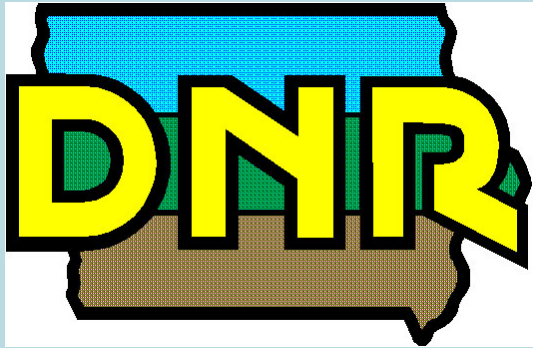


Animal Feeding Operation Regulations: Do Guidelines Protect Sensitive Water Resources in a Karst Area



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Topics for Discussion

- *Review of Code of Iowa for Water Quality*
- *Review of Iowa Administrative Code (Department Rules) for Water Quality*
- *Review of Monitoring Work*
- *Manure & Nutrient Management Plans*
- *Concerns and/or Questions*

Code of Iowa

- **459.102 Definitions.**
- *As used in this chapter, unless the context otherwise requires:*
- 21. “Designated area” means a **known sinkhole**, a cistern, an abandoned well, an unplugged agricultural drainage well, an agricultural drainage well surface inlet, a drinking water well, a designated wetland, or a water source.
- 34. “**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.

Code of Iowa

- *459.308 Unformed manure storage structures — construction standards — inspections.*
- *3. A person shall not construct an unformed manure storage structure on **karst terrain** or on an area that drains into a **known sinkhole**. However, a person may construct an unformed manure storage structure, if there is a twenty-five-foot vertical separation distance between the bottom of the unformed manure storage structure and underlying limestone, dolomite, or other soluble rock.*

Code of Iowa

- *459.310 Distance requirements.*
- *1. Except as provided in subsections 3 and 4, the following shall apply:*
 - a. A confinement feeding operation structure shall not be constructed closer than five hundred feet away from the surface intake of an agricultural drainage well. A confinement feeding operation structure shall not be constructed closer than **one thousand feet** from a wellhead, cistern of an agricultural drainage well, or **known sinkhole**.*

Code of Iowa

- *459.310 Distance requirements.*
- *1. Except as provided in subsections 3 and 4, the following shall apply:*
 - b. A confinement feeding operation structure shall not be constructed if the confinement feeding operation structure as constructed is closer than any of the following:*
 - (1) Five hundred feet away from a water source other than a major water source.*
 - (2) One thousand feet away from a major water source.*
 - (3) Two thousand five hundred feet away from a designated wetland.*

Code of Iowa

- *459.310 Distance requirements.*
- *3. A separation distance required in subsection 1 shall not apply to any of the following:*
 - *b. A confinement feeding operation building, an egg washwater storage structure, or a manure storage structure constructed with a **secondary containment barrier**. The department shall adopt rules providing for the construction and use of a secondary containment barrier, including construction design standards.*

Code of Iowa

- *459.311 Minimum requirements for manure control.*
- *1. A confinement feeding operation shall **retain all manure** produced by the operation between periods of manure disposal. For purposes of this section, dry manure may be retained by stockpiling as provided in this subchapter. A confinement feeding operation **shall not discharge manure directly into water of the state or into a tile line that discharges directly into water of the state.***

Code of Iowa

- *459.311 Minimum requirements for manure control.*
- *2. Notwithstanding subsection 1, a confinement feeding operation that is a concentrated animal feeding operation as defined in 40 C.F.R. §122.23(b) shall comply with applicable national pollutant discharge elimination system permit requirements as provided in the federal Water Pollution Control Act, 33 U.S.C. ch. 26, as amended, and 40 C.F.R. pts. 122 and 412, pursuant to rules that shall be adopted by the commission.*

Code of Iowa

- *459.311 Minimum requirements for manure control.*
- *2. (continued) Any rules adopted pursuant to this subsection shall be no more stringent than requirements under the federal Water Pollution Control Act, 33 U.S.C. ch. 26, as amended, and 40 C.F.R. pts. 122 and 412.*

Code of Iowa

- *459.311 Minimum requirements for manure control.*
- *3. Manure from an animal feeding operation shall be disposed of in a manner which will not cause surface water or groundwater pollution. Disposal in accordance with the provisions of state law, including this chapter, rules adopted pursuant to the provisions of state law, including this chapter, guidelines adopted pursuant to this chapter, and section 459.314, shall be deemed as compliance with this requirement.*

Code of Iowa

- *459.311B Stockpiling dry manure — minimum separation distance requirements and prohibitions.*
- *1. A person shall not stockpile dry manure within the following distances from any of the following:*
- *b. (1) A designated area, four hundred feet. However, an increased separation distance of **eight hundred feet** shall apply to all of the following: (a) A high-quality water resource.
(b) An agricultural drainage well.
(c) **A known sinkhole.***

Code of Iowa

- *459.311B Stockpiling dry manure — minimum separation distance requirements and prohibitions.*
- *1. A person shall not stockpile dry manure within the following distances from any of the following:*
- *b. (2) Subparagraph (1) does not apply to a person who stockpiles dry manure in a manner that does not allow precipitation-induced runoff to drain from the stockpile to the designated area.*

Code of Iowa

- 459.311D Stockpiling dry manure on *karst terrain*.
- A person stockpiling dry manure on karst terrain shall comply with all of the following:
 - 1. The person shall stockpile the dry manure at a location where there is a vertical separation distance of at least *five feet* between the bottom of the stockpile and the underlying limestone, dolomite, or other soluble rock.

Code of Iowa

- 459.311D Stockpiling dry manure on *karst terrain*.
- A person stockpiling dry manure on karst terrain shall comply with all of the following:
- **2.** A person who stockpiles dry manure for more than fifteen consecutive days shall use any of the following:
 - a. A qualified stockpile structure.
 - b. A qualified stockpile cover. However, the person shall not stockpile dry manure using a qualified stockpile cover at a long-term stockpile location unless the stockpile is located on reinforced concrete at least five inches thick.

Code of Iowa

- 459.314 Application of manure near *designated areas*.
- 2. Except as otherwise provided in this subsection, a person shall not apply manure on land located within *two hundred feet from a designated area*, unless one of the following applies:
 - a. The manure is land-applied by injection or incorporation on the same date as the manure was land-applied.
 - b. An area of permanent vegetation cover, including filter strips and riparian forest buffers, exists for *fifty feet* surrounding the designated area other than an unplugged agricultural drainage well or surface intake to an unplugged agricultural drainage well, and the area of permanent vegetation cover is not subject to manure application.

Administrative Rules

- *65.15(14) Concrete standards*
- *c. **Karst terrain**—upgraded standards. If the site of the proposed formed manure storage structure is located in karst terrain or an area that drains into a known sinkhole, the minimum concrete standards set forth in paragraph 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:*

Administrative Rules

- 65.15(14) “c”
- (1) . . . a PE, NRCS qualified staff 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.

Administrative Rules

- 65.15(14) “c”
- (2) A minimum **5-foot layer** of low permeability soil (1×10^{-6} cm/sec) or rock 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 NRCS qualified staff.

Administrative Rules

- 65.15(14) “c”
- (3) *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 NRCS qualified staff person 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.*

Administrative Rules

- 65.15(14) “c”
- (4) *Groundwater monitoring shall be performed as specified by the department.*

Monitoring Work

- *Quarterly sampling required from groundwater lowering tiles*
 - *Sample analyzed for ammonia nitrate*
- *Document tile was dry if no sample to collect*
- *No samples tested high*

Manure/Nutrient Management Plan Requirements

- *Confinements –*

Operations greater than 500 animal units required to have Manure Management Plan

- annual submittal required

- complete plan with phosphorus index required at least every 4 years

- *Open feedlots –*

Operations greater than 1000 animal units or with an NPDES permit required to have Nutrient Mgt Plan

Manure/Nutrient Management Plans

- *Helps plan manure application at appropriate rates to use nutrients for crop production*
- *Adjusts application rates for planned commercial fertilizer application*
- *Requires use of the Phosphorus Index to include risk of erosion*

Review

- *Review of Code of Iowa for Water Quality*
- *Review of Iowa Administrative Code (Department Rules) for Water Quality*
- *Review of Monitoring Work*
- *Manure & Nutrient Management Plans*
- *Concerns and/or Questions*



Concerns and/or Questions?

1 65.5(3) *The department may evaluate any proposed confinement feeding operation or proposed expansion of a confinement feeding operation that requires a construction permit or manure management plan with respect to its potential adverse impacts on natural resources or the environment.*

1 *Objection to 65.5(3) filed by the Administrative Rules Review Committee October 10, 2006. See text of Objection at end of Chapter 65.*

OBJECTION

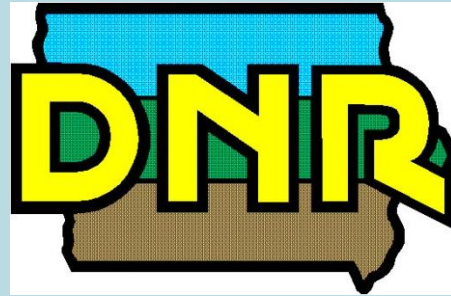
At its August 8, 2006, meeting, the Administrative Rules Review Committee voted to object to the provisions of ARC 5243B*, rules 567 IAC 65.5(3) and 65.103(5), on the grounds they are beyond the authority delegated to the Department of Natural Resources

OBJECTION

It is the opinion of the Committee that Code chapters 459 and 459A establish the procedures and standards relating to the issuance of construction permits and the approval of manure management plans, and that the Department does not have authority to create additional procedures and standards by rule.

For More Information

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