

567—65.1(455B,459,459A,459B) Definitions and incorporation by reference. In addition to the definitions in Iowa Code sections 455B.101, 455B.171, 459.102, 459A.102, and 459B.102 and in 567—Chapter 60, the following definitions shall apply to this chapter:

65.1(1) Definitions.

“Abandoned AFO structure” means the AFO structure has been razed, removed from the site of an AFO, filled in with earth, or converted to uses other than an AFO structure so that it cannot be used as an AFO structure without significant reconstruction.

“Adjacent” for open feedlot operation. Two or more open feedlot operations are defined as adjacent if both of the following occur:

1. At least one open feedlot operation structure is constructed on or after July 17, 2002; and
2. An open feedlot operation structure that is part of one open feedlot operation is separated by less than 1,250 feet from an open feedlot operation structure that is part of the other open feedlot operation.

“Adjacent—air quality” for confinement feeding operations means, for the purpose of determining separation distance requirements pursuant to rule 567—65.106(455B,459,459B), that two or more confinement feeding operations are adjacent if they have AFO structures that are separated at their closest points by less than the following:

1. 1,250 feet for a confinement feeding operation having an animal unit capacity of less than 1,250 animal units for swine maintained as part of a farrowing and gestating operation, less than 2,700 animal units for swine maintained as part of a farrow-to-finish operation, less than 4,000 animal units for cattle maintained as part of a cattle operation, or less than 3,000 animal units for any other confinement feeding operation, or for a confinement feeding operation consisting of dry bedded confinement feeding operation structures.

2. 1,500 feet for a confinement feeding operation having an animal unit capacity of 1,250 or more but less than 2,000 animal units for swine maintained as part of a swine farrowing and gestating operation, 2,700 or more but less than 5,400 animal units for swine maintained as part of a farrow-to-finish operation, 4,000 or more but less than 6,500 animal units for cattle maintained as part of a cattle operation, or for any other confinement feeding operation having an animal unit capacity of 3,000 or more but less than 5,000 animal units.

3. 2,500 feet for a confinement feeding operation having an animal unit capacity of 2,000 or more animal units for swine maintained as part of a swine farrowing and gestating operation, 5,400 or more animal units for swine maintained as part of a farrow-to-finish operation, or 6,500 or more animal units for cattle maintained as part of a cattle operation, or for any other confinement feeding operation with 5,000 or more animal units.

The distances in paragraphs “1” to “3” above shall only be used to determine that two or more confinement feeding operations are adjacent if at least one confinement feeding operation structure was constructed on or after March 21, 1996.

To determine if two or more confinement feeding operations are adjacent, for the purpose of determining the separation distance requirements, the animal unit capacity of each individual operation shall be used. If two or more confinement feeding operations do not have the same animal unit capacity, the greater animal unit capacity shall be used to determine the separation distance.

Dry manure that is stockpiled within a distance of 1,250 feet from another stockpile shall be considered part of the same stockpile.

“Adjacent—water quality” for confinement feeding operations means, for the purpose of determining the construction permit requirements pursuant to rule 567—65.103(455B,459,459B) and MMP requirements pursuant to rule 567—65.110(455B,459,459B), that two or more confinement feeding operations are adjacent if they have confinement feeding operation structures that are separated at their closest points by less than the following:

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 or more animal units.

3. The distances in paragraphs “1” and “2” above shall only be used to determine that two or more confinement feeding operations are adjacent if at least one confinement feeding operation structure is constructed or expanded on or after May 21, 1998.

“*Aerobic structure*” means an AFO 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.

“*AFO structure*” means a confinement building, manure storage structure, dry bedded confinement feeding operation structure, or egg washwater storage structure.

“*Agricultural drainage well*” means a vertical opening to an aquifer or permeable substratum which is constructed by any means including but not limited to drilling, driving, digging, coring, augering, jetting, or washing and which is capable of intercepting or receiving surface or subsurface drainage water from land directly or by a drainage system.

“*Agricultural drainage well area*” means an area of land where surface or subsurface water drains into an agricultural drainage well directly or through a drainage system connecting to the agricultural drainage well.

“*Alluvial aquifer area*” means an area underlaid by sand or gravel aquifers situated beneath floodplains along stream valleys and includes alluvial deposits associated with stream terraces and benches, contiguous windblown sand deposits, and glacial outwash deposits.

“*Alluvial soils*” means soils formed in materials deposited by moving water.

“*Alternative technology settled open feedlot effluent control system*” or “*AT system*” means use of an open feedlot effluent control technology other than a conventional runoff containment system to control and dispose of settled open feedlot effluent.

“*Anaerobic digester system*” or “*digester*” means a manure storage structure that is covered if the primary function of the manure storage structure is to process manure by employing environmental conditions including bacteria to break down organic matter in the absence of oxygen, and the structure is used for producing, collecting, and utilizing a biogas.

“*Anaerobic lagoon*” means an unformed manure storage structure if the primary function of the structure is to store and stabilize manure, the structure is designed to receive manure on a regular basis, and the structure’s design waste loading rates provide that the predominant biological activity is anaerobic. An anaerobic lagoon does not include the following:

1. A runoff control basin or a settled open feedlot effluent basin that collects and stores only precipitation-induced runoff from an open feedlot operation.
2. An anaerobic treatment system that includes collection and treatment facilities for all off gases.

“*Animal*” means cattle, swine, horses, sheep, chickens, turkeys, goats, fish, or ducks.

“*Animal capacity*” means the maximum number of animals that the owner or operator will confine in an AFO at any one time. The animal capacity shall be what is currently approved or permitted on the site and is listed in the MMP or NMP, unless a portion of the facility has been properly closed or taken out of operation through the small AFO election as provided in paragraph 65.110(1)“f.” In a confinement feeding operation, the animal capacity of all confinement buildings will be included in the determination of the animal capacity of the operation, unless the building has been abandoned, in accordance with the definition of “abandoned AFO structure.”

“*Animal feeding operation*” or “*AFO*” means a lot, yard, corral, building, or other area in which animals are confined and fed and maintained for 45 days or more in any 12-month period, and all structures used for the storage of manure from animals in the operation. Except as required for an NPDES permit required pursuant to the Act, an AFO does not include a livestock market. Open feedlot operations and confinement feeding operations are considered to be separate AFOs.

“*Animal truck wash effluent*” means a combination of manure, washwater-induced runoff, or other runoff derived from an animal truck wash facility, which may include solids.

“*Animal truck wash effluent structure*” means an impoundment that is part of an animal truck wash facility, if the primary function of the impoundment is to collect and store animal truck wash effluent.

“*Animal truck wash facility*” means an operation engaged solely in washing single-unit trucks, truck-tractors, semitrailers, or trailers used to transport animals. An animal truck wash facility is considered to be part of an AFO if the animal truck wash facility and the AFO are under common ownership or management and the animal truck wash facility is located within 1,250 feet of the AFO.

“*Animal unit*” means a unit of measurement based upon the product of multiplying the number of animals of each category by a special equivalency factor, as follows:

1. Slaughter and feeder cattle	1.00
2. Immature dairy cattle	1.00
3. Mature dairy cattle	1.400
4. Butcher or breeding swine weighing more than 55 pounds	0.400
5. Swine weighing 15 pounds or more but not more than 55 pounds	0.100
6. Sheep or lambs	0.100
7. Goats	0.100
8. Horses	2.00
9. Turkeys weighing 7 pounds or more	0.018
10. Turkeys weighing less than 7 pounds	0.0085
11. Broiler or layer chickens weighing 3 pounds or more	0.010
12. Broiler or layer chickens weighing less than 3 pounds	0.0025
13. Ducks	0.040
14. Fish weighing 25 grams or more	0.001
15. Fish weighing less than 25 grams	0.00006

“*Animal unit capacity*” means a measurement used to determine the maximum number of animal units that may be maintained as part of an AFO at any one time, including as provided in Iowa Code sections 459.201, 459.301, and 459A.103. For dry bedded confinement feeding operations, “animal unit capacity” means the maximum number of animal units that the owner or operator confines in a dry bedded confinement feeding operation at any one time, including the animal unit capacity of all dry bedded confinement feeding operation buildings that are used to house cattle or swine in the dry bedded confinement feeding operation. For purposes of determining whether an open feedlot operation must obtain an NPDES permit, the animal unit capacity of the AFO shall include the animal unit capacities of both the open feedlot operation and any adjacent confinement feeding operation if all of the following occur:

1. The animals in the open feedlot operation and any adjacent confinement feeding operation are all in the same category of animals as used in the definitions of “large CAFO” and “medium CAFO” in 40 CFR Part 122;
2. The closest open feedlot operation structure is separated by less than 1,250 feet from the closest confinement feeding operation structure; and
3. The open feedlot operation and the confinement feeding operation are under common ownership or management.

“*Animal weight capacity*” means the sum of the average weight of all animals in a confinement feeding operation when the operation is at full animal capacity. For confinement feeding operations with only one species, the animal weight capacity is the product of multiplying the animal capacity by the average weight during a production cycle. For operations with more than one species, the animal weight capacity of the operation is the sum of the animal weight capacities for all species. This definition applies to confinement feeding operations constructed prior to March 1, 2003.

“*Applicant*” means the person applying for a construction permit or an NPDES permit for an AFO.

“*Bedding*” means crop, vegetation, sand, or forage residue or similar materials placed in a dry bedded confinement building for the care of animals.

“*Business*” means a commercial enterprise.

“*Cemetery*” means a space held for the purpose of permanent burial, entombment or interment of human remains that is owned or managed by a political subdivision or private entity or a cemetery regulated pursuant to Iowa Code chapter 523I. A cemetery does not include a pioneer cemetery as defined by Iowa Code section 331.325.

“*Church*” means a religious institution.

“*Commercial enterprise*” means 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.

“*Commercial manure service*” means a sole proprietor or business association engaged in the business of transporting, handling, storing, or applying manure for a fee.

“*Commercial manure service representative*” means a manager, employee, agent, or contractor of a commercial manure service, if the person is engaged in transporting, handling, storing, or applying manure on behalf of the service.

“*Common management*” means significant control by an individual of the management of the day-to-day operations of each of two or more AFOs. “Common management” does not include control over a contract livestock facility by a contractor as defined in Iowa Code section 202.1.

“*Common ownership*” for confinement feeding operations means the ownership of a confinement feeding operation as a sole proprietor, or a 10 percent or more ownership interest held by a person, in each of two or more confinement feeding operations as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity interest holder. The ownership interest is a common ownership interest when it is held directly, indirectly through a spouse or dependent child, or both. The following exceptions shall apply to this definition:

1. For a confinement feeding operation structure constructed before June 19, 2024, that has not been expanded, “common ownership” means the ownership of a confinement feeding operation as a sole proprietor, or a majority ownership interest held by a person, in each of two or more confinement feeding operations as a joint tenant, tenant in common, shareholder, partner, member, beneficiary, or other equity interest holder. The majority ownership interest is a common ownership interest when it is held directly, indirectly through a spouse or dependent child, or both. This exception shall not apply to a confinement feeding structure or operation expanded after June 19, 2024; instead, the 10 percent or more ownership interest standard shall apply.

2. This definition shall not apply to a dry bedded confinement feeding operation that is subject to the common ownership requirements in Iowa Code section 459B.103(3)“a”(3) nor to an open feedlot operation as defined in this rule.

“Common ownership” for open feedlot operations means to hold an interest in each of two or more open feedlot operations as any of the following:

1. A sole proprietor;
2. A joint tenant or tenant in common; or
3. A holder of a majority equity interest in a business association as defined in Iowa Code section 202B.102, including as a shareholder, partner, member, beneficiary, or other equity interest holder.

An interest in an open feedlot operation under paragraph “2” or “3” is a common ownership interest when it is held directly or indirectly through a spouse or dependent child, or both.

“*Complete application*” means an application that is substantially complete and approvable when all necessary questions on the application forms have been completed, the application is signed and all applicable portions of the application, including the application form, required attachments, and application fees, have been submitted.

“*Concentrated AFO*” or “*CAFO*” means an AFO that is a designated CAFO, or that is defined as a large CAFO or a medium CAFO as defined in 40 CFR 122.23(b).

“*Confinement feeding operation*” means an AFO in which animals are confined to areas that are totally roofed and includes an AFO that is not an open feedlot operation as defined in this chapter.

1. For purposes of water quality regulation, Iowa Code section 459.301 provides that two or more AFOs under common ownership or management are deemed to be a single AFO if they are adjacent or

utilize a common area or system for manure disposal. For purposes of the air quality-related separation distances in Iowa Code section 459.202, Iowa Code section 459.201 provides that two or more AFOs under common ownership or management are deemed to be a single AFO if they are adjacent or utilize a common system for manure storage. The distinction is due to regulation of AFOs for water quality purposes under the Act. 40 CFR 122.23 sets out the requirements for an AFO and requires that two or more AFOs under common ownership be considered a single operation if they adjoin each other or if they use a common area or system for disposal of wastes. However, this federal regulation does not control regulation of AFOs for the purposes of the separation distances in Iowa Code section 459.202, and therefore the definition is not required by federal law to include common areas for manure disposal.

2. To determine if two or more AFOs are deemed to be one AFO, the first test is whether the AFOs are under common ownership or management. If they are not under common ownership or management, they are not one AFO. For purposes of water quality regulation, the second test is whether the two AFOs are adjacent or utilize a common area or system for manure disposal. If the two operations are not adjacent and do not use a common area or system for manure disposal, they are not one AFO. For purposes of the air quality-related separation distances in Iowa Code section 459.202, the second test is whether the two AFOs are adjacent or utilize a common system for manure storage. If the two operations are not adjacent and do not use the same system for manure storage, they are not one AFO.

3. A common area or system for manure disposal includes but is not limited to use of the same manure storage structure, confinement feeding operation structure, egg washwater storage structure, stockpile, permanent manure transfer piping system or center pivot irrigation system. A common area or system for manure disposal does not include manure application fields included in a manure management plan or anaerobic digester system.

“Confinement feeding operation building” or *“confinement building”* means a building used in conjunction with a confinement feeding operation to house animals.

“Confinement feeding operation structure” means an AFO structure that is part of a confinement feeding operation.

“Confinement site” means a site where there is located a manure storage structure which is part of a confinement feeding operation, other than a SAFO.

“Confinement site manure applicator” means a person, other than a commercial manure service or a commercial manure service representative, who applies manure on land if the manure originates from a manure storage structure.

“Construction approval letter” means a written document of the department to acknowledge that the preconstruction submittal requirements of rule 567—65.104(455B,459,459B) have been met for a confinement feeding operation that is not required to obtain a construction permit pursuant to rule 567—65.103(455B,459,459B).

“Construction design statement” means a document required to be submitted by a confinement feeding operation prior to constructing a formed manure storage structure, other than a SAFO, but that does not meet the threshold engineering requirements.

“Construction permit” means a written approval of the department to construct, modify or alter the use of an AFO structure as required by rules 567—65.103(455B,459,459B) and 567—65.203(455B,459A).

“Controlling interest” means ownership of a confinement feeding operation as a sole proprietor or a majority 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. The majority ownership interest is a controlling interest when it is held directly, indirectly through a spouse or dependent child, or both. The majority ownership interest must be a voting interest or otherwise control management of the confinement feeding operation.

“Covered” means organic or inorganic material, placed upon an AFO 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.

“*Critical public area*” means land that is owned or managed by the federal government, by the department, or by a political subdivision and that has unique scenic, cultural, archaeological, scientific, or historic significance or contains a rare or valuable ecological system. Critical public areas include:

1. State wildlife and waterfowl refuges listed in 571—subrules 52.1(2) and 52.1(3);
2. Recreation areas, state parks, state parks managed by another governmental agency, and state preserves as listed in rule 571—61.2(461A);
3. County parks and recreation areas as provided in subrule 65.1(2);
4. National wildlife refuges listed as follows: Union Slough National Wildlife Refuge, DeSoto National Wildlife Refuge, Boyer Chute National Wildlife Refuge, Upper Mississippi River National Wildlife and Fish Refuge, Driftless Area National Wildlife Refuge, Neal Smith National Wildlife Refuge, and Port Louisa National Wildlife Refuge;
5. National monuments and national historic sites listed as follows: Effigy Mounds National Monument and Herbert Hoover National Historic Site;
6. Parks in Iowa that are under the federal jurisdiction listed with the United States Army Corps of Engineers as provided in subrule 65.1(2).

“*Cropland*” means any land suitable for use in agricultural production including but not limited to feed, grain and seed crops, fruits, vegetables, forages, sod, trees, grassland, pasture and other similar crops.

“*Deep well*” means 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.

“*Designated area*” means a known sinkhole, abandoned well, unplugged agricultural drainage well, agricultural drainage well cistern, agricultural drainage well surface tile inlet, drinking water well, designated wetland, or water source. “Designated area” does not include a terrace tile inlet or surface tile inlet other than an agricultural drainage well surface tile inlet.

“*Designated CAFO*” means an AFO that has been designated as a CAFO pursuant to rule 567—65.201(455B,459A).

“*Designated wetland*” means land designated as a protected wetland by the United States Department of the Interior or the department, including but not limited to a protected wetland as defined in Iowa Code section 456B.1, if the land is owned and managed by the federal government or the department. However, a designated wetland does not include land where an agricultural drainage well has been plugged causing a temporary wetland or land within a drainage district or levee district. Designated wetlands in the state are listed in the department’s “Designated Wetlands in Iowa” (more information is contained in subrule 65.1(2), incorporation by reference).

“*Discontinued AFO*” means an AFO whose structures have been abandoned or whose use has been discontinued as evidenced by the removal of all animals and the owner or operator has no immediate plans to repopulate.

“*Discontinued AFO structure*” means an AFO structure that has been abandoned or whose use has been discontinued as evidenced by the removal of all animals from the structure and the owner or operator has no immediate plans to repopulate.

“*Document*” means any form required to be processed by the department under this chapter regulating AFOs, including but not limited to applications or related materials for permits as provided in Iowa Code section 459.303, MMPs as provided in Iowa Code section 459.312, comment or evaluation by a county board of supervisors considering an application for a construction permit, the department’s analysis of the application including using and responding to a master matrix pursuant to Iowa Code section 459.304, and notices required under those sections.

“*Dry bedded confinement feeding operation*” means a confinement feeding operation in which cattle or swine are confined to areas which are totally roofed and in which all manure is stored as dry bedded manure. Unless specifically stated otherwise, all requirements in Divisions I and II of this chapter do apply to dry bedded confinement feeding operations.

“Dry bedded confinement feeding operation structure” means a dry bedded confinement feeding operation building or a dry bedded manure storage structure.

“Dry bedded manure” means manure from cattle or swine that meets all of the following requirements:

1. The manure does not flow perceptibly under pressure.
2. The manure is not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The manure contains bedding.

“Dry bedded manure confinement feeding operation building” or *“building”* means a building used in conjunction with a confinement feeding operation to house cattle or swine and in which any manure from the animals is stored as dry bedded manure.

“Dry bedded manure storage structure” means a covered or uncovered structure, other than a building, used to store dry bedded manure originating from a confinement feeding operation.

“Dry manure” means manure that meets all of the following conditions:

1. The manure does not flow perceptibly under pressure.
2. The manure is not capable of being transported through a mechanical pumping device designed to move a liquid.
3. The constituent molecules of the manure do not flow freely among themselves but may show a tendency to separate under stress.

“Dry manure” includes manure marketed as a bulk dry animal nutrient product that is stored 1,250 feet or less from the confinement animal feeding structure from which it originated.

“Earthen manure storage basin” means an earthen cavity, either covered or uncovered, that, on a regular basis, receives manure discharges from a confinement feeding operation if accumulated manure from the basin is completely removed at least once each year.

“Earthen waste slurry storage basin” means an uncovered and exclusively earthen cavity that, on a regular basis, receives manure discharges from a confinement AFO if accumulated manure from the basin is completely removed at least twice each year and that was issued a permit, constructed or expanded on or after July 1, 1990, but prior to May 31, 1995.

“Educational institution” means 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 education agencies, community colleges, institutions of higher education under the control of the state board of regents, and accredited independent colleges and universities.

“Egg washwater storage structure” means an aerobic or anaerobic structure used to store the wastewater resulting from the washing and in-shell packaging of eggs. It does not include a structure also used as a manure storage structure.

“Enforcement action” means an action against a person with a controlling interest in a confinement feeding operation initiated by the department or the attorney general to enforce the provisions of Iowa Code chapter 459 or 459B or rules adopted pursuant to either chapter. An enforcement action begins when the attorney general institutes proceedings in district court pursuant to Iowa Code section 455B.112. An enforcement action is pending until final resolution of the action by satisfaction of a court order, for which all judicial appeal rights are exhausted, expired, or waived.

“Family member” means a person related to another person as parent, grandparent, child, grandchild, sibling, or a spouse of such related person.

“Feed storage runoff basin” means a covered or uncovered impoundment with the primary function to collect and store runoff from a feed storage area.

“Formed animal truck wash effluent structure” means a covered or uncovered impoundment used to store effluent from an animal truck wash facility, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials.

“Formed manure storage structure” means a covered or uncovered impoundment used to store manure from an AFO, which has walls and a floor constructed of concrete, concrete block, wood, steel, or similar materials. Subject to department approval, 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.

“Formed settled open feedlot effluent basin” means a settled open feedlot effluent basin 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 settled open feedlot effluent basin shall have the structural integrity to withstand expected internal and external load pressures.

“Freeboard” means the difference in elevation between the liquid level and the confinement feeding operation structure’s overflow level.

“Frozen ground” means soil that is impenetrable due to frozen soil moisture but does not include soil that is only frozen to a depth of two inches or less.

“Grassed waterway” means a natural or constructed channel that is shaped or graded to required dimensions and established in suitable vegetation for the stable conveyance of runoff.

“Highly erodible land” means a field that has one-third or more of its acres or 50 acres, whichever is less, with soils that have an erodibility index of eight or more, as determined by rules promulgated by the United States Department of Agriculture.

“Human sanitary waste” means wastewater derived from domestic uses including bathroom and laundry facilities generating wastewater from toilets, baths, showers, lavatories and clothes washing.

“Incidental” means a duty which is secondary or subordinate to a primary job or function.

“Incorporation” means a soil tillage operation following the surface application of manure which mixes the manure into the upper four inches or more of soil.

“Indemnity fund” means the livestock remediation fund created in Iowa Code section 459.501.

“Injection” means the application of manure into the soil surface using equipment that discharges it beneath the surface.

“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. The ownership interest is an interest when it is held directly, indirectly through a spouse or dependent child, or both.

“Karst terrain” means land having karst formations that exhibit surface and subterranean features of a type produced by the dissolution of limestone, dolomite, or other soluble rock and characterized by closed depressions, sinkholes, or caves.

“Known sinkhole” means a sinkhole that has been included in the department’s sinkhole coverage and displayed in the AFO Siting Atlas or a sinkhole known to the applicant.

“Liquid manure” means manure that meets all of the following requirements:

1. The manure flows perceptibly under pressure.
2. The manure is capable of being transported through a mechanical pumping device designated to move a liquid.
3. The constituent molecules of the liquid manure flow freely among themselves and show a tendency to separate under stress.

Liquid manure that is frozen or partially frozen is included in this definition.

“Livestock market” means any place where animals are assembled from two or more sources for public auction, private sale, or on a commission basis, which is under state or federal supervision, including a livestock sale barn or auction market, if such animals are kept for ten days or less.

“Long-term stockpile location” means an area where a person stockpiles manure for more than a total of six months in any two-year period.

“Low-pressure irrigation system” means spray irrigation equipment that discharges manure from a maximum height of nine feet in a downward direction and that utilizes spray nozzles that discharge manure at a maximum pressure of 25 pounds per square inch.

“Major water source” means a water source that is a lake, reservoir, river or stream located within the territorial limits of the state, or any marginal river area adjacent to the state, if the water source is capable of supporting 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 Table 1 and Table 2 at iowadnr.gov/afo/rules (more information is contained in subrule 65.1(2), incorporation by reference).

“*Manager*” means a person who is actively involved in the operation of the commercial manure service and makes management decisions in the operation of the service.

“*Man-made manure drainage system*” means a drainage ditch, flushing system, or other drainage device which was constructed by human beings and is used for the purpose of transporting manure.

“*Manure*” means animal excreta or other commonly associated wastes of animals including but not limited to bedding, litter, or feed losses. Manure does not include wastewater resulting from the washing and in-shell packaging of eggs. For the purposes of NPDES permitting, “manure” includes manure, bedding, compost and raw materials or other materials commingled with manure or set aside for disposal. If a manure storage structure or animal truck wash effluent structure contains both manure from an AFO and animal truck wash effluent from an animal truck wash facility, the effluent shall be deemed to be manure.

“*Manure storage structure*” means a formed manure storage structure, an unformed manure storage structure, digester, or a dry bedded manure storage structure. A manure storage structure does not include the following: (1) egg washwater storage structure, (2) areas of a confinement building where no manure is stored, and (3) areas of a confinement building where the animals have direct contact with the manure and the manure is removed regularly during the production cycle or at the conclusion of the production cycle (referred to as the “animal production area”). An animal truck wash effluent structure may be the same as a manure storage structure that is part of the confinement feeding operation, so long as the primary function of such impoundment is to collect and store both effluent from the animal truck wash facility and manure from the confinement feeding operation.

“*NPDES permit*” means a written permit of the department, pursuant to the National Pollutant Discharge Elimination System (NPDES) program, to authorize and regulate the operation of a CAFO.

“*NRCS*” means United States Department of Agriculture Natural Resources Conservation Service.

“*Nutrient management plan*” or “*NMP*” means a plan that provides for the management of manure, process wastewater, settled open feedlot effluent, settleable solids, open feedlot effluent, animal truck wash effluent, including the application of effluent, as provided in rule 567—65.209(455B,459A).

“*One hundred year floodplain*” means the land adjacent to a major water source, if there is at least a 1 percent chance that the land will be inundated in any one year. In making the calculations, the department shall consider available maps or data compiled by the Federal Emergency Management Agency.

“*Open feedlot*” means a lot, yard, corral, building, or other area used to house animals in conjunction with an open feedlot operation.

“*Open feedlot effluent*” means a combination of manure, precipitation-induced runoff, or other runoff from an open feedlot before its settleable solids have been removed. If an open feedlot operation structure or animal truck wash effluent structure contains effluent from both an open feedlot operation and an animal truck wash facility, the animal truck wash effluent shall be deemed to be open feedlot effluent.

“*Open feedlot effluent basin*” means an open feedlot basin that does not settle solids before the effluent goes to the basin.

“*Open feedlot operation*” means an unroofed or partially roofed AFO if crop, vegetation, or forage growth or residue is not maintained as part of the AFO during the period that animals are confined in the AFO. “Open feedlot operation” includes a “partially roofed AFO” as defined in this rule. Iowa Code section 459A.103 provides that two or more open feedlot operations under common ownership or management are deemed to be a single open feedlot operation if they are adjacent or utilize a common area or system for open feedlot effluent disposal. To determine if two or more open feedlot operations are deemed to be one open feedlot operation, the first test is whether the open feedlot operations are under common ownership or management. If they are not under common ownership or management, they are not one open feedlot operation. The second test is whether the two open feedlot operations are adjacent or utilize a common area or system for open feedlot effluent disposal. If the two operations are not adjacent and do not use a common area or system for open feedlot effluent disposal, they are not one open feedlot operation.

“*Open feedlot operation structure*” means an open feedlot, an open feedlot effluent basin, a settled open feedlot effluent basin, a solids settling facility, or an AT system. “Open feedlot operation structure” does not include a manure storage structure as defined in Iowa Code section 459.102.

“*Owner*” means a person who has legal or equitable title to the property where the AFO is located or a person who has legal or equitable title to the AFO structures. “*Owner*” does not include a person who has a lease to use the land where the AFO is located or to use the AFO structures.

“*Partially roofed AFO*” means an AFO in which the animals are confined under a roof and there exists unroofed areas located on the perimeter of the roofed structure, where the animals have unrestricted access at all times. The square footage of the unroofed area shall be at least 10 percent of the square footage of the attached roofed production area. Openings or vents in the roofed portion shall not be included in the 10 percent unroofed calculation.

“*Permanent vegetation cover*” means land that is maintained in perennial vegetative cover consisting of grasses, legumes, or both, and includes but is not limited to pastures, grasslands or forages.

“*Process wastewater*” means water directly or indirectly used in the operation of the AFO for any or all of the following: spillage or overflow from animal or poultry watering systems; washing, cleaning, or flushing of pens, barns, manure pits, or other AFO facilities; direct contact swimming, washing, or spray cooling of animals; or dust control. Process wastewater also includes any water which comes into contact with any raw materials, products, or byproducts, including manure, litter, feed, milk, eggs or bedding.

“*Production area*” means that part of an AFO that includes the area in which animals are confined, the manure storage area, the raw materials storage area, egg washing and egg processing facilities, and the waste containment areas. The area in which animals are confined includes but is not limited to open lots, housed lots, feedlots, stall barns, free stall barns, milk rooms, milking centers, cow yards, barnyards, medication pens, walkers, animal walkways, confinement houses, and stables. The manure storage area includes but is not limited to lagoons, solids settling facilities, settled open feedlot effluent basins, storage sheds, stockpiles, under house or pit storages, liquid impoundments, static piles, and composting piles. The raw materials storage area includes but is not limited to feed silos, silage bunkers, and bedding materials. The waste containment area includes but is not limited to settling basins and areas within berms and diversions that separate uncontaminated storm water. Also included in the definition of production area is any area used in the storage, handling, treatment, or disposal of mortalities.

“*Professional engineer*” or “*PE*” means a person engaged in the practice of engineering as defined in Iowa Code section 542B.2 who is issued a certificate of licensure as a PE pursuant to Iowa Code section 542B.17.

“*Public thoroughfare*” means a road, street, or bridge that is constructed or maintained by the state or a political subdivision.

“*Public use area*” means that portion of land owned by the United States, the state, or a political subdivision with facilities that 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 and cabins, shelter houses, playground equipment, swimming beaches at lakes, and fishing docks, fishing houses, fishing jetties or fishing piers at lakes. 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.

“*Public water supply*” (also referred to as a system or a water system) means a system for the provision to the public of piped water for human consumption, if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year. Such term includes (1) any collection, treatment, storage, and distribution facilities under control of the supplier of water and used primarily in connection with such system, and (2) any collection (including wells) or pretreatment storage facilities not under such control that are used primarily in connection with such system. A public water supply system is either a “community water system” or a “noncommunity water system.”

“*Q100*,” as defined in rule 567—70.2(455B,481A), means a flood having a 1 percent chance of being equaled or exceeded in any one year as determined by the department.

“*Qualified confinement feeding operation*” means a confinement feeding operation that has an animal unit capacity of:

1. 5,333 or more for animals other than swine as part of a farrowing and gestating operation or farrow-to-finish operation or cattle as part of a cattle operation.

2. 2,500 or more for a swine farrowing and gestating operation, not including replacement breeding swine if the following apply:

- The replacement breeding swine are raised at the confinement feeding operation; and
 - The replacement breeding swine are used in the farrowing and gestation operation.
3. 5,400 or more for a swine farrow-to-finish operation.
4. 8,500 or more for a confinement feeding operation maintaining cattle.

“*Qualified stockpile cover*” means a barrier impermeable to precipitation that is used to protect a stockpile from precipitation.

“*Qualified stockpile structure*” means a building or roofed structure that is all of the following:

1. Impermeable to precipitation.
2. Constructed using wood, steel, aluminum, vinyl, plastic, or other similar materials.
3. Constructed with walls or other means to prevent precipitation-induced surface runoff from contacting the stockpile.

“*Release*” means an actual, imminent or probable discharge of manure, process wastewater, open feedlot effluent, settled open feedlot effluent, or settleable solids from an AFO or animal truck wash facility to surface water, groundwater, drainage tile line or intake or to a designated area resulting from storing, handling, transporting or land-applying manure, process wastewater, open feedlot effluent, settled open feedlot effluent, or settleable solids.

“*Religious institution*” means a building in which an active congregation is devoted to worship.

“*Research college*” means an accredited public or private college or university, including but not limited to a university under control of the state board of regents as provided in Iowa Code chapter 262, or a community college under the jurisdiction of a board of directors for a merged area as provided in Iowa Code chapter 260C, if the college or university performs research or experimental activities regarding animal agriculture or agronomy.

“*Residence*” means a house or other building, including all structures attached to the building, not owned by the owner of the AFO that meets all of the following criteria at the location of the intended residence:

1. Used as a place of habitation for humans on a permanent and frequent basis.
2. Not readily mobile.
3. Connected to a permanent source of electricity, a permanent private water supply or a public water supply system and a permanent domestic sewage disposal system including a private, semipublic or public sewage disposal system.
4. Assessed and taxed as real property.

If a house or other building has not been occupied by humans for more than six months in the last two years, or if a house or other building has been constructed or moved to its current location within the past six months, the owner of the intended residence has the burden of proving that the house or other building is a residence. Paragraph “3” shall not apply to a house or other building inhabited by persons who are exempt from the compulsory education standards of Iowa Code section 299.24 and whose religious principles or tenets prohibit the use of the utilities listed.

“*Restricted spray irrigation equipment*” means spray irrigation equipment that disperses manure through an orifice at a rate of 80 pounds per square inch or more.

“*School*” means an educational institution.

“*Seasonal high-water table*” means the part of the soil profile closest to the soil surface that becomes saturated (usually in the spring) as observed in a monitoring well or determined by recognition of soil redoxomorphic features.

NOTE: “Redoxomorphic features” refers to the gleying or mottling or both that occur under saturated conditions within the soil profile.

“*Secondary containment barrier*” means a structure used to retain accidental manure overflow from a manure storage structure.

“*Settleable solids*,” “*scraped solids*,” or “*solids*” means that portion of the effluent that meets all the following requirements:

1. The solids do not flow perceptibly under pressure.

2. The solids are not capable of being transported through a mechanical pumping device designed to move a liquid.

3. The constituent molecules of the solids do not flow freely among themselves but do show the tendency to separate under stress.

“Settled open feedlot effluent” means a combination of manure, precipitation-induced runoff, or other runoff originating from an open feedlot operation after its settleable solids have been removed.

“Settled open feedlot effluent basin” or *“runoff control basin”* means a covered or uncovered impoundment that is part of an open feedlot operation, if the primary function of the impoundment is to collect and store settled open feedlot effluent. An animal truck wash facility may be part of an open feedlot operation. An animal truck wash effluent structure may be the same as a settled open feedlot effluent basin that is part of the open feedlot operation, so long as the primary function of such impoundment is to collect and store effluent from both the animal truck wash facility and the open feedlot operation.

“Shallow well” means 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.

“Sinkhole” means any closed depression that was caused by the dissolution or collapse of subterranean materials in a carbonate formation or in gypsum or rock salt deposits through which water may drain to the local groundwater system. Such depressions may or may not be open to the surface at times. Intermittently, sinkholes may hold water forming a pond.

“Small AFO” or *“SAFO”* means an AFO that has an animal unit capacity of 500 or fewer animal units.

“Small animal truck wash facility” means an animal truck wash facility, if all of the following apply:

1. The animal truck wash facility and all single-unit trucks, truck-tractors, semitrailers, or trailers that are washed at the facility are owned by the same person; and

2. The average total per-day volume of washwater used by the animal truck wash facility does not exceed 2,000 gallons as calculated on a monthly basis.

“Snow-covered ground” means soil covered by one inch or more of snow or soil covered by one-half inch or more of ice.

“Solids settling facility” means a basin, terrace, diversion, or other structure or solids removal method that is part of an open feedlot operation and which is designed and operated to remove settleable solids from open feedlot effluent. A “solids settling facility” does not include a basin, terrace, diversion, or other structure or solids removal method that retains the liquid portion of open feedlot effluent for more than seven consecutive days following a precipitation event.

“Spray irrigation equipment” means mechanical equipment used for the aerial application of manure, if the equipment receives manure from a manure storage structure during application via a pipe or hose connected to the structure, and includes a type of equipment customarily used for aerial application of water to aid the growing of general farm crops.

“Stockpile” means dry manure or dry bedded manure originating from a confinement feeding operation that is stored at a particular location outside a confinement feeding operation building or a manure storage structure. For open feedlot operations and animal truck washes, “stockpile” means any accumulation of manure, scraped solids, settleable solids or combination of manure and solids located outside of the open feedlot or animal truck wash facility or outside of an area that drains to an open feedlot or animal truck wash facility, where the scraped manure or solids are stored for less than six months.

“Stockpile dry bedded manure” means to store dry bedded manure outside a dry bedded manure confinement feeding operation building or a dry bedded manure storage structure.

“Stockpile dry manure” means to create or add to a dry manure stockpile.

“Surface water drain tile intake” means an opening to a drain tile, including intake pipes and French drains, which allows surface water to enter the drain tile without filtration through the soil profile.

“Swine farrow-to-finish operation” means a confinement feeding operation in which porcine animals are produced and in which a primary portion of the phases of the production cycle is conducted at one confinement feeding operation. Phases of the production cycle include but are not limited to gestation, farrowing, growing and finishing. At a minimum, farrowing, growing, and finishing shall be conducted at

the operation with a majority of the pigs farrowed at the site finished to market weight in order to qualify as a farrow-to-finish operation.

“Threshold requirements for an engineer” means the limits, pursuant to Iowa Code section 459.303, that require that the design of a formed manure storage structure or egg washwater storage structure be prepared and signed by a PE licensed in the state of Iowa or by an engineer working for the NRCS. A confinement feeding operation that utilizes a formed manure storage structure meets threshold requirements for an engineer if any of the following apply:

1. A confinement feeding operation with an animal unit capacity of 1,250 or more animal units for swine maintained as part of a swine farrowing and gestating operation.
2. A confinement feeding operation with an animal unit capacity of 2,750 or more animal units for swine maintained as part of a swine farrow-to-finish operation.
3. A confinement feeding operation with an animal unit capacity of 4,000 or more animal units for cattle maintained as part of a cattle operation.
4. Any other confinement feeding operation with an animal unit capacity of 3,000 or more animal units.

“Unformed animal truck wash effluent structure” means a covered or uncovered impoundment used to store animal truck wash effluent, other than a formed animal truck wash effluent structure.

“Unformed manure storage structure” means a covered or uncovered impoundment used to store manure, other than a formed manure storage structure, which includes an anaerobic lagoon, aerobic structure, or earthen manure storage basin.

“Unformed settled open feedlot effluent basin” means a settled open feedlot effluent basin, other than a formed settled open feedlot effluent basin.

“Vegetative infiltration basin” or *“VIB”* means an open feedlot operation structure in which settled open feedlot effluent is discharged into a relatively flat basin area which is bermed to prevent entry or discharge of surface water flows and is planted to permanent vegetation. An extensive tile system installed at a depth of three to five feet is used to collect infiltrated settled open feedlot effluent from the VIB and discharge it into a VTA for further treatment. As opposed to wetlands, which are designed to maintain a permanent water level, a VIB is designed to maximize water infiltration into the soil and thus normally will have standing water for only short periods of time. Removal of settleable solids is required prior to discharge of open feedlot effluent into the VIB. Soil suitability is essential to ensure adequate filtration and treatment of pollutants. Periodic harvesting of vegetation is required.

“Vegetative treatment area” or *“VTA”* means an open feedlot operation structure in which settled open feedlot effluent is discharged into areas that are level in one dimension and have a slight slope (less than 5 percent) in the other dimension and are planted to relatively dense permanent vegetation. Settled open feedlot effluent must be discharged evenly across the top width of the VTA and allowed to slowly flow downslope through the VTA. Level spreaders or other practices may be required to maintain even flow throughout the length of the VTA. Management to maintain a dense vegetation cover is required, as is periodic harvesting of vegetation.

“Water of the state” means any stream, lake, pond, marsh, watercourse, waterway, well, spring, reservoir, aquifer, irrigation system, drainage system, and any other body or accumulation of water, surface or underground, natural or artificial, public or private, that are contained within, flow through or border upon the state or any portion thereof.

“Water source” means 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.

“Water well” means an excavation that is drilled, cored, augered, washed, driven, dug, jetted, or otherwise constructed for the purpose of exploring for groundwater, monitoring groundwater, utilizing the geothermal properties of the ground, or extracting water from or injecting water into the aquifer. “Water well” does not include an open ditch or drain tiles or an excavation made for obtaining or prospecting for oil, natural gas, minerals, or products mined or quarried.

“Wetted perimeter” means the outside edge of land where the direct discharge of manure occurs from spray irrigation equipment.

65.1(2) *Incorporation by reference.* The text of the following incorporated materials is not included in this chapter. The materials are provided at www.iowadnr.gov/environmental-protection/animal-feeding-operations/afo-rules-regulations. The materials listed below are hereby made a part of this chapter. For material subject to change, only the specific version specified in this subrule is incorporated. Any amendment or revision to a reference document is not incorporated until this subrule has been amended to specify the new version.

a. “Act” means the federal Water Pollution Control Act, also known as the Clean Water Act, as defined by 40 CFR 403.3 as amended through July 19, 2023;

b. “AFO Siting Atlas” means an online mapping tool to assist in determining compliance of potential building sites to meet regulatory requirements. The AFO Siting Atlas is located on the department’s website, and the regulatory layers are effective as of June 19, 2024. Any changes to the regulatory layers of the AFO Siting Atlas shall be done through rulemaking. Regulatory layers include: karst, one hundred year floodplains in major water sources, and sinkholes;

c. “CFR” or “Code of Federal Regulations” means the federal administrative rules adopted by the United States as amended through July 19, 2023;

d. County Parks and Recreation Areas listed in Iowa’s County Conservation System Guide to Outdoor Adventure – effective June 19, 2024;

e. Parks in Iowa under the federal jurisdiction of the United States Army Corps of Engineers listed on the United States Army Corps of Engineers’ website – effective June 19, 2024;

f. Designated Wetlands in Iowa – effective August 23, 2006;

g. Emergency spill line telephone number is 515.725.8694 – effective January 1, 2023;

h. Appendix A: Open feedlot effluent control alternatives for open feedlot operations – effective December 14, 2016;

i. Appendix B: Master matrix – effective March 1, 2003;

j. Appendix C: Design specifications—formed manure storage structures – effective March 24, 2004;

k. Table 1: Major water sources—Rivers and Streams – effective December 14, 2016;

l. Table 2: Major water sources—Lakes – effective December 14, 2016;

m. Table 3: Annual pounds of nitrogen per space of capacity – effective September 15, 2010;

n. Table 4: Crop nitrogen usage rate factors – effective December 14, 2016;

o. Table 5: Manure production per space of capacity – effective September 15, 2010;

p. Table 6: Required separation distances for confinement feeding operations construction on or after March 1, 2003—swine, sheep, horses, poultry, and beef and dairy cattle – effective September 15, 2010;

q. Table 6a: Required separation distances for confinement feeding operations constructed on or after January 1, 1999, but prior to March 1, 2003—swine, sheep, horses and poultry – effective September 15, 2010;

r. Table 6b: Required separation distances for confinement feeding operations constructed on or after January 1, 1999, but prior to March 1, 2003—beef and dairy cattle – effective September 15, 2010;

s. Table 6c: Required separation distances for confinement feeding operations constructed prior to January 1, 1999—swine, sheep, horses and poultry – effective September 15, 2010;

t. Table 6d: Required separation distances for confinement feeding operations constructed prior to January 1, 1999—beef and dairy cattle – effective September 15, 2010;

u. Table 7: Required separation distances for open feedlot operations, stockpiles from open feedlot operations, stockpiles from dry manure confinement operations and stockpiles from dry bedded confinement operations – effective September 15, 2010;

v. Table 8: Summary of credit for mechanical aeration – effective September 15, 2010;

w. List of high-quality water resources in 567—Chapter 61 – effective January 1, 2001;

x. NRCS Iowa Technical Note No. 25 Iowa Phosphorus Index – published March 2024;

y. Iowa State University Extension and Outreach publication PM 1688, “A General Guide for Crop Nutrient and Limestone Recommendations in Iowa” – published February 2023;

z. Iowa State University Extension and Outreach publication PMR 1003, “Using Manure Nutrients for Crop Production” – published April 2023;

aa. Iowa State University Extension and Outreach publication AE 3550, “How to Sample Manure for Nutrient Analysis” – published January 2021; and

bb. Iowa State University Extension and Outreach publication CROP 31-8, “Take a Good Soil Sample to Help Make Good Fertilization Decisions” – published December 2016.

cc. NRCS Iowa Agronomy Technical Note No. 29 Dominant Critical Area – published April 2024.
[ARC 7965C, IAB 5/15/24, effective 6/19/24; Editorial change: IAC Supplement 8/6/25]