CONSTRUCTION REQUIREMENTS FOR CONFINEMENT OPERATIONS

Confinement livestock operations constructing new confinement buildings or manure storage structures, or modifying existing structures, must meet specific Iowa Department of Natural Resources (DNR) requirements regarding construction design and setbacks from residences and water bodies. These requirements depend on the animal unit capacity of the operation. In general, the larger the animal unit capacity, the more requirements that must be met.

As discussed in detail in this chapter, livestock farmers building a new confinement operation or expanding or modifying an existing confinement operation must obtain a construction permit or approval of a construction design statement from the DNR if the animal unit capacity of the operation exceeds minimum numbers. In addition, changes to an existing farm may need a construction permit or a construction design statement even though no physical construction will occur. Also, a farm that has been discontinued for two years and which exceeds the minimum requirements must get a new DNR construction permit. If a construction permit is needed, an application must be submitted to DNR on forms provided by the DNR. All of the DNR forms may be found on the DNR web site. The construction application forms may also be downloaded from the DNR's web site in two different versions: a Microsoft Word® version and an Adobe Acrobat® version.

This chapter will start with basic requirements for determining which DNR construction requirements apply and then go through those requirements in detail.

WHAT IS A CONFINEMENT FEEDING OPERATION?

A confinement operation is a livestock farm where the livestock are confined to an area that is totally roofed. On the other hand, an open feedlot operation is a livestock farm where the livestock are confined to totally unroofed or partially roofed areas. Livestock farms with both confinement and open feedlot operations on the same site generally must meet the construction requirements that apply to each portion of the operation separately. These combination operations may, however, be combined for purposes of operating/NPDES permit regulations.

A partially roofed animal feeding operation as one where the livestock have unrestricted access between inside and outside areas and the unroofed area must be at least 10% of the square footage of the roofed area.

NOTE: PARTIALLY ROOFED OPERATIONS – 10% UNROOFED AREA

Because of a change in DNR rules, some hoop or other dry bedded buildings that were not totally roofed may now be considered confinement buildings. While it is questionable whether this DNR rule change is consistent with the definition of a confinement operation in the Iowa Code (totally roofed), it is nonetheless the DNR rule. There is no stated grandfather exemption for existing operations that were built and/or received a DNR construction permit as an open feedlot. DNR has stated that construction type requirements will not be changed for existing operations but operational type requirements such as manure management plans may be imposed on partially roofed operations that are now considered confinement.

NOTE: PARTIALLY ROOFED OPERATIONS – UNRESTRICTED OUTSIDE ACCESS

The DNR rules require that livestock have unrestricted access to outside areas to qualify as a partially roofed operation that is an open feedlot operation. In individual cases, DNR has allowed livestock to be confined inside for short periods of time for sorting or other handling as well as due to adverse weather conditions. Livestock producers in this situation should consult an advisor or the DNR for individual advice.

DETERMINING THE CAPACITY OF THE OPERATION

The animal capacity of the operation establishes whether DNR construction requirements apply. Capacity is the maximum number of animals that will be confined at any one time. Depending on when construction occurs, animal capacity is determined by either "animal units" or "animal weight capacity."

NOTE: ANIMAL CAPACITY – OPEN FEEDLOT AND CONFINEMENT OPERATION AT THE SAME SITE

When determining the animal capacity of a livestock operation, open feedlots (unroofed or partially roofed confined area) and confinement operations (totally roofed confined area) are regulated separately for state law requirements even if they are on the same site. However, for purposes of operating/NPDES permits, confinement operations and open feedlots operations must be combined if both have the same category of animals under state and federal NPDES permit regulations. For example, a hog finishing operation that includes an open feedlot operation and a confinement operation on the same site may be required to obtain an operating/NPDES permit if the combined animal unit capacity is greater than 1000 animal units. Also, for purposes of operating/NPDES permits, all animals in confinement operations and open feedlot operations on the same site must be combined if either the confinement or open feedlot portion exceed 1000 animal units of animals in the same category.

NOTE: ABANDONED BUILDINGS

Abandoned buildings are not considered part of the operation when determining the operation's animal capacity. A building or structure has been abandoned if it has been razed, removed from the site of a confinement feeding operation, filled in with

earth, or converted to uses other than a confinement feeding operation structure so that it cannot be used as a confinement feeding operation structure without significant reconstruction.

Animal Units

Beginning with legislation adopted in 2002, animal units are used to determine construction requirements (and whether a manure management plan is needed). Animal units are also used to determine separation distances for operations first constructed after March 1, 2003.

To determine the number of animals units in an operation, multiply the maximum number of animals confined at any one time in the facility by the appropriate conversion factor. The appropriate conversion factors are in the table below. For example, a 1,000 head swine finishing barn would contain 400 animal units (1000 x 0.4 = 400).

Animal Unit Conversion Factors	
Species	Animal Unit
Slaughter and feeder cattle	1.0
Immature Dairy Cattle	1.0
Mature Dairy Cattle	1.4
Swine over 55 pounds	0.4
Swine between 15 and 55 pounds	0.1
Sheep or lambs	0.1
Turkeys over 112 ounces	0.018
Turkeys less than 112 ounces	0.0085
Chickens over 48 ounces	0.01
Chickens less than 48 ounces	0.0025

NOTE: ANIMAL UNITS FOR NURSERIES OR WEAN TO FINISH OPERATIONS

If pigs do not weigh more than 55 pounds while on site, the 0.1 factor may be used. Likewise, if pigs weight more than 55 pounds while on site, the 0.4 factor must be used. Thus, nurseries where pigs are removed before they weigh 55 pounds may use the 0.1 factor but if they are not removed until they weigh more than 55 pounds, the 0.4 factor must be used.

In a wean-to-finish operation where pigs are brought to the site as weaned pigs and fed to market weight, the 0.4 factor must be used because the pigs will weigh more than 55 pounds while on site.

NOTE: ANIMAL UNIT CAPACITY IN DOUBLE-STOCKED WEAN-TO-FINISH OPERATIONS

Some producers stock a site with additional weaned pigs and then move some pigs to another site before they reach 55 pounds leaving the remaining pigs on-site until market. Often called double stocking, the animal unit capacity of the site is the highest animal unit number. Thus, the pigs that are moved to another site must be moved before they weigh 55 pounds to comply with animal unit capacity limits.

For example, a 1,200 head wean-to-finish site is double stocked with 2,400 head of weaned pigs with 1,200 head moved off-site before they reach 55 pounds. The animal unit capacity during the nursery phase is 240 (2,400 x 0.1 = 240). The animal unit capacity during the finishing phase is 480 (1,200 x 0.4 = 480). The animal unit capacity of the site is the greater of the two or 480.

NOTE: ANIMAL UNITS FOR FARROWING OPERATIONS

All pigs weighing more than 55 pounds, including sows, use the 0.4 factor. For example a sow farrowing operation with 1,200 sows has an animal unit capacity of 480 (1,200 x 0.4=480). In addition, pigs weighing less than 15 pounds do not have an animal unit factor and are not included in the calculation.

NOTE: ANIMAL UNITS FOR DAIRY

Even though there is considerable variation in the weight of mature dairy cows of various breeds, under state and federal law all dairy cows must use the same animal unit factor regardless of the breed.

NOTE: ANIMAL UNITS FOR BEEF COWS

Although not specified under Iowa law, federal law provides that a cow/calf pair is to be counted as one animal unit.

Animal Weight Capacity

Before 2002, animal weight capacity was used to determine if a construction permit was needed. Today, animal weight capacity is still used to determine separation distances from residences, businesses, churches, schools, and public use areas if the operation was first constructed before March 1, 2003, and is expanding.

In general, the animal weight capacity is determined by multiplying the maximum number of animals confined at any one time in the facility by the average weight of an animal during the production cycle. Average weight can be calculated by dividing the weight increase during the production cycle by two and then adding the weight of the animals when they entered the facility.

EXAMPLE

A finishing hog operation, where the pigs weigh 50 pounds when they enter the facility and 250 pounds at the end of the production cycle, would have an average weight over the production cycle of 150 pounds (((250 – 50) ÷ 2) + 50). A 900 head finishing operation would have an animal weight capacity of 135,000 pounds (900 X 150 = 135,000).

DEFINITION OF "CONSTRUCTED"

Different DNR rules apply depending upon when an operation was first constructed. One example is that different separation distances apply to livestock farms first constructed before March 1, 2003. For purposes of DNR rules and the Iowa Code, an operation is considered to be constructed on the date that any of the following occurs:

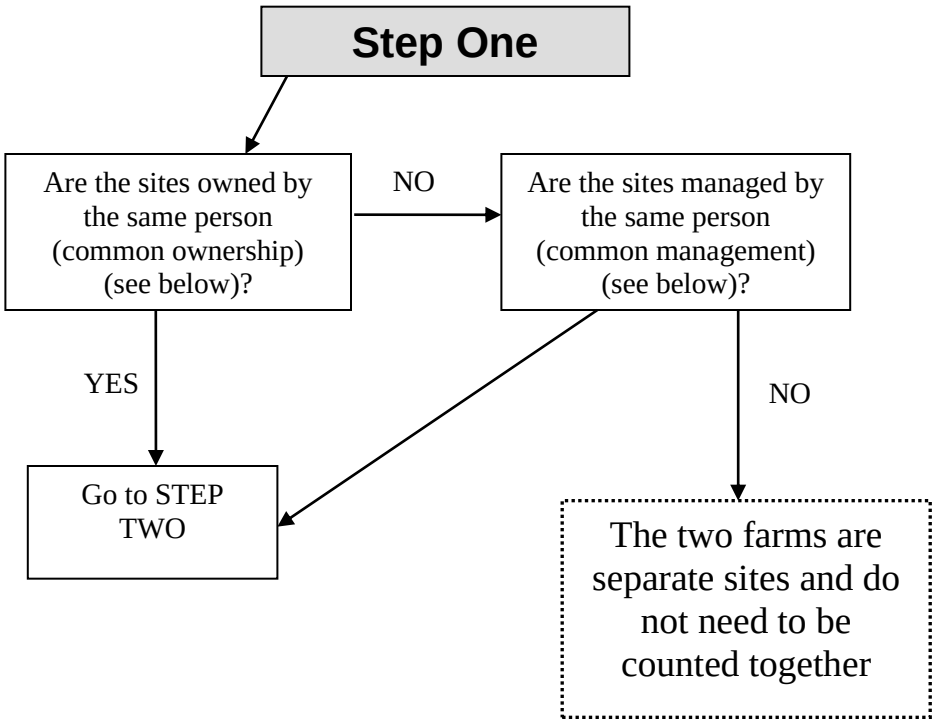
- Excavation for the proposed construction or expansion of a structure, including excavation for the footings of the structure, and filling or compacting soil for the proposed structure;
- Forms for concrete are installed for a proposed structure or proposed expansion of an operation; or
- Piping for the movement of manure is installed within or between structures as proposed or proposed to be expanded.
- Filling or compacting soil or soil amendments.

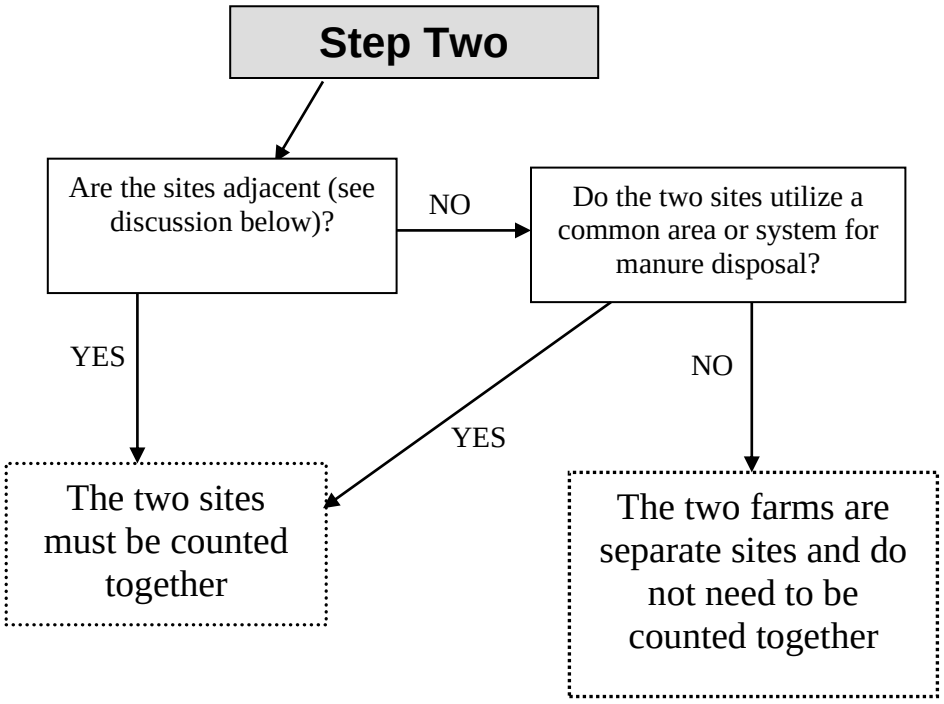
Construction is not considered to have begun upon any of the following:

- Removal of trees, brush, or other vegetative growth;
- Construction of driveways or roads;
- General earth moving for leveling at the site; or
- Installation of temporary utility services.

DETERMINING WHETHER TWO SITES MUST BE CONSIDERED ONE

For purposes of determining construction requirements and whether a manure management plan is required, two confinement buildings which (1) have common ownership or management and (2) are adjacent or utilize a common area or system for manure disposal are counted together to determine the animal unit capacity of the operation. To better illustrate this requirement, use the following flow chart.





- Common ownership: On Feb. 19, 2020, DNR rules changed to provide that an operation is under common ownership if a person owns or has a ten percent interest directly or indirectly in more than one confinement operation. Before the change, the rule was a majority ownership interest. Confinement operations constructed before Feb. 19, 2020 continue to be subject to the majority ownership requirement, as do dry-bedded confinements and open feedlot operations. An interest in the confinement farm as a joint tenant, tenant in common or majority equity interest which is held directly or indirectly by the owner's spouse or dependent child is deemed to be held by the owner.

- Common management: An operation is under common management if the same individual or entity has significant control over day-to-day operations in both facilities. Under a DNR rule that went into effect on Sep. 15, 2010, control by an owner of livestock being fed under production contracts in two or more confinement operations (open feedlot operations were already covered by this rule) is not by itself common management.

NOTE: CONTRACT FEEDING

Until Sep. 15, 2010, DNR took the position that significant control over day-to-day operations included most contract feeding arrangements. Specifically, DNR took the position that if a contractor had the right to control marketing, feed rations, or vet services over two separate producers, the two operations have common management. However, DNR rules were changed as of Sep. 15, 2010 to exclude these contract feeding arrangements for confinement operations from the definition of common management.

- Adjacent: Two confinement operations are adjacent if they are separated at their closest points by less than 1,250 feet if the combined animal unit capacity is 1,000 animal units or less or by less than 2,500 feet if the combined animal unit capacity is 1,000 animal units or more. (Note that different animal unit capacities and distances apply for purposes of separation distances. See Separation Distance section of this Handbook.)

  In addition, for operating/NPDES permit purposes, a confinement operation is adjacent to any open feedlot operation within 1,250 feet that has the same species and federal EPA category of animals or if either the confinement or open feedlot operation by itself exceeds 1,000 animal units.

- Common area or system for manure disposal: DNR rules define a common area or system for manure disposal to include the same manure storage structure, confinement structure, manure stockpile, permanent manure piping system, or center pivot irrigation system. These same DNR rules exclude manure application fields in a manure management plan from the definition of common area for manure disposal and anaerobic digesters from the definition of common system for manure disposal.

NOTE: WHAT IS A COMMON SYSTEM FOR MANURE DISPOSAL?

Two livestock farms which use the same manure storage structure, other than an anaerobic digester, would qualify as utilizing a common system for manure disposal.

For purposes of operating/NPDES permit requirements, EPA has indicated it would consider using the same manure application equipment on two different farms as utilizing a common system for manure disposal.

If manure is transported to another person's farm for storage, it could be considered as a common system for manure disposal. While there may be ways to avoid this result, such as selling the manure to the other producer, producers in this situation should obtain individual advice.

NOTE: HOW IS OFF-SITE MANURE STORAGE REGULATED?

In recent years with the increased fertilizer value of manure there has been increased interest in constructing manure storage away from the production site and closer to manure application areas. This allows manure to be transported from the production site to the off-site storage before crops are harvested thereby reducing time required during the busy fall manure application season and allowing greater and more efficient use of manure.

Manure storage structures are by law part of an animal feeding operation (and therefore as part of a confinement feeding operation). Accordingly, an off-site manure storage structure is part of the confinement operation where the manure is produced, no matter how far the structure is from the confinement operation itself. The animal unit capacity of the production site is used to determine the DNR requirements for the off-site storage, such as whether a permit or manure management plan is required or the applicable separation distances to residences, etc.

Although not directly covered in DNR rules, if manure from two different production sites will be stored in the same off-site storage, then the off-site storage will likely be considered a common manure disposal system and the two operations will be considered one. Thus, using off-site manure storage for two different production sites should be carefully considered and all potential regulatory requirements considered. For example, any future construction at either of the production sites could be required to meet additional DNR rules (e.g., a permit, MMP, or higher separation distance to a residence) as a result of the off-site storage.

CONFINEMENT OPERATION CONSTRUCTION REQUIREMENTS

A confinement operation is a livestock farm where the livestock are confined to an area that is totally roofed. Confinement operations include farms that have liquid or dry manure. Dry manure buildings would include hoop buildings, deep-bedded barns, or turkey or chicken buildings when the livestock are housed indoors.

NOTE: WHAT IS MANURE STORAGE?

Although barns managed with a dry manure system may be considered to be confinement buildings, DNR does not consider the areas where the livestock are housed to be manure storage. This means that dry manure livestock buildings do not have to meet the same construction standards required for manure storage.

A manure storage structure or egg washwater storage structure can only be used for animal manure and waste, not human sanitary waste. Contact the county sanitarian for the requirements for properly disposing of human sanitary waste.

Construction requirements for a confinement operation depend on the animal unit capacity of the farm. There are three categories that determine the construction requirements:

- 500 Animal Units or Less - Small Animal Feeding Operations (SAFO)
- 500 to 1,000 Animal Units
- 1,000 Animal Units or More

A. A small animal feeding operation (SAFO) is an animal feeding operation which has an animal unit capacity of 500 or fewer animal units.

1. A SAFO must meet the following construction requirements:
   - Setbacks from water bodies:
   - 500 feet from a water source (lake, river, reservoir, creek, stream, ditch or other body of water having definite banks and a bed)
   - 1000 feet from a major water source (navigable lake or river listed in DNR rules)
   - 100 to 1,000 feet from a private well
   - 2500 feet from a designated wetland
   - 500 feet from an agricultural drainage well surface intake
   - 1000 feet from a wellhead or cistern of an agriculture drainage well or known sinkhole

Distances to Wells

Applies to all Animal Feeding Operations, regardless of the size of operation, including operations with 500 AU or less	**Public well**		**Private well**	
	Shallow	**Deep**	**Shallow**	**Deep**
Aerobic structure, anaerobic lagoon, earthen manure storage basin, egg washwater storage structure and open feedlot runoff control basin	1,000 feet	400 feet	400 feet	400 feet
Formed manure storage structure, confinement building, open feedlot solids settling facility and open feedlot.	200 feet	100 feet	200 feet	100 feet
Other distances				
Major water sources, wellhead, cistern of an agricultural drainage well or known sinkhole (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided)				1,000 feet
Water sources other than major water sources, surface intakes of an agricultural drainage well (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided)				500 feet
Designated wetlands (owned and managed by the Federal government or the Iowa DNR)				2,500 feet

2. Groundwater table separation. There are two options to meet this requirement: (1) Install a tile line around the base of the underground manure storage pit (see Construction Design Statement below) or (2) Measure current groundwater levels through the use of temporary monitoring wells or test pits to determine whether the level is above the proposed floor of the manure storage. The groundwater measurements must be done by an engineer, certified groundwater professional or qualified NRCS staff.

3. Alluvial soil/floodplain. No manure storage structure can be constructed on alluvial soil unless the farmer has first received a declaratory order from DNR stating the land is not located in a 100 year

floodplain of a major water source. Manure storage structures cannot be constructed on 100 year floodplain of a major water source.

4. Stormwater discharge permit. A storm water discharge permit is required if the area disturbed during construction is more than one acre. The permit is a National Pollution Discharge Elimination System permit required under the Clean Water Act. If a permit is required the operator must complete a pollution prevention plan and file their application for a permit at least 180 days prior to construction if filing an individual permit and 24 hours prior to construction if filing a general permit.

A SAFO is not required to:

1. Obtain a construction permit (unless the farm uses an unformed manure storage structure) or complete a master matrix.
2. Submit a manure management plan to DNR
3. Meet separation distances from residences, businesses, churches, schools, public use areas or roads

NOTE: RECOMMEND FOLLOWING SEPARATION DISTANCES

Even though SAFOs are not required to meet separation distances to residences, businesses, churches, schools, public use areas or roads, it is recommended that SAFOs meet these distances. A SAFO cannot expand to more than 500 animal units in the future if the farm does not meet these distances. In addition, although a SAFO is exempt from these distances, a SAFO is not exempt from nuisance lawsuits and meeting these distances may help avoid a nuisance lawsuit.

NOTE: DOWNSIZING A CONFINEMENT OPERATION TO BECOME A SMALL ANIMAL FEEDING OPERATION

A confinement operation can downsize to become a SAFO without rendering a portion of the facilities unusable. Rules effective December 14, 2016 clarified that a confinement operation that has downsized to a SAFO is not required to file an annual manure management plan until the unused portion of the operation is returned to production and the operation is no longer a SAFO.

B. Confinement Feeding Operations with a Capacity of 500 to 1,000 Animal Units Using Formed Manure Storage

A confinement operation with more than 500 animal units of capacity but less than 1,000 animal units of capacity using formed storage must meet the following requirements before beginning construction:

1. Separation distances. Separation distances to residences, businesses, churches, schools, public use areas, and public roads must be met. Also, separation distances to waters bodies must be met. See additional information later in this chapter. (DNR must be provided with maps, drawings, or aerial photos showing the location of the proposed structures and any information on any other operations owned or managed within 2,500 feet.)

2. Alluvial soil/floodplain. No manure storage structure can be constructed on alluvial soil unless the farmer has first received a declaratory order from DNR stating the land is not located in a 100 year

floodplain of a major water source. Manure storage structures cannot be constructed on 100 year floodplain of a major water source. See additional information later in this chapter.

3. Karst terrain. The producer must submit information to DNR as to whether the proposed site is in Karst terrain.

4. Stormwater discharge permit. A storm water discharge permit is required if the area disturbed during construction is more than one acre. The permit is a National Pollution Discharge Elimination System permit required under the Clean Water Act. If a permit is required the operator must complete a pollution prevention plan and file their application for a permit at least 180 days prior to construction if filing an individual permit and 24 hours prior to construction if filing a general permit.

5. Manure management plan. At least 30 days before construction may begin, a manure management plan must be submitted to DNR and the county board of supervisors where the livestock farm will be located and where manure will be applied if land is in a county other than where the livestock farm is located. See Manure Management chapter for the DNR requirements for a manure management plan.

6. Construction design statement. The construction design statement must be submitted to DNR and the county board of supervisors where the livestock farm will be located at least 30 days before construction begins. The information required on the CDS details the design of the structure(s), including a certification by the contractor constructing the structure(s) that all design standards required by the Iowa Code and Rules will be met. In addition, the CDS requires information regarding whether the site is on karst terrain and if so, the form requires verification that the structure will comply with the upgraded concrete standards laid out in the Administrative Rules. The CDS also requires verification that the site is not in alluvial soils or, if it is, that it is either not in a floodplain or a floodplain permit has been acquired. A CDS form can be obtained on the DNR website at http://www.iowadnr.gov/afo/forms/5428068.pdf. A sample construction design statement form can be found later in this chapter. This is a sample form for illustrations purposes only, please go to the Iowa DNR website to download the latest form.

7. DNR Construction Approval Letter. If all requirements are met, DNR will issue a construction approval letter giving the date (30 days after the MMP and CDS were submitted to DNR and the county) construction can begin. This construction approval expires if construction is not begun within one year and completed within four years after the date of the construction approval letter.

C. Confinement Feeding Operations Using Unformed (Earthen) Manure Storage

A confinement operation using earthen storage is required to obtain a construction permit and complete a master matrix. For these construction requirements, see the example DNR construction permit application and accompanying comments. Producers with earthen manure storage must control erosion with perennial grass on the outer, top and inner (to the freeboard line) portions of a berm unless these areas are covered by concrete, riprap, a synthetic liner, or similar erosion control materials or measures.

D. Confinement Animal Feeding Operations with a Capacity of 1,000 Animal Units or More

A confinement operation with a capacity of 1,000 animal units or more using formed storage must obtain a construction permit before construction can begin.

In addition, even if no physical construction or alteration takes place, a permit is required if there is an increase in manure volume or a modification in the manner manure is stored unless increases or modifications are due to animal unit increases within the limits of a previously issued construction permit or the increase is determined to be insignificant by DNR. No permit is required for repairs or additions to an animal confinement building such as fans, slats, gates, roofs or covers. However, plans for repair or modification of manure structures must be submitted to DNR to determine if a permit is required.

A confinement operation which has been discontinued for 24 months or more must obtain a construction permit before resuming operation if the operation: (1) uses unformed manure storage; or, (2) uses formed storage and has more than 1,000 animal units capacity.

DNR cannot issue a construction permit to expand or modify a confinement operation for 120 days (before Sep. 15, 2010, the DNR rule was one year) after completion of the last construction or modification which did not require a permit. DNR must grant a waiver to this prohibition if the applicant demonstrates good cause for a waiver.

NOTE: PURPOSE OF 120 DAY WAITING PERIOD

The intent of the rule is to prevent producers from avoiding the permit requirement by building just under the permit threshold and then applying for a permit to finish the operation. For example, if a farmer wants to build five 1,000-head hog finishing buildings but doesn't want to wait for the DNR to issue a permit. If the farmer tried to build four and then apply for a permit, the DNR rules would require the producer to wait 120 days to receive a construction permit. On the other hand, if the farmer planned on constructing four buildings and built them, then additional financing became available for a fifth, the farmer could apply for a variance. The DNR must grant the request if the circumstances warrant the variance. For specific requirements of an application for a variance, contact DNR or obtain assistance from a rules consultant.

1. Construction Permit Requirements

A completed construction permit application must be submitted to the DNR and the county board of supervisors or county auditor in the county where the proposed site is to be located. DNR rules state that a permit application should be submitted 120 days before construction is planned to begin.

NOTE: COMPLETE APPLICATION

Rule changes effective Dec. 14, 2016 added a definition of a complete application as one where all questions have been completed, the application is signed and all applicable portions of the application and attachments have been submitted. If the application is not complete, DNR will require the producer to start the application process over.

NOTE: SUBMITTING PERMIT 120 DAYS BEFORE CONSTRUCTION TO BEGIN IS A RECOMMENDATION

A DNR rule change in 2010 states that a permit application *should* be submitted 120 days before construction is planned to begin is a recommendation and not a requirement, due to the use of the term "should."

The owner of the site or the structures must be the permit applicant. DNR rules define the owner as the person who has legal or equitable title.

NOTE: DNR RULES DEFINITION OF OWNER

There have been county appeals of construction permit applications before the Iowa EPC where the validity of a permit was challenged because the applicant did not have legal title to the site or the structures. Rather , the applicant had entered into a purchase agreement to purchase the property contingent upon receiving a DNR construction permit. Understandably, buyers often do not want to complete the purchase of a site for a confinement operation until they know for sure that they have a construction permit. Because of these challenges as to whether an applicant with a purchase agreement continent upon a construction permit met the requirement of being an owner, DNR rules were changed in 2010 to clarify that an owner is a person who has legal or equitable title. A properly drafted purchase contract contingent upon a permit being issued will qualify as equitable title.

A copy of the most recent construction permit application form can be found at http://www.iowadnr.gov/afo/forms/5421428.pdf. A sample construction permit form with notes is included in the environmental handbook as a separate document. This sample form is for illustrations purposes only and should not be used when submitting your application. Please go to the Iowa DNR website to download the latest version of the form.

PERMIT APPROVAL, DENIAL, EXPIRATION AND REVOCATION

DNR must approve or deny a permit within sixty days after receiving an application. DNR may extend the review period by up to 30 days after sending notice to the permit applicant and the county board of supervisors. An applicant may request one or more 30 day extensions of the deadline for DNR approval. However, the department may terminate an application if the applicant requests extensions beyond one year after the permit application was submitted.

NOTE: 60 DAY TIME LIMIT ON PERMIT APPROVALS

To assist the DNR with issuing permits on a timely basis, applicants should make sure their application contains all of the necessary information. Shortly after submitting the application the producer should contact DNR to see if additional information is needed following their preliminary review of the application.

The DNR must notify the applicant whether it approved or disapproved a permit application within three days of their decision. An applicant may contest the decision by requesting a hearing before an administrative law judge or the Environmental Protection Commission within 14 days of receiving notice of DNR's decision.

A construction permit will expire if construction has not begun within one year and completed within four years of the date the permit was issued. If a site with a construction permit has not completed construction within the required 4 years after the permit is issued, the animal unit capacity in the permit will be reduced to what was actually constructed and the DNR will issue a construction permit amendment.

Construction permits may be revoked if DNR determines that the operation of the facility constitutes a "clear, present and impending danger to public health or the environment."

NOTE: PERMITS FOR FUTURE EXPANSION

A producer may want to submit a permit application for the entire expansion now if another expansion that is planned in the near future (note that permits expire in four years after they are issued) that will result in the animal unit capacity of the operation being over the permit threshold. If the same manure storage structure will be used both for the current and future expansion, the storage structure will need to meet the DNR's requirements when the operation is expanded. Meeting DNR permit requirements when the structure is built will save time and money if the operation is expanded.

NOTE: IS A PERMIT REQUIRED?

If it is unclear whether a permit is required, the producer may write the DNR explaining the factual circumstances and request a written decision, or contact an advisor.

COUNTY PARTICIPATION AND THE MASTER MATRIX

The master matrix is a system created by the Iowa legislature in 2002, to provide counties with additional input on construction permit applications. The requirements of the master matrix are in addition to the core environmental requirements for a construction permit. Permit applicants choose specific matrix items to obtain the required points. The master matrix includes factors in three different categories - air, water, and community - and points are assigned to each factor. The applicant must obtain the required points in each category as well as a total score.

County supervisors have the opportunity to adopt the master matrix in January of each year by adopting a construction evaluation resolution. Counties must readopt a construction evaluation resolution each January in order to continue requiring the master matrix. If a county has not adopted the master matrix by January 31, construction permit applications filed in the county that year are not required to have the matrix.

A master matrix is not required for an expansion of an operation up to 1,666 animal units if the site was originally constructed before April 1, 2002.

NOTE: WHO DOES NOT NEED A MASTER MATRIX?

A master matrix is not required for construction or expansion of a confinement livestock farm if:

1. A construction permit is not required.
2. Even if a construction permit is required, a matrix is not required if after expansion the farm's capacity will be less than 1,666 animal units and the farm was originally construction before April 1, 2002.
3. The county board of supervisors where the farm is located has not adopted the matrix for that year. All counties must decide each year in January whether to participate in the matrix for the upcoming calendar year.

Counties have a defined role in the construction permit process. A county that has not adopted the master matrix still has responsibilities in the construction permit application process. Both those counties that have adopted the matrix and those that have not adopted the matrix have some of the same responsibilities. Before a person can receive a construction permit, the owner of the confinement operation must first submit the permit application and manure management plan to the county board of supervisors or county auditor in the county where the operation is to be located. The county has 14 days to publish notice in a local paper that the permit has been filed and provide for the time and place for the public to comment. The county may (but is not required to) hold a public hearing on the application. The county may give DNR their comments on the permit application within 30 days after the DNR receives the application, verifying that a copy of the permit was provided to the county. If the county's comments are timely received, the DNR must consider the county's comments prior to issuing the permit.

NOTE: VERIFICATION OF COUNTY RECEIPT OF APPLICATION

Currently, the DNR does not begin review of a permit application or manure management plan until they receive verification that the county where the operation is located has received a copy of the construction permit. Once the verification and all other required information is received, the DNR can consider the application complete and proceed with the review. It is recommended that the verification be obtained and provided to the DNR with or even before the permit is submitted to the DNR so that the DNR can proceed with the permitting process. The DNR may conduct an inspection of the site after giving 24 hours notice to the applicant or sooner with consent of the applicant. If the county has adopted the master matrix, the county may designate an official to accompany the DNR on their inspection of the proposed site. DNR must notify the county three days before conducting its site inspection. A county representative may accompany the DNR on its inspection of the site.

County comments must relate to the operation's compliance with the legal requirements for construction of the confinement operation. Some of the issues a county could comment on include:

- The existence of an object or location not included in the construction permit application that is subject to a separation distance as provided in Iowa Code §§ 459.202, 459.203 & 459.310.
- The suitability of soils and the hydrology of the site where construction or expansion of a confinement feeding operation or related animal feeding operation structure is proposed.
- The availability of land for the application of manure originating from the confinement feeding operation.

- Whether the construction or expansion of a proposed animal feeding operation structure will impede drainage through established tile lines, laterals, or other improvements which are constructed to facilitate the drainage of land not owned by the person applying for the construction permit.

Only those counties that have adopted the matrix must evaluate the livestock farm according to the matrix, may accompany the DNR on the site visit and have a right to appeal a tentative permit approval.

If the county recommends approval pursuant to a satisfactory master matrix score, then DNR determines if the application meets all requirements. If the application meets the legal requirements, the DNR must issue the permit. If the application does not meet the legal requirements, the DNR will deny the application. The DNR does not score the matrix if the county determines the application received a satisfactory master matrix score.

If the county recommends disapproval because of an unsatisfactory master matrix score, the DNR must first determine if the application meets all other requirements. If the application does not meet the legal requirements, the DNR will deny the application. If the application meets the legal requirements, the DNR must do an independent evaluation of the farm's matrix application. If the DNR does not give the matrix a passing score, the DNR must deny the permit. If the DNR gives the matrix a passing score, the DNR must preliminarily approve the permit application.

A county that has adopted the matrix may appeal DNR's preliminary approval to the Iowa Environmental Protection Commission (EPC) within 14 days after receiving notification of its decision. The county then has an additional 16 days to file all documentation for the appeal. The DNR must notify and deliver a copy to the county supervisors within three days of its decision. The EPC has 35 days to make a decision on the appeal. The appeal must be based on whether the application complies with Iowa law. If the preliminary decision is not appealed by the county or producer within 14 days, the decision becomes final. If the county files for an appeal with the EPC, EPC has authority to designate experts to give testimony at the appeal hearing. EPC must designate these experts at least seven days before the hearing date. The parties to the appeal may ask the experts questions at the appeal hearing. All materials, including the complete DNR file on the permit application, will be posted on the DNR website beginning no later than five days after the county files the demand for hearing. Any person may submit written material for the appeal hearing to EPC up to 15 days before the hearing. The material will be considered for inclusion in the appeal record by the EPC chairperson.

PROHIBITIONS ON CONSTRUCTION:

A. Pending Enforcement Actions

Persons or companies that have been referred to the attorney general for a violation of livestock regulations may be prohibited from constructing or expanding a confinement feeding operation structure.

If a person is the subject of a pending DNR enforcement action for which the attorney general has filed a lawsuit and the lawsuit has not been resolved:

- A person or company cannot construct or modify a confinement feeding operation structure if the person has a controlling interest in a confinement operation
- The person or company cannot be issued a DNR construction permit when the applicant has an interest in a confinement operation.

Constructing or expanding an operation includes financing or contracting to build a confinement operation. A person may complete the construction or expansion of the confinement operation if he or she has an unexpired DNR construction permit or if a permit is not required.

B. Habitual Violator

There are also additional regulatory requirements for persons or companies classified as a habitual violator.

Habitual violators cannot:

- Construct or modify a confinement feeding operation structure while classified as a habitual violator
- Obtain a construction permit for a confinement feeding operation from the DNR for five years after the date of the last violation while classified as a habitual violator.

A person is classified as a habitual violator if three or more qualifying violations occur involving their animal feeding operation within a 5-year period after January 1, 1995. The classification ends when less than three violations have occurred in the past five years. The DNR is required to notify habitual violators of their status. Generally, a violation is the construction or operation of a confinement operation in violation of the law or conditions of the permit. A violation must have been referred to the attorney general for legal action and resulted in assessment of a civil penalty or court conviction. Different violations taking place during the same time period will be considered separate violations. In order for violations to be counted as one of the three violations in the past five years the violations must have related to:

- The construction or operation of a confinement feeding operation structure for which a permit is required in violation of the rules;
- Intentionally making false statements or misrepresentations to the DNR as part of an application for a construction permit;
- Failing to obtain a permit or approval to construct or operate a confinement feeding operation when required by the rules;
- Operating a confinement feeding operation or structure which causes water pollution when done intentionally or for failure to take required measures to abate the pollution which resulted from an act of God; or
- Failing to submit a manure management plan as required.

Constructing or expanding an operation includes financing or contracting to build a confinement operation. The habitual violator doesn't have to own, lease or operate the facilities for financing or contracting to be prohibited. Habitual violators also cannot transfer a controlling interest in a confinement operation to an employee, current investor, or relative without the new owner also being subject to the habitual violator penalties. However, a person may complete the construction or expansion of the confinement operation if he or she has an unexpired DNR construction permit or if a permit is not required.

A habitual violator is subject to a $25,000 per day fine for each violation after notification of the habitual violator status by the DNR. This means that once a person has been classified as a habitual violator and notified of his status, any subsequent violations can be punished by a violation of $25,000 per day. Every operation in which the habitual violator owns a controlling interest is subject to an annual review by the department, including annual submission of and approval of a manure management plan.

C. Construction In A Floodplain

a. One Hundred Year Floodplain

Confinement feeding operations cannot be constructed in a one-hundred year floodplain. A one hundred year floodplain is defined as land that has a one percent chance of being flooded in any given year and is adjacent to a major water source. A person cannot place fill on the land to raise it above the one hundred year flood level. The Iowa Code requires DNR to designate all one hundred year floodplains in the state.

Because most flood plains have not been designated, all farmers who plan to build a confinement feeding operation structure on any soils classified as alluvial must get a 100-year floodplain determination from DNR. If the proposed livestock farm does not require a construction permit, the farmer must petition the department for a declaratory order to declare that the proposed site is not in the 100-year floodplain. If the proposed livestock farm requires a construction permit, the farmer must indicate on page one of the construction application that the site may be on alluvial soils and the department will make the determination.

NOTE: LOCATING ALLUVIAL SOILS

The DNR website has maps that indicate the locations of alluvial soils. The website can be found at http://csbweb.igsb.uiowa.edu/imsgate/maps/afo_siting_atlas.asp. **Make sure to have all pop-up blockers disabled to properly use the site.** If pop-up blockers are not disabled, the site will "freeze," and the legal description will not be found on the map. Click to enter into the map site. The easiest and quickest way to determine if the proposed site may sit on alluvial soil is to enter the legal description of the land. Click on "Legal" in the upper right-hand corner, and enter the description in the pop-up box in the format shown. The legend on the left side of the screen allows the user to show or hide map features. Check or uncheck the legend boxes on the left hand side of the screen as desired, then click "Redraw Map" at the bottom left of the page to refresh the map with the desired features.

b. Q100 Land

Land that has a one percent chance of being flooded in any given year is considered Q100. Construction of confinement feeding operations on a Q100 of a major water source is not allowed. However, construction of a confinement feeding operation is allowed on a Q100 of a water source that is not a major water source, subject to the regulations of the DNR, the county, or both. To determine if a building site is in a regulated floodplain, or Q100, a producer should contact the Water Resources Section, Floodplain Development in the DNR, or the county zoning administrator. When contacting the DNR or the county, the producer should know the building site's location by township, section, and quarter section so that the site can be located on the floodplain map. The floodplain maps provide a general idea of the floodplain in the area, but for a more exact identification of the demarcation line the project engineer should work with a surveyor and hydrologist. Application forms for this permit may be found at: http://www.iowadnr.com/water/floodplain/fp_afo.html

c. Floodplains

The DNR has jurisdiction over all floodplains for the purpose of protecting property from floods. DNR must approve the construction, maintenance and use of a structure on a floodplain or floodway.

This includes buildings which are residences, factories, warehouses, storage sheds, and other walled, roofed structures constructed for occupation by people or animals or for storage of materials. All structures used in a livestock operation qualify - whether or not a DNR construction permit is required. In addition, the agricultural exemption to county zoning does not apply to any structure located in or on the floodplain of any river or stream. Thus, a county's zoning ordinance may apply to livestock structures to be built in a floodplain. Before a livestock operation can be located in a floodplain, both DNR and county approval (if the county has adopted county zoning) must be obtained.

A building built in a floodplain outside of the city limits must have approval from DNR unless the area that drains to the building site is less than 10 square miles. However, construction in a floodplain in an urban area must have DNR approval if the drainage area is more than two square miles:

- If the building is adjacent to a dam and the lowest floor level (including a basement and presumably a manure pit) is lower than the top of the dam; or
- If the building is downstream from a dam and flooding can reasonably be anticipated from principal or emergency spillway discharges. If the dam does not comply with DNR high hazard criteria, DNR approval is required at any location where flooding can reasonably be anticipated from overtopping and failure of the dam.

If the DNR has jurisdiction, then DNR approval is required for:

- New building construction, including placement and grading of fill materials to create an elevated site;
- Additions to existing buildings that increase the original floor area by 25% or more; and
- Reconstruction of a building if the cost is more than 50% of the market value of the existing building or if the market value of the building will increase by more than 50%.

The minimum flood protection levels for buildings built in a floodplain are based on the damage potential of the building and its contents. DNR rules classify buildings as follows:

- Maximum flood damage potential: Includes buildings containing materials dangerous to the public, buildings containing contents of high public value, fuel storage facilities, and hospitals. These buildings must be protected to the level of a 500-year flood plus 1-foot.
- High flood damage potential: Includes residences or industrial, commercial or public buildings where flooding would result in high public damage as determined by DNR, and wastewater treatment facilities. These buildings and facilities must be protected to the level of a 100-year flood plus one foot. DNR rules specifically require that the top of a manure storage structure be constructed at least one foot above the elevation of a 100-year flood.
- Moderate flood damage potential: Includes industrial and commercial buildings containing readily movable contents and seasonal residences. These buildings must be protected to the level of a 50-year flood.

Buildings, including livestock barns, are required to have DNR approval for minimum flood protection levels and must use the following flood protection methods:

- Structural design and flood proofing: Basement walls and floors below the minimum flood protection level must be flood proof and able to withstand hydrostatic pressure and buoyant forces of the minimum flood level. Sanitary sewer drains below the minimum flood protection level must have automatic closure valves to prevent overflow.

- Location: Criteria for location of a building include consideration of the potential for obstructing flood flows and the potential hazards which may arise when the building is surrounded by floodwater.

D. Agricultural Drainage Wells

No earthen manure storage structures or earthen egg washwater storage structures may be built on land that drains to an agricultural drainage well. Iowa law requires the closure of agricultural drainage wells by December 31, 2001 where an earthen storage structure was previously built in the drainage area. Persons owning land that drains to an agricultural drainage well had until December 31, 2001 to remove surface intakes to the ag drainage well. Persons owning land with a cistern connected to an ag drainage well shall construct and maintain sidewalls around the cistern to prevent surface water runoff from directly emptying into the ag drainage well. A person owning land on which an ag drainage well is located shall make sure the system is adequately ventilated in a manner that does not cause surface water to drain directly in to the ag drainage well. A lock shall be installed over the ag drainage well or cistern to prevent unauthorized access.

E. Karst Topography

An anaerobic lagoon or earthen manure storage basin cannot be located at a site that exhibits Karst features such as sinkholes or solution channeling generally occurring in areas underlain by limestone or dolomite. The top of a manure storage structure must be built at least one foot above the elevation of a 100-year flood.

TRANSFER OF PERMITS

If a livestock operation with a DNR permit is sold, the new owner is subject to all the terms and conditions of the permit. The DNR must be notified of the transfer by the current permit holder and the new permit holder within 30 days after the transfer. Within 30 days of receiving a request from the DNR, the new permit holder may need to supply the information to modify the permit to reflect the new ownership. A person who is a habitual violator or has a pending enforcement action may not purchase a confinement operation with a DNR permit.

NOTE: TRANSFER REQUIRES NEW MMP

DNR rules require that the new owner file a new MMP with DNR and the county within 60 days after the transfer. The new owner can use the existing MMP for manure applications until the new MMP is filed. See the Manure Management chapter of this Handbook for further discussion.

SEPARATION DISTANCES

Confinement farms are subject to the distance requirements regardless of whether an Iowa Department of Natural Resources (DNR) permit is required. However, new operations which use formed manure storage structures and have less than 500 animal units are exempt from the separation distances for residences, businesses, churches, schools, public use areas and roads. Separation distances from special environmental features such as streams and wetlands still apply to operations less than 500 animal units.

The first date of construction of confinement facilities dictate which separation distances apply because of legislative and regulatory changes that have occurred over time. The 1995 legislation increased the distances

for anaerobic lagoons and earthen manure storage basins and added distances for formed manure storage structures, confinement buildings and egg washwater storage structures. The legislation also included new requirements for these facilities to locate a certain distance away from businesses, churches, cities and schools. The 1998 legislation increased the distances for confinement buildings and covered manure storage structures. It also increased the distance from navigable rivers and added new distance requirements from all other water bodies, cemeteries and roads. The 2002 legislation increased these distances, and implemented animal unit measurements, replacing animal weight capacity.

ADJACENCY: DETERMINING WHETHER TWO SITES MUST BE CONSIDERED ONE

For purposes of determining which separation distance applies, two confinement operations which have (1) common ownership or management and (2) adjacent or utilize a common system for manure disposal are counted together to determine the animal weight capacity of the operation. Two operations are adjacent if they are separated at their closest points by distances less than the following:

ADJACENCY DISTANCES FOR SEPARATION DISTANCES	
< 1,250,000 pounds for animals other than cattle < 4,000,000 pounds animal weight capacity for cattle	1,250 feet
> 1,250,000 pounds and < 2,000,000 pounds for animals other than cattle > 1,250,000 pounds and < 2,500,000 pounds for swine farrow-to-finish > 4,000,000 pounds and < 6,000,000 pounds animal weight capacity for cattle	1,500 feet
> 2,000,000 pounds for animals other than cattle > 2,500,000 pounds for swine farrow-to-finish > 6,000,000 pounds animal weight capacity for cattle	2,500 feet

WATER BODY SEPARATION DISTANCES

All new and expanding confinement farms must meet the following setback distances from water bodies:

- 500 feet from a water source (lake, river, reservoir, creek, stream, ditch or other body of water having definite banks and a bed) This distance is 200 feet for dry bedded cattle and hog confinement operations.
- 1000 feet from a major water source (navigable lake or river listed in DNR rules)
- 100 to 1,000 feet from a private well (see table below)
- 2500 feet from a designated wetland
- 500 feet from an agricultural drainage well surface intake
- 1000 feet from a wellhead or cistern of an agriculture drainage well or known sinkhole

Distances to Wells

Applies to all Animal Feeding Operations, regardless of the size of operation, including operations with 500 AU or less	**Public well**		**Private well**	
	Shallow	**Deep**	**Shallow**	**Deep**
Aerobic structure, anaerobic lagoon, earthen manure storage basin, egg washwater storage structure and open feedlot runoff control basin	1,000 feet	400 feet	400 feet	400 feet
Formed manure storage structure, confinement building, open feedlot solids settling facility and open feedlot.	200 feet	100 feet	200 feet	100 feet
Other distances				
Major water sources, wellhead, cistern of an agricultural drainage well or known sinkhole (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided)				1,000 feet
Water sources other than major water sources, surface intakes of an agricultural drainage well (Excluding farm ponds, privately owned lakes or when a secondary containment barrier is provided) (For dry bedded confinement feeding operations this distance is 200 feet)				500 feet
Designated wetlands (owned and managed by the Federal government or the Iowa DNR)				2,500 feet

Major Water Source. A major water source is a river, lake or stream if it can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years excluding periods of flooding. To be a major water source, a lake, river, stream or other water body must be listed on either the lake or river major water source list contained in DNR rules. More lakes, rivers, and streams may be added by DNR rules and the DNR can consider other lakes, rivers, and streams on an individual basis during the consideration of a construction permit application.

Water Source. A water source is a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without outlet to which only one landowner is riparian. A water source is a water body which meets this definition, but is not include on the major water source list.

Secondary Containment. The separation distances from water bodies do not apply if a secondary containment barrier is constructed. Secondary containment must meet the following design, operation and maintenance requirements:

- For liquid manure, a secondary containment barrier must consist of a structure surrounding or downslope of a manure storage structure that is designed to contain 120 percent of the volume of manure stored above the manure storage structure's final grade or 50 percent of the volume of the manure stored below or partially below the structure's final grade, whichever is greater. The structure must be designed by a professional engineer or NRCS qualified staff.
    - For purposes of secondary containment barriers for confinement operations storing liquid or semi-liquid manure to qualify for an exemption, semi-liquid manure is defined as manure that is too solid for pumping but too liquid for stacking.
- For dry manure, a secondary containment barrier must be designed to contain 10 percent of the volume of manure stored. Detailed drawings prepared by the owner or a representative must be submitted.
    - For purposes of earthen secondary containment barriers for confinement operations storing dry manure to qualify for an exemption to the separation distance, the earthen secondary

containment is not required to meet percolation standards and dike slope and width requirements for liquid manure structure earthen secondary containment. Any dry manure retained in the secondary containment must be removed and properly disposed within 14 days.

- If the containment barrier does not surround the manure storage structure, upland drainage must be diverted.
- The barrier may be constructed of earth, concrete or a combination of both.
- The barrier may have a relief outlet or valve. However, this relief outlet or valve must remain closed and any accumulated liquid due to overflow must be land applied under the MMP.
- The base must slope to a collecting area where storm water can be pumped out. If storm water is contaminated with manure, it must be land-applied at normal fertilizer application rates.
- Secondary containment barriers constructed entirely or partially of earth must meet the following requirements:
    - The soil surface, including dike, must be constructed to prevent downward water movement at rates greater than 1 X 10-6 cm/sec and must be maintained to prevent downward water movement at rates greater than 1 X 10-5 cm/sec.
    - Dikes cannot be steeper than 45 degrees and must be protected against erosion. If the slope is 19 degrees or less, grass can be sufficient protection, provided it does not interfere with the required soil seal.
    - The top width of the dike must be no less than 3 feet.
- Secondary containment barriers constructed of concrete must be watertight and comply with the following requirements:
- The base of the containment structure must be designed to support the manure storage structure and its contents.
- The concrete must be routinely inspected for cracks, which must be repaired with a suitable sealant.

NOTE: SECONDARY CONTAINMENT – RELIEF VALVES

As noted above, DNR rules now allow a relief outlet or valve for secondary containment. The rules require the valve to remain closed and any overflow must be land applied under the MMP. The reference to overflow refers to overflow from the manure structure and means that any accumulated liquid in the containment that is not overflow can be released through the valve and then the valve must be closed and remain closed.

NOTE: SECONDARY CONTAINMENT FOR DRY MANURE

Note that secondary containment for dry manure structures is subject to a much lower containment volume (10%). Also, the containment is not required to be designed by a professional engineer or NRCS staff.

Wells. The distance applies regardless of who owns the well or the purpose for the well. If the owner of the livestock operation wants to build closer than the well separation distances, a variance must be obtained from the DNR. DNR rules define a deep well as a well located and constructed in such a manner that there is a continuous layer of low permeability soil or rock at least 5 feet thick located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn. DNR rules define a shallow well as a well located and constructed in such a manner that there is not a continuous layer of low permeability soil or rock (or equivalent retarding mechanism acceptable to the department) at least 5 feet thick, the top of which is located at least 25 feet below the normal ground surface and above the aquifer from which water is to be drawn.

NOTE: VARIANCES TO WELL SEPARATION DISTANCES

If the proposed facility does not meet the required well separation distances, a person may apply for a variance from the distances when certain conditions exist. Well waivers are more likely to be granted if the following are present:

- The well is up slope from the manure storage – surface drainage can't get to the well
- Tight soils are in the area (no sand)
- The protection to the well is equivalent to the protection the separation distance would provide
- The well head is adequately protected

When applying for a well variance, it is recommended that the following information be included with the request:

- Pictures of the site
- Topography map
- Soils map
- Diagram of the site to scale
- Plat map with the parcel outlined
- Information about the proposed building – design, location, etc.
- Information about the well – when drilled, how long its been used and what for, depth, soil materials, any well tests on water quality conducted, etc.
- Information about the current buildings
- Reason why there is no practical alternative to building at that location

Allow at least 30-60 days for the DNR to process a request for a variance.

SEPARATION DISTANCES FROM RESIDENCES, BUSINESSES, CHURCHES, SCHOOLS, PUBLIC USE AREAS AND ROADS

Separation Distances Effective on or after March 1, 2003

The separation distances from residences, churches, businesses, schools, public use areas, and roads for new confinement farms which are constructed or expanded on or after March 1, 2003 are described in the tables below. If no confinement structure on the farm was constructed before this date, please skip over the next two sections and move to the separation distance exemption section.

Separation Distances Effective before March 1, 2003

This section applies if the first confinement structure on the farm was constructed before March 1, 2003. The separation distances from residences, churches, businesses, schools, public use areas, and roads for confinement operations constructed or expanded before March 1, 2003, but before May 31, 1995, are described in two separate tables below. If a structure on the farm was constructed before March 1, 2003, but before May 31, 1995, the separation distances in effect at the time of first construction are grandfathered-in depending on the date of the first construction.

Anaerobic lagoons or earthen slurry storage basins which were constructed before May 31, 1995, are required to be 1,250 feet away from residences and public use areas for operations with less 1.6 million pounds of live animal weight for cattle and less than 625,000 pounds for other animals. For operations larger than 1.6 million pounds for cattle and 625,000 pounds for other animals, the lagoon or basin is required to be 1,875 feet away from residences and public use areas. A written waiver could be obtained from a neighbor to build closer

than the required distance. Existing farms that have not been expanded are grandfathered-in to these distances.

NOTE: DEFINITION OF A PUBLIC USE AREA

A rule change effective Dec. 14, 2016 changed the definition of a public use area to remove lakes listed at the end of Chapter 65 and instead add cabins and fishing docks, fishing houses, fishing jetties or fishing piers at lakes.

NOTE: SEPARATION DISTANCE FROM CITIES AND TOWNS

Most livestock facilities must be located farther away from residences, businesses, churches, schools and public use areas located within the city limits (an incorporated area) than those located outside the city limits. See tables below. However, the city limits or incorporated area does not include a city's extra two-mile zoning area.

EXAMPLE – EXISTING FARM NOT EXPANDING

A 1200 head deep pit swine finishing building was constructed in 2000. It is 1000 feet from a neighboring residence and was in compliance with the separation distance in effect at that time. The building would have to be at least 1250 feet away under the separation distances for new farms. However, since it was built before the separation distance law took effect (March 1, 2003), the existing finishing building remains where it is and continues to operate.

EXAMPLE – EXISTING FARM EXPANDING

A 1200 head deep pit swine finishing barn was constructed in 2000. It is 1000 feet from a neighboring residence and was in compliance with the separation distance in effect at that time. The hog farmer wants to expand the farm by adding a 1200 head concrete pit finishing barn. In determining the required separation distance, the animal unit capacity of the entire farm, including the existing farm, must be included. The animal weight capacity of the expanded farm is approximately 384,000 pounds. Because of the grandfathering clause, this new barn continues to use animal weight capacity for determining separation distances. If the farm expands, the air quality separation distances in the tables below that apply to the existing barn also apply to the new barn. Therefore, the new barn must be at least 1000 feet from the closest residence not owned by the farmer.

EXAMPLE – EXISTING FARM EXPANDING TO THE NEXT SIZE CATEGORY

A 1200 head deep pit swine finishing barn was constructed in 2000. It is 1000 feet from a neighboring residence and was in compliance with the separation distance in effect at that time. The hog farmer wants to expand the farm by adding THREE 1200 head concrete pit finishing barns. In determining the required separation distance, the animal unit capacity of the entire farm, including the existing farm, must be included. The animal weight capacity of the expanded farm is approximately 768,000 pounds. Because of the grandfathering clause, this new barn continues to use animal weight capacity for determining separation distances; however, the farm is expanding over the next size category in the table and must meet a greater distance. If the farm expands, the air quality separation distances tables below that applies to the existing farm also applies to the expanded farm. Therefore, the new barn must be at least 1250 feet from the closest residence not owned by the farmer.

NOTE: EXPANSION OF SMALL OPERATIONS

A producer constructing a small animal feeding operation after January 1, 1999 should also consider whether the operation may be expanded in the future over the 200,000 or 400,000 pound thresholds. While a small animal feeding operation is exempt from separation distances, future expansions of the operation over the threshold are not exempt. Therefore, when building a small operation, the operation should meet the separation distance required for the operation after the planned expansion. Otherwise, the operation cannot be expanded at that location. Even if future expansion is not planned, it is advisable to locate a facility farther away than the required distance.

Exemptions to Separation Distances from Residences, Businesses, Churches, Schools and Public Use Areas

The following are exempt from separation distances for residences, churches, businesses, schools, public use areas and roads:

- A confinement farm built before the effective date of the separation distance does not need to meet the new distance requirement and may continue to operate.
- A confinement farm constructed before March 1, 2003, and which expands later complies with the distances in effect at the time the farm was first constructed or expanded. (See examples above.)
- An operation built before March 1, 2003, may expand if the expansion of the operation is built is farther away from the residence, church, school, business, public use area than the existing portion of operation. Additionally, the following also must be met:
    1) For a confinement feeding operation that includes a confinement feeding operation structure constructed prior to March 1, 2003, the animal weight capacity of the confinement feeding operation as expanded is not more than the lesser of the following:
        a) Double its animal weight capacity on the following dates:
            i. May 31, 1995, for a confinement feeding operation that includes a confinement feeding operation structure constructed prior to January 1, 1999.
            ii. January 1, 1999, for a confinement feeding operation that only includes a confinement feeding operation structure constructed on or after January 1, 1999, but does include a confinement feeding operation structure constructed prior to March 1, 2003.
        b) Either of the following:
            i. Six hundred twenty-five thousand pounds animal weight capacity for animals other than cattle.
            ii. One million six hundred thousand pounds animal weight capacity for cattle.
    2) For a confinement feeding operation that does not include a confinement feeding operation structure constructed prior to March 1, 2003, the animal unit capacity of the confinement feeding operation as expanded is not more than the lesser of the following:
        a) Double its animal unit capacity on March 1, 2003.
        b) One thousand animal units.

- An operation built before March 1, 2003, may replace an earthen manure storage structure with one or more formed manure storage structures if the following requirements are met:
    1) The animal weight capacity of the portion of the operation for which the replaced storage structures is being built does not increase.
    2) The use of the earthen manure storage structure is discontinued within one year after construction of the new storage.
    3) The replacement storage does not have storage for more than 14 months.
    4) The replacement storage must be built no closer to a business, church, school, public use area or road than the operation was before the replacement was built.
- Small operations. The distances from residences, churches, schools, public use areas and roads do not apply to a confinement operation using a formed manure storage structure and which has an animal unit capacity of less than 500 animal units. If an earthen structure is used, the exception for small operations does not apply.
- Written waiver. The confinement operation obtains a written waiver from the owner of the land on which a residence, church, business, school or public use area is located. Two examples of written waivers are attached to the end of this chapter.
    1) The waiver must be recorded in the county where the property benefiting from the separation distance is located.
    2) The waiver must be specific to the construction or expansion for which the application is submitted. Future construction or expansion may only be included in the waiver if the waiver includes specific language describing the future construction or expansion.

NOTE: WRITTEN WAIVER TERMS

The specific conditions of the waiver may be negotiated between the parties. Some conditions could include a restriction on the size of the operation, type of manure storage structures, manure application limits. Although not required by DNR, producers may want to consider combining the required waiver with a nuisance easement or covenant if the producer is concerned about a nuisance suit by the person granting the waiver. One example waiver attached to the end of this chapter includes a nuisance easement or covenant.

- Benefited structure built later. A confinement operation in existence before the residence, church, business, school, public use area or road was constructed or expanded can expand without regard to the separation distances.

MEASURING SEPARATION DISTANCES

All distances between a livestock operation structure and locations or objects from which separation is required are to be measured from their closest points by standard survey methods. When measuring from a confinement operation structure, the structure does not include areas that do not house animals or store manure or litter (e.g. offices, loading chutes, bulk feed bins, etc.) Except for cemeteries, distances are not measured from property boundary lines.

- The closest point of an anaerobic lagoon or earthen basin is the maximum allowable level of manure (point of freeboard).
- The closest point of a public use area is the closest point of the facilities that qualify as a public use area (See Appendix 1 for definition of areas that qualify). For cemeteries, measurement is to the closest point of the property line.

- The closest point of a lake or reservoir is the ordinary high water mark.
- The closest point of a river, stream or drainage ditch is the top of the bank of the channel.
- The closest point of a road is the closest part of the road right of way.

NOTE: ROAD RIGHT OF WAY

Normally the road right of way is marked by the fence line. However, to be sure, a producer should check the official county land records or have the land surveyed. A separation distance from a road right of way is not measured from the middle of the road.

Swine, Sheep, Horses, Goats and Poultry Separation Distance Requirements beginning January 1, 1999

Type of Structure	Size of Operation Animal Weight Capacity	Residences[1], commercial enterprises, religious institutions, or educational institutions		Public Use Areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to <1,250,000 lb 1,250,000 lb or more	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Covered earthen manure storage basins	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to <1,250,000 lb 1,250,000 lb or more	1,000 feet 1,000 feet 1,250 feet 1,875 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Uncovered formed manure storage structures	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to < 1,250,000 lb 1,250,000 lb or more	None 1,250 feet 1,500 feet 2,000 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Confinement buildings and covered formed manure storage structures	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to < 1,250,000 lb 1,250,000 lb or more	None 1,000 feet 1,250 feet 1,875 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Egg washwater storage structures	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to < 1,250,000 lb 1,250,000 lb or more	None 750 feet 1,000 feet 1,500 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
	Private Shallow Well	Private Deep Well	Public Shallow Well	Public Deep Well
Anaerobic lagoon, aerobic structure, earthen manure storage basins, egg washwater storage structure or run-off control basin	400 feet[2]	400 feet[2]	1000 feet[2]	400 feet[2]
Confinement building, formed manure storage structure, feedlot solids settling facility, or open feedlot	200 feet[2]	100 feet[2]	200 feet[2]	100 feet[2]
	Surface Intake of an Ag Drainage Well or Sinkhole	Major Watercourses	Watercourses	Roads
Anaerobic lagoon, earthen manure storage basin, formed manure storage structure, egg washwater storage structure, or confinement building	500 feet[2]	500 feet[2]	200 feet[2]	100 feet

[1] Residences not owned by the owner of the animal feeding operation.

[2] These distances apply to all animal feeding operations, regardless of size, that have the designated structures.

Beef and Dairy Cattle Separation Distance Requirements beginning January 1, 1999

Type of Structure	Size of Operation Animal Weight Capacity	Residences[1], commercial enterprises, religious institutions, or educational institutions		Public Use Areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Covered earthen manure storage basins	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	1,000 feet 1,000 feet 1,250 feet 1,875 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Uncovered formed manure storage structures	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	None 1,250 feet 1,500 feet 2,000 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Confinement buildings and covered formed manure storage structures	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	None 1,000 feet 1,250 feet 1,875 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Anaerobic lagoons, aerobic structure, earthen manure storage basins, egg washwater storage structure or run-off control basin	Private Shallow Well 400 feet[2]	Private Deep Well 400 feet[2]	Public Shallow Well 1000 feet[2]	Public Deep Well 400 feet[2]
Confinement building, formed manure storage structure, feedlot solids settling facility, or open feedlot	200 feet[2]	100 feet[2]	200 feet[2]	100 feet[2]
Anaerobic lagoon, earthen manure storage basin, formed manure storage structure, egg washwater storage structure, or confinement building	Surface Intake of an Agricultural Drainage Well or Sinkhole 500 feet[2]	Major Watercourse 500 feet[2]	Watercourse 200 feet[2]	Road 100 feet

[1] Residences not owned by the owner of the animal feeding operation.

[2] These distances apply to all animal feeding operations, regardless of size, that have the designated structures.

Swine, Sheep, Horses, Goats and Poultry Separation Distance Requirements from 5/31/95 to 12/31/98

Type of Structure	Size of Operation Animal Weight Capacity	Residences[1], commercial enterprises, religious institutions, or educational institutions		Public Use Areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to <1,250,000 lb 1,250,000 lb or more	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Covered earthen manure storage basins	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to <1,250,000 lb 1,250,000 lb or more	750 feet 750 feet 1,000 feet 1,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Uncovered formed manure storage structures	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to < 1,250,000 lb 1,250,000 lb or more	None 1,000 feet 1,500 feet 2,000 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Confinement buildings, covered formed manure storage structures, and egg washwater storage structures	<200,000 lb 200,000 lb to < 625,000 lb 625,000 lb to < 1,250,000 lb 1,250,000 lb or more	None 750 feet 1,000 feet 1,500 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
	Private Shallow Well	Private Deep Well	Public Shallow Well	Public Deep Well
Anaerobic lagoon, aerobic structure, earthen manure storage basins, egg washwater storage structure or run-off control basin	400 feet[2]	400 feet[2]	1000 feet[2]	400 feet[2]
Confinement building, formed manure storage structure, feedlot solids settling facility, or open feedlot	200 feet[2]	100 feet[2]	200 feet[2]	100 feet[2]
	Surface Intake of an Ag Drainage Well or Known Sinkhole		Navigable Lakes, Rivers and Streams	
Anaerobic lagoon, earthen manure storage basin, formed manure storage structure, egg washwater storage structure, or confinement building	500 feet[2]		200 feet[2]	

[1] Residences not owned by the owner of the animal feeding operation.

[2] These distances apply to all animal feeding operations, regardless of size, that have the designated structures.

Beef and Dairy Cattle Separation Distance Requirements from 5/31/95 to 12/31/98

Type of Structure	Size of Operation Animal Weight Capacity	Residences[1], commercial enterprises, religious institutions, or educational institutions		Public Use Areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Covered earthen manure storage basins	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	750 feet 750 feet 1,000 feet 1,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet	1,250 feet 1,250 feet 1,875 feet 2,500 feet
Uncovered formed manure storage structures	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	None 1,000 feet 1,500 feet 2,000 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
Confinement buildings, covered formed manure storage structures, and egg washwater storage structures	<400,000 lbs. 400,000 lbs. to <1,600,000 lbs. 1,600,000 lbs. to <4,000,000 lbs. 4,000,000 lbs. or more	None 750 feet 1,000 feet 1,500 feet	None 1,250 feet 1,875 feet 2,500 feet	None 1,250 feet 1,875 feet 2,500 feet
	Private Shallow Well	Private Deep Well	Public Shallow Well	Public Deep Well
Anaerobic lagoons, aerobic structure, earthen manure storage basins, egg washwater storage structure or run-off control basin	400 feet[2]	400 feet[2]	1000 feet[2]	400 feet[2]
Confinement building, formed manure storage structure, feedlot solids settling facility, or open feedlot	200 feet[2]	100 feet[2]	200 feet[2]	100 feet[2]
	Surface Intake of an Ag Drainage Well or Known Sinkhole		Navigable Lakes, Rivers and Streams	
Anaerobic lagoon, earthen manure storage basin, formed manure storage structure, egg washwater storage structure, or confinement building	500 feet[2]		200 feet[2]	

[1] Residences not owned by the owner of the animal feeding operation.

[2] These distances apply to all animal feeding operations, regardless of size, that have the designated structures.

All Livestock Separation Distance Requirements after 3/31/2003

Type of Structure	Size of Operation Animal Unit Capacity	Residences, commercial enterprises, religious institutions, or educational institutions		Public Use Areas
		Unincorporated Areas	Incorporated Areas	
Anaerobic lagoons and uncovered earthen manure storage basins	< 1,000 AU 1,000 to <3,000 AU 3,000 AU or more	1,875 feet 2,500 feet 3,000 feet	1,875 feet 2,500 feet 3,000 feet	1,875 feet 2,500 feet 3,000 feet
Covered earthen manure storage basins	< 1,000 AU 1,000 to <3,000 AU 3,000 AU or more	1,000 feet 1,875 feet 2,375 feet	1,875 feet 1,250 feet 3,000 feet	1,875 feet 1,250 feet 3,000 feet
Uncovered formed manure storage structures	< 1,000 AU 1,000 to <3,000 AU 3,000 AU or more	1500 feet 2,000 feet 2,500 feet	1,875 feet 2,500 feet 3,000 feet	1,875 feet 2,500 feet 3,000 feet
Confinement buildings and covered formed manure storage structures	< 1,000 AU 1,000 to <3,000 AU 3,000 AU or more	1250 feet 1,875 feet 2,375 feet	1,875 feet 2,500 feet 3,000 feet	1,875 feet 2,500 feet 3,000 feet
Egg washwater storage structure	< 1,000 AU 1,000 to <3,000 AU 3,000 AU or more	1,000 feet 1,500 feet 2,000 feet	1,875 feet 2,500 feet 3,000 feet	1,875 feet 2,500 feet 3,000 feet
Confinement feeding operation structure				
	Private Shallow Well	Private Deep Well	Public Shallow Well	Public Deep Well
Anaerobic lagoons, aerobic structure, earthen manure storage basins, egg washwater storage structure or run-off control basin	400 feet	400 feet	1000 feet	400 feet
Confinement building, formed manure storage structure, feedlot solids settling facility, or open feedlot	200 feet	100 feet	200 feet	100 feet
	Surface Intake of an Agricultural Drainage Well, Sinkhole, or Watercourse	Major Watercourse	Road	
Anaerobic lagoon, earthen manure storage basin, formed manure storage structure, egg washwater storage structure, or confinement building	500 feet	1,000 feet	100 feet	

DNR DIRECTOR DISCRETION RULE

The DNR may evaluate any proposed confinement operation or proposed expansion of a confinement operation that requires a construction permit or manure management plan with respect to its potential adverse impacts on natural resources or the environment. In conducting the evaluation, the DNR shall consider the following factors:

(1) The likelihood manure will be applied to frozen or snow–covered cropland.
(2) The proximity of the structures or manure application areas to sensitive areas, including but not limited to publicly owned land, designated areas, trout streams and karst terrain.
(3) Topography, slope, vegetation, potential means or routes of conveyance of manure spilled or land–applied. This factor includes but is not limited to whether the manure application areas involve cropland with predominant slopes greater than 9 percent without a conservation plan approved by the local soil and water conservation district or its equivalent and whether manure for land application is hauled or otherwise transported more than five miles.
(4) Whether the operation or manure application area is or will be located in a two–year capture zone for a public water supply.

In addition to the requirements in other DNR rules, the DNR may deny a construction permit, disapprove a manure management plan or prohibit construction of the proposed operation at the proposed location if the director of the DNR determines from the evaluation that the operation would reasonably be expected to result in any of the following impacts:

(1) Manure from the operation will cause pollution of a water of the state.
(2) Manure from the operation will cause a violation of state water quality standards.
(3) An adverse effect on natural resources or the environment will occur in a specific area due to the current concentration of animal feeding operations or the associated manure application areas.

The DNR also may establish permit conditions or require amendments to the MMP in addition to the minimum requirements established for such operations, on the location of structures or manure application, or other operational conditions necessary to avoid or minimize the adverse impacts.

A construction permit denial or condition, an MMP disapproval or required amendment, or a prohibition of construction under this DNR rule may be appealed using normal appeal procedures to an administrative law judge and then to EPC.

DNR has developed a form to use when reviewing a construction permit application for the director discretion rule.

DO NOT USE THESE FORMS – YOU MUST OBTAIN A CURRENT COPY OF THE FORMS FROM DNR'S WEBSITE.

APPENDIX C
MASTER MATRIX

NOTE: SUPPORTING DOCUMENTATION

Supporting documentation for the matrix factors selected, including design, operation, and maintenance plans, should be included with the master matrix. If the necessary supporting documentation is not included, DNR may reject the permit application even if a county recommends approval of the permit based on the master matrix because DNR considers the matrix a part of the permit.

NOTE: MATRIX SELECTIONS

There is a menu of choices for permit applicant to choose from in the matrix. A minimum of 440 points are required for the matrix to be approved. All matrix factors chosen become legally enforceable through the construction permit. They must be met for the life of the farm and are binding on the owners of the farm. Therefore, the factors must be chosen carefully with this in mind. Matrix points which remain constant are better choices than factors which may change due to time or circumstances.

NOTE: DOCUMENTATION OF DISTANCES

It is recommended that the separation distances selected in the matrix be documented to avoid questions and possible denial of the claimed points. Documentation could include aerial maps, GPS coordinates or site surveys.

NOTE: SEPARATION DISTANCE DETERMINATIONS

Determining what structures and locations a livestock farm must be separated from is a common question to both minimum separation distances and the additional matrix distances. For an in-depth discussion of what constitutes these types of structures or locations please see the previous discussion in this chapter.

Proposed Site Characteristics

The following scoring criteria apply to the site of the proposed confinement feeding operation. Mark one score under each criterion selected by the applicant. The proposed site must obtain a minimum overall score of 440 and a score of 53.38 in the "air" subcategory, a score of 67.75 in the "water" subcategory and a score of 101.13 in the "community impacts" subcategory.

1 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:
* Residence not owned by the owner of the confinement feeding operation,
* Hospital,
* Nursing home, or
* Licensed or registered child care facility.

	Score	Air	Water	Community
250 feet to 500 feet	25	16.25		8.75
501 feet to 750 feet	45	29.25		17.50
751 feet to 1,000 feet	65	42.25		22.75
1,001 feet to 1,250 feet	85	55.25		29.75
1,251 feet or more 100	65.00	35.00		

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.
(B) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(C) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(D) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(E) A full listing of licensed and registered child care facilities is available at county offices of the department of human services.

NOTE: RESIDENTIAL DISTANCE WAIVERS

A situation that sometimes arises is when an owner of a residence lives outside the minimum required separation distance but within the distances that can be selected under this matrix factor. In this instance, the DNR has taken the position that a waiver may not be signed by the owner to allow for points or higher points to be taken for this matrix factor as if the residence was not there.

Another situation is when an owner of a residence located within the minimum required separation distance grants a waiver to allow the livestock farm to be built. This waiver has the effect of the separation distance not applying to that residence. Matrix points may then be taken as if the residence for which a waiver has been signed doesn't exist.

NOTE: REGULATED CHILD CARE PROVIDERS

The list of regulated child care providers is now available on the Department of Human Services web site at: http://www.dhs.state.ia.us/Consumers/Child_Care/LicensingRegs/CCProviderMap.html

2 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest public use area.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500 feet	25	10.00		15.00
1,501 feet or more	30	12.00		18.00

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

(B) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 of 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

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3 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest:

* Educational institution,
* Religious institution, or
* Commercial enterprise.

	Score	Air	Water	Community
250 feet to 500 feet	5	2.00		3.00
501 feet to 750 feet	10	4.00		6.00
751 feet to 1,000 feet	15	6.00		9.00
1,001 feet to 1,250 feet	20	8.00		12.00
1,251 feet to 1,500 feet	25	10.00		15.00
1,501 feet or more	30	12.00		18.00

(A) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

(B) The department will award points only for the single building, of the three listed above, closest to the proposed confinement feeding operation.

(C) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

(D) "Religious institution" - a building in which an active congregation is devoted to worship.

(E) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

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4 Additional separation distance, above minimum requirement of 500 feet, from proposed confinement structure to the closest water source.

	Score	Air	Water	Community
250 feet to 500 feet	5		5.00	
501 feet to 750 feet	10		10.00	
751 feet to 1,000 feet	15		15.00	
1,001 feet to 1,250 feet	20		20.00	
1,251 feet to 1,500 feet	25		25.00	
1,501 feet or more	30		30.00	

"Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.

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5 Separation distance of 300 feet or more from the proposed confinement structure to the nearest thoroughfare.

	Score	Air	Water	Community
300 feet or more	30	9.00		21.00

(A) "Thoroughfare" - a road, street, bridge, or highway open to the public and constructed or maintained by the state or a political subdivision.
(B) The 300-foot distance includes the 100-foot minimum setback plus additional 200 feet.

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6 Additional separation distance, above minimum requirements, from proposed confinement structure to the closest critical public area.

	Score	Air	Water	Community
500 feet or more	10	4.00		6.00

(A) All critical public areas as defined in 567--65.1(455B), are public use areas, and therefore subject to public use area minimum separation distances.
(B) Refer to the construction permit application package to determine the animal unit capacity (or animal weight capacity if an expansion) of the proposed confinement feeding operation. Then refer to Table 6 of 567--Chapter 65 to determine minimum required separation distances.

7 Proposed confinement structure is at least two times the minimum required separation distance from all private and public water wells.

	Score	Air	Water	Community
Two times the minimum separation distance	30		24.00	6.00

Refer to Table 6 of 567--Chapter 65 for minimum required separation distances to wells.

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8 Additional separation distance, above the minimum requirement of 1,000 feet, from proposed confinement structure to the closest:

* Agricultural drainage well,
* Known sinkhole, or
* Major water source.

	Score	Air	Water	Community
250 feet to 500 feet	5 0.	50	2.50	2.00
501 feet to 750 feet	10	1.00	5.00	4.00
751 feet to 1,000 feet	15	1.50	7.50	6.00
1,001 feet to 1,250 feet	20	2.00	10.00	8.00
1,251 feet to 1,500 feet	25	2.50	12.50	10.00
1,501 feet to 1,750 feet	30	3.00	15.00	12.00
1,751 feet to 2,000 feet	35	3.50	17.50	14.00
2,001 feet to 2,250 feet	40	4.00	20.00	16.00
2,251 feet to 2,500 feet	45	4.50	22.50	18.00
2,501 feet or more	50	5.00	25.00	20.00

(A) The department will award points only for the single item, of the three listed above, that is closest to the proposed confinement feeding operation.
(B) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
(C) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.

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9 Distance between the proposed confinement structure and the nearest confinement facility that has a submitted department manure management plan.

	Score	Air	Water	Community
Three-quarter of a mile or more (3,960 feet)	25	7.50	7.50	10.00

Confinement facilities include swine, poultry, and dairy and beef cattle.

NOTE: LOCATION OF OTHER FARMS

Confinement farms larger than 500 animal units built after May 31, 1985 are required to submit annual manure management plans. Contact the nearest DNR regional field office to determine if a livestock farm has submitted a manure management plan.

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10 Separation distance from proposed confinement structure to closest:

* High quality (HQ) waters,
* High quality resource (HQR) waters, or
* Protected water areas (PWA)

is at least two times the minimum required separation distance

	Score	Air	Water	Community
Two times the minimum separation distance	30		22.50	7.50

(A) The department will award points only for the single item, of the three listed above, closest to the proposed confinement feeding operation.
(B) HQ waters are identified in 567--Chapter 61.
(C) HQR waters are identified in 567--Chapter 61.
(D) A listing of PWAs is available at http://www.state.ia.us/government/dnr/organiza/ppd/prowater.htm#Location%20of%20PWA's%20in.

NOTE: LIST OF HIGH QUALITY WATER RESOURCES

The web site link contained in the matrix form is no longer valid. A list of high quality waters, high quality resource waters or protected water areas is now linked on the DNR fact sheet page: http://www.iowadnr.gov/afo/files/hqwr2.pdf

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11 Air quality modeling results demonstrating an annoyance level less than 2 percent of the time for residences within two times the minimum separation distance.

	Score	Air	Water	Community
University of Minnesota OFFSET model results demonstrating an annoyance level less than 2 percent of the time	10	6.00		4.00

(A) OFFSET can be found at http://www.extension.umn.edu/distribution/livestocksystems/DI7680.html . For more information, contact Dr. Larry Jacobson, University of Minnesota, (612) 625-8288, jacob007@tc.umn.edu .

(B) A residence that has a signed waiver for the minimum separation distance cannot be included in the model.
(C) Only the OFFSET model is acceptable until the department recognizes other air quality models.

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12 Liquid manure storage structure is covered.

	Score	Air	Water	Community
Covered liquid manure storage	30	27.00		3.00

(A) "Covered" - organic or inorganic material, placed upon an animal feeding operation structure used to store manure, which significantly reduces the exchange of gases between the stored manure and the outside air. Organic materials include, but are not limited to, a layer of chopped straw, other crop residue, or a naturally occurring crust on the surface of the stored manure. Inorganic materials include, but are not limited to, wood, steel, aluminum, rubber, plastic, or Styrofoam. The materials shall shield at least 90 percent of the surface area of the stored manure from the outside air. Cover shall include an organic or inorganic material which current scientific research shows reduces detectable odor by at least 75 percent. A formed manure storage structure directly beneath a floor where animals are housed in a confinement feeding operation is deemed to be covered.
(B) The design, operation and maintenance plan for the manure cover must be in the construction permit application and made a condition in the approved construction permit.

NOTE: DESIGN, OPERATION & MAINTENANCE PLANS

What should be included in a design, operation and maintenance plan depends upon the specific type of cover being used and its maintenance requirements. As noted in the matrix, a confinement building over a manure storage pit is a cover. The matrix requires a design, operation and maintenance plan for all covers including a confinement building. Your design, operation and maintenance plan for a confinement building as a cover should include such things as routine inspections will be conducted to assure the soundness of the structure, properly maintain gutters and drainage systems to prevent rainwater from entering structure and increasing liquid level of manure storage structure, periodically ensure that pump-out lids, exterior doors, fan housings and other access points are secured, and ensure operators are alert to potential failure of ventilation systems due to power failures, vandalism and equipment malfunction, especially during cold weather, when natural ventilation is limited.

---

13 Construction permit application contains design, construction, operation and maintenance plan for emergency containment area at manure storage structure pump-out area.

	Score	Air	Water	Community
Emergency containment	20		18.00	2.00

(A) The emergency containment area must be able to contain at least 5 percent of the total volume capacity of the manure storage structure.
(B) The emergency containment area must be constructed on soils that are fine-grained and have low permeability.

(C) If manure is spilled into the emergency containment area, the spill must be reported to the department within six hours of onset or discovery.
(D) The design, construction, operation and maintenance plan for the emergency containment area must be in the construction permit application and made a condition in the approved construction permit.

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14 Installation of a filter(s) designed to reduce odors from confinement building(s) exhaust fan(s).

	Score	Air	Water	Community
Installation of filter(s)	10	8.00		2.00

The design, operation and maintenance plan for the filter(s) must be in the construction permit application and made a condition in the approved construction permit.

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15 Utilization of landscaping around confinement structure.

	Score	Air	Water	Community
Utilization of landscaping	20	10.00		10.00

The design, operation and maintenance plan for the landscaping must be in the construction permit application and made a condition in the approved construction permit. The design should contain at least three rows of trees and shrubs, of both fast and slow-growing species that are well suited for the site.

NOTE: SHELTER BELTS

The matrix does not specify the design of the shelter belt, including location, shape and size. It is recommended that landscaping be placed on all sides of the buildings and structures where it is feasible. At a minimum the landscaping should be placed in the side of the building and structures in the prevailing wind direction. Placement between the farm and the nearest neighbor is also recommended to provide visual screening.

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16 Enhancement, above minimum requirements, of structures used in stockpiling and composting activities, such as an impermeable pad and a roof or cover.

	Score	Air	Water	Community
Stockpile and compost facility enhancements	30	9.00	18.00	3.00

(A) The design, operation and maintenance plan for the stockpile or compost structure enhancements must be in the construction permit application and made a condition in the approved construction permit.
(B) The stockpile or compost structures must be located on land adjacent or contiguous to the confinement building.

---

17 Proposed manure storage structure is formed

	Score	Air	Water	Community
Formed manure storage structure	30		27.00	3.00

(A) "Formed manure storage structure" - a covered or uncovered impoundment used to store manure from an animal feeding operation, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Similar materials may include, but are not limited to, plastic, rubber, fiberglass, or other synthetic materials. Materials used in a formed manure storage structure shall have the structural integrity to withstand expected internal and external load pressures.

(B) The design, operation and maintenance plan for the formed manure storage structure must be in the construction permit application and made a condition in the approved construction permit.

NOTE: DESIGN, OPERATION & MAINTENANCE PLANS FOR

DNR takes the position that the operation and maintenance plan must identify procedures to observe the proper operation of the perimeter tile below ground that lowers hydrostatic pressure around the storage structure.

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18 Manure storage structure is aerated to meet departmental standards as an aerobic structure, if aeration is not already required by the department.

	Score	Air	Water	Community
Aerated manure storage structure(s)	10	8.00		2.00

(A) Aerobic structure - an animal feeding operation structure other than an egg washwater storage structure which relies on aerobic bacterial action which is maintained by the utilization of air or oxygen and which includes aeration equipment to digest organic matter. Aeration equipment shall be used and shall be capable of providing oxygen at a rate sufficient to maintain an average of 2 milligrams per liter dissolved oxygen concentration in the upper 30 percent of the depth of manure in the structure at all times.

(B) The design, operation and maintenance plan for the aeration equipment must be in the construction permit application and made a condition in the approved construction permit.

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19 Proposed confinement site has a suitable truck turnaround area so that semi trailers do not have to back into the facility from the road

	Score	Air	Water	Community
Truck turnaround	20			20.00

(A) The design, operation and maintenance plan for the truck turn around area must be in the construction permit application and made a condition in the approved construction permit.

(B) The turnaround area should be at least 120 feet in diameter and be adequately surfaced for traffic in inclement weather.

NOTE: TRUCK TURN AROUND

The purpose of the truck turn around is for traffic safety. Any design, operation and maintenance plan must meet this objective to be accepted.

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20 Construction permit applicant's animal feeding operation environmental and worker protection violation history for the last five years at all facilities in which the applicant has an interest.

	Score	Air	Water	Community
No history of Administrative Orders in last five years	30			30.00

(A) "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

(B) An environmental violation is a final Administrative Order (AO) from the department of natural resources or final court ruling against the construction permit applicant for environmental violations related to an animal feeding operation. A Notice of Violation (NOV) does not constitute a violation.

21 Construction permit applicant waives the right to claim a Pollution Control Tax Exemption for the life of the proposed confinement feeding operation structure.

	Score	Air	Water	Community
Permanent waiver of Pollution Control Tax Exemption	5			5.00

(A) Waiver of Pollution Control Tax Exemption is limited to the proposed structure(s) in the construction permit application.

(B) The department and county assessor will maintain a record of this waiver, and it must be in the construction permit application and made a condition in the approved construction permit.

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22 Construction permit applicant can lawfully claim a Homestead Tax Exemption on the site where the proposed confinement structure is to be constructed

- OR -

the construction permit applicant is the closest resident to the proposed confinement structure.

	Score	Air	Water	Community
Site qualifies for Homestead Tax Exemption or permit applicant is closest resident to proposed structure	25			25.00

Proof of Homestead Tax Exemption is required as part of the construction permit application.

(A) Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

23 Construction permit applicant can lawfully claim a Family Farm Tax Credit for agricultural land where the proposed confinement feeding operation is to be located pursuant to Iowa Code chapter 425A.

	Score	Air	Water	Community
Family Farm Tax Credit qualification	25			25.00

(A) Applicant includes persons who have ownership interests. "Interest" - means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly, indirectly through a spouse or dependent child, or both.

NOTE: QUALIFYING FOR POINTS WITHOUT BEING A RECIPIENT OF THE TAX CREDIT

The matrix requires the applicant to be able to "lawfully claim" the family farm tax credit. Therefore, the matrix does not require the applicant to actually receive the family farm tax credit in order to qualify for these points. Documentation should be provided to prove that the applicant could qualify for the credit if the applicant has not actually received the credit.

24 Facility size.

	Score	Air	Water	Community
1 to 2,000 animal unit capacity	20			20.00
2,001 to 3,000 animal unit capacity	10			10.00
3,001 animal unit capacity or more	0			0.00

(A) Refer to the construction permit application package to determine the animal unit capacity of the proposed confinement structure at the completion of construction.

(B) If the proposed structure is part of an expansion, animal unit capacity (or animal weight capacity) must include all animals confined in adjacent confinement structures.

(C) Two or more animal feeding operations under common ownership or management are deemed to be a single animal feeding operation if they are adjacent or utilize a common area or system for manure disposal. In addition, for purposes of determining whether two or more confinement feeding operations are adjacent, all of the following must apply:

(a) At least one confinement feeding operation structure must be constructed on and after May 21, 1998.

(b) A confinement feeding operation structure which is part of one confinement feeding operation is separated by less than a minimum required distance from a confinement feeding operation structure which is part of the other confinement feeding operation. The minimum required distance shall be as follows:

(1) 1,250 feet for confinement feeding operations having a combined animal unit capacity of less than 1,000 animal units.

(2) 2,500 feet for confinement feeding operations having a combined animal unit capacity of 1,000 animal units or more.

25 Construction permit application includes livestock feeding and watering systems that significantly reduce manure volume.

	Score	Air	Water	Community
Wet/dry feeders or other feeding and watering systems that significantly reduce manure volume	25		12.50	12.50

The design, operation and maintenance plan for the feeding system must be in the construction permit application and made a condition in the approved construction permit.

NOTE: DESIGN, OPERATION & MAINTENANCE PLANS

To avoid disputes, the applicant should provide university or reliable company research to document the significant reduction in manure volume.

Proposed Site Operation and Manure Management Practices

The following scoring criteria apply to the operation and manure management characteristics of the proposed confinement feeding operation. Mark one score under each criterion that best reflects the characteristics of the submitted manure management plan.

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26 Liquid or dry manure (choose only one subsection from subsections "a" - "e" and mark one

		Score	Air	Water	Community
a.	Bulk dry manure is sold under Iowa Code chapter 200A and surface-applied	15		15.00	
	Bulk dry manure is sold under Iowa Code chapter 200A and incorporated on the same date it is land-applied	30	12.00	12.00	6.00

b.	Dry manure is composted and land-applied under the requirements of a department manure management plan	10	4.00	4.00	2.00
	Dry manure is composted and sold so that no manure is applied under the requirements of a department manure management plan	30	12.00	12.00	6.00

c.	Methane digester is used to generate energy from manure and remaining manure is surface-applied under the requirements of an approved department manure management plan	10	3.00	3.00	4.00
	After methane digestion is complete, manure is injected or incorporated on the same date it is land applied under the requirements of an approved department manure management plan	30	12.00	12.00	6.00

d.	Dry manure is completely burned to generate energy and no remaining manure is applied under the requirements of a manure management plan	30	9.00	9.00	12.00
	Some dry manure is burned to generate energy, but remaining manure is land-applied and incorporated on the same date it is land-applied	30	12.00	12.00	6.00

e.	Injection or incorporation of manure on the same date it is land-applied	30	12.00	12.00	6.00

(A) Choose only ONE line from subsection "a", "b," "c," "d," or "e" above and mark only one score in that subsection.
(B) The injection or incorporation of manure must be in the construction permit application and made a condition in the approved construction permit.
(C) If an emergency arises and injection or incorporation is not feasible, prior to land application of manure the applicant must receive a written approval for an emergency waiver from a department field office to surface-apply manure.
(D) Requirements pertaining to the sale of bulk dry manure under pursuant to Iowa Code chapter 200A must be incorporated into the construction permit application and made a condition of the approved construction permit.
(E) The design, operation and maintenance plan for utilization of manure as an energy source must be in the construction permit application and made a condition in the approved construction permit.
(F) The design, operation and maintenance plan for composting facilities must be in the construction permit application and made a condition in the approved construction permit.

NOTE: INJECTION OR INCORPORATION FACTOR

The DNR regulations define what is required to qualify as injection or incorporation. "Incorporation" is defined as soil tillage operation following the surface application of manure which mixes the manure into the upper four inches or more of soil. "Injection" is defined as the application of manure into the soil surface using equipment that discharges it beneath the surface.

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27 Land application of manure is based on a two-year crop rotation phosphorus uptake level.

	Score	Air	Water	Community
Two-year phosphorus crop uptake application rate	10		10.00	

(A) Land application of manure cannot exceed phosphorus crop usage levels for a two-year crop rotation cycle.
(B) The phosphorus uptake application rates must be in the construction permit application and made a condition in the approved construction permit.

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28 Land application of manure to farmland that has USDA Natural Resources Conservation Service (NRCS) approved buffer strips contiguous to all water sources traversing or adjacent to the fields listed in the manure management plan.

	Score	Air	Water	Community
Manure application on farmland with buffer strips	10		8.00	2.00

(A) The department may request NRCS maintenance agreements to ensure proper design, installation and maintenance of filter strips. If a filter strip is present but not designed by NRCS, it must meet NRCS standard specifications.
(B) The application field does not need to be owned by the confinement facility owner to receive points.
(C) On current and future manure management plans, the requirement for buffer strips on all land application areas must be in the construction permit application and made a condition in the approved construction permit.

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29 Land application of manure does not occur on highly erodible land (HEL), as classified by the USDA NRCS.

	Score	Air	Water	Community
No manure application on HEL farmland	10		10.00	

Manure application on non-HEL farmland must be in the construction permit application and made a condition in the approved construction permit.

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30 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

* Residence not owned by the owner of the confinement feeding operation,
* Hospital,
* Nursing home, or
* Licensed or registered child care facility.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	3.25		1.75
Additional separation distance of 500 feet	10	6.50		3.50

(A) The department will award points only for the single building, of the four listed above, closest to the proposed confinement feeding operation.
(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.
(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.
(E) "Licensed child care center" – a facility licensed by the department of human services providing child care or preschool services for seven or more children, except when the facility is registered as a child care home.
(F) "Registered child development homes" - child care providers certify that they comply with rules adopted by the department of human services. This process is voluntary for providers caring for five or fewer children and mandatory for providers caring for six or more children.
(G) A full listing of licensed and registered child care facilities is available at county offices of the department of human

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31 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for land application of manure to closest public use area.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

(A) "Public use area" - a portion of land owned by the United States, the state, or a political subdivision with facilities which attract the public to congregate and remain in the area for significant periods of time. Facilities include, but are not limited to, picnic grounds, campgrounds, cemeteries, lodges, shelter houses, playground equipment, lakes as listed in Table 2 in 567--Chapter 65, and swimming beaches. It does not include a highway, road right-of-way, parking areas, recreational trails or other areas where the public passes through, but does not congregate or remain in the area for significant periods of time.

(B) Minimum separation distance for land application of manure injected or incorporated on the same date as application: 0 feet.

(C) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.

(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

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32 Additional separation distance, above minimum requirements (0 or 750 feet, see below), for the land application of manure to the closest:

* Educational institution,
* Religious institution, or
* Commercial enterprise.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	2.00		3.00

(A) Minimum separation distance for land application of manure broadcast on soil surface: 750 feet.

(B) Minimum separation distance for land application of manure injected or incorporated on same date as application: 0 feet.

(C) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

(D) "Educational institution" - a building in which an organized course of study or training is offered to students enrolled in kindergarten through grade 12 and served by local school districts, accredited or approved nonpublic schools, area educational agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

(E) "Religious institution" - a building in which an active congregation is devoted to worship.

(F) "Commercial enterprise" - a building which is used as a part of a business that manufactures goods, delivers services, or sells goods or services, which is customarily and regularly used by the general public during the entire calendar year and which is connected to electric, water, and sewer systems. A commercial enterprise does not include a farm operation.

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33 Additional separation distance of 50 feet, above minimum requirements (0 or 200 feet, see below), for the land application of manure to the closest private drinking water well or public drinking water well

- OR -

well is properly closed under supervision of county health officials.

	Score	Air	Water	Community
Additional separation distance of 50 feet or well is properly closed	10		8.00	2.00

(A) Minimum separation distance for land application of manure injected or incorporated on the same date as application or 50-foot vegetation buffer exists around well and manure is not applied to the buffer: 0 feet.
(B) Minimum separation distance for land application of manure broadcast on soil surface: 200 feet.
(C) If applicant chooses to close the well, the well closure must be incorporated into the construction permit application and made a condition in the approved construction permit.

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34 Additional separation distance, above minimum requirements, for the land application of manure to the closest:

* Agricultural drainage well,
* Known sinkhole,
* Major water source, or
* Water source.

	Score	Air	Water	Community
Additional separation distance of 200 feet	5	0.50	2.50	2.00
Additional separation distance of 400 feet	10	1.00	5.00	4.00

(A) "Agricultural drainage wells" - include surface intakes, cisterns and wellheads of agricultural drainage wells.
(B) "Major water source" - a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, which can support a floating vessel capable of carrying one or more persons during a total of a six-month period in one out of ten years, excluding periods of flooding. Major water sources in the state are listed in Tables 1 and 2 in 567--Chapter 65.
(C) "Water source" - a lake, river, reservoir, creek, stream, ditch, or other body of water or channel having definite banks and a bed with water flow, except lakes or ponds without an outlet to which only one landowner is riparian.
(D) The additional separation distances must be in the construction permit application and made a condition in the approved construction permit.

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35 Additional separation distance above minimum requirements, for the land application of manure, to the closest:

* High quality (HQ) water,
* High quality resource (HQR) water, or
* Protected water area (PWA).

	Score	Air	Water	Community
Additional separation distance of 200 feet	5		3.75	1.25
Additional separation distance of 400 feet	10		7.50	2.50

(A) HQ waters are identified in 567--Chapter 61.
(B) HQR waters are identified in 567--Chapter 61.
(C) A listing of PWAs is available at http://www.state.ia.us/government/dnr/organiza/ppd/prowater.htm#Location%20of%20PWA's%20in

NOTE: LIST OF HIGH QUALITY WATER RESOURCES

The web site link contained in the matrix form is no longer valid. A list of high quality waters, high quality resource waters or protected water areas is now linked on the DNR fact sheet page: http://www.iowadnr.gov/afo/files/hqwr2.pdf

36 Demonstrated community support.

	Score	Air	Water	Community
Written approval of 100% of the property owners within a one mile radius.	20			20.00

37 Worker safety and protection plan is submitted with the construction permit application.

	Score	Air	Water	Community
Submission of worker safety and protection plan	10			10.00

(A) The worker safety and protection plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The worker safety and protection plan and subsequent records must be kept on site with the manure management plan records.

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38 Applicant signs a waiver of confidentiality allowing public to view confidential manure management plan land application records

	Score	Air	Water	Community
Manure management plan confidentiality waiver	5			5.00

The waiver of confidentiality must be in the construction permit application and made a condition in the approved construction permit. The applicant may limit public inspection to reasonable times and places.

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39 Added economic value based on quality job development (number of full time equivalent (FTE) positions), and salary equal to or above Iowa department of workforce development median (45-2093)

- OR -

the proposed structure increases commercial property tax base in the county.

	Score	Air	Water	Community
Economic value to local community	10			10.00

The Iowa department of workforce development regional profiles are available at http://www.iowaworkforce.org/centers/regionalsites.htm. Select the appropriate region and then select "Regional Profile."

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40 Construction permit application contains an emergency action plan.

	Score	Air	Water	Community
Emergency action plan	5		2.50	2.50

(A) Iowa State University Extension publication PM 1859 lists the components of an emergency action plan. The emergency action plan submitted should parallel the components listed in the publication.
(B) The posting and implementation of an emergency action plan must be in the construction permit application and made a condition in the approved construction permit.
(C) The emergency action plan and subsequent records must be kept on site with the manure management plan records.

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41 Construction permit application contains a closure plan.

	Score	Air	Water	Community
Closure plan	5		2.50	2.50

(A) The closure plan must be in the construction permit application and made a condition in the approved construction permit.
(B) The closure plan must be kept on site with the manure management plan records.

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42 Adoption and implementation of an environmental management system (EMS) recognized by the department.

	Score	Air	Water	Community
EMS	15	4.50	4.50	6.00

(A) The EMS must be in the construction permit application and made a condition in the approved construction permit.
(B) The EMS must be recognized by the department as an acceptable EMS for use with confinement operations.

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43 Adoption and implementation of NRCS approved Comprehensive Nutrient Management Plan (CNMP).

	Score	Air	Water	Community
CNMP	10	3.00	3.00	4.00

The implementation and continuation of a CNMP must be in the construction permit application and made a condition in the approved construction permit.

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44 Groundwater monitoring wells installed near manure storage structure), and applicant agrees to provide data to the department.

	Score	Air	Water	Community
Groundwater monitoring	15		10.50	4.50

(A) Monitoring well location, sampling and data submission must meet department requirements.
(B) The design, operation and maintenance plan for the groundwater monitoring wells, and data transfer to the department, must be in the construction permit application and made a condition in the approved construction permit.

	Total Score	Air	Water	Community
	880	213.50	271.00	404.50
Score to pass	440	53.38	67.75	101.13

DO NOT USE THIS FORM – YOU MUST OBTAIN A CURRENT COPY OF THE FORM FROM DNR'S WEBSITE.

CONSTRUCTION DESIGN STATEMENT

Section 1 - Information about the proposed formed manure storage structure[3](s)

A) Information about the operation:

Name of Facility ID No. :

Location:

(1/4 1/4) (1/4) (Section (Tier & Range) (Name of (County)

NOTE: INCORRECT INFORMATION MAY DELAY BEGINNING CONSTRUCTION

All information, including technical information such as the legal description of the livestock farm, on the MMP and CDS must be exact and must be the same. DNR has taken the position that if certain information such as the legal description of the site is incorrect or missing, the 30 day waiting period for construction must start over when the information is supplied or corrected.

B) Description of the proposed formed manure storage structure[3]. Include dimensions (length, width, or diameter, depth). Indicate if it is aboveground or belowground; covered or uncovered, made of concrete or steel. If necessary attach more pages:

C) Karst Determination: Go to www.IowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is in karst or potential karst, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:

☐ The site is not in karst or potential karst. If the site is not located in karst or potential karst, print and enclose the map with the name and location of the site clearly marked.

☐ The DNR geologist has verified that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used. Complete and sign Section 3,H (page 5).

D) Alluvial Soils Determination: Go to www.IowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:

☐ The site is not in alluvial soils. If the site is not in potential alluvial soils, print and enclose the map with the name and location of the site clearly marked.

☐ The DNR geologist has verified that the site is in alluvial soils. Check one of the following:

☐ Not in 100-year floodplain or does not require a floodplain permit. Include correspondence from the DNR.

☐ Requires floodplain permit. Include Floodplain Permit.

Section 2 - Manure management plan:

☐ An original manure management plan (MMP) is enclosed with this form, even if a MMP was previously filed.

Owner's Name (print)	Owner's Signature	Date

Section 3 - Construction design standards: The person responsible for constructing the formed manure storage structure(s)[3] must complete pages 2 to 5.

[3] Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.

A) Liquid and semi-liquid manure: The proposed formed manure storage structure[3] will be (check one):

A.1 ☐ A non-circular concrete tank, belowground, with walls laterally braced or below the building concrete pit designed according to 567 IAC chapter 65, Appendix D.

A.2 ☐ A non-circular concrete tank, belowground, walls designed according to MidWest Plan Service (MWPS), publication MWPS-36. Include design calculations.

A.3 ☐ A circular concrete tank, walls designed according to MidWest Plan Service (MWPS), publication MWPS TR-9. Include design calculations.

A.4 ☐ Will be made of steel, constructed aboveground according to the manufacturer's recommendations.

B) Dry manure: The proposed formed manure storage structure[3] will be (check one):

B.1 ☐ An aboveground concrete tank, with walls designed according to MWPS-36. Include design calculations.

B.2 ☐ Will be made of steel, constructed aboveground according to the manufacturer's recommendations.

B.3 ☐ Will be a belowground or partially belowground concrete tank, with walls laterally braced designed according to 567 IAC chapter 65, Appendix D or MWPS-36. Include design calculations.

C) Details of the proposed design: Submit an additional completed copy of this page 2 for each formed manure storage structure[3] that have different dimensions. Complete all of the following information:

Number of buildings: _____ **Building name:** _____

Dimensions of proposed formed manure storage structure[3]

	Length	Width	Height or depth	Wall thickness	Diameter (circular tanks only)
Feet					
Inches					

[3] Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.

To determine the appropriate vertical steel in walls, first check one of the following boxes (must check one):

☐ a. To use Tables D-1 and D-2 (on pages 7-8), backfilling of walls shall be performed with gravel, sand, silt, and clay mixtures (less than 50 percent fines), with coarse sand with silt or clay (less than 50 percent fines), or cleaner granular material (see page 9 for the unified soils classification). You will need to submit a copy of a USDA soil survey map with the proposed location of the formed manure storage structures3 clearly marked showing the unified soil classification; or a statement signed by a qualified organization or NRCS staff.

☐ b. Use Tables D-3 and D-4 (on pages 8-9) if backfilling of walls will be performed with soils that are unknown or with low plasticity silts and clays with some sand or gravel (50 percent or more fines); or fine sands with silt or clay (less than 50 percent fines); or low to medium plasticity silts and clays with little sand or gravel (50 percent or more fines); or high plasticity silts and clays (see page 9 for unified soils classification). You must use Tables D-3 and D-4 if you do not submit the soils information requested in box "a", above.

Maximum spacing of steel, in inches

Description of reinforcing steel in walls	Proposed vertical steel in walls [see boxes "a" and "b", above]				Proposed horizontal steel in walls (use Table D-5)
	Walls where vehicles are **not** allowed within 5 feet (use Table D-1)[a]	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-2)[a]	Walls where vehicles are **not** allowed within 5 feet (use Table D-3)[b]	All walls with pumpout ports and walls where vehicles are allowed within 5 feet (use Table D-4)[b]	
Grade 40, No. 4					
Grade 40, No. 5					
Grade 60, No. 4					
Grade 60, No. 5					

D) Aboveground tanks or partially aboveground tanks: Liquid and semi-liquid manure (check the following box):

☐ If the proposed tank is to be constructed **aboveground or partially aboveground** and will have an external outlet or inlet below the liquid level, the tank will also be constructed according to the 567 IAC 65.15(20).

E) Steel Tanks: Certification that the tank will be constructed according to the tank manufacturer's specifications:

Name of tank manufacturer company:

Address:

Telephone: Fax:

F) Additional construction design standards:

To determine the additional requirements set forth in 567 IAC 65.15(14) that would apply to the proposed formed manure storage structure[3], check any of the following 3 boxes based on the information entered on Sections 3.A or 3.B (page 2):

[3] Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.

☐ If you checked boxes A.1, A.2, A.3 or B.3 (on page 2) all of the following 15 additional requirements apply. Complete the numbered items 1 to 15 (below).

☐ If you checked box B.1 (on page 2), only the requirements of numbered items 1, 3, 4, 5, 6, 8 and 12 apply and need to check those boxes (below).

☐ If you checked boxes A.4 or B.2 (on page 2) and the steel tank will have a concrete floor, only the requirements of numbered items 1, 2, 3, 4, 5, 8, 9, 12, apply and need to check those boxes (below).

Additional Requirements that will be followed during construction of the formed manure storage structure(s)[3]:

[3] Formed manure storage structure means a covered or uncovered concrete or steel tank, including concrete pits below the floor.

1. Site preparation (check the following box):

☐ The finished subgrade of a formed manure storage structure shall be graded and compacted to provide a uniform and level base and shall be free of vegetation, manure and debris. For the purpose of this subrule, “uniform” means a finished subgrade with similar soils.

2. Groundwater separation requirements (check one of the following boxes):

☐ When the groundwater table, as determined in 65.15(7)“c,” is above the bottom of the formed structure, a drain tile shall be installed along the footings to artificially lower the groundwater table pursuant to 65.15(7)“b.” The drain tile shall be placed within 3 feet of the footings as indicated in Appendix D, Figure D-1, at the end of this chapter and shall be covered with a minimum of 2 inches of gravel, granular material, fabric or a combination of these materials to prevent plugging the drain tile. If applying for a construction permit, a device to allow monitoring of the water in

the drainage tile lines installed to lower the groundwater table and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.

☐ In lieu of the drain tile, a certification signed by a PE2, a groundwater professional certified pursuant to 567 Chapter 134, or a qualified staff from NRCS, is being submitted indicating that the groundwater elevation, according to 65.15(7)"c", is above the bottom of the formed structure.

3. Minimum as-placed concrete compressive strength (check the following box):

☐ All concrete shall have the following minimum as-placed compressive strengths and shall meet American Society for Testing and Materials (ASTM) standard ASTM C 94: 4,000 pounds per square inch (psi) for walls, floors, beams, columns and pumpouts and 3,000 psi for the footings. The average concrete strength by testing shall not be below design strength. No single test result shall be more than 500 psi less than the minimum compressive strength.

4. Cement and aggregates specifications (check the following box):

☐ Cementitious materials shall consist of portland cement conforming to ASTM C 150. Aggregates shall conform to ASTM C 33. Blended cements in conformance with ASTM C 595 are allowed only for concrete placed between March 15 and October 15. Portland-pozzolan cement or portland blast furnace slag blended cements shall contain at least 75 percent, by mass, of portland cement.

5. Concrete consolidation and vibration requirements (check the following box):

☐ All concrete placed for walls shall be consolidated or vibrated, by manual or mechanical means, or a combination, in a manner which meets ACI 309.

6. Minimum rebar specifications: (check the following box):

☐ All rebar used shall be a minimum of grade 40 steel. All rebar, with the exception of rebar dowels connecting the walls to the floor or footings, shall be secured and tied in place prior to the placing of concrete.

7. Wall reinforcement placement specifications (check the following box):

☐ All wall reinforcement shall be placed so as to have a rebar cover of 2 inches from the inside face of the wall for a belowground manure storage structure. Vertical wall reinforcement should be placed closest to the inside face. Rebar placement shall not exceed tolerances specified in ACI 318.

8. Minimum floor specifications. Complete part a) and b):

a) Floor thickness requirements (check the following box):

☐ The floor slab shall be a minimum of 5 inches thick. Nondestructive methods to verify the floor slab thickness may be required by the department. The results shall indicate that at least 95 percent of the floor slab area meets the minimum required thickness. In no case shall the floor slab thickness be less than 4½ inches.

b) The floor slab reinforcement shall be located in the middle of the thickness of the floor slab (check one of the following boxes):

☐ Formed manure storage structures with a depth of 4 feet or more shall have primary reinforcement consisting of a minimum of #4 rebar placed a maximum of 18 inches on center in each direction placed in a single mat.

☐ Formed manure storage structure with a depth less than 4 feet shall have shrinkage reinforcement consisting of a minimum of 6 × 6-W1.4 × W1.4 welded wire fabric.

9. Minimum footing specifications (check the following box):

☐ The footing or the area where the floor comes in contact with the walls and columns shall have a thickness equal to the wall thickness, but in no case be less than 8 inches, and the width shall be at least twice the thickness of the footing. All exterior walls shall have footings below the frostline. Tolerances shall not exceed -½ inch of the minimum footing dimensions.

10. Requirement to connect walls to footings (check one of the following boxes):

☐ The vertical steel of all walls shall be extended into the footing, and be bent at 90°, OR
☐ A separate dowel shall be installed as a #4 rebar that is bent at 90° with at least 20 inches of rebar in the wall and extended into the footing within 3 inches of the bottom of the footing and extended at least 3 inches horizontally, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.
☐ As an alternative to the 90°bend, the dowel may be extended at least 12 inches into the footing, with a minimum concrete cover of 3 inches at the bottom, as indicated in Appendix D, Figure D-1 (page 10). Dowel spacing (bend or extended) shall be the same as the spacing for the vertical rebar.
☐ In lieu of dowels, mechanical means or alternate methods may be used as anchorage of interior walls to footings. Please submit structural calculations and details of this proposal.

11. Concrete forms specifications (check the following box):
☐ All walls shall be formed with rigid forming systems and shall not be earth-formed.

12. Curing of concrete requirements (check the following box):
☐ All concrete shall be cured for at least seven days after placing, in a manner which meets ACI 308, by maintaining adequate moisture or preventing evaporation. Proper curing shall be done by ponding, spraying or fogging water; or by using a curing compound that meets ASTM C 309; or by using wet burlap, plastic sheets or similar materials.

13. Construction joints and waterstops specifications (check the following box):
☐ All construction joints in exterior walls shall be constructed to prevent discontinuity of steel and have properly spliced rebar placed through the joint. Waterstops shall be installed in all areas where fresh concrete will meet hardened concrete as indicated in Appendix D, Figures D-1 and D-2, at the end of this chapter. The waterstops shall be made of plastic, rolled bentonite or similar materials approved by the department.

14. Backfilling of walls specifications (check the following box):
☐ Backfilling of the walls shall not start until the floor slats or permanent bracing have been installed. Backfilling shall be performed with material free of vegetation, large rocks or debris.

15. Additional design requirements (check the following box, if applicable):
☐ A formed manure storage structure with a depth greater than 12 feet shall be designed by a PE or an NRCS engineer.

G) Construction Certification: The person responsible for constructing the formed manure storage structure[3] must sign this page. Any change(s) to the specifications of the formed manure storage structure must be first approved by DNR:

"I hereby certify that I have read and understand the minimum design and construction standards of Iowa Code chapter 459, Subchapter III, and the 567 Iowa Administrative Code (IAC) 65.15(14) "Minimum concrete standards" or 567 IAC 65 (if other than concrete). The proposed formed manure storage structure(s)[3] at the operation:

Name of operation:		County:	
Owner's name:			

will be constructed in accordance with these minimum requirements. Included with this certification are:

☐ Page 2, for each formed manure storage structure[3] that have different dimensions
☐ Pages 3 to 5 (applicable sections)
☐ Other documents (specify): _____"

(Print name)	(Signature)	(Date)
(Company)	(Address)	(Phone No.)

(See page 6 for mailing instructions)

(Print name)	(Signature)	(Date)
(Company)	(Address)	(Phone No.)

H) Upgraded Concrete Standards Certification: If "Yes" was checked in Section 1.C (page 1) --site exhibits karst terrain or drains into a known sinkhole-- the person responsible for constructing the formed manure storage structure must also complete this section:

567 IAC 65.15(14)"c". Karst terrain—upgraded standards. If the site of the proposed formed manure storage structure is located in an area that exhibits karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in 65.15(14)“a” or “b” shall apply. In addition, the following requirements apply to all formed manure storage structures that store nondry or dry manure (check all of the following boxes):

☐ (1) A minimum 5-foot vertical separation distance between the bottom of a formed manure storage structure and limestone, dolomite, or other soluble rock is required if the formed manure storage structure is not designed by a PE or an NRCS engineer.

☐ (2) If the vertical separation distance between the bottom of the proposed formed manure storage structure and limestone, dolomite, or other soluble rock is less than 5 feet, the structure shall be designed and sealed by a PE or an NRCS engineer who certifies the structural integrity of the structure. A 2-foot-thick layer of compacted clay liner material shall be constructed underneath the floor of the formed manure storage structure. However, it is recommended that any formed manure storage structure be constructed aboveground if the vertical separation distance between the bottom of the structure and the limestone, dolomite, or other soluble rock is less than 5 feet.

☐ (3) In addition, in an area that exhibits karst terrain or an area that drains into a known sinkhole, a PE, an NRCS engineer or a qualified organization shall submit a soil exploration study based on the results from soil borings or test pits to determine the vertical separation between the bottom of the formed structure and limestone, dolomite, or other soluble rock. A minimum of two soil borings or two test pits, equally spaced within each formed structure, are required. After soil exploration is completed, each soil boring and pit shall be properly plugged with concrete grout, bentonite, or similar materials.

☐ (4) Groundwater monitoring shall be performed as specified by the department.

☐ (5) Backfilling shall not start until the floor slats have been placed or permanent bracing has been installed, and shall be performed with material free of vegetation, large rocks, or debris.

"I have read and understand the upgraded concrete standards of IAC 65.15(14)"c", and certify that the proposed formed manure storage structure(s)[3] at the above operation will be constructed according to these standards":

(See page 6 for mailing instructions)

Section 4 - Drainage Tile Certification: Required only if applying for a construction permit and constructing three or more confinement feeding operations structures[4]. This page must be completed and signed by the person responsible for excavating the confinement feeding operation structure[4]:

[4] Confinement feeding operation structure = A confinement building, a formed or unformed manure storage structure, or an egg washwater storage structure.

567 IAC 65.15(1) - Drainage tile removal for new construction of a manure storage structure. Prior to constructing a manure storage structure, other than storage of manure in an exclusively dry form, the site for the animal feeding operation structure shall be investigated for drainage tile lines as provided in this subrule. All applicable records of known drainage tiles shall be examined for the existence of drainage tile lines.

c. The applicant for a construction permit for a formed manure storage structure shall investigate for tile lines during excavation for the structure. Drainage tile lines discovered upgrade from the structure shall be rerouted around the formed manure storage structure to continue the flow of drainage. All other drainage tile lines discovered shall be rerouted, capped, plugged with concrete, Portland cement concrete grout or similar materials or reconnected to upgrade tile lines. Drainage tile lines installed at the time of construction to lower a groundwater table may remain where located. A device to allow monitoring of the water in the drainage tile lines installed to lower the groundwater table

and a device to allow shutoff of the drainage tile lines shall be installed if the drainage tile lines do not have a surface outlet accessible on the property where the formed manure storage structure is located.

"I certify that I have read and understand the requirements of 567 IAC 65.15(1)"c" and that to the best of my knowledge, information and belief, the proposed confinement feeding operation structures[4] at:

Name of operation: _____ County: _____

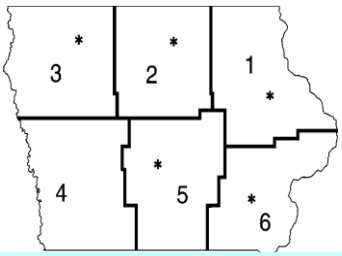
Owner's name: _____

will not impede the drainage of established drainage tile lines which cross their property lines and if construction disturbs drainage tile lines, I will take the necessary measures to reestablish drainage and, upon completion of construction, file a statement that those measures were taken to reestablish drainage."

(Print name)	(Signature)	(Date)
(Company)	(Address)	(Phone No.)

Mailing Instructions: Mail only pages 1 to 5, and page 6 (if applicable) of this CDS according to the following:

1. Operations not needing a construction permit (AUC[1] between 501 and 999 AU and constructing a formed manure storage structure[3]) but required to submit a manure management plan (MMP), at least **30 days** prior to beginning construction must file this CDS, the required karst and alluvial soils documentation requested in Section 1,C and 1,D (page 1) along with the required MMP documents and fees with the nearest DNR Field Office:



Field Office 1
909 West Main Street, Suite 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 Avenue
Spencer, IA 51301
(712) 262-4177

Field Office 4
1401 Sunnyside Lane
Atlantic, IA 50022
(712) 262-4177

Field Office 5
401 SW 7th, Suite 1
Des Moines, IA 50309
(515) 725-0268

Field Office 6
1023 West Madison St.
Washington, IA 52353
319-653-2856

2. If a construction permit is required (AUC[1] = 1,000 AU or more and constructing a formed manure storage structure[3]), mail this CDS, the required construction application documents and fees, at least 90 days prior to beginning construction, to allow for all actions required by Iowa law, to the AFO-Program (Wallace Building, Des Moines, Iowa). You must follow the instructions in the construction application form (DNR Form 542-1428).

If you have any questions regarding the concrete standards requirements and CDS, contact an engineer of the AFO-Program at (515) 281-8941, the nearest DNR Field Office, or visit www.IowaDNR.com.

DO NOT USE THIS FORM – YOU MUST OBTAIN A CURRENT COPY OF THE FORM FROM DNR'S WEBSITE.

Iowa Department of Natural Resources
Construction Permit Application Form
Confinement Feeding Operations

INSTRUCTIONS:
Prior to constructing, installing, modifying or expanding a confinement feeding operation structure[1], answer questions 1-8 on Item 3, Section A (page 2), to determine if a construction permit is required. To calculate the animal unit capacity (AUC) of the operation, complete Table 1 (page 4.) If a construction permit is required, complete the rest of the form, have the owner(s) sign it on pages 5 and 6. Mail to the DNR (see address on page 5) this application form, documents and fees requested in Checklist No. 1 or 2 (pages 10-16). See item 5 (page 5), to determine which checklist to use.

If a construction permit is not needed, some pre-construction requirements may still apply prior to the construction of a formed manure storage structure[2]. See page 5 for additional DNR contact information.

THIS APPLICATION IS FOR:

❑ **A new confinement feeding operation**

❑ **An existing confinement feeding operation** *(answer all of the following questions):*

a) Facility ID No. (5 digit number): _____
b) Date when the operation was first constructed: _____
c) Date when the last construction, expansion or modification was completed: _____
(Not needed if the confinement operation has previously received a construction permit from DNR.)
d) Is this also an ownership change? ❑ Yes. ❑ No.

NOTE: DATES OF CONSTRUCTION
The date when the operation was first constructed is used to determine the applicable separation distances from residences, businesses, churches, schools, and public use areas. See the discussion at the beginning of this chapter regarding the definition of construction. The date when the last construction was completed is used for determining the compliance with the DNR rule that prohibits the issuance of a permit within one year after completion of construction that does not require a permit. See the discussion in previous sections regarding this one year waiting period.

ITEM I — LOCATION AND CONTACT INFORMATION (See page 17 for instructions and an example):

A) Name of operation:_____

B) Location:_____
(¼ ¼) (¼) (Section) (Tier & Range) (Name of Township) (County)

Owner information:
Name:_____ Title: _____
Address:_____
Telephone:_____ Fax:_____ e-mail:_____

Person to contact with questions about this application Of different than owner):
Name: _____ Title: _____
Address:_____
Telephone: _____ Fax: _____ e-mail:_____

❑ Enclose aerial photo or engineering drawing showing the proposed location of the confinement feeding operation structure and all applicable separation distances, as requested in Attachment 1 (pages 11 or 14). See example of aerial photo on pages 18 to 19, at the end of this form.

❑ I manage or am the majority owner of another confinement feeding operation located within 2,500 feet of the proposed site. Please contact the DNR-AFO Program staff at (515) 281-8941 to verify site adjacency requirements.

_____

[1]Confinement feeding operation structure = animal feeding operation structure (confinement building, manure storage structure or egg washwater storage structure) that is part of a confinement feeding operation. Manure storage structures include formed and unformed manure storage structures.
[2] Formed manure storage structure = covered or uncovered concrete or steel tanks, and concrete pits below the building.

ITEM 2 — SITING INFORMATION:
A) Karst Determination: Go to www.lowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is not located in karst or potential karst, print and enclose the map with the name and location of the site clearly marked. If the site is in karst or potential karst, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:
❑ The site is not in karst or potential karst. Include documentation requested in checklist 1 or 2 (pages 10 or 13).
❑ The DNR geologist has verified that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be used.

B) Alluvial Soils Determination: Go to www.lowaDNR.com, select the link to 'Mapping (GIS Interactive)', then check the AFO Siting Atlas. If the site is not in potential alluvial soils, print and enclose the map with the name and location of the site clearly marked. If the site is in potential alluvial soils, if you cannot access the map, or if you have questions about this issue, contact a DNR geologist at (515) 242-6848. Check one of the following:
❑ The site is not in alluvial soils. Include documentation requested in checklist 1 or 2 (pages 10 or 13).
❑ The DNR geologist has verified that the site is in alluvial soils. Check one of the following:
  ❑Not in 100-year floodplain or does not require a floodplain permit. Include correspondence from the DNR.
  ❑Requires floodplain permit. Include Floodplain Permit.

NOTE: KARST TERRAIN

A manure storage structure cannot be built on a site that is karst terrain unless upgraded concrete standards are used to form the structure. Go to DNR's website as directed in the application form. If the site is not karst, print the map and clearly indicate on the map where the site is located. If the site is or potentially is karst contact a DNR geologist for verification. If the site is karst, a soil exploration study and soil borings must be performed by a professional engineer, an NRCS engineer or a qualified organization and a copy of the study and soil borings must be attached.

NOTE: ALLUVIAL SOILS

If the proposed site is on alluvial soils a floodplain permit may be required. See Section VIII below for a discussion of construction in floodplains. A map or documentation from the DNR geologist showing that the site is not in alluvial soils or if the site is in alluvial soils, correspondence from DNR showing that the site is not in a floodplain, that a floodplain permit is not required, or a copy of the floodplain permit must be attached to the application.

ITEM 3 — OPERATION INFORMATION:

A) A construction permit is required prior to any of the following:

1. ❑ Constructing or modifying any unformed manure storage structure[3], or constructing or modifying a confinement building that uses an unformed manure storage structure[3].
2. ❑ Constructing, installing or modifying a confinement building or a formed manure storage structure[s] at a confinement feeding operation if, after construction, installation or expansion, the AUC of the operation is 1,000 animal units (AU) or more. This also applies to confinement feeding operations that store manure exclusively in a dry form.
3. ❑ Initiating a change that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in any unformed manure storage structure[3], even if no construction or physical alteration is necessary. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
4. ❑ Initiating a change, even if no construction or physical alteration is necessary, that would result in an increase in the volume of manure or a modification in the manner in which manure is stored in a formed manure storage structure[s] if, after the change, the AUC of the operation is 1,000 AU or more. Increases in the volume of manure due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.
5. ❑ Constructing or modifying any egg washwater storage structure or a confinement building at a confinement feeding operation that includes an egg washwater storage structure.
6. ❑ Initiating a change that would result in an increase in the volume of egg washwater or a modification in the manner in which egg washwater is stored, even if no construction or physical alteration is necessary. Increases in the volume of egg washwater due to an increase in animal capacity, animal weight capacity or AUC up to the limits specified in a previously issued construction permit do not require a new construction permit.

7. ❑ Repopulating a confinement feeding operation if it was closed for 24 months or more and if any of the following apply:
    1. ❑ The confinement feeding operation uses an unformed manure storage structure[3] or egg washwater storage structure;
    2. ❑ The confinement feeding operation includes only confinement buildings and formed manure storage structures[2] and has an AUC of 1,000 AU or more.
8. ❑ Installing a permanent manure transfer piping system, unless the department determines that a construction permit is not required.

[3] Unformed manure storage structure = covered or uncovered anaerobic lagoon, earthen manure storage basin, aerobic earthen structure.

NOTE: PERMIT REQUIRED EVEN IF NO CONSTRUCTION

As previously noted, even if there is no physical construction or alteration, a permit is required if there is an increase in manure volume or modification in the manner manure is stored unless the increases or modifications are due to an animal unit increase within the limits of a previously issued construction permit or the increase is determined by DNR to be insignificant. No permit is required for repairs or additions to a confinement building such as fans, slats, gates, roofs or covers. However, plans for repair or modifications of manure structures must be submitted to DNR to determine if a permit is required.

B) In your own words, describe in detail, the proposed construction, expansion, installation, modification or repair being proposed in this project. Attach additional pages if necessary:

C) Master Matrix *(must check one).* If any of boxes 1 to 3 are checked, the operation is required to be evaluated with the master matrix if the county, where the confinement feeding operation structure is or would be located, has adopted a 'Construction Evaluation Resolution' (CER). Select the one that best describes your confinement feeding operation:

1. ❑ A new confinement feeding operation proposed in a county that has adopted a CER.
2. ❑ An existing operation constructed on or after April 1, 2002, in a county that has adopted a CER.

3. ❑ An existing operation constructed prior to April I. 2002, with a current or proposed AUC of 1,667 AU or more in a county that has adopted a CER.
4. ❑ None of the above. Therefore, the master matrix evaluation is not required.

D) Qualified Operation *(must check one).* If any of boxes 1 to 4 are checked, the operation is also a 'qualified operation'. A qualified operation is required to use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, this requirement does not apply if box 5 is checked. Select the one that best describes your confinement feeding operation:

1. ❑ A swine farrowing and gestating operation with an AUC of 2,500 AU or more.
2. ❑ A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
3. ❑ A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
4. ❑ Other confinement feeding operations with an AUC of 5,333 AU or more.
5. ❑ This is not a qualified operation because:
    a. ❑ It is below the limits shown on boxes 1 to 4.
    b. ❑ It includes a confinement feeding operation structure constructed prior to May 31, 1995.
    c. ❑ It handles manure exclusively on a dry form.

ITEM 4 — ANIMAL UNIT CAPACITY (AUC) and, if applicable, ANIMAL WEIGHT CAPACITY (AWC):

A) Calculating AUC — Required for all operations
For each animal species, multiply the maximum number of animals that you would ever confine at one time by the appropriate factor, then add all AU together on Table 1 (page 4). Use the maximum market weight for the appropriate animal species to select the AU factor.

You must complete all applicable columns in Table 1. Use column a) to calculate the existing AUC, before permit for existing operations only. Use column b) to calculate the 'Total proposed AUC' (after a permit is issued) including new operations. The number obtained in column b) is the AUC of the operation and must be used to determine permit requirements. Use column c) to calculate the 'New AU' to be added to an existing operation. To calculate the indemnity fee (see page 7), also use column c), however, if the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c).

In calculating the AUC of a confinement feeding operation, you must include the AUC of all confinement buildings which are part of the confinement feeding operation, unless a confinement building has been abandoned.
A confinement feeding operation structure is abandoned if the confinement feeding operation structure has been razed, removed from the site of a confinement feeding operation, filled in with earth, or converted to uses other than a confinement feeding operation structure[1] so that it cannot be used as a confinement feeding operation structure[1] without significant reconstruction. Therefore, in Table 1, enter the animal unit capacity of all the confinement buildings, including those that are from an "adjacent" operation located within 2,500 feet. For more information, contact the AFO Program at (515) 281-8941.

Table 1. Animal Unit Capacity (AUC): (**No. HEAD) x (FACTOR) = AUC**

Animal Species	a) Existing AUC (Before permit)	b) Total Proposed AUG (After permit)
	(No. Head) x (Factor) = AUG	(No. Head)x (Factor) = AUC
Slaughter or feeder cattle	1.0	1.0
Immature dairy cattle	1.0	1.0
Mature dairy cattle	1.4	1.4
Gestating sows	0.4	0.4
Farrowing sows & litter	0.4	0.4
Boars	0.4	0.4
Gilts	0.4	0.4
Finished (Market) hogs	0.4	0.4
Nurse pigs 15 lbs to 55 lbs	0.1	0.1
Sheep and lambs	0.1	0.1
Horses	2.0	2.0
Turkeys 7lbs or more	0.018	0.018
Turkeys less than 7 lbs	0.0085	0.0085
Broiler/Layer chickens 3 lbs or	0.01	0.01
Broiler/Layer chickens less than 3	0.0025	0.0025
TOTALS: a) Existing AUC:		b) Total proposed

Note: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUC" (column b) in the "New AU" (column c)

c) New AU = b) – a):

(This is the AUC of the operation)

B) Calculating AWC - Only for operations first constructed prior to March 1, 2003

The AWC is needed for an operation that was first constructed prior to March 1, 2003, to determine some of the minimum separation distance requirements for construction or expansion.

The AWC is the product of multiplying the maximum number of animals that you would ever confine at any one time by their average weight (lbs) during the production cycle. Then add the AWC if more than one animal species is present (examples on how to determine the AWC are provided in 567 IAC 65.1(455B).)

If the operation was first constructed prior to March 1, 2003, you must complete all applicable columns in Table 2:

Table 2: Animal Weight Capacity (AWC): (No. head) * (Avg. weight, lbs) = AWC, lbs

Animal Species	a) Existing AWC (Before Permit)			b) Proposed AWC (After Permit)			
	(No. head) x avg weight = AWC			(No. head) x avg weight = AWC			
Slaughter or feeder cattle							
Immature dairy cattle							
Mature dairy cattle							
Gestating sows							
Farrowing sows and litter							
Boars							
Gilts							
Finished (Market) hogs							
Nursery pigs 15 lbs to 55 lbs							
Sheep and lambs							
Horses							
Turkeys 7 lbs or more							
Turkeys less than 7 lbs							
Broiler/Layer chickens 3 lbs or more							c) New AWC = b)-a)
Broiler/Layer chickens less than 3 lbs							
Totals:	a) Existing AWC:			b) Total proposed AWC:			

(This is the AWC of the operation)

NOTE: ANIMAL UNIT CAPACITY

Complete the Animal Unit Capacity Table following the table directions and the animal unit capacity discussion set out previously in this chapter. Include in your calculation any confinement operations that will be adjacent to the proposed operation. See the adjacency discussion set out previously in this chapter.

NOTE: ANIMAL WEIGHT CAPACITY

Only complete this section if the application is for a proposed modification or expansion of an existing operation which was constructed prior to March 1, 2003. Complete the application table following the table directions and the previous discussion in this chapter of animal weight capacity.

ITEM 5 — SUBMITTAL REQUIREMENTS. Checklists No. 1 or 2 (pages 10-16) describe the submittal requirements, which are based on the type of confinement feeding operation structure[1] and AUC proposed. To determine which checklist to use, choose the option that best describes your confinement feeding operation:

A) ❑ <u>Formed manure storage structures[2]:</u> The proposed confinement feeding operation structure[1] will be or will use a formed manure storage structure[2]. Check one of the following boxes:

1. ❑ A swine farrowing and gestating operation with an AUC of 1,250 AU or more. Use submittal checklist No. 2 (page 13.)
2. ❑ A swine farrow-to-finish operation with an AUC of 2,750 AU or more. Use submittal checklist No. 2 (page 13.)
3. ❑ A cattle confinement feeding operation (including dairies) with an AUC of 4,000 AU or more. Use submittal checklist No. 2 (page 13.)
4. ❑ Other confinement feeding operations with an AUC of 3,000 AU or more. Use submittal checklist No. 2 (page 13.)
5. ❑ None of the above. Use Submittal Checklist No. 1 (page 10.)

If any of boxes 1 to 4 are checked, the operation meets the threshold requirements for an engineer[4] and a Professional Engineer (PE), licensed in Iowa, is required. For these cases, use Submittal Checklist No. 2 (pages 13-15.)

If you checked box 5, your operation is below threshold requirements for an engineer[4] and a Professional Engineer (PE) is not required. Use Submittal Checklist No. 1 (pages 10-12).

B) ❑ <u>Unformed manure storage structure[3]:</u> The proposed confinement feeding operation structure', will be or will use an unformed manure storage structure[3] or an egg washwater storage structure. A Professional Engineer (PE) licensed in Iowa must design and sign the engineering documents for any size of operation. Use Submittal Checklist No. 2 (pages 13-15) and Addendum "A" (page 16).

NOTE: ENGINEER REQUIRED

If the proposed operation meets threshold requirements, an engineer licensed in Iowa must certify the design plans and inspect the facility. If an engineer is required, the licensed engineer or designee of the engineer must supervise the critical points of construction. The designee cannot be the permittee, the owner of the operation, a direct employee of the permittee or owner of the operation, the contractor or an employee of the contractor. Dry manure facilities are exempt from this requirement; however, the DNR requires a cross section of the buildings to assure that the facility will be used for dry manure. An operation meets threshold requirements and requires an engineer certification if any of the items 1-4 in section A apply.

If an engineer is required, the applicant must attach an engineering report, plans and technical specifications prepared and sealed by a professional engineer licensed in the state of Iowa or a NRCS Engineer containing all required information and verifying that the structure(s) meets the design standards specified in 567 IAC 65. If constructing three or more confinement feeding operation structures, a drainage tile certification statement shall verify that the proposed operation will not impede the drainage of established drainage tile lines which cross property boundary lines. The drainage tile certification statement must be attached to the construction design statement and signed by the following:

1. A professional engineer or NRCS Engineer, if an engineer is required or
2. By the person responsible for constructing the structure if no engineer is required

If no engineer is required, a Construction Design Statement must be submitted with the permit instead of an engineer report. Note, however, that if the proposed operation will be located in karst an engineer is required. See previous discussion in this chapter of the requirements for a Construction Design Statement.

ITEM 6 — SIGNATURE:

I hereby certify that the information contained in this application is complete and accurate.
Signature of Owner(s): _____ Date: _____

_____ Date: _____

MAILING INSTRUCTIONS:
To expedite the application process, follow the submittal requirements explained in Checklist No. 1 or 2 (pages 10 to 16), whichever applies. Page 1 of this form should be the first page of the package. Mail all documents and fees to:

Iowa DNR
AFO Program
502 East 9th St.
Des Moines, IA 50319-0034

(Note: Incomplete applications will be returned to the sender. Application documents submitted to the Field Office will delay the application process).

Questions
Questions about construction permit requirements or regarding this form should be directed to an engineer of the animal feeding operations (AFO) Program at (515) 281-8941 or go to http://www.iowadnr.com (select the link to "Animal Feeding Operations"). To contact the appropriate DNR Field Office, go to http:l/www.iowadnr.com/fo/index.html.

[4] Threshold requirements for an engineer apply to the construction of a formed manure storage structure[2]. Operations that meet or exceed the threshold requirements for an engineer, are required to submit engineering documents signed by a professional engineer licensed in the state of Iowa. Please refer to Checklist No. 2 (pages 13 to 15.)

ITEM 7

Interested Parties Form
Confinement Feeding Operation

Interest means ownership of a confinement feeding operation as a sole proprietor or a 10 percent or more ownership interest held by a person in a confinement feeding operation as a joint tenant, tenant in common, shareholder, partner, member, beneficiary or other equity interest holder. Ownership interest is an interest when it is held either directly or indirectly through a spouse or dependent child, or both.

INSTRUCTIONS:
Please list all persons (including corporations, partnerships, etc.) who have an interest in any part of the confinement feeding operation covered by this permit application.

Full Name	Address	City/State	Zip

For each name above, please list below all other confinement feeding operations in Iowa in which that person has an interest. Check box "**None**", below, if there are no other confinement feeding operations in Iowa in which the above listed person has an interest.

Operation Name	Location (1/4 ¼, Section, Tier, Range, Township, County)	City
□ **None** [There are no other confinements in Iowa in which the above listed person(s) has or have an interest].		

I hereby certify that the information provided on this form is complete and accurate.

Signature of Owner(s): _____ Date: _____

_____ _____

NOTE: PURPOSE OF INTERESTED PARTIES FORM

DNR uses the information requested on the Interested Parties Form to determine if persons who are habitual violators or have pending enforcement actions own the operation that is applying for the permit. An interest in an operation includes any interest of 10 percent or more owned either directly or indirectly, through a spouse or dependent child. The owner(s) must sign this page to verify that all information provided in regards to interested parties is correct.

Manure Storage Indemnity Fee Form for Construction Permits

Credit fees to: _____
Name of operation: _____

INSTRUCTIONS:

1) Use the 'Total Proposed AUG' from column b), Table 1 (page 4), to select the appropriate fee line in the table below. The 'Total Proposed AUG' is the AUC of the operation.
2) Select the animal specie and row number (see examples). Enter the 'New AU' from column c), Table 1 (page 4). The 'New AU' is the number of AU to be added to an existing operation or being proposed with a new operation. Note: If the "Existing AUC" (column a) is 500 AU or less, enter the "Total proposed AUG" (column b) in "New AU" (column c).
3) Multiply the 'New AU' by the appropriate 'Fee per AU'. The resulting number is the indemnity fee due.

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474-542-47A-0431

Example 1: An existing swine operation is expanding from an 'Existing AUG' of 1,000 AU to a 'Total Proposed AUC' of 1,800 AU, and has previously paid an indemnity fee for the existing 1,000 AU. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is other than poultry; enter 800 AU in the 'New AU' column, row 4, and multiply it by $ 0.15:
(800 AU) x ($ 0.15 per AU) = $ 120.00

Example 2: An existing poultry operation is expanding from an 'Existing AUG' of 250 AU to a 'Total Proposed AUC' of 2,000 AU and has not paid the indemnity fee for animals housed in the existing buildings. Calculate the indemnity fee as follows: The 'Total Proposed AUC' is between 1,000 AU and 3,000 AU; the animal specie is poultry and the indemnity fee has not previously been paid, enter 2,000 AU in the 'New AU' column on row 3, and multiply it by $0.06:
(2,000 AU) x ($ 0.06 per AU) = $ 120.00

Example 3: If you are proposing a new swine confinement feeding operation with a 'Total Proposed AUC' of 3,500 AU, enter 3,500 AU in the 'New AU' column, row 6 and multiply it by $ 0.20: (3,500 AU) x ($ 0.20 per AU) = $ 700.00

Example 4: If you are applying for a construction permit but you are not increasing the AUC of the operation, and has previously paid the applicable indemnity for the animals housed in the existing buildings, there is no indemnity fee due ($ 0.00). If no indemnity fee is due, do not submit this page.

Indemnity Fee Table:

Total Proposed AUC – (after permit) from column b), Table 1	Row	Animal Species	New AU – from column c), Table 1	X	Fee per AU	Indemnity Fee
Less than 1,000 AU	1	Poultry		X	$0.04	
	2	Other		X	$0.10	
1,000 AU or more to less than 3,000 AU	3	Poultry		X	$0.06	
	4	Other		X	$0.15	
3,000 AU or more	5	Poultry		X	$0.08	
	6	Other		X	$0.20	

ITEM 8 (Cont.)

Filing Fees Form
for Construction Permits

Credit fees to: _____

Name of operation: _____

INSTRUCTIONS:

1. If the operation is applying for a construction permit enclose a payment for the following:
   - ❑ Construction application fee $ 250.00. (Note: This fee is non-refundable)

2. A manure management plan must be submitted and you must also pay the following:
   - ❑ Manure management plan filing fee $ 250.00 (Note: This fee is non-refundable)

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473-542-473A-0431
474-542-474A-0431

3. Total filing fees: Add the fees paid in items 1 and 2 (above): $ _____

SUMMARY:

Manure Storage Indemnity Fee (see previous page) $_____
to be deposited in the Manure Storage Indemnity Fee Fund (474)

Total filing fees (see item 3 on this page) $_____
to be deposited in the Animal Agriculture Compliance Fund (473)

TOTAL DUE: $_____

4. Make check payable to: Iowa Department of Natural Resources or Iowa DNR; and send it along with the construction application documents (See submittal checklist No. 1 or 2, pages 10-15.) Note: Do not send this fee to the county.

NOTE: INDEMNITY FUND

All indemnity fees are placed in the indemnity fund to provide for any clean-up costs for conditions caused by confinement feeding operations. Expanding operations are only required to pay a fee for the additional animal unit capacity they are expanding to. The calculation is based on animal unit capacity calculated in Item 4, Table 1. If the proposed construction will not increase the animal unit capacity of the operation, an indemnity fee is not required and the Indemnity Fee Form should not be submitted to the DNR.

NOTE: APPLICATION FEE

A construction application fee ($250), manure management plan fee ($250), and the applicable manure storage indemnity fee must accompany the construction permit. Fill out the Filing Fee form and submit one check for the whole amount, including the indemnity fund fee payable to “Iowa DNR”. The check should be stapled in the indicated place on the front of the application. Only the DNR receives these fees. Do not submit any fees to the county. In most cases, if your permit is not approved your fees will not be refunded.

ITEM 9

COUNTY VERIFICATION RECEIPT OF DNR CONSTRUCTION PERMIT APPLICATION

This form provides proof that the County Board of Supervisors has been provided with a complete copy of the construction permit application documents (everything except the fees) for the confinement feeding operation:

Owner: _____ Telephone: _____
Name of operation: _____
Location:_____
(1/4 1/4) (1/4) (Section) (Tier & Range) (Name of Township) (County)

Documents being submitted to the county:

- ❑ Construction permit application form: submit items 1 to 9 (see Submittal Checklist No. 1 or 2)
- ❑ Attachment 1 - Aerial photos: Must clearly show the location of the proposed confinement feeding operation structure and that all the separation distances are met, including those claimed for points in the master matrix (if applicable).
- ❑ Attachment 2 - Statement of design certification, submit any of the following (see Checklist No. 1 or 2):
  - ❑ Construction Design Statement form
  - ❑ Professional Engineer (PE) Design Certification form
  - ❑ Engineering report, construction plans and technical specifications
  - ❑ In addition, if proposing an unformed manure storage structure[3] or an egg washwater storage structure submit documentation required in Addendum "A" of this construction application form.
- ❑ Attachment 3 - Manure management plan.
- ❑ Attachment 4 - Master Matrix (if required). You must include supporting documents (see Checklist No. 1 or 2)

THIS SECTION IS RESERVED FOR THE COUNTY

As soon as DNR receives a construction permit application, the DNR will fax your County Auditor a "Courtesy reminder letter" explaining what actions your County Board of Supervisors must complete and the deadlines.
Public Notice is required for **all** construction permit applications, including those applications not required to be evaluated with the master matrix and applications in counties not participating in the Master matrix.
Counties participating in the master matrix: the county's master matrix evaluation and county's recommendation is required for the following cases:

- A new confinement feeding operation that is applying for a construction permit
- An existing confinement feeding operation that was first constructed on or after April 1 , 2002 that is applying for a construction permit.
- An existing confinement feeding operation that was first constructed prior to April 1, 2002 that is applying for a construction permit with an animal unit capacity (AUC) is 1,667 animal units (AU) or more.

I have read and acknowledge the county's duty with this construction permit application, as specified in 567 IAC 65.10(455B) and Iowa Code 459.304. On behalf of the Board of Supervisors for: COUNTY:
NAME:
TITLE:
(Member of the County Board of Supervisors or its designated official/employee) Date:_____ , 20
If you do not receive the courtesy reminder letter within a reasonable time, or if you have any questions, please contact the animal feeding operations (AFO) Program at (515) 281-8941 or visit www.lowaDNR.com

NOTE: COUNTY VERIFICATION

The DNR must receive verification that a copy of the permit application and all attachments, including the manure management plan, were submitted to the county. The bottom half of this form must be filled out by a county supervisor or the auditor. Note that if manure is going to be applied in another county, verification of that county's receipt of the manure management plan must be provided as well. Provide a second form for this county verification. Make sure the verification includes the date on which the county received the application because the county has thirty days from that date to submit any comments or recommendations to DNR.

NOTE: SUBMITTAL CHECKLISTS

There are two submittal checklists attached to the permit application form that list the items required to be submitted to the DNR for approval of the application. Follow only the checklist that applies to the application depending upon whether a professional engineer is required. Additionally, if an unformed manure storage structure is being constructed, those items listed in Addendum "A" must also be submitted.

DO NOT SUBMIT THIS PAGE

Applicant's Submittal Checklist No. 1

For operations below threshold requirements for an engineer[4]
(Using formed manure storage[2] and not required to have a Professional Engineer)

To expedite the review process, please ensure that the construction permit application form is the first page of the application package. For more information, visit: www.lowaDNR.com and select the link to "Animal Feeding Operations" or call (515) 281-8941.

Mail two (2) copies of the entire construction permit application package, with completed items 1-9 (see below), including Attachments 1 to 3, and if applicable Attachment 4. Follow mailing instructions given on page 5. Incomplete applications or with incorrect fees will be returned to sender. Do not include this checklist and do not mail it to the DNR's Field Office.

NOTE: NUMBER OF COPIES
Make 4 copies of the permit application and all attachments -- 2 copies for DNR, 1 for each county, and one for your records.

Submit items in the following order:

CONSTRUCTION PERMIT APPLICATION FORM:

- ❑ **Item 1. Location** - completed (page 1). See page 17 for instructions and example on location.
- ❑ **Item 2. Siting Information** - enclose the necessary documentation requested on page **2:**
  - **A) Karst documentation (page 2):**
    - ❑ The site is not in karst. Enclose the map, with the name and the footprint of the operation clearly marked or enclose documentation from the DNR geologist stating that the site is not in karst.
    - ❑ The DNR geologist has verified that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are being used. The upgraded concrete standards of 567 IAC 65.15(14)"c" must be followed. You must also include copy of soils study and soil borings performed by a PE, an NRCS engineer or a qualified organization.
  - **B) Alluvial soils documentation (page 2):**
    - ❑ The site is not in alluvial soils. Enclose the map, with the name and footprint of the operation clearly marked or enclose documentation from the DNR geologist stating that the site is not in alluvial soils.
    - ❑ If the site is in alluvial soils. Submit one of the following:
      - ❑ a. Include correspondence from DNR showing that the site is not in floodplain or that a flood plain permit is not required.
      - ❑ b. Include a copy of the floodplain permit.
- ❑ **Item 3. Operation Information - completed (pages 2 and 3)**
- ❑ **Item 4. Calculating Animal Unit Capacity and, if applicable, Animal Weight Capacity (pages 3 and 4)**
  - ❑**Animal Unit Capacity** - complete all applicable columns of Table 1 (page 4).

❑ **Animal Weight Capacity (if applicable)** - complete all applicable columns of Table 2 (page 4).

❑ **Item 5. Submittal requirements - completed (page 5)**

❑ **Item 6. Signature - owner must sign the form (page 5)**

❑ **Item 7. Interested Parties Form - completed (both sections) and signed (page 6)**

❑ **Item 8. Fee Forms**

- ❑ Indemnity Fee Form (page 7)
- ❑ Filing Fee Form (page 8)
- ❑ Check with correct fee stapled to front of application form. Make check payable to "Iowa DNR."

❑ **Item 9. County Verification Receipt** — completed, dated and signed (page 9). Note: if manure will be applied in a county other than the county in which the site is located, an additional copy of the manure management plan must be submitted to the other county and a verification of receipt must be submitted.

DO NOT SUBMIT THIS PAGE

ATTACHMENTS:

❑ **Attachment 1 - Aerial photos:** Aerial photos must be submitted that clearly show the location of all existing and proposed confinement feeding operation structures and show at least a one-mile radius around the structures. The photos must either show roads on the north and south or east and west sides of a section (so that a mile distance is apparent), or include a distance scale.

The photo(s) must show that the proposed structures comply with all statutory minimum required separation distances to the objects listed below:

- Residences (not owned by the permit applicant), churches, businesses, schools, public use areas
- Water wells (depends on type)
- Major water sources, wellhead or cistern of an agricultural drainage well or known sinkholes
- Water sources (other than major water sources) or surface intakes of an agricultural drainage well
- Designated wetlands
- Road right-of-way

The separation distance to each of the above objects must be noted with a straight line between the proposed structure(s) and the object. If any of the above objects is not located within one mile from the proposed structures, note the fact on the photo(s) or use additional pages. (Example: "No agricultural drainage wells within one mile.")

All separation distances that are not clearly in excess of the required minimum separation distance must be measured according to 567 IAC 65.11(5) using standard survey methods. Go to the DNR fact sheet page at http://www.iowadnr.com/afo/factsheets.html and select DNR fact sheet "Distance Requirements for Construction" to find the required separation distances. An example aerial photo can also be found on pages 18 to 19. Or, go directly to http://www.iowadnr.com/afo/files/distreq.doc or http://www.iowadnr.com/afo/files/map5.pdf.

Note: If a master matrix is required, the photos must also show that the additional separation distances required for any points claimed in matrix criteria one through ten will be met for the objects listed above. Note the additional separation distance by drawing a straight line between the proposed structures and the matrix item.

❑ **Attachment 1"b" - Written waivers** (if applicable): If the required separation distance to a house, church, business, school, or public use area cannot be met, a waiver from the affected landowner may be obtained. If the required separation distance to the right-of-way cannot be met, a waiver from the state or the political subdivision may be obtained. Waivers must be recorded in the recorder's office of the county to become effective. A copy of the recorded written waiver must be submitted with the application.

NOTE: SEPARATION DISTANCE EXEMPTIONS

See information later in this chapter on separation distance and waiver requirements and for information on additional exemptions to separation distances not listed in the DNR form.

❑ **Attachment 1"c"** - Secondary containment barrier: As provided in Iowa Code section 459.310, the separation distance requirements to a major water source; wellhead, cistern of an agricultural drainage well; known sinkhole; water sources (other than major water sources); surface intakes of an agricultural drainage well and designated wetland do not apply if the confinement feeding operation structure is proposed with a secondary containment barrier that meets the requirements of 567 IAC 65.15(17). Contact an AFO engineer at (515) 281-8941 for more information.

NOTE: DNR RULES ON SECONDARY CONTAINMENT BARRIERS

DNR has adopted detailed rules for requirements for secondary containment barriers. See the discussion earlier in this chapter.

❑ **Attachment 2.** Statement of design certification - Submit one of the following:

❑ Construction Design Statement (on DNR form 542-8068), completed and signed, if the formed manure storage structure[2] is not designed and sealed by a professional engineer (PE); OR

❑ Professional Engineer (PE) Design Certification (on DNR form 542-8122), completed and signed, if the formed manure storage structure will be a site specific design sealed by a professional engineer (PE). This form is to used in lieu of a CDS for a confinement feeding operation that is below threshold engineering requirements[4] and that is not in karst (see Item 2, A).

Attachment 3. Manure Management Plan (on DNR Form 542-4000), completed and signed addressing all the requirements set forth in the 567 IAC Chapter 65. However, if the operation is or will be selling all of their dry manure under Iowa Code chapter 200 or 200A, a completed and signed DNR Form 542-8069 must be filed instead.

Attachment 4. Master Matrix (567 IAC 65, Appendix C) is required to evaluate a construction permit application in any of the following cases:

NOTE: MASTER MATRIX

See the Master Matrix discussion later in this chapter to determine whether a matrix is required with the permit application and for more details on completing the master matrix form.

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1. ❑ A new confinement feeding operation proposed in a county that has adopted a 'Construction Evaluation Resolution' (CER).
2. ❑ An existing confinement feeding operation constructed on or after April 1, 2002, in a county that has adopted a CER.
3. ❑ An existing confinement feeding operation constructed prior to April 1, 2002, with a current or proposed AUC of 1,667 AU or more, in a county that has adopted a CER.

If master matrix is required, submit all of the following documents as requested in 567 IAC 65, Appendix C:

❑ Completed Master matrix, and its supporting documents:

❑ A design, operation and maintenance plan is required if points are claimed for each of the following items: 12, 13, 14, 15, 16, 17, 18, 19, 25, 26"b", 26"c", 26"d" or 44.

❑ A supporting document must be included if points are claimed for each of the following items: 7, 11, 21, 22, 26"a", 26"e", 27, 28, 29, 30, 31, 32, 33, 34, 37, 38, 40, 41, 42 or 43.

❑ All other master matrix items for which points are being claimed, should have supporting documents.

Information about other permits that may be required:

- An NPDES permit for a combined operation may also be required, if your animal feeding operation has animals in confinement and open lots. For more information, see DNR Form No. 542-1427, posted in the DNR's — AFO web site or visit the Environmental Protection Agency (EPA)'s web site.
- Storm water permit General permit No. 2, associated with construction activities, is required prior to disturbing one (1) or more acres of land. This includes the clearing, grading and excavation of the confinement feeding operation structures and phased construction. For more information contact the Storm Water Program at (515) 281-6782 or at http://www.iowadnr.com/water/stormwater/index.html.
- A water use permit is required for the withdrawal or diversion of more than 25,000 gallons per day of water. Water purchased from municipal or rural water systems is excluded. For more information, contact Dennis Alt at (515) 725-0275.

DO NOT SUBMIT THIS PAGE

Applicant's Submittal Checklist No. 2

For operations that meet or exceed threshold requirements for an engineer[4]
(Using formed manure storage[2] and required to have a Professional Engineer);
or operations utilizing unformed manure storage[3] or egg washwater storage

To expedite the review process, please ensure that the construction permit application form is the first page of the application package. For more information, visit: www.lowaDNR.com and select the link to "Animal Feeding Operations" or call (515) 281-8941.

Mail three (3) copies of construction permit application form, completed items 1-9 (see below), Attachments 1 and 2, and if applicable, Attachment 4 and Addendum A" (page 16). Mail two (2) copies of the manure management plan, Attachment 3. Follow mailing instructions given on page 5. Incomplete applications or with incorrect fees will be returned to sender. Do not include this checklist and do not mail it to the DNR's Field Office.

Submit items in the following order:

CONSTRUCTION PERMIT APPLICATION FORM:

- ❑ **Item 1. Location** - completed (page 1). See page 17 for instructions and example on location.
- ❑ **Item 2. Siting Information** - enclose the necessary documentation requested on page 2:
  - **A) Karst documentation (page 2):**
    - ❑ The site is not in karst. Enclose the map, with the name and the footprints of the operation clearly marked or enclose documentation from the DNR geologist.
    - ❑ The DNR geologist has verified that the site is in karst. The upgraded concrete standards of 567 IAC 65.15(14)"c" are being used. You must also include copy of soils exploration study and soil borings performed by a PE, an NRCS engineer or a qualified organization.
  - **B) Alluvial soils documentation (page 2):**
    - ❑ The site is not in alluvial soils. Enclose the map, with the name and footprints of the operation clearly marked or enclose documentation from the DNR geologist.
    - ❑ If the site is in alluvial soils. Submit one of the following:
      a. Include correspondence from DNR showing that the site is not in floodplain or that a flood plain permit is not required.
      b. Include a copy of the floodplain permit.
- ❑ **Item 3. Operation Information** - completed (pages 2 and 3)
- ❑ **Item 4. Calculating Animal Unit Capacity and, if applicable, Animal Weight Capacity (pages 3 and 4)**
  - ❑ Animal Unit Capacity - complete all applicable columns of Table 1 (page 4).
  - ❑ Animal Weight Capacity (if applicable) - complete all applicable columns of Table 2 (page 4).
- ❑ **Item 5. Submittal requirements** -completed (page 5)
- ❑ **Item 6. Signature** - owner must sign the form (page 5)
- ❑ **Item 7. Interested Parties Form** - completed (both sections) and signed (page 6)
- ❑ **Item 8. Fee Forms**

- ❑ Indemnity Fee Form (page 7)
- ❑ Filing Fee Form (page 8)
- ❑ Check with correct fee stapled to front of application form. Make check payable to "Iowa DNR."

❑ **Item 9. County Verification Receipt** — completed, dated and signed (page 9). Note: if manure will be applied in a county other than the county in which the site is located, an additional copy of the manure management plan must be submitted to the other county and a verification of receipt must be submitted.

DO NOT SUBMIT THIS PAGE
ATTACHMENTS:

- ❑ **Attachment 1 - Engineering drawing** (3 copies): An engineering drawing must be submitted that clearly show the location of all existing and proposed confinement feeding operation structures and show at least a one-mile radius around the structures. The engineering drawing(s) must either show roads on the north and south or east and west sides of a section (so that a mile distance is apparent), or include a distance scale.

  The engineering drawing(s) must show that the proposed structures comply with all statutory minimum required separation distances to the objects listed below:
  - Residences (not owned by the permit applicant), churches, businesses, schools, public use areas
  - Water wells (depends on type)
  - Major water sources, wellhead or cistern of an agricultural drainage well or known sinkholes
  - Water sources (other than major water sources) or surface intakes of an agricultural drainage well
  - Designated wetlands
  - Road right-of-way

  The separation distance to each of the above objects must be noted with a straight line between the proposed structure(s) and the object. If any of the above objects is not located within one mile from the proposed structures, note the fact on the drawings or use additional pages. (Example: "No agricultural drainage wells within one mile.")

  All separation distances that are not clearly in excess of the required minimum separation distance must be measured according to 567 IAC 65.11(5) using standard survey methods. Go to the DNR fact sheet page at http://www.iowadnr.com/afo/factsheets.html and select DNR fact sheet "Distance Requirements for Construction" to find the required separation distances. An example aerial photo can also be found on pages 18 to 19. Or, go directly to http://www.iowadnr.com/afo/files/distreq.doc or http://www.iowadnr.com/afolfiles/map5.pdf.

  Note: If a master matrix is required, the engineering drawings must also show that the additional separation distances required for any points claimed in matrix criteria one through ten will be met for the objects listed above. Note the additional separation distance by drawing a straight line between the proposed structures and the matrix item.

- ❑ **Attachment 1"b" - Written waivers (3 copies):** If the required separation distance to a house, church, business, school, or public use area cannot be met, a waiver from the affected landowner may be obtained. If the required separation distance to the right-of-way cannot be met, a waiver from the state or the political subdivision may be obtained. Waivers must be recorded in the recorder's office of the county to become effective. A copy of the recorded written waiver must be submitted with the application.

- ❑ **Attachment 1"c" - Secondary containment barrier (3 copies):** As provided in Iowa Code section 459.310, the separation distance requirements to a major water source; wellhead, cistern of an agricultural drainage well; known sinkhole; water sources (other than major water sources); surface intakes of an agricultural drainage well and designated wetland do not apply if the confinement feeding operation structure' is proposed with a secondary containment barrier that meets the requirements of 567 IAC 65.15(17). Contact an AFO engineer at (515) 281-8941 for more information.

- ❑ **Attachment 2 - Engineering report, engineering plans, and technical specifications (3 copies of each):** Prepared and sealed by a professional engineer (PE) licensed in the state of Iowa or a NRCS Engineer:

    - ❑ **Engineering report** must describe: proposed confinement feeding operation structures' and its manure control system; animal unit capacity and animal capacity; daily and yearly manure production estimates; volume of manure storage requirements and storage provided. Include a statement certifying that the proposed confinement feeding operation structures' comply with the design standards of Iowa Code section 459 and 567 IAC 65.
    - ❑ **Engineering plans** must show all dimensions (plan view and cross sectional views as needed) for each proposed confinement feeding operation structure', including a USGS topographic map that shows the location of the confinement feeding operation structures'. Plans must show the following:
        - For a formed manure storage structure[2], compliance with 567 IAC 65.15(14) "Minimum concrete standards."
        - For an unformed storage structure[3] or an egg washwater storage structure, see "Addendum A" (page 15).
    - ❑ **Technical specifications** that address the applicable design requirements of 567 IAC 65.
    - ❑ **Drainage tile certification** statement (signed by a PE or NRCS Engineer), if constructing three (3) or more confinement feeding operation structures , indicating that the proposed confinement feeding operation structures will not impede the drainage of established drainage tile lines which cross your property boundary lines, unless measures are taken to reestablish the drainage prior to completion of construction.

- ❑ **Attachment 3. Manure Management Plan (on DNR Form 542-4000) — 2 copies only:** completed and signed addressing all the requirements set forth in the 567 IAC Chapter 65. However, if the operation is or will be selling all of their dry manure under Iowa Code chapter 200 or 200A, a completed and signed DNR Form 542-8069 must be filed instead.
- ❑ **Attachment 4. Master Matrix** (567 IAC 65, Appendix C) is required to evaluate a construction permit application in any of the following cases:
    1. ❑ A new confinement feeding operation proposed in a county that has adopted a 'Construction Evaluation Resolution' (CER).
    2. ❑ An existing confinement feeding operation constructed <u>on or after April 1, 2002,</u> in a county that has adopted a CER.
    3. ❑ An existing confinement feeding operation constructed <u>prior to April 1, 2002,</u> with a current or proposed AUC of <u>1,667 AU or more,</u> in a county that has adopted a CER.

  If master matrix is required, submit all of the following documents as requested in 567 IAC 65, Appendix C:
    - ❑ Completed Master matrix, and its supporting documents:
    - ❑ A design, operation and maintenance plan is required if points are claimed for each of the following items: 12, 13, 14, 15, 16, 17, 18, 19, 25, 26"b", 26"c", 26"d" or 44.
    - ❑ A supporting document must be included if points are claimed for each of the following items: 7, 11, 21, 22, 26"a", 26"e", 27, 28, 29, 30, 31, 32, 33, 34, 37, 38, 40, 41, 42 or 43.
    - ❑ All other master matrix items for which points are being claimed, should have supporting documents.

Information about additional requirements that may apply:

- A "Qualified Operation" shall only use a manure storage structure that employs bacterial action which is maintained by the utilization of air or oxygen, and which shall include aeration equipment. However, a confinement feeding operation is not required to provide aeration if the operation was constructed prior to May 31, 1995 or if the operation handles manure exclusively in a dry form. A confinement feeding operation is a "Qualified Operation" if any of the following boxes are checked:
    - ❑ A swine farrowing and gestating operation with an AUC of 2,500 AU or more.
    - ❑ A swine farrow-to-finish operation with an AUC of 5,400 AU or more.
    - ❑ A cattle confinement feeding operation (including dairies) with an AUC of 8,500 AU or more.
    - ❑ Other confinement feeding operations with an AUC of 5,333 AU or more.

Contact the AFO Program at (515) 281-8941 for additional information on the aeration requirements that must be included with the engineering documents.

Information about other permits that may be required:

- An NPDES permit for a combined operation may also be required, if your animal feeding operation has animals in confinement and open lots. For more information, see DNR Form No. 542-1427, posted in the DNR's — AFO web site or visit the Environmental Protection Agency (EPA)'s web site.
- Storm water permit General permit No. 2, associated with construction activities, is required prior to disturbing one (1) or more acres of land. This includes the clearing, grading and excavation of the confinement feeding operation structures and phased construction. For more information contact the Storm Water Program at (515) 281-6782 or at http:/www.lowadnr.com/water/stormwaterlindex.html.
- A water use permit is required for the withdrawal or diversion of more than 25,000 gallons per day of water. Water purchased from municipal or rural water systems is excluded. For more information, contact Dennis Alt at (515) 725-0275 or visit the following web site: http://www.state.ia.us/epd/wtrsuply/supaps/wperm.html

DO NOT SUBMIT THIS PAGE

Addendum "A" for applicant's use only

Additional information required for unformed manure storage[s] Or egg washwater storage

If the confinement feeding operation proposes to construct, expand or modify an unformed manure storage structure[3] or an egg washwater storage structure; the following information is required:

1. ❑ **Three (3) copies** of a soil exploration report that meets the requirements of 567 IAC 65.15(6) must be submitted, and the results of ground water determination that meets 65.15(7)"a" to "c" must be included. Soil corings shall be obtained by a method that identifies the continuous soil profile and must include at least the following information:
    - ❑ A minimum of four intact continuous core samples: one to be located within a 50 feet radius of each of the four bottom corners of the unformed manure storage structure[3] or egg washwater storage structure. If the point of deepest excavation is at a point other than a corner, an additional coring shall be located at the point of deepest excavation.
    - ❑ One coring shall be obtained at least 25 feet below the lagoon/basin bottom elevation.
    - ❑ All other corings shall penetrate to a depth of at least 10 feet below the lagoon/basin bottom.
    - ❑ The seven-day water level in all core holes shall be reported and the well construction details shall be identified.
    - ❑ The location and surface elevation of all corings shall be identified.
    - ❑ All corings have been properly plugged, upon abandonment.
    - ❑ PE certification on the soils exploration report.

NOTE: SOIL EXPLORATION REPORT

The report must be certified by a professional engineer and verify that a minimum of four corings were done in a manner to reflect a continuous soil profile; that the soil coring was within 50 feet of the bottom edge of the structure and spaced so that one coring was as close as possible to each corner; that all corings were taken to a minimum depth of 10 feet below the bottom elevation of the structure; that at least one coring was taken to a depth of 25 feet or to bedrock, whichever is greater; and that all corings have been properly plugged upon abandonment. A structure larger than four acres must have one additional coring per acre.

2. ❑ If a permanent artificial groundwater lowering system as provided in 567 IAC 65.15(7)"b", is being proposed for the unformed manure storage structure[3] or egg washwater storage structure, detailed engineering plans and calculations that show it will effectively lower the GW table, must be submitted for review and approval.

NOTE: GROUNDWATER TABLE
Engineer plans must show that the groundwater table is two feet below the bottom of the lagoon or, if the groundwater table is less than two feet below the bottom of the lagoon, a synthetic liner will be put in place. The groundwater table must be determined from the soil corings after a seven-day waiting period. The DNR's Geological Survey Bureau will also evaluate the site soils and existing water table data to determine the average annual high water table. Four feet of separation between the groundwater table and the bottom of the lagoon is recommended. A gravity flow tile system is allowed to permanently lower the groundwater table in the area if detailed engineering plans and soil drainage information are supplied to the department.

3. ❑ A minimum separation of 2 feet must be maintained between the proposed bottom elevation of the unformed manure storage structure[3] or egg washwater storage structure and the groundwater table; or a synthetic liner must be installed. Submit detailed engineering plans, including cross sectional and longitudinal views.

4. ❑ Construction of an unformed manure storage structure[3] or egg washwater storage structure on an area that exhibits karst (as defined in 567 IAC 65.1(455B)) is prohibited in accordance to 567 IAC 65.15(8).

5. ❑ Construction of an unformed manure storage structure[3] or egg washwater storage structure on the 100-year flood plain of a major water source is also prohibited in accordance to 567 IAC 65.8(3)"e"(2).

6. ❑ Flooding Protection is provided in accordance to 567 IAC 65.15(10).

7. ❑ The proposed seal of the unformed manure storage structure[3] or egg washwater storage structure will not allowed for a seepage that exceed 1/16 inch/day at the design depth in accordance to 567 IAC 65.15(11).

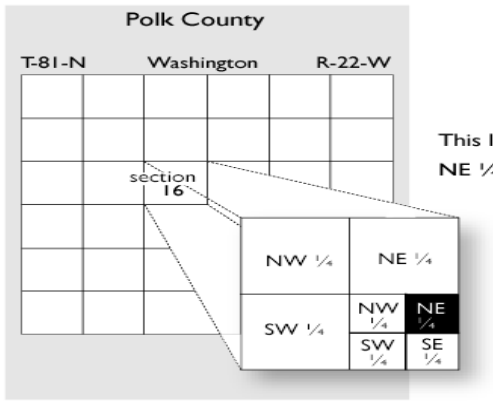
8. ❑ The proposed liner of the unformed manure storage structure[3] or egg washwater storage structure is being proposed in accordance to 567 IAC 65.15(12). Submit detailed engineering plans.

9. ❑ The proposed anaerobic lagoon is being proposed to meet 567 IAC 65.15(13). Submit detailed engineering plans and calculations.

10. ❑ Berm erosion control measurements for the proposed unformed manure storage structure[3] or egg washwater storage structure meet or exceed 567 IAC 65.15(15). Submit detailed engineering plans.

11. Mail 3 copies of the information requested in this Addendum, at the address indicated on page 5.
For questions or for more information, visit: www.lowaDNR.com and select the link to "Animal Feeding Operations" or call (515) 281-8941.

Example of Location Information for Items 1, 7 and



This location would be described as follows:
NE ¼ of the SE ¼ of section 16 T81N-R22W

Location	NE	SE	16	T81N - R22W	Washington	Polk
	(¼¼)	(¼)	(Section)	(Tier & Range)	(Name of Township)	(County)