



Description of soil BCKOW~~~~~N (KELOWNA)

General Characteristics

<u>Classification</u>	O.DBC <u>Orthic Dark Brown Chernozem</u>
<u>Profile</u>	Native soil profile The soil is in native condition (undisturbed by agriculture).
<u>Kind of material</u>	Mineral The soil material is primarily composed of mineral particles.
<u>Water table</u>	Never The water table is not present in the soil at any time.
<u>Root restrictions</u>	Sixth layer The growth of plant roots is restricted by the sixth layer.
<u>Type of root restricting layer</u>	Compact Till Compact (Basal) Till
<u>Drainage</u>	Well drained Water is removed from the soil readily but not rapidly. Excess water flows downward readily into underlying pervious material or laterally as subsurface flow. Soils have intermediate available water storage capacity (4-5 cm) within the control section, and are generally intermediate in texture and depth. Water source is precipitation. On slopes subsurface flow may occur for short durations, but additions are equaled by losses.

Parent Materials

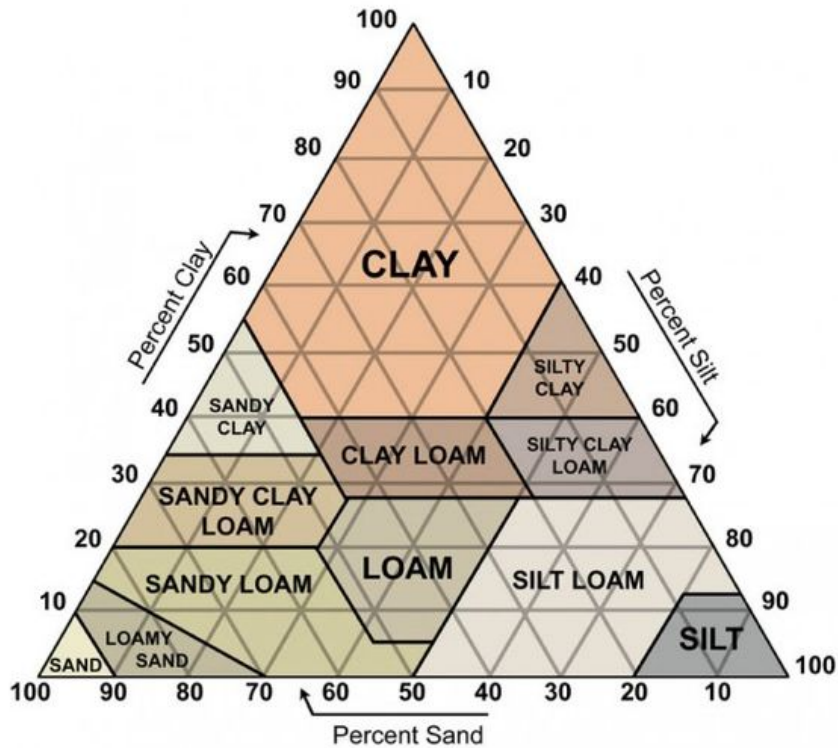
<u>Mode of Deposition</u>	<u>Texture</u>	<u>Chemical properties</u>
Till (Morainal) Morainal material (till) deposited by glacial ice: a mixture of boulders, sand, silt, and clay.	Medium Medium (USDA Texture Classes: VFSL,L,SIL,SI,GL,GSIL).	Medium Acid to Neutral pH 5.6 - 7.4

SOIL SURVEY HEADINGS

COLUMN	DESCRIPTION (*Important data in bold, ignore the rest!)
Layer	Layers numbered 1, 2, 3, ... with each layer going deeper into the soil profile
Upper	* Depth of the top of a soil layer, in centimeters
Lower	* Depth of the bottom of a soil layer, in centimeters
hzn_lit	Classification — Horizon Lithological Discontinuity — soil scientist use only
hzn_mas	Classification — Horizon Master Code — soil scientist use only
hzn_suf	Classification — Horizon Suffix — soil scientist use only
hzn_mod	Classification — Horizon Modifier — soil scientist use only
bd	Bulk Density, grams per cubic centimeter. Measures the fine earth fraction excluding “coarse fragments”
cofrag	* Coarse Fragments (gravel, rock, cobbles, ...) percent of volume
tsand	* Sand , percent by weight
tsilt	* Silt , percent by weight
tclay	* Clay , percent by weight
domsand	* Dominant Sand , Very Coarse (VC), Coarse (C), Medium (M), Fine (F), Very Fine (VF)
vfsand	* Very Fine Sand , percent by weight
orgcarb	* Organic Carbon , percent by weight
vonpost	Decomposition Class
wood	Woody Material, percent by volume
phca	* Soil pH in calcium chloride
ph2	* Soil pH reported by survey
bases	Base Saturation, percentage of available sites that are occupied by basic cations (e.g. potassium, magnesium, calcium, sodium...)
caco3	Calcium Carbonate Equivalent, percent of total soil weight. Carbonates affect nutrient availability.
cec	* Cation Exchange Capacity , milliequivalents per 100 grams, measures how many nutrients the soil can hold onto. Higher numbers are better and are generally related to high organic matter and clay content. Higher CEC also related to better water storage capacity
ec	Electrical Conductivity, decisiemens per meter (dS/m) — Salinity , values above 1 or 2 indicate slight salinity, values above 4 or 5 indicate strong salinity, values above 10 are very saline.
ksat	Saturated Hydraulic Conductivity, centimeters per hour (cm/h) — A measure of how rapidly a soil drains.
kp0	Water Retention at 0 kiloascal suction, percent of total soil volume — Saturated Soil
kp10	*Water Retention at 10 kilopascal suction, percent of total soil volume — Field Capacity in Sandy Soils
kp33	*Water Retention at 33 kilopascal suction, percent of total soil volume — Field Capacity in Silts, Clays, Loams
kp1500	*Water Retention at 1500 kilopascal suction, percent of total soil volume — Permanent Wilting Point

KELOWNA SOIL PROFILE

Layers			Classification				Physical										Chemical						Water				
Layer Number	Upper Depth (cm)	Lower Depth (cm)	hzn_lit	hzn_mas	hzn_suf	hzn_mod	bd	cofrag	tsand	tsilt	tclay	domsand	vfсанд	orgcarb	vonpost	wood	phca	ph2	bases	cac o3	cec	ec	ksat	kp0	kp10	kp33	kp1500
1	0	9		A	h	1	1.2	5	54	36	10	F	14	3.2	-9	-9	6.8	7.2	100	0	17	0	1.0	55	30	24	12
2	9	21		A	h	2	1.15	15	50	38	12	F	13	1.4	-9	-9	6.5	7.1	89	0	13	0	1.0	57	19	16	8
3	21	30		AB			1.45	10	55	31	14	F	14	0.5	-9	-9	6.6	7.2	85	0	9	0	1.0	45	30	23	15
4	30	49		B	m		1.5	15	52	33	15	F	13	0.3	-9	-9	6.6	7.2	87	1	8	0	1.0	43	33	25	10
5	49	60		BC	k		1.65	30	54	34	12	F	14	0.4	-9	-9	7.3	7.7	100	5	6	0	0.1	38	30	25	11
6	60	130		C	k		1.75	30	52	45	3	F	13	0.2	-9	-9	7.5	8.0	100	4	4	0	0.1	34	27	22	6



SOIL TEXTURE PYRAMID - Percent Sand / Silt / Clay to determine Texture

Screenshot for Andrew's Soil Survey Map, using data downloaded from SIFT (Soil Information Finder Tool), also available from DataBC and from iMapBC sites.

Label means: "80% of area has Kelowna Sandy Loam soil."

