**Section 506.302 Site Investigation**

a) The owner or operator of a livestock waste handling facility must conduct a site investigation in compliance with this Section to determine the following:

1) Whether aquifer material is considered present (or not present) within 5 feet of the planned bottom of the livestock waste handling facility;

2) Whether the proposed facility is to be located within the floodway or flood fringe of a 100-year floodplain; and

3) Whether the proposed facility is to be located within a karst area or within 400 feet of a natural depression in a karst area.

b) Except for facilities that are proposed to be located within an area designated as "Sink hole areas" on "Karst Terrains and Carbonate Rocks of Illinois", IDNR-ISGS Illinois Map 8, the owner or operator must obtain soil samples from within the final livestock waste handling facility area or within 20 feet of the livestock waste handling facility boundaries. The sampling must be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:

1) The soil sampling must begin at the soil surface and extend to a depth that includes a minimum of 5 feet below the planned bottom of the livestock waste handling facility native soil or to bedrock;

2) If bedrock is encountered, additional soil samplings may be necessary to verify the presence of aquifer material or karstified carbonate bedrock;

3) Continuous samples must be recovered from each soil sampling; and

4) Upon completion, any boring used for sampling must be properly abandoned and sealed under the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120. Any excavation used for sampling that is within the construction boundaries of the livestock management facility or livestock waste handling facility must be restored by adding soil compacted in lifts no greater than 6 inches.

c) If the Department determines that additional soil samplings are necessary to ensure the protection of the groundwater, the surface water, or the structural integrity of the livestock waste handling facility, the Department must require additional soil samplings.

d) As an alternative to performing the soil sampling required under subsection (b) or (c), the owner or operator of the livestock waste handling facility may propose to the Department to use alternative information sources. The Department must evaluate the proposal; determine whether the alternative information sources will result in a site investigation that will be at least as protective of the groundwater, the surface water, and the structural integrity of the livestock waste handling facility as would have resulted from data resulting from soil borings; and notify the owner or operator of the Department's finding.

e) Despite the other requirements of this Subpart, if aquifer material is located above or within 5 feet of the lowest point of the livestock waste handling facility, the design of the facility must comply with Section 506.310.

f) Despite the other requirements of this Subpart, if the site investigation determines that the livestock waste handling facility is to be located in the flood fringe of a 100-year floodplain, the design of the facility must comply with Section 506.311.

g) If the proposed livestock waste handling facility is to be located within an area designated as "Sink hole areas" on "Karst Terrains and Carbonate Rocks of Illinois", IDNR-ISGS Illinois Map 8 or if the results of the soil sampling conducted under Section 506.302(b) indicate the proposed livestock waste handling facility is to be located in a karst area, the following requirements must be met:

1) The Department must conduct a visual inspection of the surrounding area to determine the presence of natural depressions during the pre-construction site inspection as required under 8 Ill. Adm. Code 900.505(a). Construction must not occur within 400 feet of a natural depression in a karst area;

2) The owner or operator must perform one or more soil borings that must be located within the final livestock waste handling facility area or within 20 feet of the livestock waste handling facility boundaries to determine the presence of voids. The boring must begin at the soil surface and extend to a depth that includes a minimum of 20 feet below the planned bottom of the livestock waste handling facility;

3) Continuous samples must be recovered from each boring;

4) The Licensed Professional Engineer, Licensed Professional Geologist, or USDA-NRCS representative designated to perform such functions must evaluate the results of the soil boring. If a void of 1 foot or greater in vertical distance is discovered from the soil boring performed under subsection (g)(2), the following requirements must be met:

A) The Department may require additional borings to determine the extent of the void;

B) Despite the other requirements of this Subpart, the owner or operator must submit to the Department a plan for the design of the facility that must include the additional design requirements in Section 506.312 and must include any additional design requirements necessary by the Licensed Professional Engineer; and

C) The Department must review and approve the plan required under subsection (g)(4)(B) before construction. The Department may also require additional design criteria before the plan is approved and construction may begin.

If no voids of 1 foot or greater in vertical distance are discovered from the soil boring performed, the design must include the additional requirements in Section 506.312.

5) Upon completion of the borings required under subsection (g), the borings must be properly abandoned and sealed under the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120.

h) The site investigation in compliance with subsections (b), (c), (d), (e), (f), and (g) must be conducted under the direction of a Licensed Professional Engineer, a Licensed Professional Geologist, or a representative of the USDA-NRCS designated to perform such functions.

(Source: Amended at 48 Ill. Reg. 3274, effective February 15, 2024)