

DNR rules on delayed capping & alternative covers

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Solid Waste Interested Parties Meeting

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Some relevant rules

- NR 506.08(3) & (4) – closure requirements for landfills without approved plans
- NR 504.07 –final cover design requirements for landfills with plans
 - Clay cap designs in original version
 - Composite cap designs for MSW Lfs, clay cap designs for non-MSW Lfs
 - Grading layer, clay or GCL + soil barrier layer, geomembrane, drain, rooting zone, topsoil
- NR 506.07(1)(a) - daily disposal in as small an area as practical
- NR 504.09(2)(g) – design so that final grades in each phase are reached as soon as possible and the open area used for filling is minimized

Delayed closure in rules

- NR 514.07(3) – closure of MSW landfills with composite caps
 - One or more years delay allowed after attaining waste final grades
 - Intermediate cover, not add'l waste placement, gas extraction in place & operating
- NR 514.07(4) – pulp & papermill sludges or other low-bearing-capacity-waste landfills
 - Two years delay allowed
 - Plus NR 504.07(1)(d), NR 504.07(4)(b) & NR 504.10
 - Alternate design criteria expressly allowed due to inability of waste mass to support compacted clay weight & construction
- Not in rules – MSW landfill overfills
 - Allow 5 years (usually) to settle after reaching 5% overfill
 - Goal is for waste to settle back down to approved waste final grades
 - Overfill & time delay intended to avoid failure of reach waste final grades due to notching effect on sideslopes

Alternative final covers

- Default code design – clay or composite caps
 - Longevity – comparable to drumlins?
- Geosynthetic-only designs
 - Closure Turf – Agru America – similar to synthetic athletic fields
 - Geomembrane + solar cells
 - Believable final covers?
 - Longevity? Replacement? Long-term care?
- ET (evapotranspiration) or matric potential water balance caps
 - All soil – multiple feet (?)
 - Specialized geotechnical testing of small soil samples
 - ACAP research, U mill tailings, mine waste reclamation, ag lysimeters
 - Can a small sample effectively represent performance of large volumes of soil needed for final cover?
 - Compliant with RCRA Sub D performance spec?