[f]: _____ **animals/year**

Source of Nutrient Content Data (columns 4, 5): standard tables, analysis of manure samples, other**:**

_____

Manure Management Plan Form

Determining Maximum Allowable Manure Application Rates

Instructions: Complete a worksheet for each unique combination of the following factors (crop rotation, optimum crop yield, manure nutrient concentration, remaining crop N need, method of application) that occurs at this operation. Endnotes are given on pages 4-6.

Management Identification (Mgt ID)[g]: _____
(Identify this application scenario by letter, refer to endnote g)

Method used to determine optimum yield[h]: _____ **Timing of Application:** _____

Method of Application[i]: _____ **Application Loss Factor[i]:** _____

If spray irrigation is used, identify method[j]: _____

Table 2. Manure Nutrient Concentration

Manure Nutrient Content (lbs/1000gal or lbs/ton)					
Manure Storage Structure(s)[k]					
Total N		**P_2O_5**			
% TN available 1st year[l]		% **2nd year**		% **3rd year**	
Available N 1st year[m]		**2nd year[n]**		**3rd year[o]**	

Table 3. Crop Usage Rates[p]

(lbs/bu or lbs/ton)	**N**	**P_2O_5**
Corn		0.32
Soybean	3.8	0.72
Alfalfa	50	13

* Use blank space above to add crop not listed.

Table 4. Calculations for rate based on nitrogen (always required).

1	**Applying Manure For** (crop to be grown)[q]					
2	**Optimum Crop Yield[h]**	bu or ton/acre				
3	**P_2O_5 removed with crop by harvest[r]**	lb/acre				
4	**Crop N utilization[s]**	lb/acre				
5a	**Legume N credit[t]**	lb/acre				
5b	**Commercial N planned[u]**	lb/acre				
5c	**Manure N carryover credit[v]**	lb/acre				
6	**Remaining crop N need[w]**	lb/acre				
7	**Manure rate to supply remaining N[x]**	gal/acre or ton/acre				
8	**P_2O_5 applied with N-based rate[y]**	lb/acre				

Table 5. Calculations for rate based on phosphorus (required if P-based rates are planned)

9	**Commercial P_2O_5 planned[z]**	lb/acre				
10	**Manure rate to supply P removal[aa]**	gal/acre or ton/acre				
11	**Manure rate for P based plan[bb]**	gal/acre or ton/acre				
12	**Manure N applied with P-based plan[cc]**	lb/acre				

Table 6. Application rates that will be carried over to page 3.

13	**Planned Manure Application Rate[dd]**	gal/acre or ton/acre				

When applicable, manure application rates must be based on the P index value as follows:
(0-2) N-based manure management.
(>2-5) N-based manure management but P application rate cannot exceed two times the P removal rate of the crop schedule.
(>5-10) Until December 31, 2008, P-based manure management while adopting practices to reduce P index to 5 or below.
(>10) No manure application until practices are adopted to reduce P index to 5 or below.

Manure Management Plan Form

Year by Year Nutrient Management Plan Summary

Instructions: Complete this form for each of the next **five** growing seasons, to demonstrate sufficient land base to apply manure over multiple crop years. If this page is identical for multiple years (e.g. every other year), submit only once for the identical years, and indicate which years the form represents. Endnotes are given on pages 4-6.

Crop Year(s): _____

1	2	3	4	5	6	7	8	9	10	11
Field Designation[ee]	Field Location ___ ¼ of the ___1/4 Sec ___ T____ R____ Township Name _____ County Name _____	Mgt ID[ff]	Planned Crop	Acres receiving manure[gg]	Own, rent, or agreement (include length of agreement)[hh]	P Index Value[ii]	HEL (Yes or No)[jj]	Planned Application[kk] Gal or ton/acre	Planned Application[kk] Gal or ton/field	Correct Soil Test for P[ll] (Yes or No)
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
							☐ Yes ☐No			☐ Yes ☐No
	Total acres available for manure application						**Total Gallons that could be applied**			
							Total Tons that could be applied			

[a] If a manure storage structure receives manure from several animal production phases and the manure and nitrogen production values given in Appendices A1 and A2 do not adequately represent the operation (such as with a farrow-to-finish swine operation where half the pigs produced are sold as feeders and the remainder held for finishing) calculate a weighted average.

[b] For example, indoor or outdoor formed storage, earthen basin, or anaerobic lagoon; to simplify calculations similar manure storage structures that contain manure with essentially the same nutrient concentrations may be grouped together (for example, the manure storage structures for a 3-building finishing unit with below-building pits could be identified as "3 below-building finishing pits").

[c] From standard tables (Appendix A4), your own samples, or other sources – identify source in space provided below Table 1 on page 1. If your own samples are used, DNR requires submittal of laboratory reports supporting manure concentrations. If your own samples are used, the results may need to be converted from parts per million (ppm) to pounds/1000 gallons. The formula for making this conversion is: N or P_2O_5 concentration (lb/1000 gal) = N or P_2O_5 concentration in parts per million (ppm) X 0.00834. For solid manure the conversion is: N or P_2O_5 concentration (lb/ton) = N or P_2O_5 concentration in parts per million (ppm) X 0.002. If measured volume or weight of manure is used in the plan, actual N and P_2O_5 concentrations must also be used.

[d] From Appendix A1; adjust values if operation has data justifying use of different volumes or weights (e.g., operation uses large volume of clean up water, and thus its manure production volume per animal space is higher than that given in table). If actual volumes or weights are used, DNR may require submittal of supporting data. If actual manure N and P_2O_5 concentrations are used in the plan, measured volume or weight must also be used.

[e] Annual manure produced (**liquid** manure) = maximum number of animals confined (column 2) multiplied by (x) gal/space/day (column 6) x days/ year building occupied (column 7). Annual manure produced (**solid** manure) = maximum number of animals confined (column 2) x tons/space/year (column 6).

[f] Estimated Annual Animal Production = Maximum number of animals confined (column 2 of Table 1) x production cycles per year. If operation has no production cycles (e.g. sows) state only total maximum number confined.

[g] Use the management ID to identify each unique combination of the following factors (crop rotation, optimum crop yields, manure nutrient concentration, remaining crop N need, method of application) that occur. The idea behind the management ID is to group fields with identical management on the same page 2, to avoid the redundancy of doing the exact same calculations for multiple fields.

For example, if 8 fields in the plan are in a corn/bean rotation with yields of 160 and 50 bu/acre and all will receive injected manure with the same nutrient concentration and availability, then page two would only need to be filled out once for the 8 fields and the management ID (e.g. "A") would represent all 8 fields. The same management ID could be used to describe these fields even if they were in different phases of the crop rotation (i.e. some are in corn and some in beans each year).

[h] Yields can be used from any of the following:

- USDA Iowa Ag statistics county yield averages
- Multi-peril insurance proven yields
- USDA Farm Service Agency proven yields
- Individual farm proven yields
- Soil survey interpretation records

Documentation of the information used to determine optimum yields must kept with the plan (DNR may require submittal of yield documentation). Documentation may include copies of historical farm yield records, soil survey maps and average yields for the soils found, FSA yield data, etc... If Iowa Ag Statistics county average yields, Appendix A8, are used, documentation is not required to determine optimum yields for corn and soybean crops. The optimum yield for each crop may be set equal to either the average of the last 5-year county yields plus 10 percent or the average of the highest 4 out of the last 5-year county average. If crops other than corn or soybeans are grown, Iowa Ag Statistics yield data for those crops will need to be obtained and optimum yield levels calculated (both the yield data and the calculations should be kept with the plan). If proven yield methods are used to determine optimum yields, the Appendix B2 Worksheet should be used to calculate the optimum yields.

[i] Use list of application methods and application loss factors provided in Appendix A7. If methods other than those listed in Appendix A7 are used, identify the methods and the nitrogen loss factors for those methods.

[j] Use of spray irrigation for manure application: Iowa law includes a number of requirements and restrictions on applying manure through spray irrigation. If spray irrigation is being used, the plan should identify the actions the operation will take to ensure compliance with these requirements and restrictions. In addition, the plan should identify any additional methods or practices the operation will use to reduce potential odor, if any additional methods will be used.

[k] From Table 1 column 3.

[l] Suggested availability values are: liquid swine manure – 90-100% in 1st crop year, dairy and beef cattle (solid or liquid) 30-40% in 1st crop year, poultry 50-60% in first crop year; 2nd and 3rd year N availability for dairy or beef cattle of 10% and 5%; respectively. 2nd year N availability for poultry manure of 0-10%.

[m] 1st year available N = Total N x Application loss factor x Percentage of TN available in the first year (e.g. for 95% N available in first year multiply by 0.95), Appendix B3 can be used to make the calculation.

[n] 2nd year available N = Total N x Application loss factor x Percentage of TN available in the second year. Appendix B3 can be used to make the calculation.

[o] 3rd year available N = Total N x Application loss factor x Percentage of TN available in the third year. Appendix B3 can be used to make the calculation.

[p] Appendices A5 and A6 list crop nitrogen and phosphorus requirements for various crops. These values, or crop use requirements from other credible sources, may be used to determine the crop nitrogen needs and phosphorus removal rates for the crops included in the crop schedule for the fields. For non-legume crops such as corn or grasses, the crop N need value represents the amount of nitrogen required to produce the optimum yield for that crop, and is determined by multiplying the crop nitrogen requirement (in lb/bu or lb/ton of yield) times the optimum crop yield. For legume crops such as soybeans or alfalfa, the crop utilization value represents the amount of nitrogen these legumes will utilize from the soil in producing the optimum crop yield, provided nitrogen is available at these levels in the soil. Again, this amount is determined by multiplying the crop utilization rate (in lb/bu or lb/ton of yield) times the optimum crop yield.

[q] As a minimum, Table 4 should indicate the full crop rotation for the management ID (i.e. , for a corn, corn, soybean rotation, Table 4 should cover a minimum of three crop years).

[r] P_2O_5 removed with crop by harvest = P_2O_5 crop usage rate (Table 3) x Optimum crop yield (row 2)

[s] Crop N utilization = N crop usage rate (Table 3) x Optimum crop yield (row 2)

[t] Credit for nitrogen carryover from prior year legume crops should be determined as follows:

- last year's soybean crop: 1 lb nitrogen per bushel of yield, maximum of 50 lb nitrogen per acre credit
- legume forage crop:
  - last year's crop with 50 to 100% alfalfa or other legume in stand: 100 to 140 lb nitrogen per acre
  - last year's crop with 20 to 50% alfalfa or other legume in legume/grass mixture: 50 to 80 lb nitrogen per acre
  - two years ago crop with 50 to 100% alfalfa or other legume in stand: 30 lb nitrogen per acre
- last year's legume green manure crop: 100 lb nitrogen per acre

[u] Amount of N applied with commercial fertilizer (e.g. starter, with herbicide carrier, etc...).

[v] Manure N carryover credit represents the amount of nitrogen available for crop use due to manure applications made in prior crop years. The carryover N credit is determined by:

1. multiplying the amount of manure (in 1000 gal/acre or ton/acre) applied to the field in the previous crop by the 2nd Year Available N concentration for the applicable manure storage source and method of application;
2. multiplying the amount of manure (in 1000 gal/acre or ton/acre) applied to the field two crop years ago by the 3nd Year Available N concentration for the applicable manure storage source and method of application; adding the resulting N carryover credit values together.

[w] Remaining crop N need = Crop N utilization (row 4) minus (–) Legume N credit (row 5a) – Commercial N planned (row 5b) – Manure N carryover credit (row 5c)

[x] Manure rate to supply remaining N = Remaining crop N need (row 6) divided by (/) 1st year available N (Table 2) (x 1000 for liquid manure)

[y] P_2O_5 applied with N-based rate = Manure rate to supply remaining N need (row 7) x P_2O_5 concentration (Table 2) (Divide by 1000 for liquid manure)

[z] Amount of P_2O_5 applied with commercial fertilizers.

[aa] Manure rate to supply P removal = (P_2O_5 removed with crop by harvest (row 3) – Commercial P_2O_5 planned (row 9))/ Manure P_2O_5 content (Table 2) (x 1000 for liquid manure).

[bb] Manure rates for a P based plan can apply up to the amount of P_2O_5 removed with harvest by the next 4 anticipated crops in a single application if the application rate doesn't exceed the N-based rate (row 7) and no additional P is applied for the period covered by the application. For example, in a corn/soybean rotation if the "manure rate to supply P removal" (row 10) was 2,000 gal/acre for the corn crop and 1,500 for the bean crop, then 3,500 gal/acre could be applied in a single application if the nitrogen rate was not exceeded. Phosphorus in addition to crop removal may be applied if soil tests are very low or low in phosphorus and additional phosphorus is recommended by Pm-1688 "General Guide to Crop Nutrient and Limestone Recommendations in Iowa."

[cc] Manure N applied with P-based plan = Manure rate for P based plan (row 11) x 1st year available N (Table 2) (divided by 1000 for liquid manure)

[dd] Manure application rate that is planned. Use these values for page 3 of the form.

[ee] Field designation may be by Farm Services Agency (FSA) field number, landowner's name, or other suitable designation. A plat map showing the animal feeding operation and all application fields should be kept in the plan. In

addition, aerial photos (e.g. FSA section photos) of the fields receiving manure should be in the plan with the boundaries of the individual application fields marked. Also marked on aerial photos should be areas of the fields that are unavailable or unsuitable for manure application, and areas where specific restrictions on manure application apply. DNR may require submittal of plat maps and aerial photos. Areas with specific restrictions on manure application include:

- within 200 feet of a designated area: A designated area means a known sinkhole, or a cistern, abandoned well, unplugged agricultural drainage well, agricultural drainage well surface tile inlet, drinking water well, lake, or a farm pond or a privately owned lake as defined in Iowa Code Section 462A.2. A designated area does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet. Iowa law requires manure from an animal feeding operation be injected or incorporated within the same day of application if applied within 200 feet of a designated area. However, this restriction does not apply if a 50-foot buffer of permanent vegetation surrounds the designated area and no manure is applied within the 50-foot buffer.
- within 750 feet of neighboring residence, church, school, business, or public use area: Iowa law requires liquid manure from a confinement feeding operation be injected or incorporated within 24 hours of application if applied within 750 feet of a neighboring residence not owned by the owner of the confinement feeding operation, a church, school, business, or public use area. However, this restriction does not apply if a written waiver is obtained from the owner of the property benefiting by this distance requirement.
- areas where liquid manure is applied through spray irrigation systems: see endnote “j” for page 2.

[ff] Identify how the field will be managed using management IDs from page 2.

[gg] The number of acres of the field that will receive manure. Acres not available for manure application include areas where topography, soils, or other factors make manure application impossible; areas where manure will not be applied; areas where application is prohibited under a manure disposal agreement; and areas where Iowa law or DNR rules prohibit manure application. It may also include areas where Iowa law or DNR rules restrict manure application to methods different than those being used by the operation.

[hh] A copy of all written manure application agreements for all fields identified in the plan that are not owned or rented for crop production purposes by the owner of the animal feeding operation must be submitted to DNR and kept with the plan (agreements must be signed by the landowner). If manure is applied based on an agreement, also indicate in column 6 the length of the agreement (e.g. annual, 3-yr, 10-yr).

[ii] Submit a NRCS P index detailed report containing a P index for each field in the MMP. Additionally, the manure management plan must include a document (e.g. NRCS RUSLE2 profile erosion calculation record) indicating the inputs and results of RUSLE2 for each field in the plan (These documents must be submitted to the DNR).

[jj] Identify if the field receiving manure is classified as Highly Erodible Land (HEL)..

[kk] gallons or tons / field = Acres receiving manure (column 5) x gallons or tons/acre (column 9)

[ll] Check “yes” if soil sampling meets minimum requirements. Refer to Rule 65.17(16) in the Iowa Administrative Code for minimum soil sampling requirements. This rule can be found in Appendix A of the MMP. If correct sampling was not used, fields must be resampled within one year.