

Exercise 2-2: Creating a soil spatial heterogeneity map

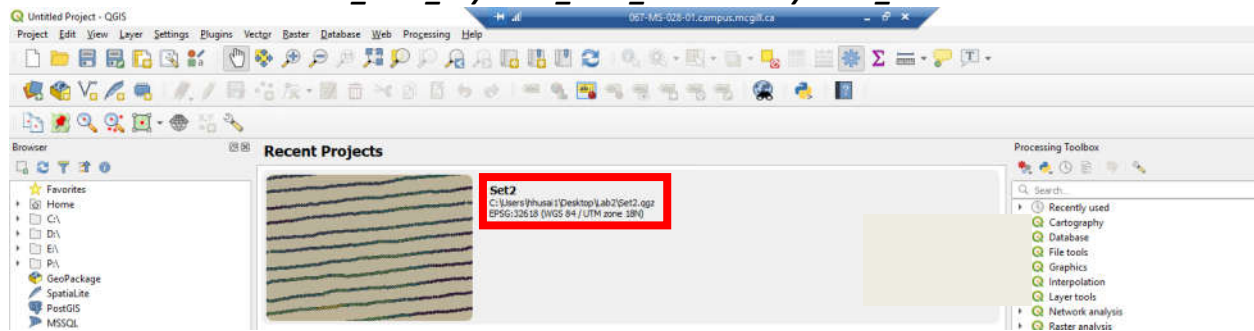
Mapping objectives:

- Display soil apparent electrical conductivity (EC_a) measurements using classified symbols
- Overlay EC_a to soil survey data

Data folder: Dataset2

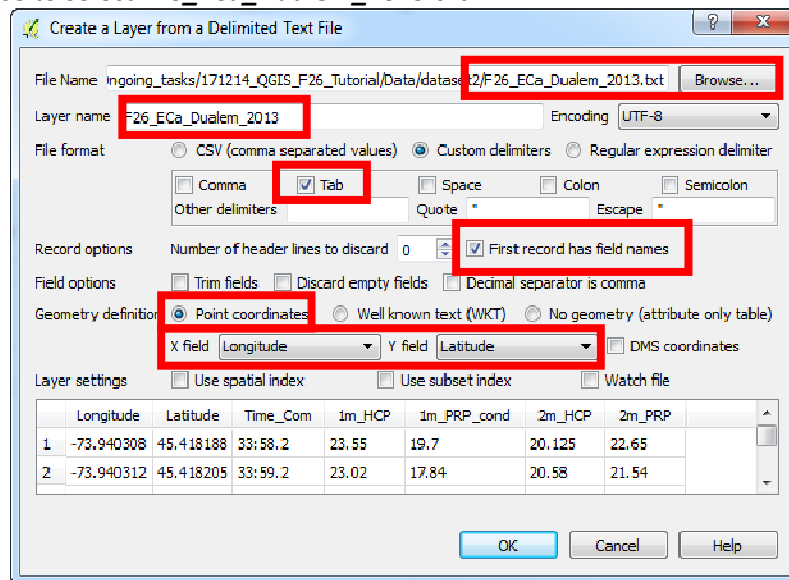
Part 1: Open saved project

1. Open previous saved project
 - a. Double click **set2** in Recent Projects or double click **set2.qgs** in the folder of Dataset2
 - b. Uncheck **F26_Yield_Soybeans_2014_UTM** and **soybeans_c**

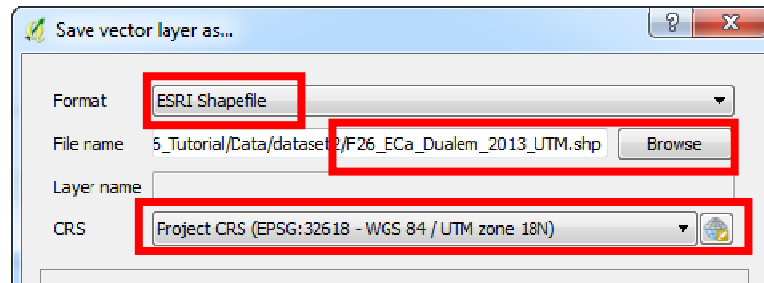


Part 2: Create EC_a point layer from the tabular data

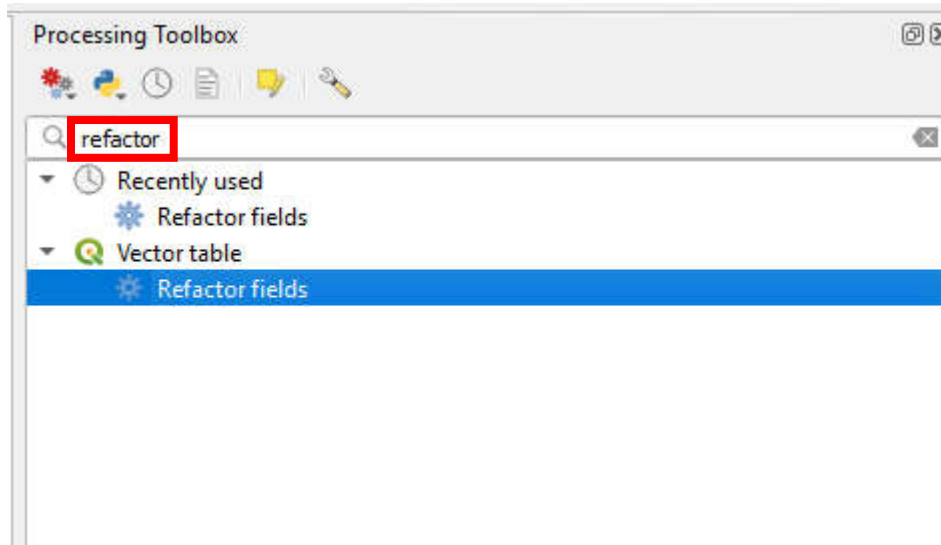
1. Click Add Delimited Text Layer on Toolbar
2. Click Browse to select **F26_ECa_Dualem_2013.txt**



3. In the Layer Panel, right click **F26_ECa_Dualem_2013**, then click Save As
4. In the Save vector layer as ...
 - a. Format = ESRI Shapefile
 - b. File name = **F26_ECa_Dualem_2013_UTM.shp**
 - c. CRS = Project CRS (EPSG:32618 – WGS 84 / UTM zone 18 N) ... Click OK

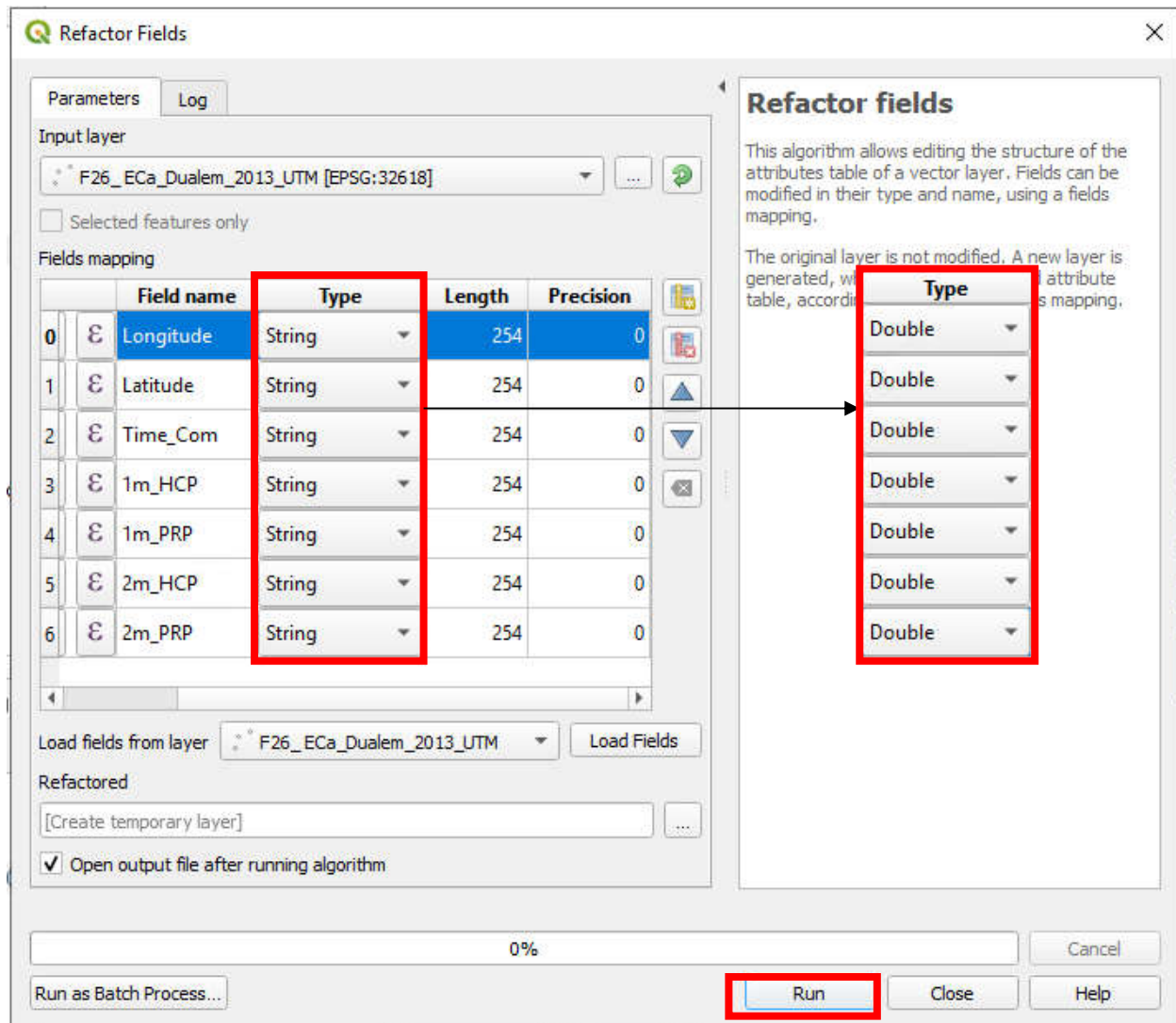


5. Right click **F26_ECa_Dualem_2013**, then click Remove



6. Change the type of field:

- Type "refactor" in processing Toolbox and open "**Refactor fields**".
- Select "F26_ECa_Dualem_2013_UTM" shapefile.
- change all string type to "Double".
- click "Run"



- ☒ **Refactored**
- ☒ F26_Yield_Soybeans_2014
- ☒ F26_Boundary_UTM

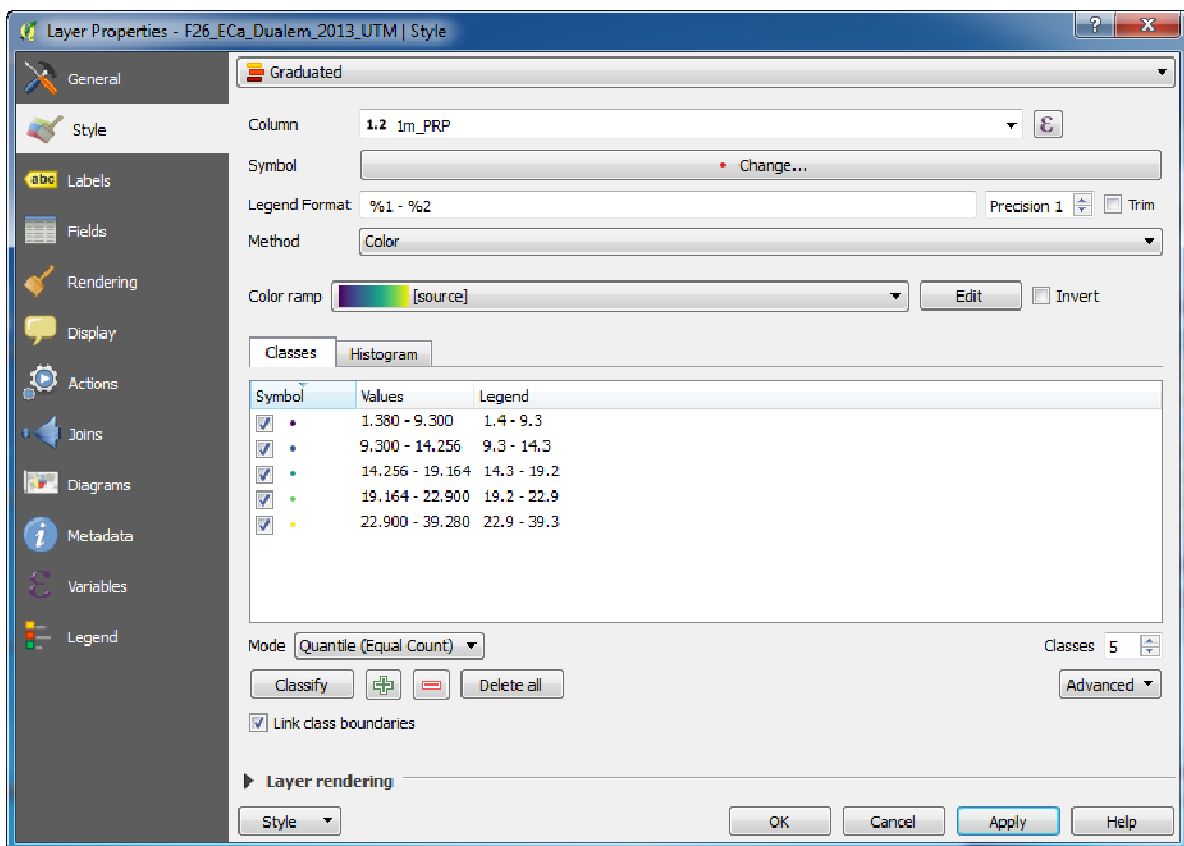
- e. Right click **Refactored**, then click Save As
 - f. In Save vector layer as ...
 - Format = ESRI Shapefile
 - File name = **F26_ECa_Dualem_2013_UTM.shp**
 - CRS = **Project CRS (EPSG:32618 - WGS 84 / UTM zone 18 N) ...**
- Click OK

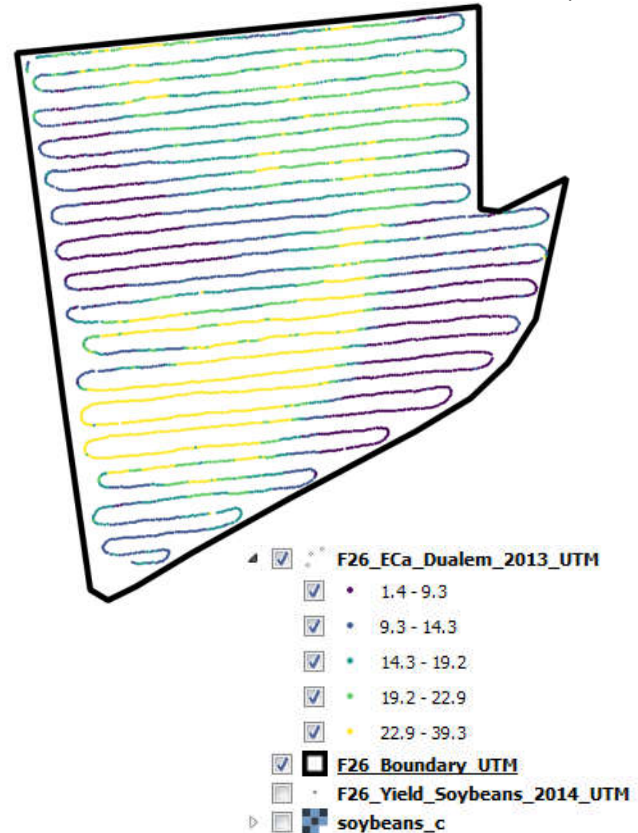
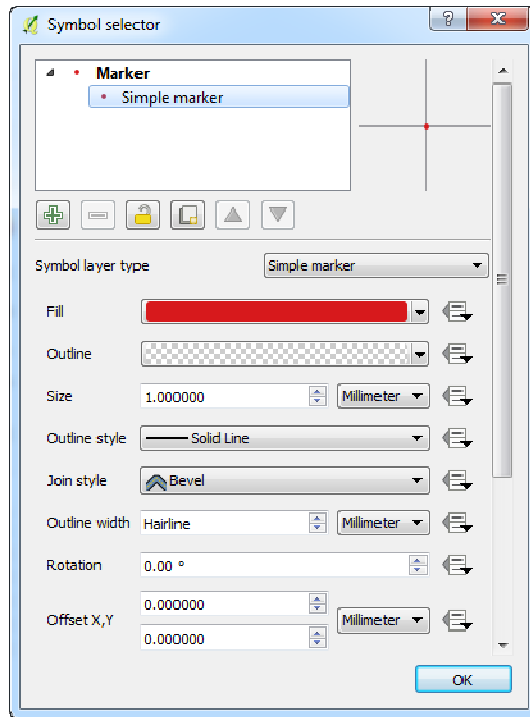
6. Right click **F26_ECa_Dualem_2013_UTM**, then go to Properties to modify symbol style

- a. Style = Graduated
- Column = 1m_PRP
- Symbol > Change... > Simple marker
- Outline = Transparent border
- Size = 1 (Millimeter)
- Legend Format = %1 - %2 ; Precision 1
- Method = Color
- Color ramp = Viridis
- Mode = Quantile (Equal Count)

Click Classify

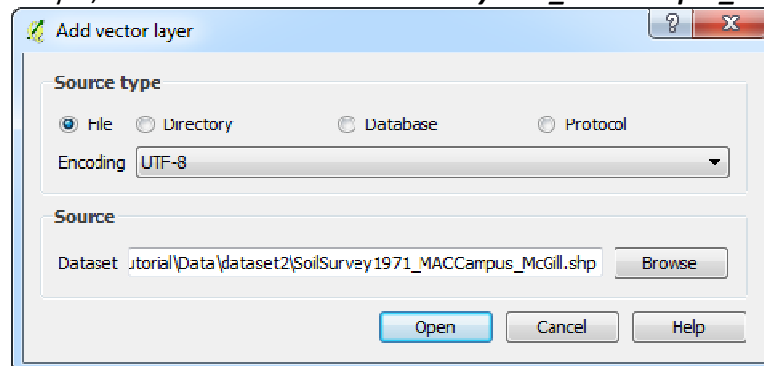
Click OK



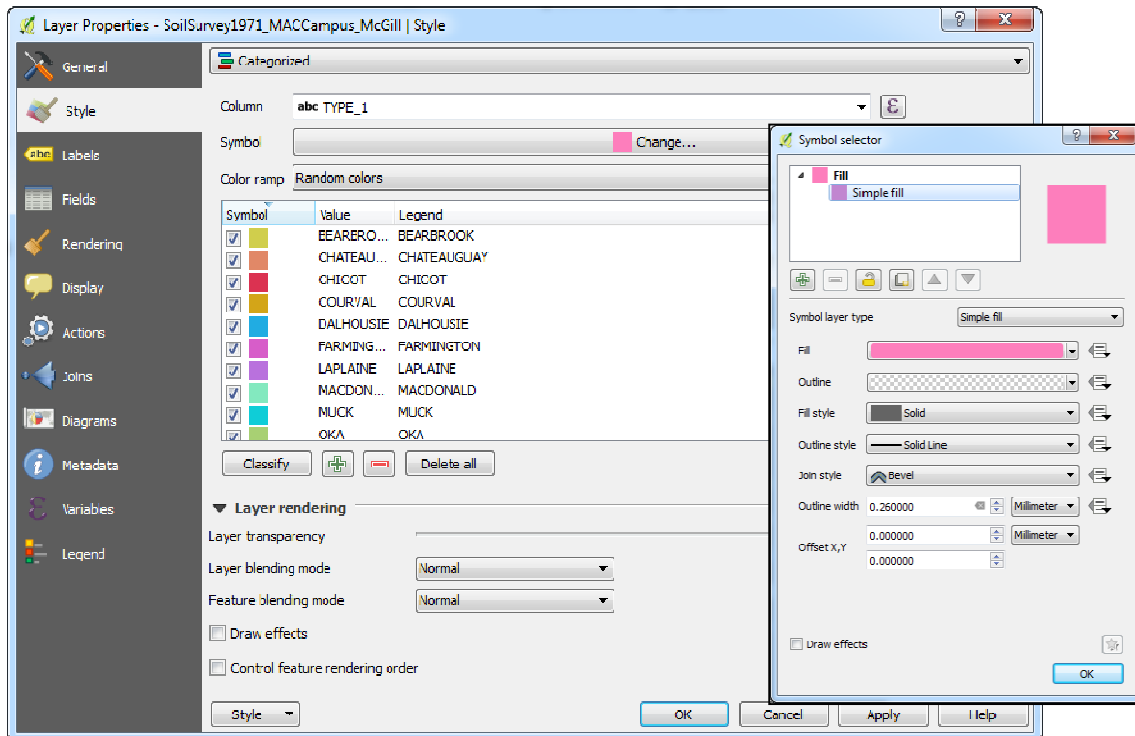


Part 3: Import soil survey data

1. In the Manage Layers Toolbar, click Add Vector Layer
2. In Add vector layer, click Browse to select **SoilSurvey1971_MACCampus_McGill.shp**

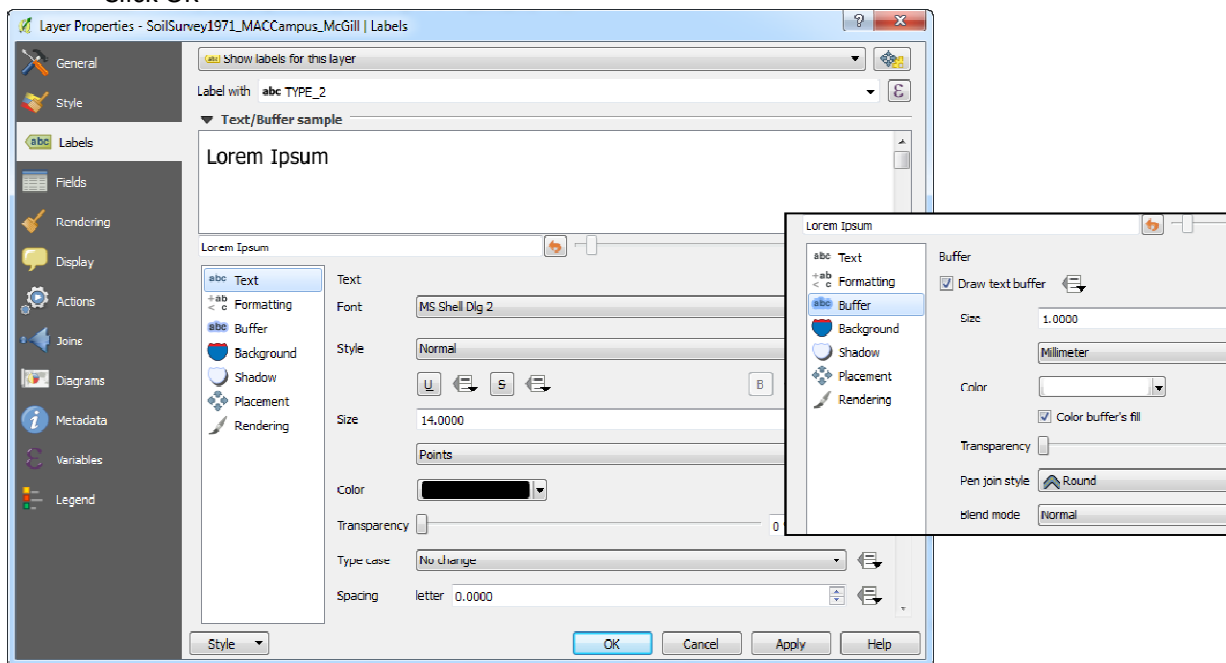


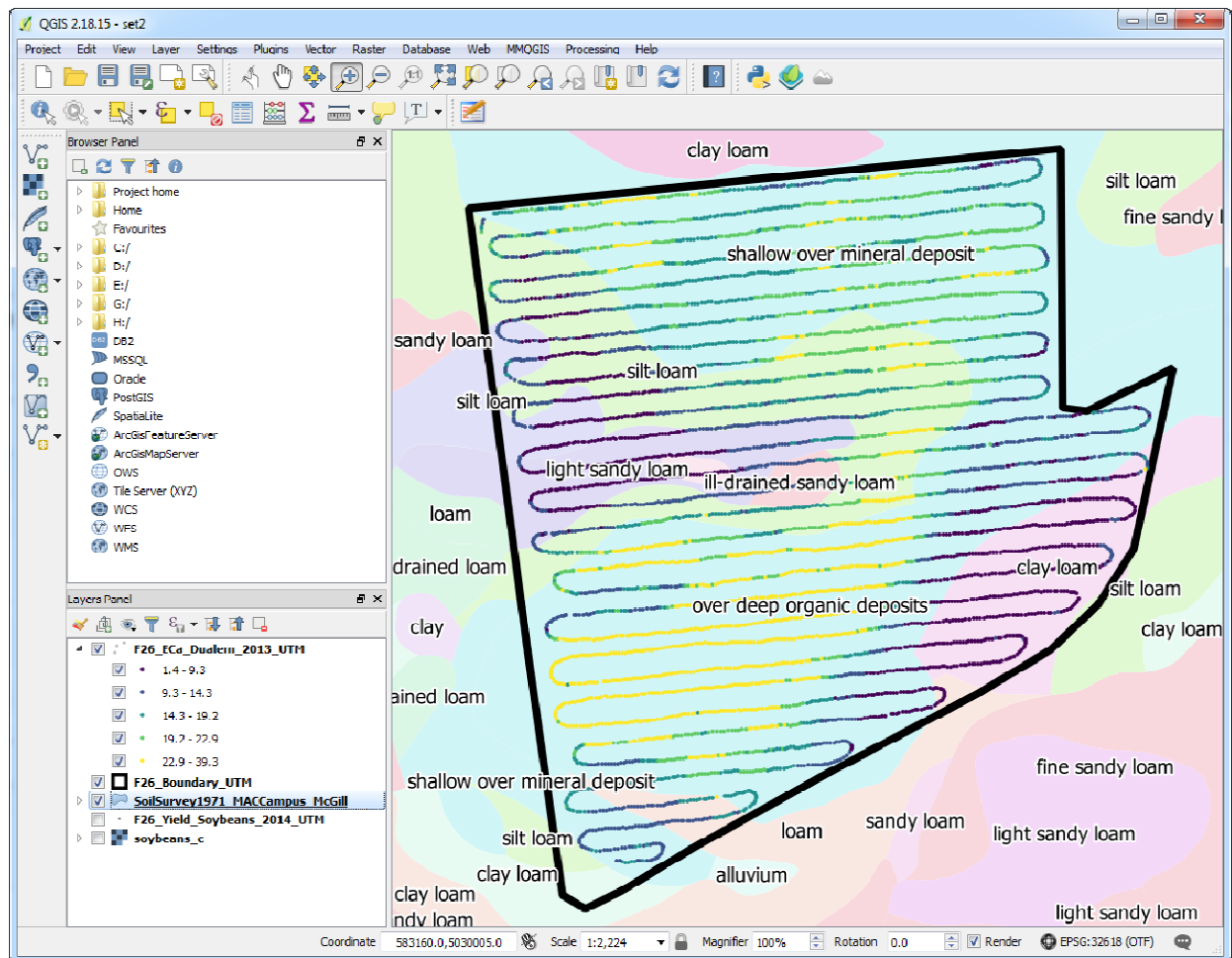
3. In the Layers Panel, move **SoilSurvey1971_MACCampus_McGill.shp** to the bottom of the list
 4. Right click **SoilSurvey1971_MACCampus_McGill.shp** to open Properties
 - a. Styles > Categorized
 - Column = Type_1
 - Symbol > Change ... > Simple fill
 - Outline = Transparent border
 - Color ramp = random colors
- Click Classify



5. Still in Layer Properties:
 - a. Labels = Show labels for this layer
- Label with TYPE_2
Text:
Size = 14
Buffer:
Check Draw text buffer

Click OK





6. Go to Project > New Print Layout to create a new map layout (See Exercise 2_1 for instruction)
7. Save the project