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Basic Holding Pond Operation Fact Sheet

Open feedlot runoff collected in holding ponds for animal feeding operations (AFO) must be managed to prevent discharges. Nebraska's [Title 130 -- Livestock Waste Control Regulations](#) requires the following:

- 1) Any time the holding pond gets too full to hold the expected runoff volume of a 25-year/24-hour storm, the operator is required to begin land application of waste. The land application must begin as soon as a suitable dewatering day occurs (see related NDEE fact sheet, ["What Are Dewatering Days?"](#)) in order to restore the capacity of the holding pond. Land application must continue during all available dewatering days until the holding pond has enough storage capacity to hold the runoff from a 25-year/24-hour storm. The level for this volume is the "must pump" level.
- 2) Prior to the winter months, the operator must land apply livestock waste to provide the minimum design storage capacity as specified in Title 130, Chapter 8, Section 002. The level for the minimum design storage capacity is the "winter pump-down" level.
 - a) For open lot AFOs, this volume must be no less than the average runoff amount for the month of June, AND runoff from the 25-year/24-hour rainfall event AND any manure, litter, or process wastewater for the month of June.
- 3) Reaching the minimum design storage capacity may require removal of accumulated solids. For some operations, this volume may be the entire storage capacity of the holding pond. For these operations, the holding pond should be emptied in the fall, and the accumulated solids removed. However, care must be taken during removal of accumulated solids to prevent damage to the liner.

Your permit application must specify the volumes required and the minimum design storage capacity (defined above). These volumes must be designated in the application, with the related pumping levels permanently marked on the holding pond staff gauge or other permanent markers in the holding pond.

When sizing holding ponds, several factors should be considered, including:

- Availability of land application area,
- Pumping and irrigation system capacities,
- Cropping practices, and
- Suitable scheduling of land application.

The requirement to dewater on all available days whenever the holding pond liquid level exceeds the "must pump" level, applies at all times, regardless of cropping practices. Increased holding pond capacity allows greater flexibility for scheduling land application and may reduce the need to pump. The livestock waste control facility (LWCF) should be designed to allow sufficient capacity for maintaining a minimal amount of solids to protect the liner of the holding pond.

Additional land application area also allows for more frequent land application and greater volumes of effluent to be applied. Generally, a minimum of 1.5 acres of land application area for effluent is needed for each acre of open lot and contributing area. Additional land application area and increased storage capacity contribute to a more manageable livestock waste control facility.

Pumping capacity should be adequate to land apply the runoff from the 25-year/24-hour storm in 10 to 14 dewatering days. A reduced pumping capacity may be considered where additional storage capacity is provided and maintained through lower pumping levels in the holding pond.

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