

Soil Surface Texture

Soil surface texture strongly influences the soil's ability to retain moisture, its general level of fertility, and the ease or difficulty of cultivation. For example, water moves easily through coarse-textured (sandy) soils, so little moisture is retained and these soils dry out more quickly than fine-textured (clayey) soils. Sandy soils are often characterized by a loose or single-grained structure which is very susceptible to wind erosion. On the other hand, clay soils have a high proportion of very small pore spaces which hold moisture tightly. Clay soils are usually fertile because they are able to retain plant nutrients better than sandy soils. However, they transmit water very slowly and are therefore susceptible to excess moisture conditions.

The predominant soil surface texture within the watershed is clay, which covers much of central watershed (49%) (refer to Table 4.0, Figure 8.0). Fine loams cover 29% of the study area and predominate in the west and southeast corners of the study area. Sands cover the majority of the Birds Hill region, and occur in pockets in the west and southeast portions, covering 6% of the watershed area. There are also some organic textures present in areas throughout the study area.

Table 4.0 Soil surface texture in the Lower Red River Watershed study area¹

Class	Area (ha)	Percent of Study Area
Clayey	206,228	49.2
Fine Loamy	121,670	29.0
Coarse Loamy	23,479	5.6
Sand	27,043	6.4
Coarse Sand	53	0.01
Organic	26,819	6.4
Rock	2.7	0
Water	11,031	2.6
Unclassified	3,209	0.8
Total	419,534	100

1. Soil surface texture is based on the dominant soils series for each soil polygon