Appendix B to rule OAC 901:10-2-14: Available Water Capacity (AWC)

Practical Soil Moisture Interpretations for Various Soils Textures and Conditions to determine liquid Waste Volume Applications not to exceed AWC.

This table shall be used to determine the AWC at the time of application and the liquid volume in gallons that can be applied not to exceed the AWC. To determine the AWC in the upper 8 inches use a soil probe or similar device to evaluate the soil to a depth of 8 inches.

For land application, liquid manure application may also be calculated by converting acres per inch to gallons per acre. This conversion is based on the following formula: 1 acre - inch equals 27,156 gallons per acre.

Available Moisture in the Soil	**Sands and Loamy Sands**	**Sandy Loam and Fine Sandy Loam**	**Very Fine Sandy Loam, Loam, Silt Loam, Silty Clay Loam**	**Sandy Clay, Silty Clay, Clay, Fine and Very Fine Textured Soils**
< 25% Soil Moisture	Dry, loose and single-grained; flows through fingers.	Dry and loose; flows through fingers.	Powdery dry; in some places slightly crusted but breaks down easily into powder.	Hard, baked and cracked; has loose crumbs on surface in some places.
Amount to Reach AWC	20,000 gallons/ac	27,000 gallons/ac	40,000 gallons/ac	27,000 gallons/ac
25-50% or Less Soil Moisture	Appears to be dry; does not form a ball under pressure.	Appears to be dry; does not form a ball under pressure.	Somewhat crumbly but holds together under pressure.	Somewhat pliable; balls under pressure.
Amount to Reach AWC	15,000 gallons/ac	20,000 gallons/ac	30,000 gallons/ac	20,000 gallons/ac
50-75% Soil Moisture	Appears to be dry; does not form a ball under pressure.	Balls under pressure but seldom holds together.	Forms a ball under pressure; somewhat plastic; slicks slightly under pressure.	Forms a ball; ribbons out between thumb and forefinger.
Amount to Reach AWC	10,000 gallons/ac	13,000 gallons/ac	20,000 gallons/ac	13,000 gallons/ac
75% to Field Capacity	Sticks together slightly; may form a weak ball under pressure.	Forms a weak ball tha breaks easily, does no stick.	Forms ball; very pliable; slicks readily if relatively high in clay.	Ribbons out between fingers easily; has a slick feeling.
Amount to Reach AWC	5,000 gallons/ac	7,000 gallons/ac	11,000 gallons/ac	7,000 gallons/ac
100% Field Capacity	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.	On squeezing, no free water appears on soil, but wet outline of ball on hand.
Above Field Capacity	Free water appears when soil is bounced in hand.	Free water is released with kneading.	Free water can be squeezed out.	Puddles: free water forms on surface

Notes:

- No manure shall be applied if the upper two inches of soil are saturated from precipitation
- Liquid manure applications to tiled fields must be less than or equal to 13,576 gal/ac.
- Prior to liquid manure being applied to land application areas that are subsurface drained (tile), preferential flow paths shall be evaluated. When preferential flow paths are present, the owner, operator, or certified livestock manager shall document the best management practices implemented (i.e., use of appropriate tillage practices, reduction of application rates, etc.) to prevent discharge through the subsurface drainage system.