

Accessing ApSoil data for use in Howleaky

3/6/2013

DMF

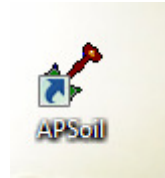
Accessing ApSoil data for Howleaky.pptx



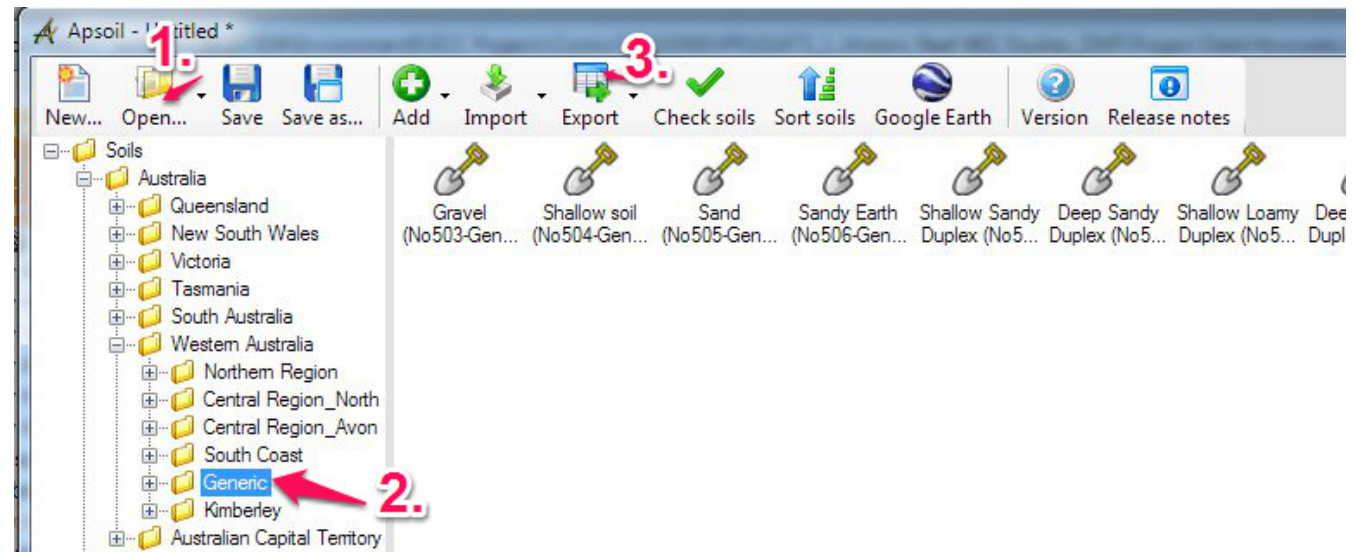
RPS

1. Exporting from ApSoil

Launch ApSoil



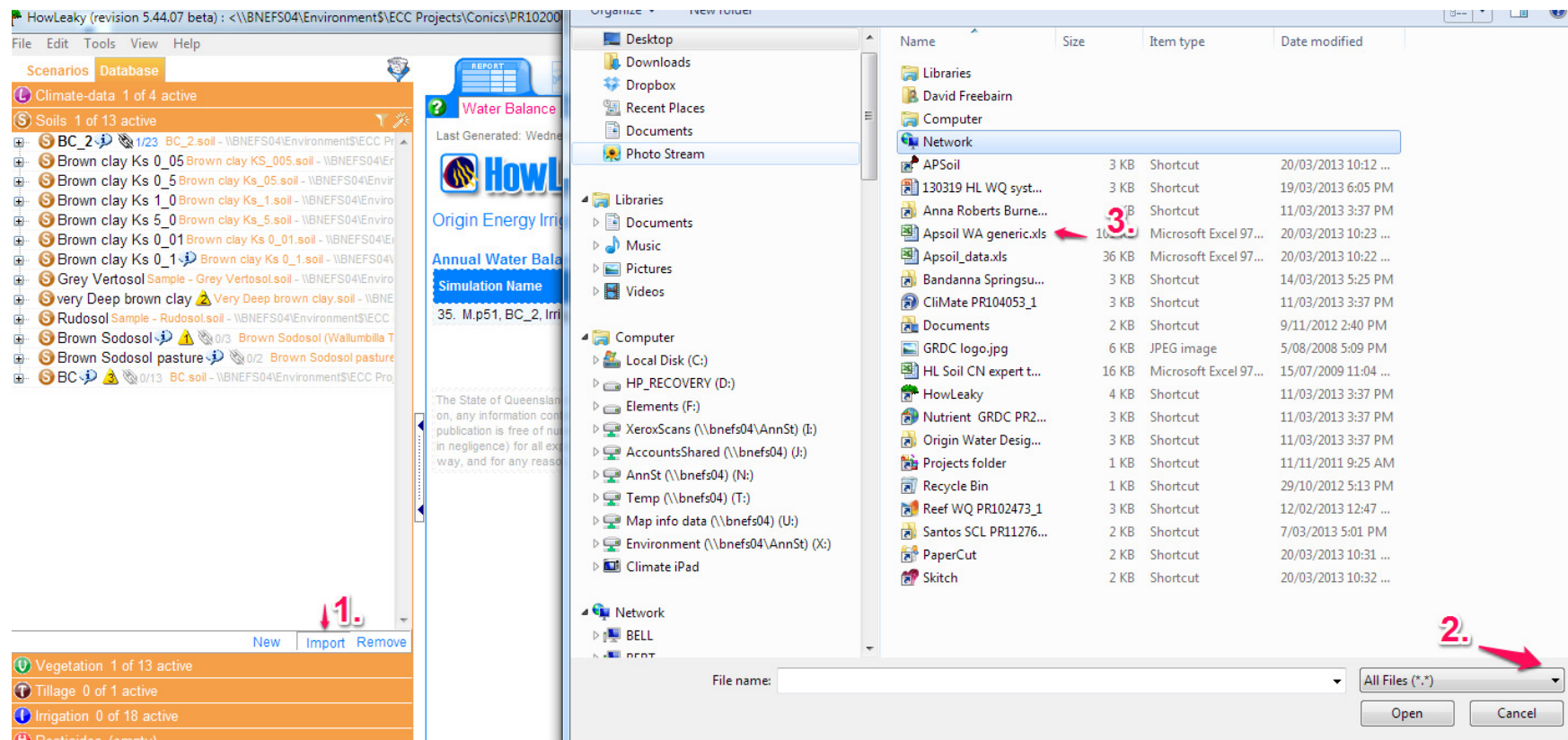
1. Open ApSoil database, either from existing ApSoil.xls file or WWW
2. Select either a group of soils or an individual soil
3. Export to a spread sheet



2. Importing soils into Howleaky

In Howleaky

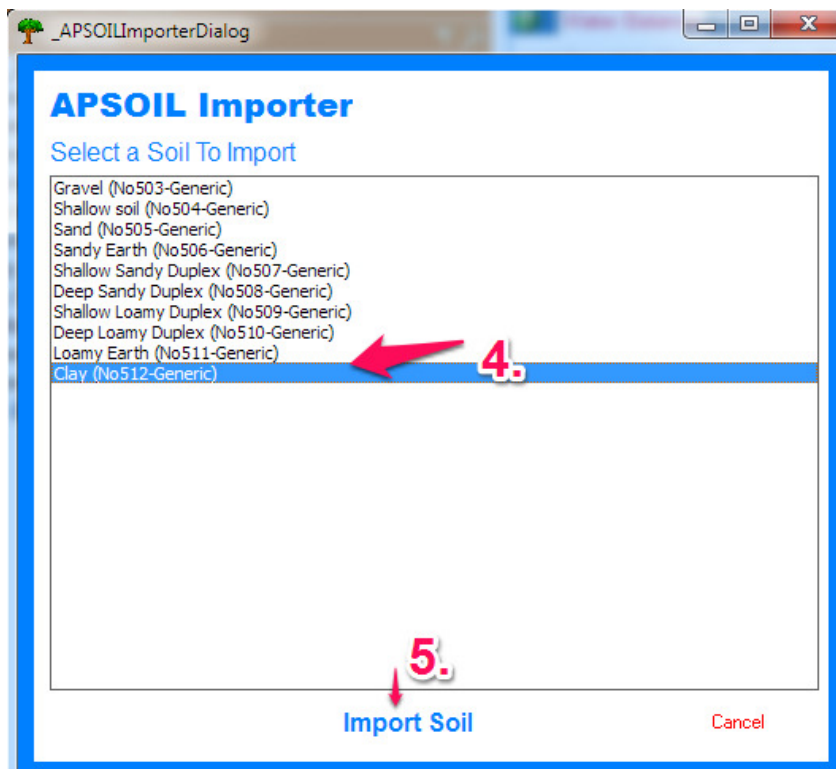
1. Select “Import soil”
2. Select “All Files (*.*)”
3. Select the file that was exported from ApSoil (may have multiple soils)



If multiple soils in file, an “APSOIL Importer” dialogue will appear

4. Select soil to be imported

5. Import soil -this will produce a draft soil description. There may be some missing values, add these and “save as”



BC 0/13 BC.soil - \BNEFS04\Environment\ECCE Pro

Clay (No512-Generic) incomplete Clay (No512-Generic)

Number of Horizons	Lay1	Lay2	Lay3
Layer Depth (Cumulative)	100	200	300
Air dry moisture	10	11.5	15
Wilting point	13.3	13.5	15
Field capacity	26.6	27	28
Sat. water content	44	44	44
Maximum drainage from...	-	-	-
Bulk density	1.4	1.4	1.4
Stage 2 evap., Cona	2	mm/day^0.5	
Stage 1 evap. limit, U	2	mm	

Notes

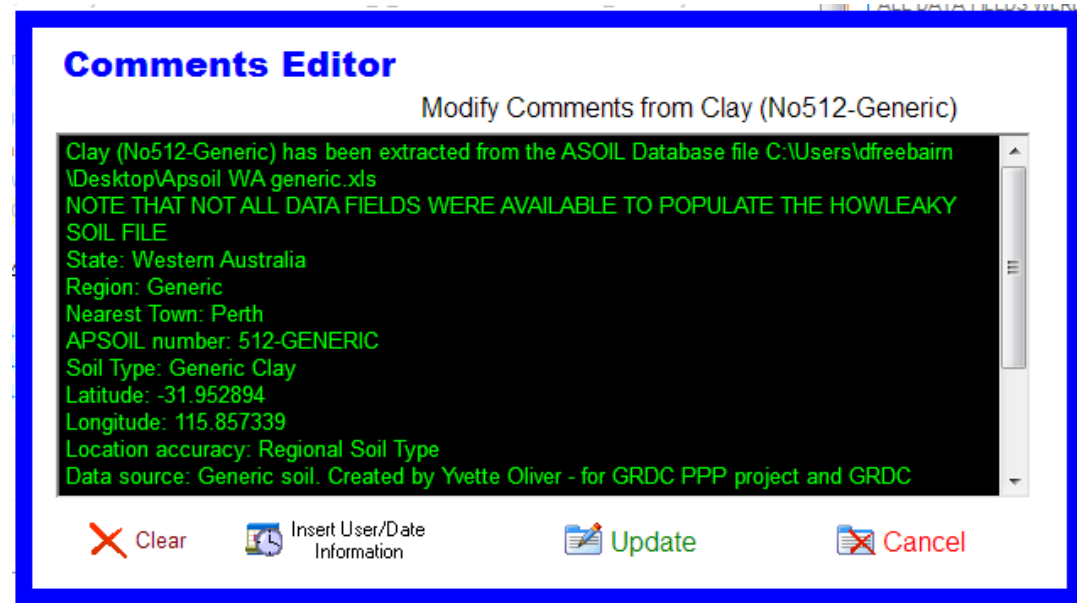
- Howleaky has a maximum of 10 soil layers and will truncate if >10
- There are differences in parameters between APSIM and Howleaky – see red fields
- The last three fields are only visible when “Tools/Show extended soil parameters is selected –for creating CliMate soil parameter files

Clay (No512-Generic) incomplete Clay (No512-Generic).soil - C:\Users\dfreebairn\Desktop\											
Number of Horizons	10										
	Lay1	Lay2	Lay3	Lay4	Lay5	Lay6	Lay7	Lay8	Lay9	Lay10	
Layer Depth (Cumula...	100	200	300	400	600	900	1200	1500	1800	2100	2500
Air dry moisture	10	11.5	15	15.4	18	18	18	18	18	18	18
Wilting point	13.3	13.5	15	15.4	18	18	18	18	18	18	18
Field capacity	26.6	27	28	28.4	29.1	29.1	29.3	28.1	27.6	27	27
Sat. water content	44	44	44	44	44	44	44	44	44	44	44
Maximum drainage from...	-	-	-	-	-	-	-	-	-	-	-
Bulk density	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4	1.4
Stage 2 evap., Cona	2	mm/day*0.5									
Stage 1 evap. limit, U	2	mm									
Runoff curve no (bare...	60										
CN Reduction 100% ...	20										
CN Reduction - Tillage	-										
Rainfall to 0 roughness	-	mm									
USLE K factor	-	metric									
USLE P factor	-										
Field slope	-	%									
Slope length	-	m									
Rill/intermill ratio	-	(0-1)									
Soil cracking	<input checked="" type="checkbox"/> No										
Sediment Delivery Ratio	-	(0-1)									
Organic Carbon	-	%									
Carbon Nitrogen Ratio	-										
Nitrogen Mineralisation ...	-										

CliMate only, not used in HL

Acknowledgements

- ApSoil is a database of soil water characteristics enabling estimation of Plant Available Water Capacity for individual soils and crops. It is designed for use in simulation modelling and agronomic practice.
<http://www.apsim.info/Wiki/Default.aspx?Page=APSoil&NS=&AspxAutoDetectCookieSupport=1>
- When a soil is imported into Howleaky, metadata is also imported describing source of data
- This added functionality for Howleaky was developed by David McClymont (DHM Environmental Software Engineering Pty Ltd)



ApSoil is a product of the APSIM initiative ... accessed at

<http://www.apsim.info/Wiki/APSoil.ashx>

APSoil is a database of soil water characteristics enabling estimation of Plant Available Water Capacity for individual soils and crops. It covers many cropping regions of Australia and is regularly updated. It is designed for use in simulation modelling and agronomic practice.

APSoil enables the user to:

- View individual soil and crop species data in spreadsheet and graphical formats
 - Modify soils to fit local conditions eg sub-soil constraints
 - Include digital images or .pdf files relating to individual soils
 - Run the APSIM model using soils developed within APSoil
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- ApSoil Data can be partially imported into Howleaky

APSIM and the APSIM Initiative



APSIM is internationally recognised as a highly advanced simulator of agricultural systems. It contains a suite of modules which enable the simulation of systems that cover a range of plant, animal, soil, climate and management interactions. It is undergoing continual development, with new capability added to regular releases of official versions over time. Its development and maintenance is underpinned by rigorous science and software engineering standards