

APPENDIX A Environmental Stewardship Assessment: Soil Characteristics

Do the soils on current land application sites present any specific environmental risks? This assessment tool will help you confidentially evaluate the environmental issues that relate to the soil characteristics of land application sites. For an assessment of site-related characteristics (e.g., slope, flooding potential, and location relative to surface water), see Lesson 33, Selecting Land Application Sites.

To complete, identify the Field IDs for four fields by listing those IDs under each of the three risk levels. For each issue listed in the left column of the worksheet, read across to the right and check the statement that best describes conditions for each field listed. If any blanks do not apply, leave them blank.

When this evaluation is completed for common manure application sites, use the information to (1) select preferred land application sites; (2) identify higher risk application sites; and (3) determine sites requiring additional conservation management practices to offset the higher risks associated with soil characteristics. This information should be considered as a manure utilization plan is assembled (see Lesson 31, Manure Utilization Plans).

Soil Characteristics	High Risk				Moderate Risk				Low Risk			
Field ID	Example: Home 80				Example: Home 80				Example: Home 80			
Available water capacity (see Engineering Properties of Soil, County Soil Survey)	< 3 inches				3-6 inches				> 6 inches			
Your Land Application Sites →					4							
Caution exchange capacity	CEC is < 5.				CEC is between 5 - 15.				CEC is > 15.			
Your Land Application Sites →					4							
Rock fragments, stones, and boulders	> 3% of the surface is covered with stones and boulders.				Between 0.1% - 3% of the surface is covered with stones and boulders.				< 0.1% of the surface is covered with stones and boulders.			
Your Land Application Sites →									4			
Permeability rate for slowest rate within top 12 inches of soil (see Engineering Properties of Soil in County Soil Survey)	Perm rate < 0.2 inch/hr if manure is surface applied (surface water concern).				Perm rate of 0.2-2 inches/hr if manure is surface applied.				Any perm rate < 2, manure is injected or incorporated the same day.			
Your Land Application Sites →	4											
Soil pH	pH is < 5 or > 8.				pH is between 5-6.				pH is between 6-8.			
Your Land Application Sites →					4							
Salinity	> 16 mmhos/cm				8-16 mmhos/cm				< 8 mmhos/cm			
Your Land Application Sites →									4			

Reference: Agricultural Waste Management Field Handbook, Chapter 6, USDA Natural Resource Conservation Service.