**Section 506.202 Site Investigation**

a) The owner or operator of a lagoon constructed under this Subpart 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 50 feet of the planned bottom of the lagoon;

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

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

b) The owner or operator must perform one or more soil borings that must be located within the final lagoon area or within 20 feet of the final exterior berm toe. The boring must be performed to determine the presence of aquifer material or karstified carbonate bedrock as follows:

1) The soil boring must extend to a depth that includes 50 feet below the planned bottom of lagoon native soil or to bedrock;

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

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

4) Upon completion, the borings must be properly abandoned and sealed under the Illinois Water Well Construction Code at 77 Ill. Adm. Code 920.120.

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

d) As an alternative to performing the soil borings required under subsection (b) or (c), the owner or operator of the lagoon 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 management 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 the site investigation determines that the lagoon is to be located in the flood fringe of a 100-year floodplain, the design of the lagoon must comply with Section 506.206.

f) If the results of the soil boring conducted under Section 506.202(b) indicate the proposed lagoon is to be located in a karst area or if the proposed lagoon 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, 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 900.604(a). Construction must not occur within 400 feet of a natural depression in a karst area; and

2) The Licensed Professional Engineer or Licensed Professional Geologist must evaluate the results of the soil boring conducted under subsection (b). If the soil boring reveals a void of 1 foot or greater in vertical distance, 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 lagoon that must include the additional design requirements stated in Section 506.207 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 (f)(2)(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 are discovered from the soil boring performed, the design must include the additional requirements in Section 506.207.

g) The site investigation in compliance with subsection (b), (c), (d), (e), or (f) must be conducted under the direction of a Licensed Professional Engineer or Licensed Professional Geologist.

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