

Case File #2

	Zone 1	Zone 2
Texture	clay-sandy loam	silty loam
Organic matter	0.5-1%	4.0%
pH	7.2	6.0
Bulk density	1.45 g cm ⁻³	1.1-1.35 g cm ⁻³
Topsoil depth	up to 15 cm	10 cm
Parent material	UNDM	GLLC
Drainage	well	well
Soil group	OR	DGL OGL

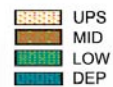
TABLE LEGEND:

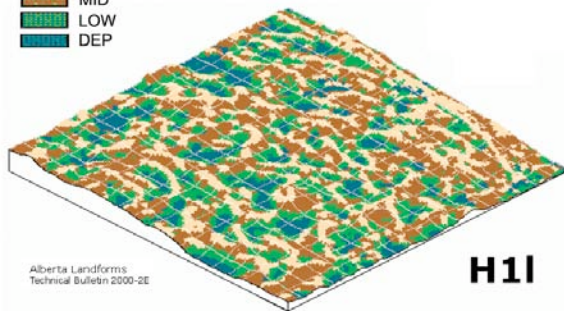
UNDM: undifferentiated materials lacking similar textures and structures.

GLLC: Glaciolacustrine – sediments deposited by the glaciers in a lake-like environment

OR: Organic soils (>40% organic matter)

DGL OGL: Gray Luvisol, or the gray coloured soils formed under forest vegetation, and which receive ample moisture


 UPS
 MID
 LOW
 DEP



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Total land area under consideration: just over 1 section (640 acres or 259 hectares)

Existing land use:

West Side (Zone 1): The east side of this area is considered “natural”, along the banks of a river that winds its way from north to south. Some light forestry may have also occurred along the eastern edges of this area.

East Side (Zone 2): Along the northern edge of the west side, a major multi-lane highway travels in an east-west direction with significant access ramps to the north and south. This highway travels east towards a major city, and west towards an even more natural, forested area. Owing to the stony nature of some of the soils of the area, an area to the south of the highway and small town is currently being used for gravel extraction, although a significant amount of open, natural space still exists surrounding this area. The majority of this open space is used for grazing of cattle.

Natural features:

West Side: The major natural feature of this area is a fast flowing river, which winds itself from north to south in this zone. The soils in the area vary widely in both their texture and structure, although they are surprising low in organic matter (1%) despite the presence of many trees. The area is a valley landscape with slopes of 1 to 5% on the upper “terraces” overlooking the river, to 35% on the slopes leading down to the river’s edge.

East Side: The natural features of this area vary greatly through the region. The soils are predominantly woodland soils on fine textured (clay and silt) sediments deposited by ancient flooding of the river. There are also areas of heavy clay scattered throughout the region, which have the potential to remain wet well into the summer months. In the native grassland areas, there are some black prairie soils and heavy deposits of surface organic matter from the vegetation. The area is moderately to well drained.