

Comm 82.36(3) & 60.30 8/7/07

What does the department require for the thickness of a subsurface stormwater detention system or detention basin liner?

There are three options that the department deems acceptable for a subsurface stormwater detention system or detention basin liner:

1. Clay liner
2. High Density Polyethylene Liner (HDPE)
3. Polyethylene Pond Liner (PPL)

The specifications for the liners are as follows.

Clay liner

In-place hydraulic conductivity of 1×10^{-7} cm/sec or less

50% fines (200 sieve) or more (by weight)

Average liquid limit (LL) of 25 or greater, with none less than 20

Average plasticity index (PI) of 12 or more, with none less than 10

Clay installed wet or optimum if using standard Proctor, and 2% wet or optimum if using modified proctor.

Minimum thickness of two feet

Compacted to 95% for standard Proctor, 90% for modified Proctor

Smooth drum compaction equipment is not allowed for clay compaction

Clay shall be placed in lifts no greater than six inches prior to compaction

Clay shall be disked or otherwise mechanically processed before compaction to break up clods.

Maximum clod size is 4 inches

HDPE liner

Minimum thickness shall be 40 mils

Design according to the criteria in Table 3 of the NRCS Wastewater Storage Facility Technical Standard 313

Install according to NRCS Wisconsin Construction Specification 202, Polyethylene Geomembrane Lining

PPL

Minimum thickness shall be 30 mils

Design according to the criteria in Table 3 of the NRCS Wastewater Storage Facility Technical Standard 313

Install according to NRCS Wisconsin Construction Specification 202, Polyethylene Geomembrane Lining