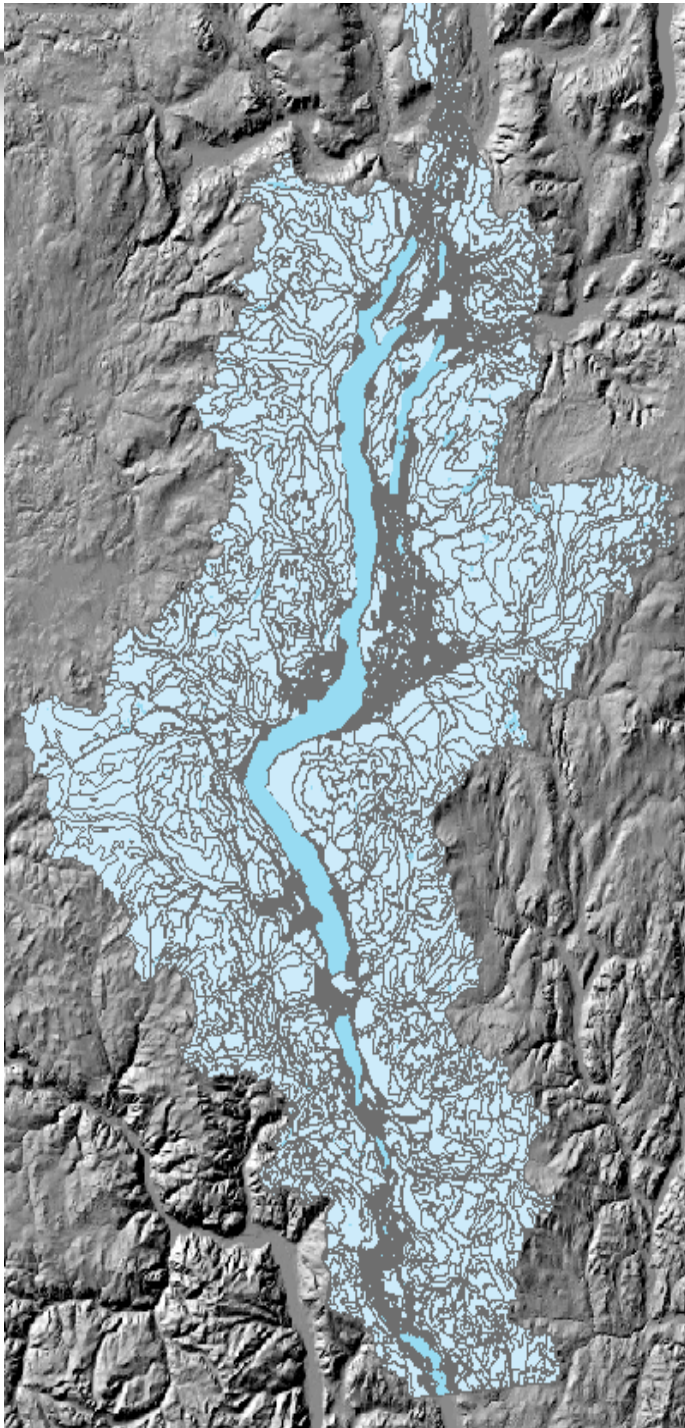


OK Basin Soil Data: Status, availability and gaps

Scott Smith,
Okanagan Water Stewardship Council
February 8, 2018





Currently available on-line

‘Seamless’ polygon map fully correlated from legacy maps at various scales

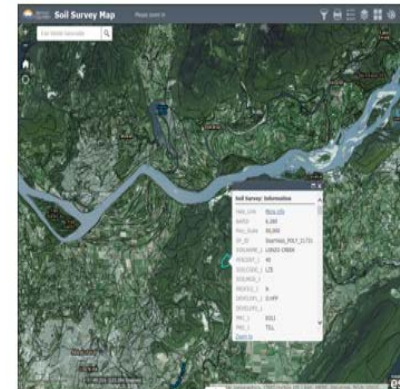
Data Set	Number of Polygons	Total Area in Hectares	Mean Polygon Area in Hectares
Vernon	2404	1,213,889	505
Penticton	3430	1,610,781	469
Seamless (Detail)	9987	145,174	15
Tulameen	666	400,835	602



BC Soil Information Finder Tool

The Soil Information Finder Tool (SIFT) provides access to soil survey data, reports and maps.

[Launch the BC Soil Information Finder Mapping Tool](#)



Other Maps & Data

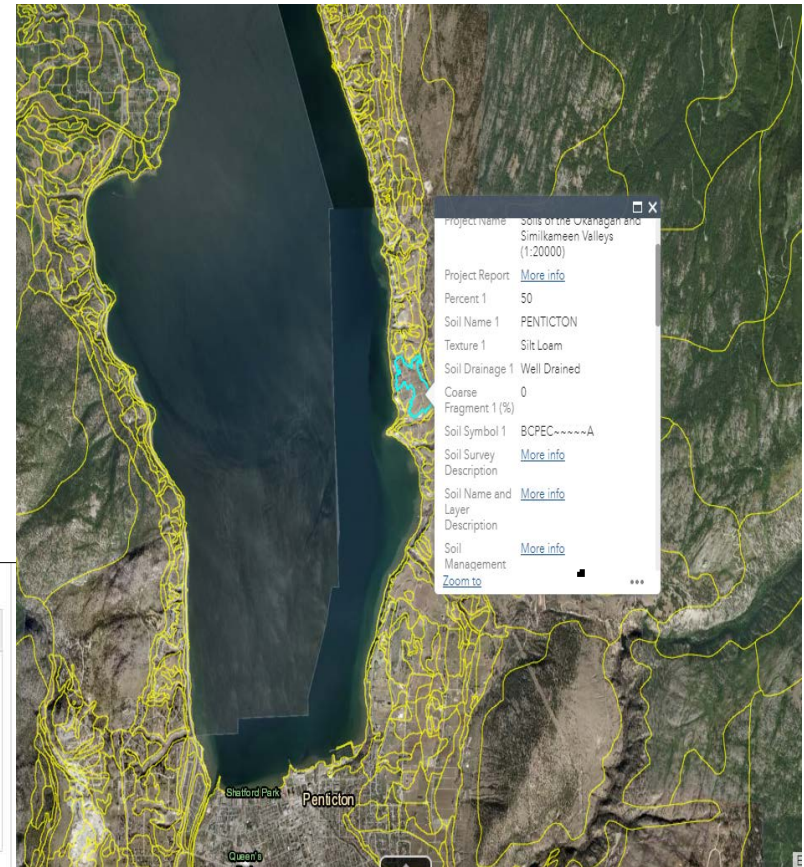
[Download the B.C. Soils GIS Dataset](#) (in file geodatabase or shapefile format)

Download Soil or Ag Capability KMZ files to use with Google Earth:

[Soil KMZ Finder Index Map](#)

[Ag Capability KMZ Finder Index Map](#)

SIFT links polygon map to database organized by soil horizon



Parent Materials

Mode of Deposition	Texture	Chemical properties
Glaciolacustrine Used where there is evidence that the lacustrine materials were deposited in contact with glacial ice. One of the following characteristics must be present: <ul style="list-style-type: none"> • kettles or an otherwise irregular surface that is neither simply the result of normal settling and compaction in silt nor the result of piping • slump structures resulting from loss of support caused by melting of retaining ice • presence of numerous ice-rafted stones in the lacustrine silts. 	Moderately Fine Moderately Fine (USDA Texture Classes: SCL, FSCL, VFSL, CL, SICL, GSCL, GL, CBCL).	Moderately / Very Strongly Calcareous 6 - 40 CaCO ₃ equivalent (%)

Soil Layer Characteristics

			Classification				Physical										Chemical								
Layer Number	Upper depth	Lower depth	hzn_lit	hzn_mas	hzn_suf	hzn_mod	bd	cofrag	tsand	tsilt	tclay	domsand	vfsand	orgcarb	vonpost	wood	phca	ph2	bases	caco3	cec	ec	ksat	kp0	kp1
1	0	22		A	p		1.04	0	15	63	22	F	4	2.0	-9	-9	7.0	7.3	98	0	15	0	0.3	61	34
2	22	32		B	m		1.11	0	14	66	20	F	4	1.1	-9	-9	7.4	7.8	100	0	13	0	0.3	58	42
3	32	51		BC	k	1	1.14	0	15	67	18	F	4	1.1	-9	-9	7.9	8.2	100	7	12	0	0.3	57	43
4	51	80		BC	k	2	1.15	0	17	67	16	F	4	0.6	-9	-9	8.1	8.5	100	14	13	1	0.3	57	39
5	80	96		C	k		1.22	0	14	74	12	F	4	0.4	-9	-9	7.9	7.9	100	10	11	1	0.3	54	26
6	96	120		C	ks		1.47	0	2	79	19	F	1	0.2	-9	-9	8.0	8.0	100	5	10	5	0.3	45	36

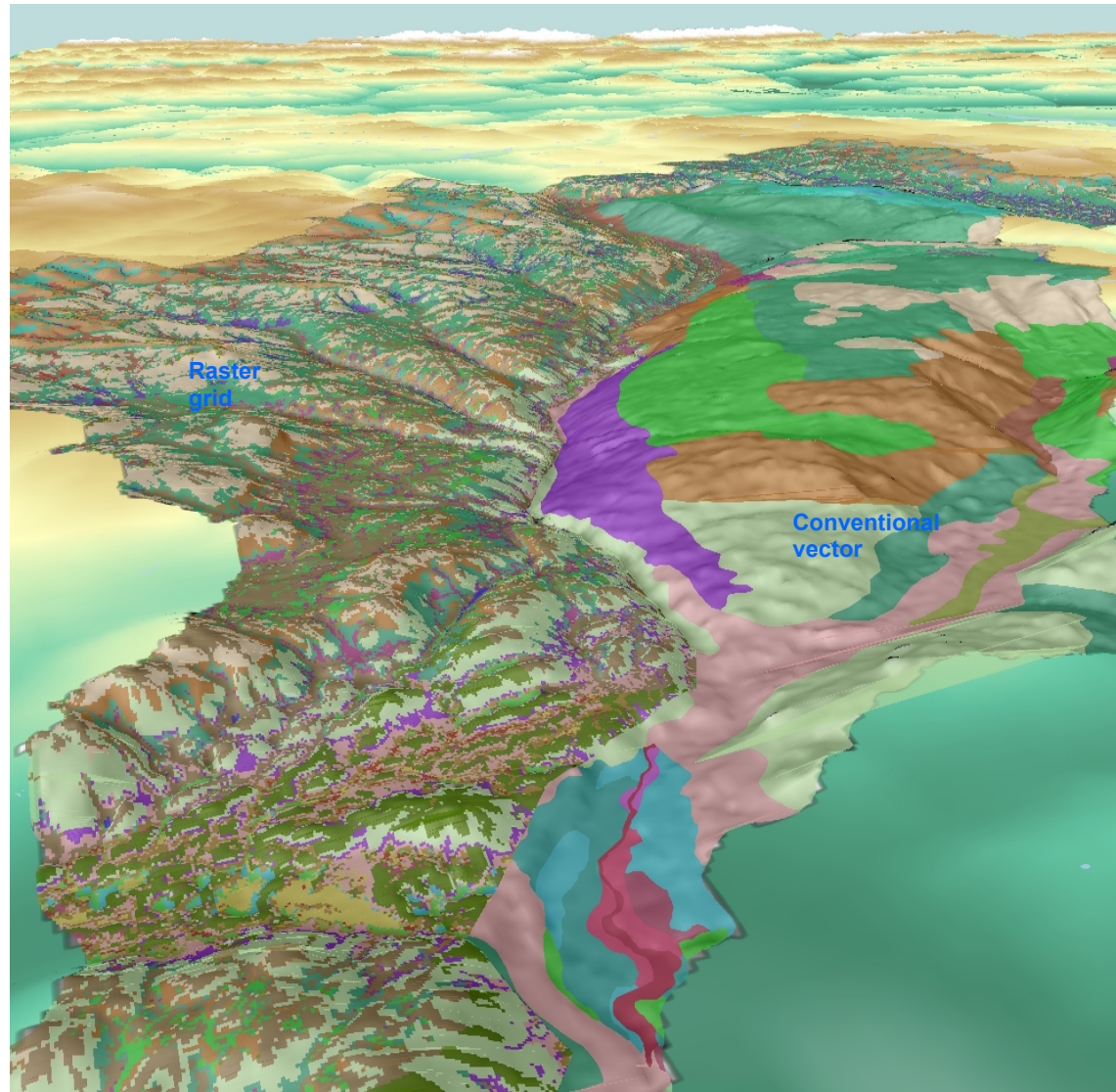
Date Modified: 2013-06-26

Digital Soil Map vs Polygon Soil Map

**Currently
available at
various resolution
and reliability**

**100 m grid
250 m grid*
1 km grid***

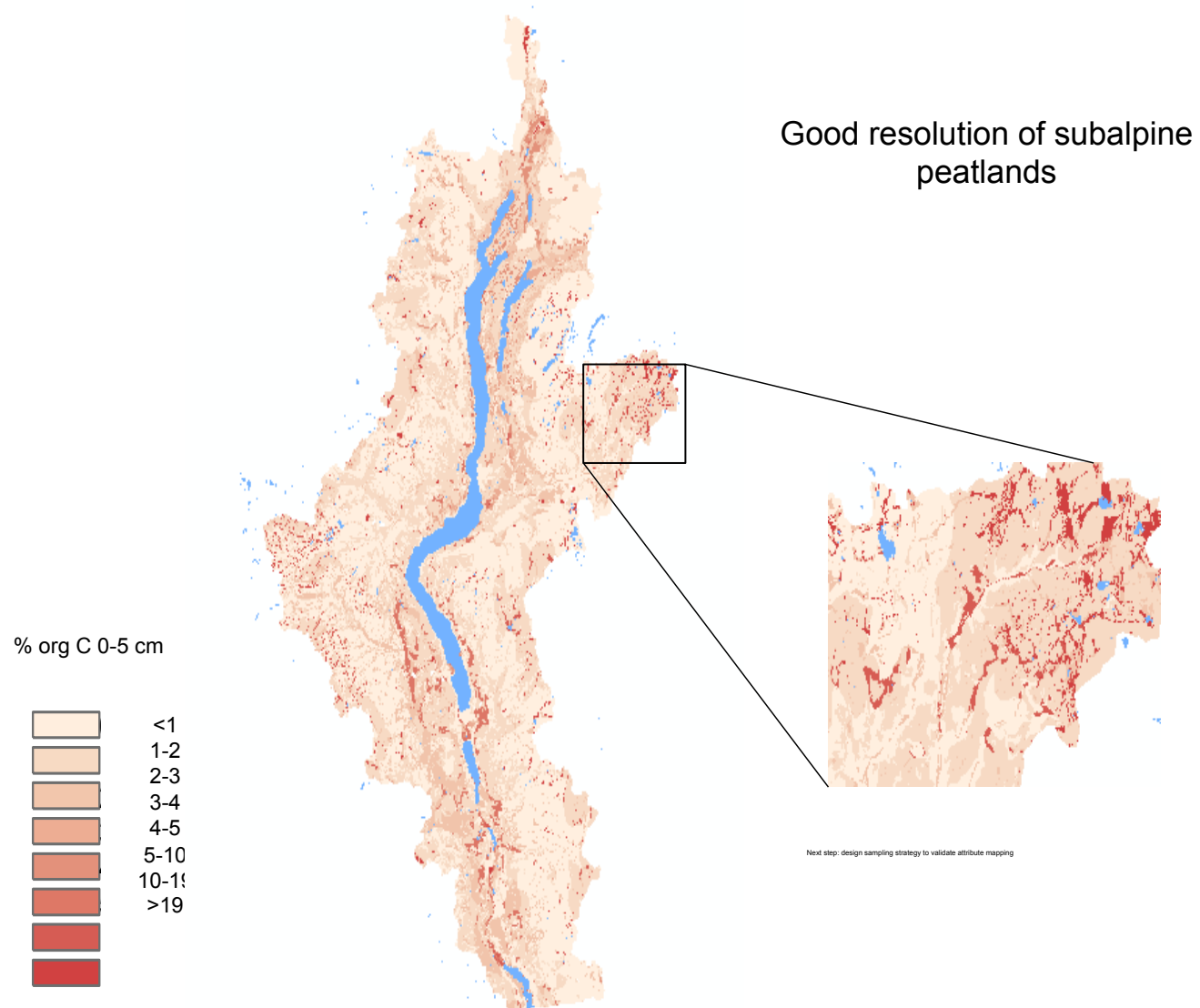
**Available from [https://
soilgrids.org](https://soilgrids.org)**



Each grid cell contains soil information presented in a standardized depth interval format

- Populate DSM attribute table by fixed depths
 - 0-5 cm
 - 5-15
 - 15-30
 - 30-60
 - 60-100
 - 100-200 cm
- Attributes
 - Organic Carbon
 - pH
 - Clay
 - Sand
 - Silt
 - Coarse Fragments
 - Electrical Conductivity
 - Bulk Density
 - Available Water Holding Capacity

Results – attribute mapping



Gaps

- Coverage and resolution generally adequate for most users
- Most of the data are 25+ years old and do not reflect well soil conditions on managed landscapes
- Limited expertise available to support users and to update this information
- Historically soil data have been a shared responsibility of both federal and provincial governments, however.....
- Currently only skeleton soil staff remain in government agencies
- Most pedological expertise now resides in the private sector mainly doing project-based environmental assessments not regional mapping.
- New technologies will continue to change the way soil maps are made.