

Using County Soil Surveys to Evaluate Suitability of Soils for Earthen Impoundments

The NRCS in many states has completed soil surveys on a county-by-county basis. As the following example illustrates, these soil surveys contain information that can be useful in evaluating soils for earthen impoundments.

In summary, the soil survey indicates that this soil may be suitable for an earthen manure impoundment. The sieve analyses and plasticity indices place the soil in the NRCS Groups III and IV, and a liner can likely be constructed that will meet the target permeability rate for earthen manure impoundments. Possible limitations include poor internal drainage, perched water table, and slope.

The soil survey offers general information that may be useful in preliminary evaluation of an area for an earthen manure storage facility. Due to limitations in the depth of the survey profile and the size of the mapping units, the survey cannot substitute for a site-specific investigation. Such an investigation should include a geologic evaluation and soil borings and analyses at the specific location.

Participant Activity

Use the soil survey for your county and proposed site to complete the following table and evaluate the soil for an earthen manure impoundment. Discuss the information found in the soil survey.

A county soil survey report can provide much information needed to evaluate a site's suitability for a manure storage facility.