Department of Environment & Conservation

Proposed Emergency Rule

Supplemental Information

Division of Solid Waste Management| 26 August 2020

Proposed Management Site Background

- Considered State-owned lands only
  - Screened these lands with assistance of USDA-Natural Resource Conservation Service (NRCS).
  - Utilized soil interpretation tool, “Catastrophic Mortality, Large Animal Disposal, Pit.
  - Tool identified Chickasaw State Forest as potentially meeting desired requirements.
- Chickasaw State Forest
  - Within a county already positive for Chronic Wasting Disease (CWD).
  - Obtained approval from TN Department of Agriculture, Division of Forestry.
  - Test pits revealed area of interest was predominately red sandy clay.
  - TDEC geologists estimate on-site soils have a hydraulic conductivities lower than 1 x 10(-5)cm/sec, with most approaching 1 x 10(-6)cm/sec. With adequate compaction, hydraulic conductivities lower than 1 x 10(-7)cm/sec are estimated. (This is comparable to the required hydraulic conductivity for Class I landfill geologic buffers)

Chickasaw State Forest Requirements

- Current max depth to be used for parts not to exceed depths of roughly 6 ft unless additional test pits are conducted to analyze depths below 11 ft (depth of test pits conducted thus far).
- Trenches will be approximately 10 ft long and 5 ft wide.
- Minimum 5 ft geologic buffer, hydraulic conductivities of 1 x 10(-6)cm/sec or lower.
- An additional 1-2 ft of bentonite clay acquired off-site overlaying the 5 ft geologic buffer.
- Parts placed in successive layers covered with bentonite clay, stopping 1 ft from the surface.
- Trenches will be covered immediately and closed daily.
- Measures to divert stormwater from trenches will be required.
- Access will be controlled by a perimeter fence that is gated and locked.
- Final site closure to include grade leveling, silt fencing installation, and re-seeding.

Requirements

- Same requirements used last year at Wolf River Wildlife Management Area.
- Scientific literature review and discussions with CWD prion researchers reassure TDEC these measures are appropriate.
- CWD prions bind strongly to clay, particularly montmorillonite (i.e., bentonite).
- Prion movement in such soils has been found to be minimal (stormwater controls further reduce mobility).
- Can require groundwater monitoring.
- TDEC staff will be conducting regular site inspections to ensure requirements are being met.