

Concentrated Animal Feeding Operations (CAFO) Guidance Document 1

Depth Gauge requirements for large CAFO waste storage structures

Large CAFO waste storage structures shall include an easily visible, clearly marked depth gauge. Depth gauges are required on all storage structures that at anytime will contain agricultural waste. Three clearly marked divisions shall be made to delineate each of the volumes specified below:

Three major divisions:

- a) Operational Volume (Waste and Normal Precipitation/Runoff)
 - The storage capacity of the structure designed to contain all (or in combination with other structures) of the large CAFO waste generated from the operation of the large CAFO (including normal precipitation and runoff in the production area)

- b) Emergency Volume (Extreme Storm Precipitation/Runoff)
 - The permittee shall use the 25-year 24-hour rainfall event for cattle, horses and sheep and existing swine, poultry and veal. Existing means populated prior to January 30, 2004
 - The permittee shall use the 100-year 24-hour rainfall event for new swine, poultry and veal. New means populated on or after January 30, 2004.
 - The magnitude of the rainfall event will be specified in the permittee's certificate of coverage (this includes all runoff captured from the production area during this rain event)

- c) Freeboard Volume (Freeboard to prevent berm erosion and failure)
 - An additional design capacity of a minimum of 12 inches of freeboard for storage structures that are subject to precipitation caused runoff. For storage structures that are not subject to precipitation caused runoff, the freeboard shall be a minimum of 6 inches.

Installation Requirements:

It is important to know where the lowest point of the storage structure is before installing the gauge. The lowest point can be found with the use of survey equipment, such as a transit. The Freeboard Volume mark is the top mark on the gauge and this mark must be placed even with the lowest point of the storage structure, to ensure that the proper amount of freeboard is maintained and overflows do not occur.

Inspection Requirements:

The depth of the large CAFO waste in the storage structure(s) and the available operating volume as indicated by the depth gauge shall be recorded a minimum of one time weekly year-round.

Considerations:

- a) Materials used must be durable and able to with stand freezing and thawing (examples: large chain, heavy-duty PVC, steel rod)
- b) Pick a location that is easily seen but out of the way of heavy equipment
- c) Any depth gauges that are destroyed or missing must be replaced immediately to ensure accurate records
- d) The elevations for the gauge should be re-shot every five years to ensure there has been no movement or settling

Storage Volume

