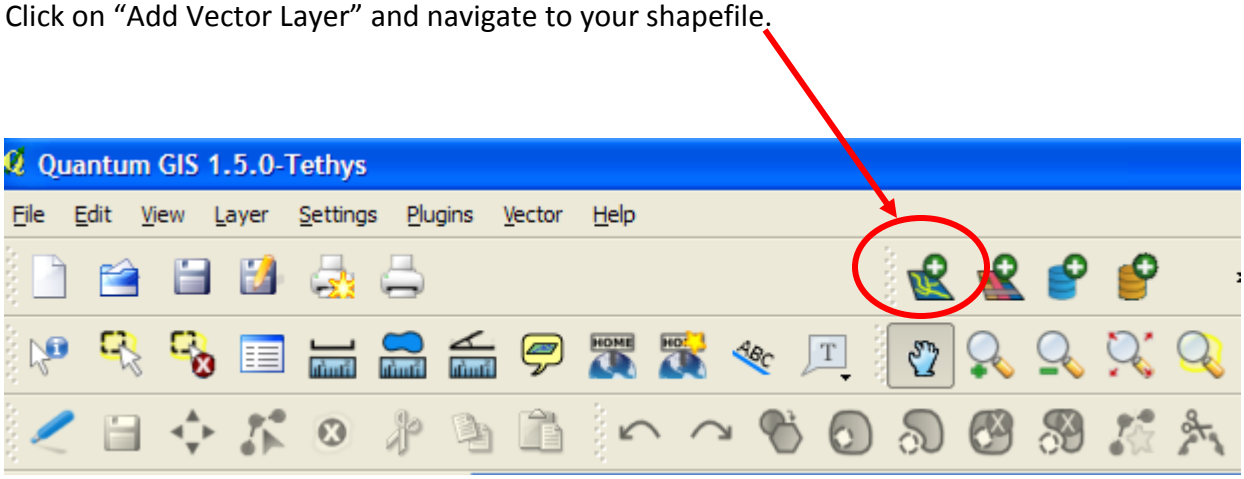
QUANTUM GIS

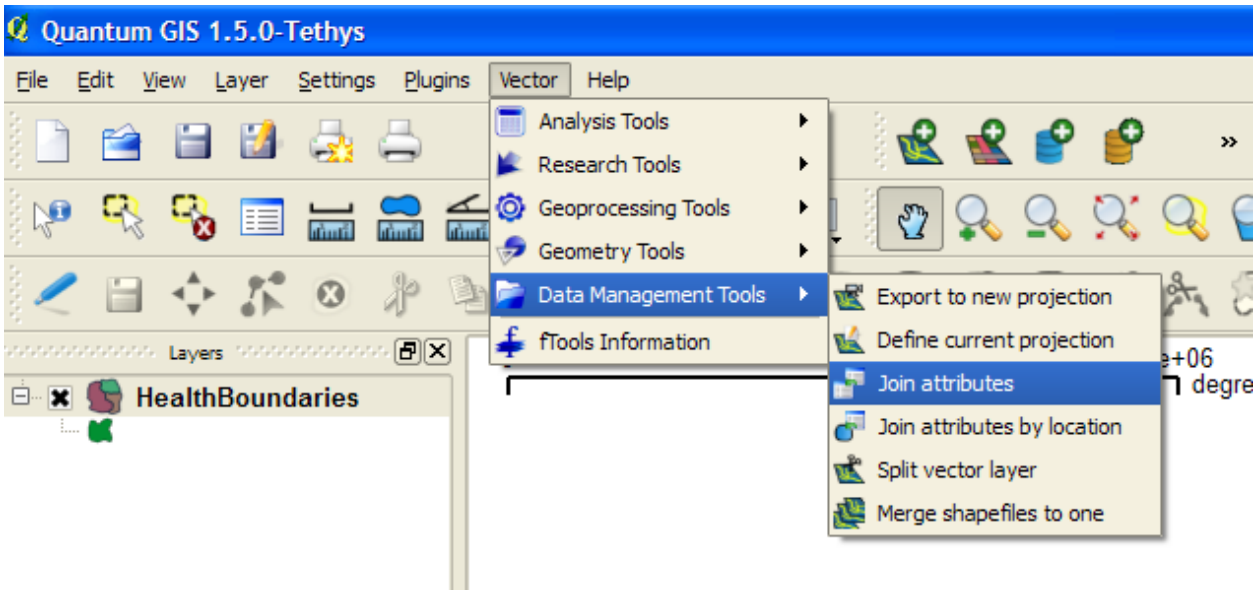
1)Open the shapefile into QGIS –

Click on “Add Vector Layer” and navigate to your shapefile.

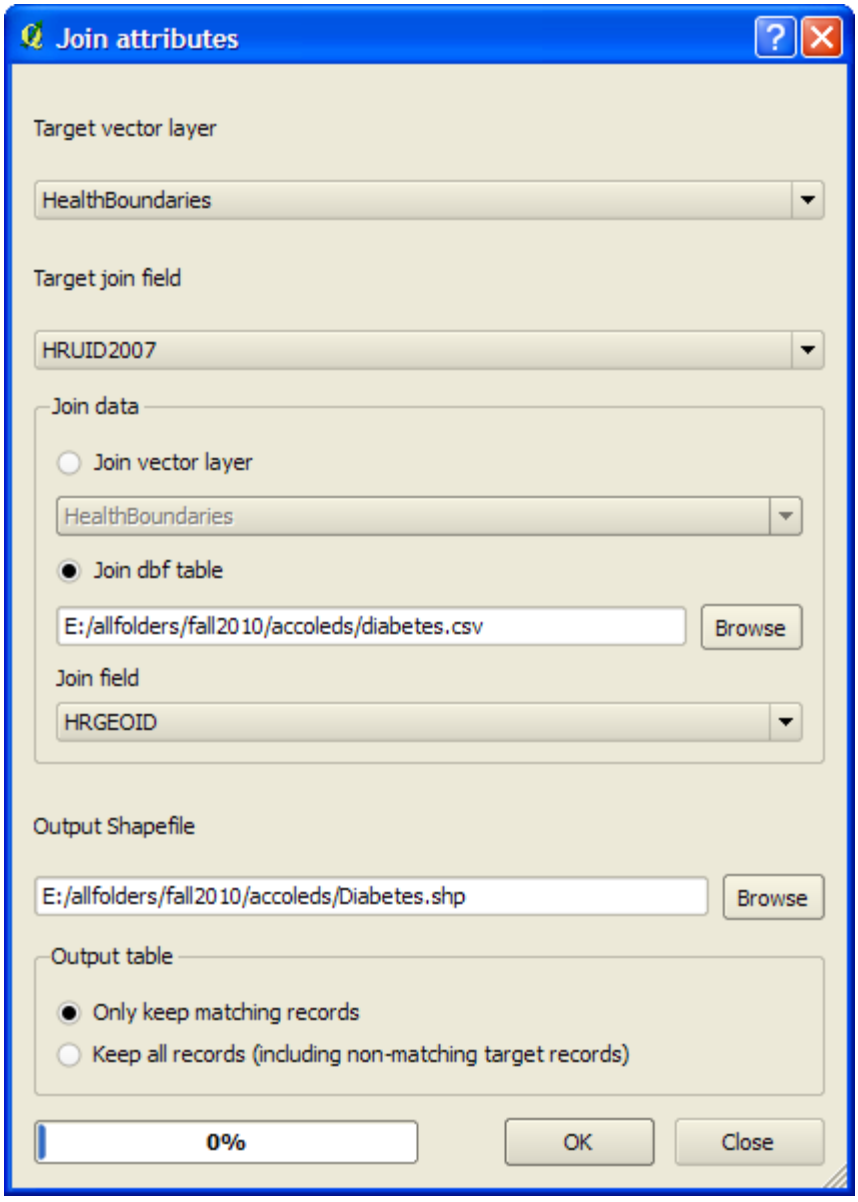


2)Join the diabetes statistics to the shapefile using a table join –

Select Vector – Data Management Tools – Join Attributes.



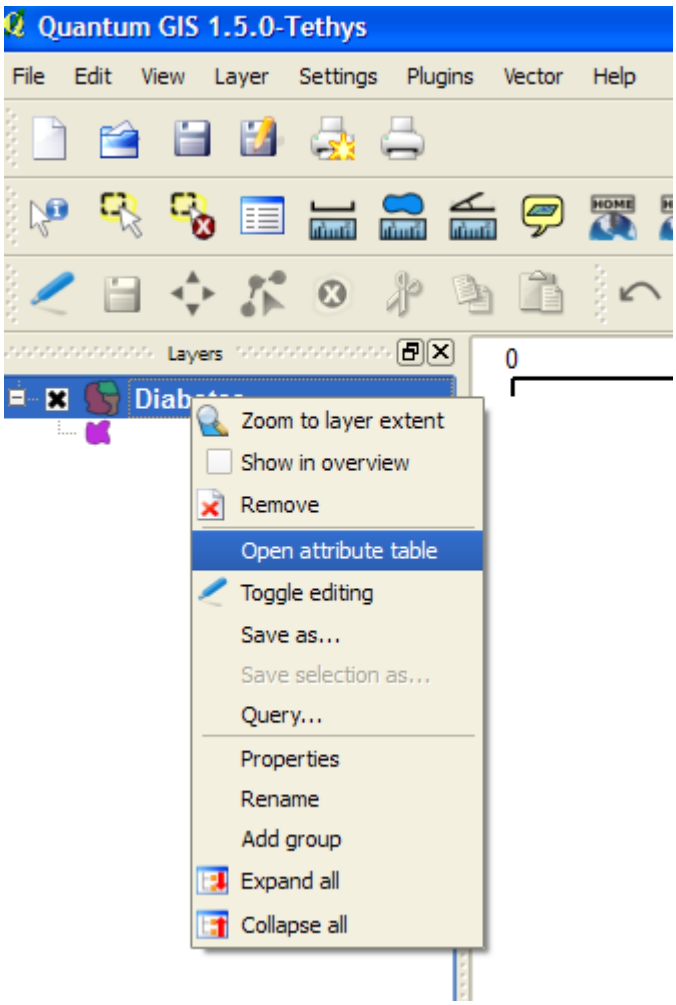
Select HealthBoundaries as the target vector layer, specify HRUID2007 as the target join field, and select the diabetes.csv file as the Join dbf table. The join field will automatically populate with the HRGEOID field as the Join field. Create an output shapefile, and only keep the matching records. Click OK.



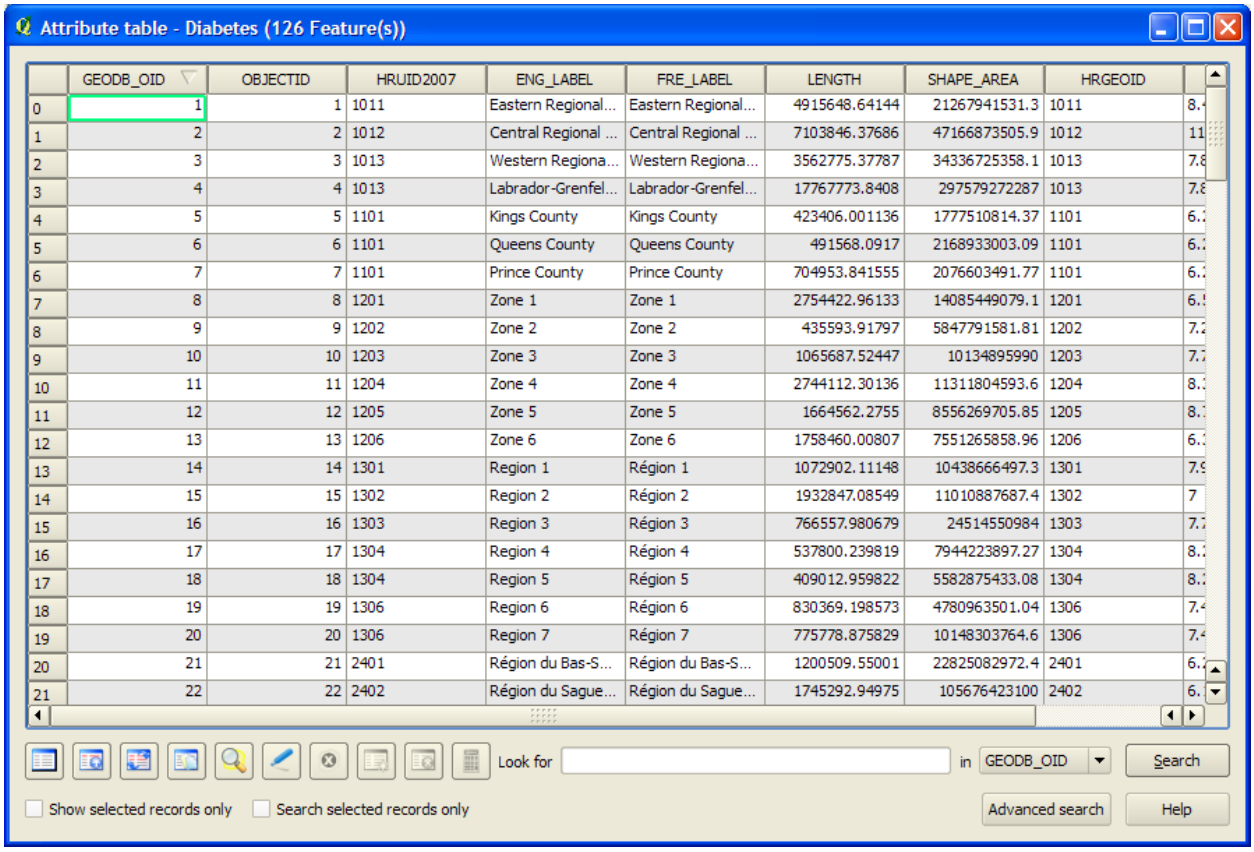
3)Add the newly created and joined shapefile to your map by adding a vector layer.

4)Remove the HealthBoundaries shapefile by right clicking on the shapefile and selecting Remove.

5)Next a calculation must be performed to convert the diabetes field in the joined shapefile from text to number (decimals) so that a classification can be performed on the diabetes field allowing the creation of a thematic or choropleth map. Right click on the joined shapefile, and select open attribute table.

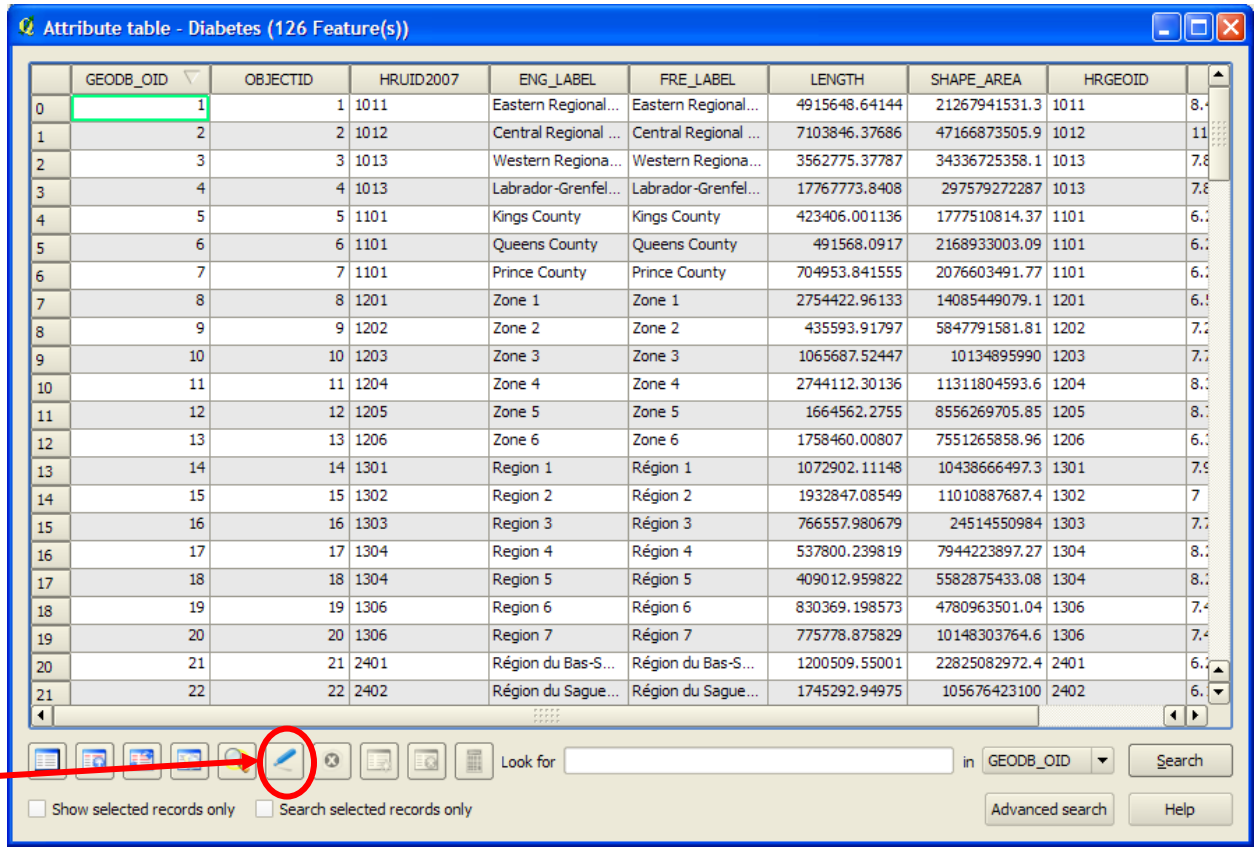


This opens the attribute table of the joined shapefile.



	GEODB_OID	OBJECTID	HRUID2007	ENG_LABEL	FRE_LABEL	LENGTH	SHAPE_AREA	HRGEOID	
0	1	1	1011	Eastern Regional...	Eastern Regional...	4915648.64144	21267941531.3	1011	8.
1	2	2	1012	Central Regional ...	Central Regional ...	7103846.37686	47166873505.9	1012	11
2	3	3	1013	Western Regiona...	Western Regiona...	3562775.37787	34336725358.1	1013	7.8
3	4	4	1013	Labrador-Grenfel...	Labrador-Grenfel...	17767773.8408	297579272287	1013	7.8
4	5	5	1101	Kings County	Kings County	423406.001136	1777510814.37	1101	6.
5	6	6	1101	Queens County	Queens County	491568.0917	2168933003.09	1101	6.
6	7	7	1101	Prince County	Prince County	704953.841555	2076603491.77	1101	6.
7	8	8	1201	Zone 1	Zone 1	2754422.96133	14085449079.1	1201	6.
8	9	9	1202	Zone 2	Zone 2	435593.91797	5847791581.81	1202	7.
9	10	10	1203	Zone 3	Zone 3	1065687.52447	10134895990	1203	7.
10	11	11	1204	Zone 4	Zone 4	2744112.30136	11311804593.6	1204	8.
11	12	12	1205	Zone 5	Zone 5	1664562.2755	8556269705.85	1205	8.
12	13	13	1206	Zone 6	Zone 6	1758460.00807	7551265858.96	1206	6.
13	14	14	1301	Region 1	Région 1	1072902.11148	10438666497.3	1301	7.9
14	15	15	1302	Region 2	Région 2	1932847.08549	11010887687.4	1302	7
15	16	16	1303	Region 3	Région 3	766557.980679	24514550984	1303	7.
16	17	17	1304	Region 4	Région 4	537800.239819	7944223897.27	1304	8.
17	18	18	1304	Region 5	Région 5	409012.959822	5582875433.08	1304	8.
18	19	19	1306	Region 6	Région 6	830369.198573	4780963501.04	1306	7.
19	20	20	1306	Region 7	Région 7	775778.875829	10148303764.6	1306	7.
20	21	21	2401	Région du Bas-S...	Région du Bas-S...	1200509.55001	22825082972.4	2401	6.
21	22	22	2402	Région du Sague...	Région du Sague...	1745292.94975	105676423100	2402	6.

Turn on the Toggle Editing Mode.



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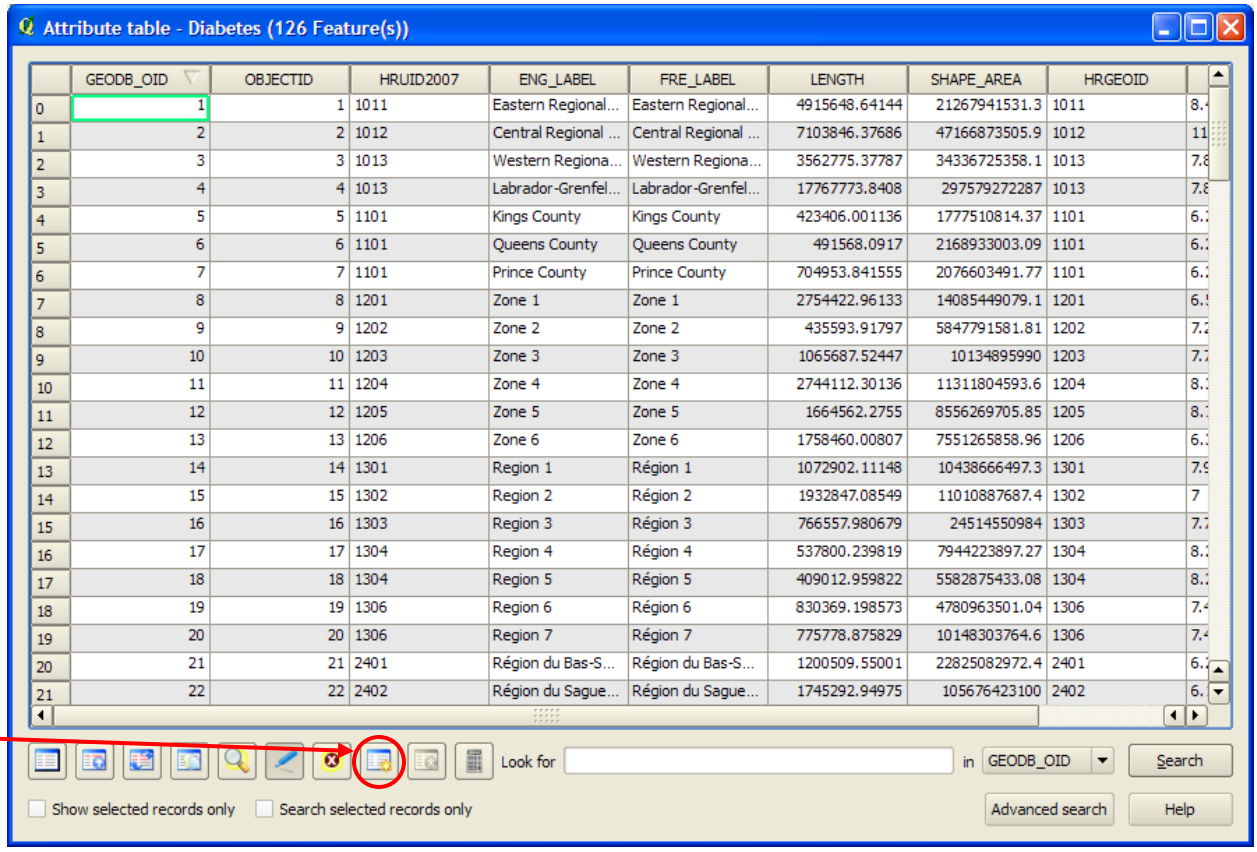
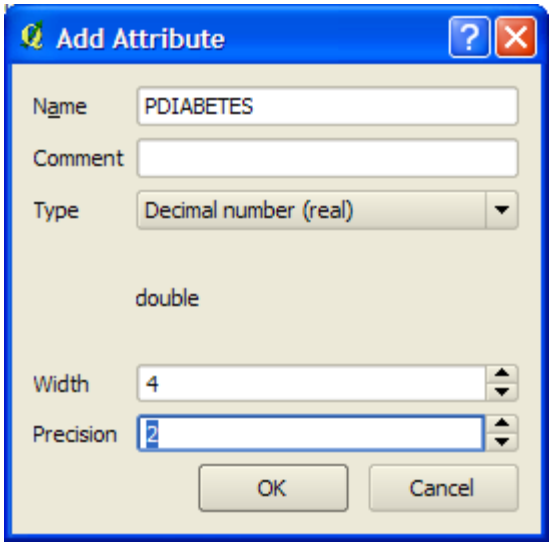
0	1	1	1011	Eastern Regional...	Eastern Regional...	4915648.64144	21267941531.3	1011
1	2	2	1012	Central Regional ...	Central Regional ...	7103846.37686	47166873505.9	1012
2	3	3	1013	Western Regiona...	Western Regiona...	3562775.37787	34336725358.1	1013
3	4	4	1013	Labrador-Grenfel...	Labrador-Grenfel...	17767773.8408	297579272287	1013
4	5	5	1101	Kings County	Kings County	423406.001136	1777510814.37	1101
5	6	6	1101	Queens County	Queens County	491568.0917	2168933003.09	1101
6	7	7	1101	Prince County	Prince County	704953.841555	2076603491.77	1101
7	8	8	1201	Zone 1	Zone 1	2754422.96133	14085449079.1	1201
8	9	9	1202	Zone 2	Zone 2	435593.91797	5847791581.81	1202
9	10	10	1203	Zone 3	Zone 3	1065687.52447	10134895990	1203
10	11	11	1204	Zone 4	Zone 4	2744112.30136	11311804593.6	1204
11	12	12	1205	Zone 5	Zone 5	1664562.2755	8556269705.85	1205
12	13	13	1206	Zone 6	Zone 6	1758460.00807	7551265858.96	1206
13	14	14	1301	Region 1	Région 1	1072902.11148	10438666497.3	1301
14	15	15	1302	Region 2	Région 2	1932847.08549	11010887687.4	1302
15	16	16	1303	Region 3	Région 3	766557.980679	24514550984	1303
16	17	17	1304	Region 4	Région 4	537800.239819	7944223897.27	1304
17	18	18	1304	Region 5	Région 5	409012.959822	5582875433.08	1304
18	19	19	1306	Region 6	Région 6	830369.198573	4780963501.04	1306
19	20	20	1306	Region 7	Région 7	775778.875829	10148303764.6	1306
20	21	21	2401	Région du Bas-S...	Région du Bas-S...	1200509.55001	22825082972.4	2401
21	22	22	2402	Région du Sague...	Région du Sague...	1745292.94975	105676423100	2402

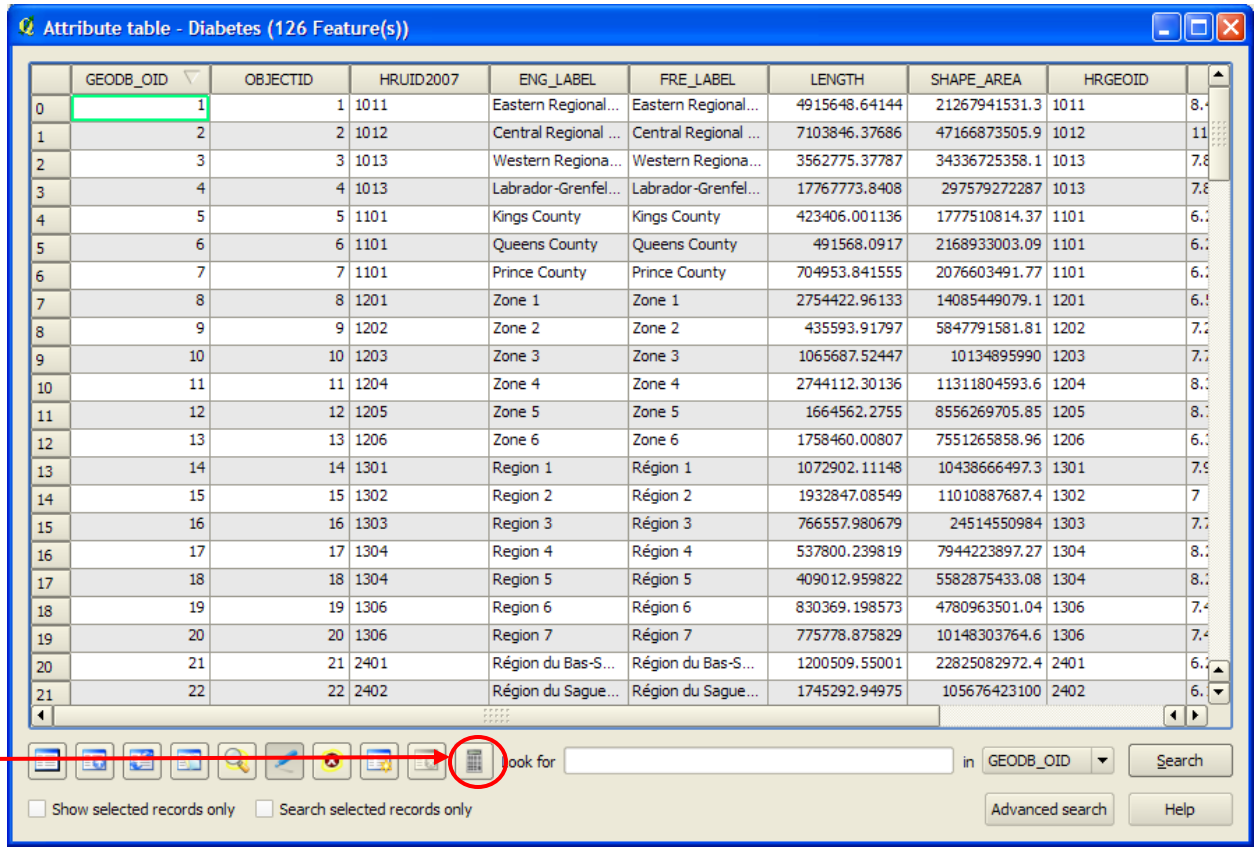
Select Add New Column.



In the pop-up box that opens, give the new field a name, select Type= Decimal number (real), and assign a width of 4 and a Precision of 2. Click OK.



Click on the Open Field Calculator button.



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4	5	5	1101	Kings County	Kings County	423406.001136	1777510814.37	1101	6.
5	6	6	1101	Queens County	Queens County	491568.0917	2168933003.09	1101	6.
6	7	7	1101	Prince County	Prince County	704953.841555	2076603491.77	1101	6.
7	8	8	1201	Zone 1	Zone 1	2754422.96133	14085449079.1	1201	6.
8	9	9	1202	Zone 2	Zone 2	435593.91797	5847791581.81	1202	7.2
9	10	10	1203	Zone 3	Zone 3	1065687.52447	10134895990	1203	7.7
10	11	11	1204	Zone 4	Zone 4	2744112.30136	11311804593.6	1204	8.
11	12	12	1205	Zone 5	Zone 5	1664562.2755	8556269705.85	1205	8.
12	13	13	1206	Zone 6	Zone 6	1758460.00807	7551265858.96	1206	6.
13	14	14	1301	Region 1	Région 1	1072902.11148	10438666497.3	1301	7.9
14	15	15	1302	Region 2	Région 2	1932847.08549	11010887687.4	1302	7
15	16	16	1303	Region 3	Région 3	766557.980679	24514550984	1303	7.7
16	17	17	1304	Region 4	Région 4	537800.239819	7944223897.27	1304	8.
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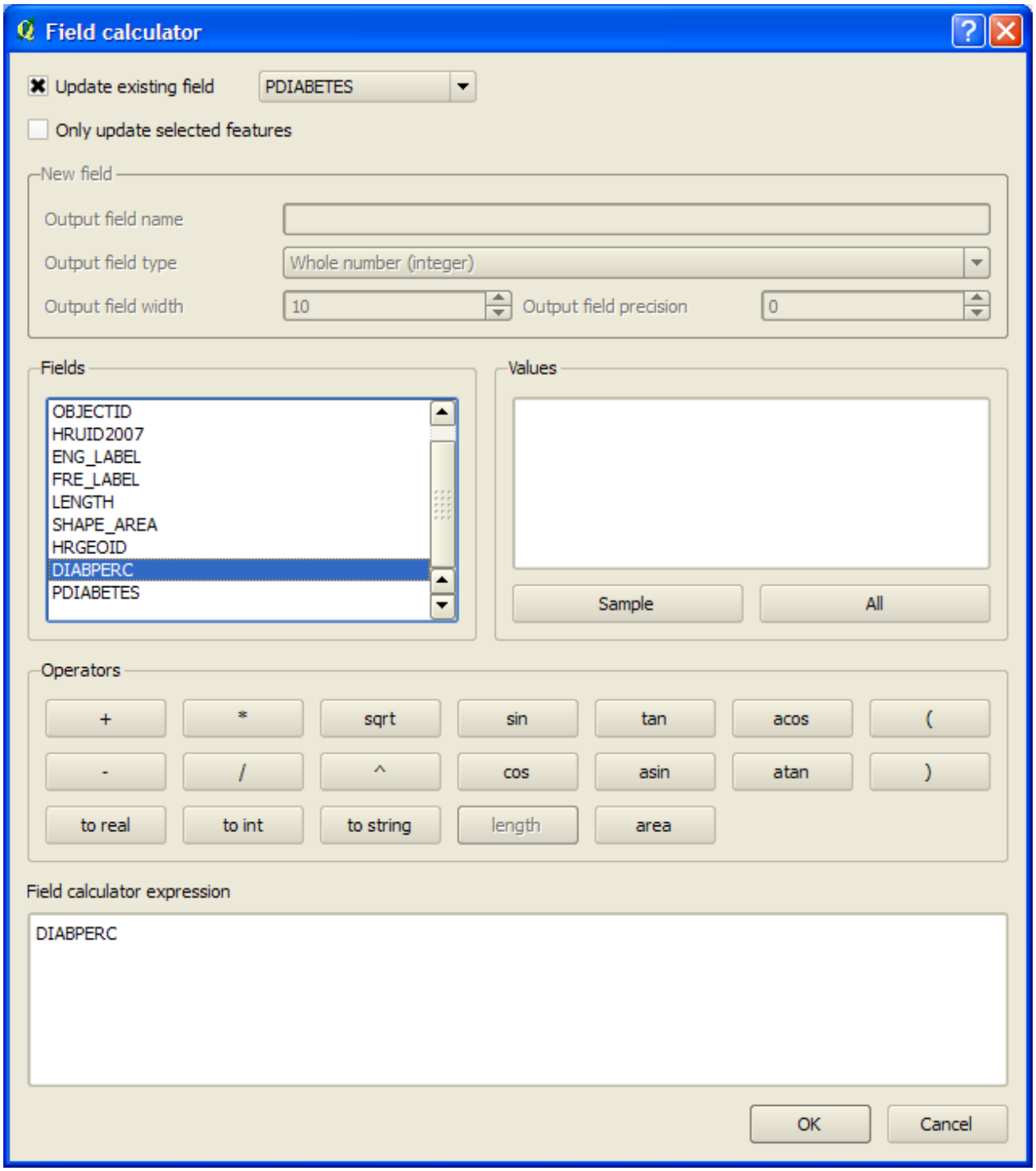
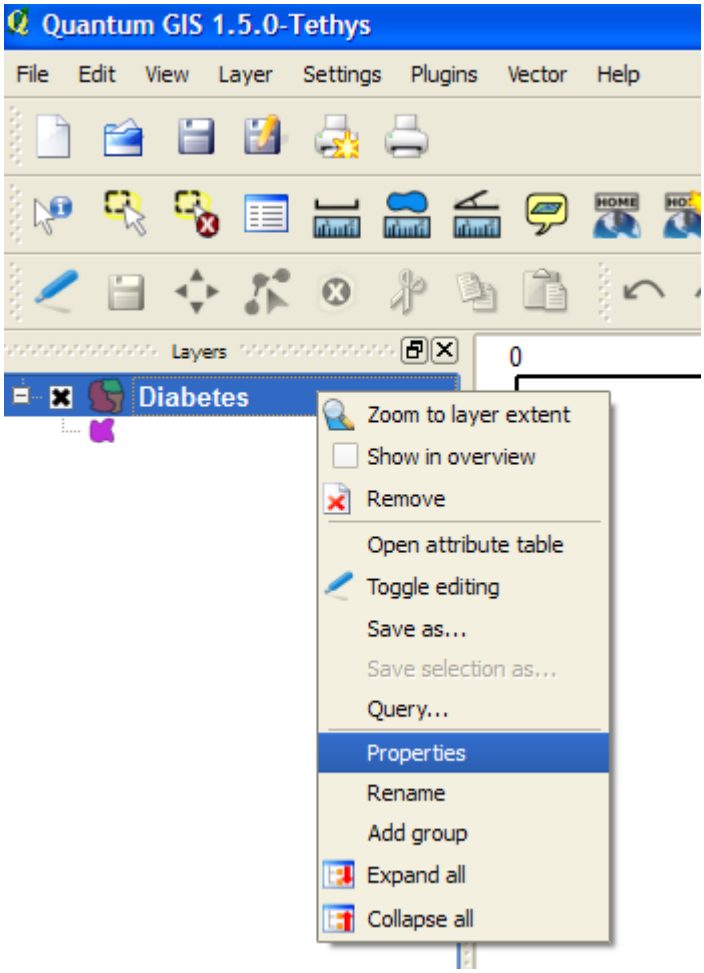
18	19	19	1306	Region 6	Région 6	830369.198573	4780963501.04	1306	7.4
19	20	20	1306	Region 7	Région 7	775778.875829	10148303764.6	1306	7.4
20	21	21	2401	Région du Bas-S...	Région du Bas-S...	1200509.55001	22825082972.4	2401	6.
21	22	22	2402	Région du Sague...	Région du Sague...	1745292.94975	105676423100	2402	6.

The field calculator opens. Check the box next to Update Existing field, and select your new, numeric field as the field to update. Under the fields box, select the original text diabetes field that was used in the join to place it in the field calculator expression box. Click OK. This operation assigns the diabetes values from the text field into the new numeric field, enabling the creation of a thematic map.

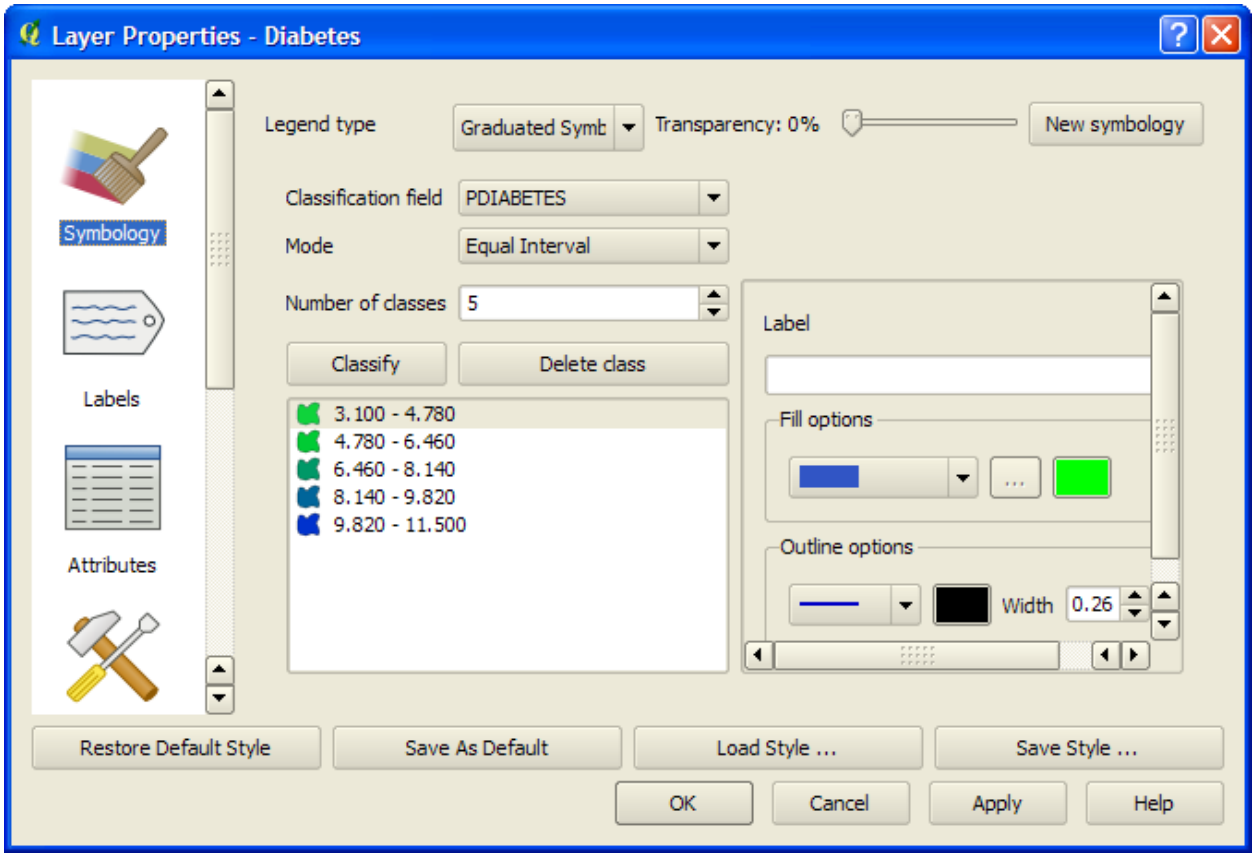


Turn off the toggle editing mode by clicking on the toggle edit button again, and save your changes.

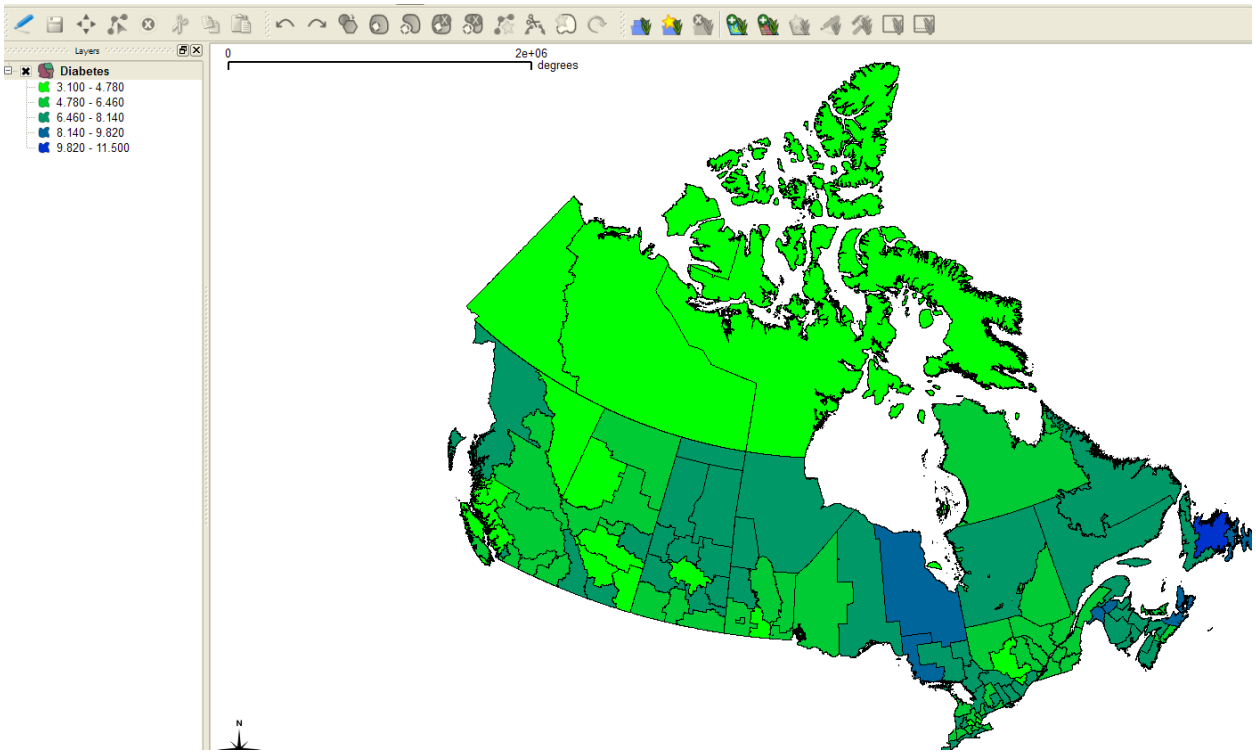
6)Create a Thematic Map of the percentage of Canadians with diabetes by Health Region. Right click on your shapefile, and select Properties.



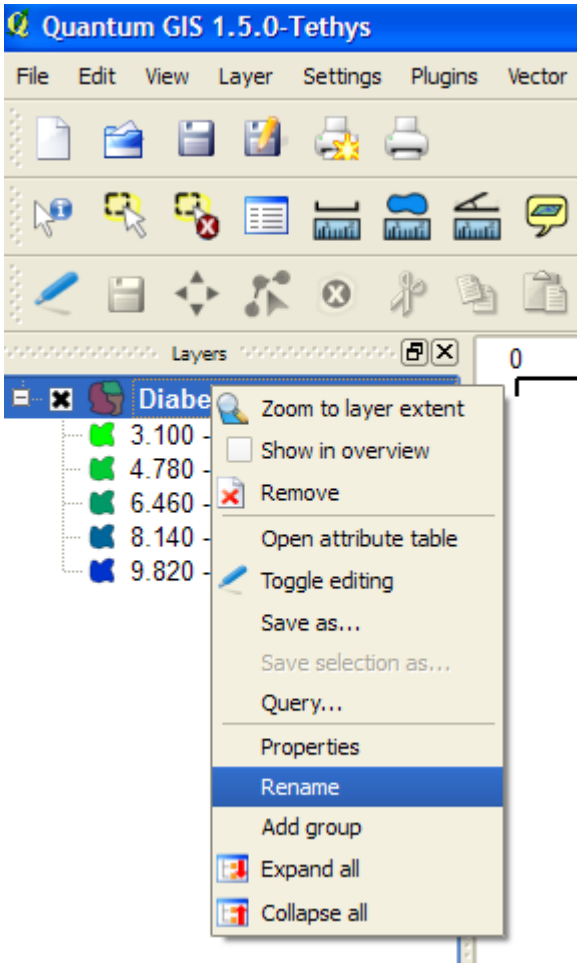
In the Layer Properties box that pops-up, select Graduated Symbol as the Legend type, select the numeric percentage diabetes field as the Classification field, select Equal Interval as a classification mode, and create 5 classes. Click on Classify to create the legend. Click OK. Try selecting different colours for each classification category.



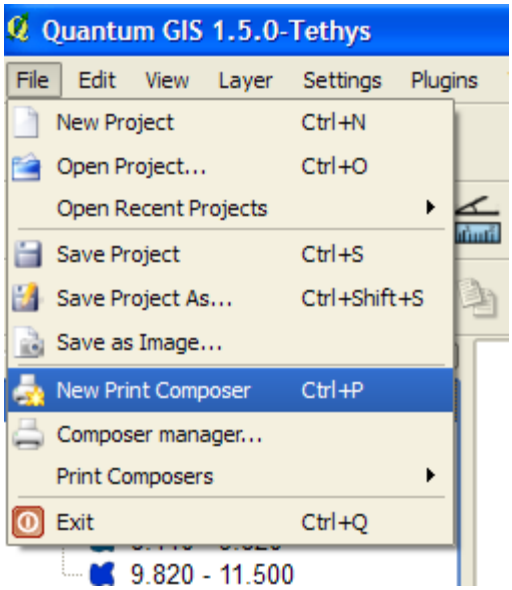
You result should appear similar to the result below. Experiment with different classification modes, and numbers of classes. What is the definition of Equal Interval and Quantile? What are each of these classification modes displaying?



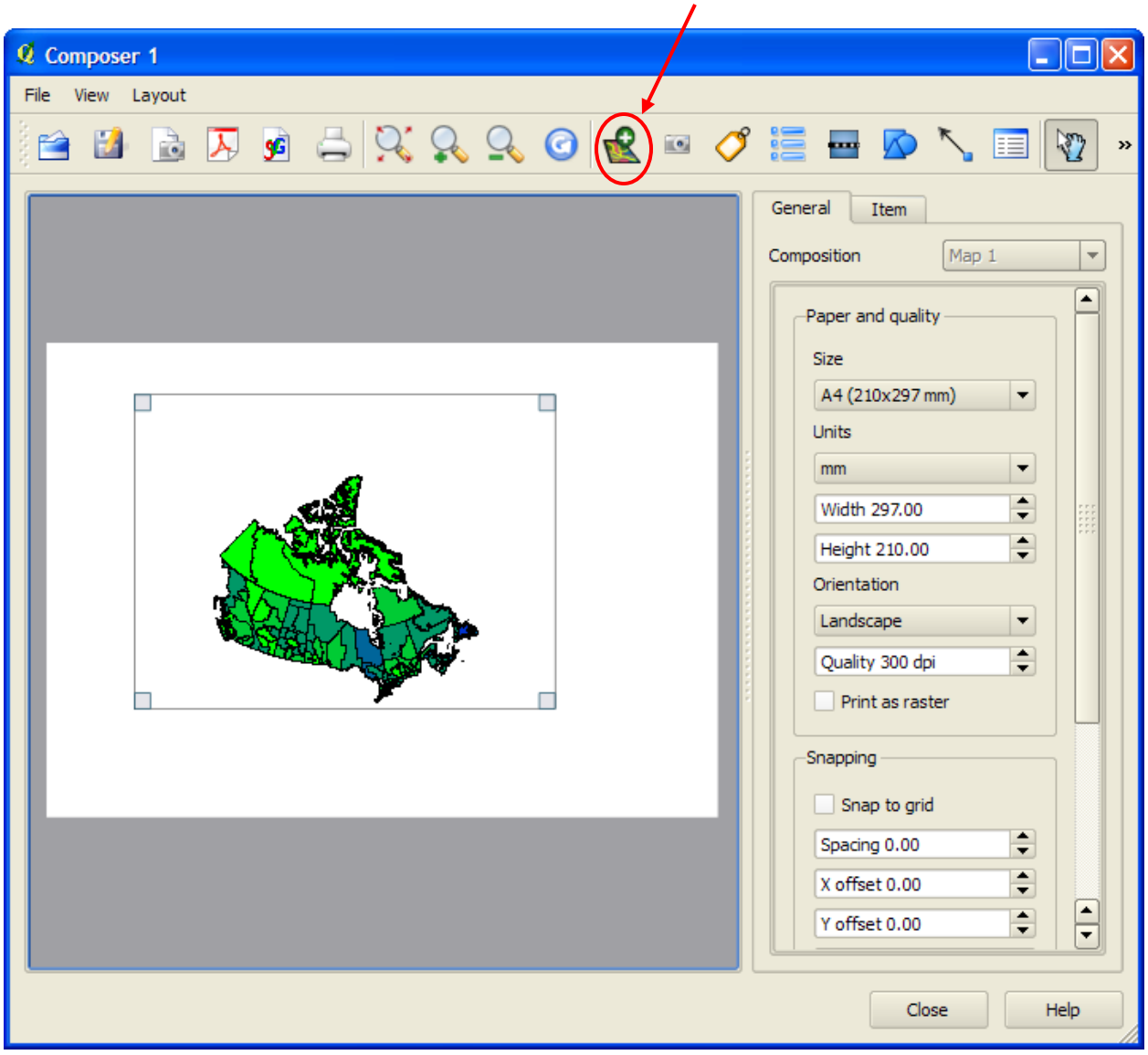
7)Rename your shapefile to a more meaningful name. Right click on the shapefile and select Rename.



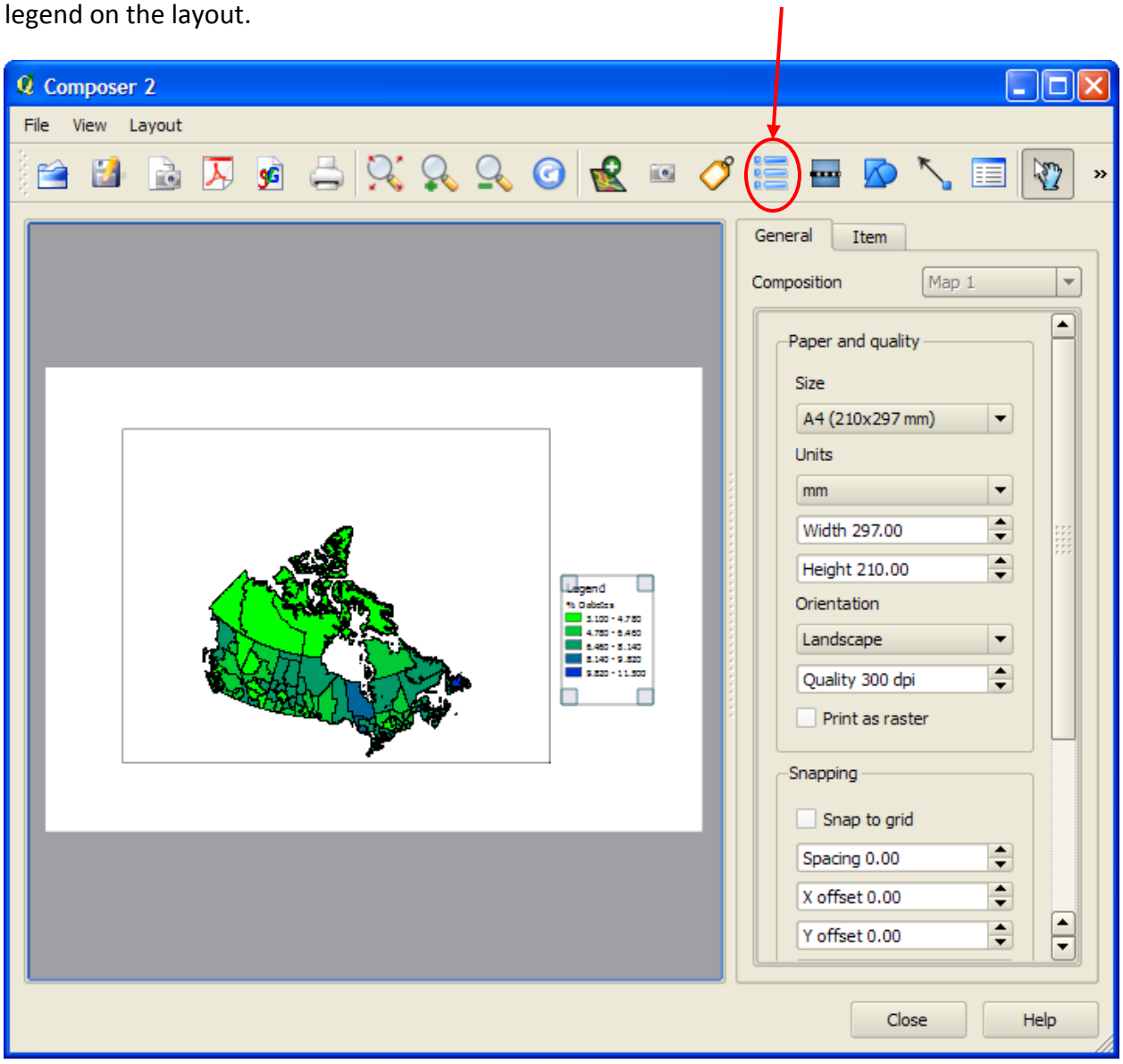
8)Create a Map Layout and print the map to a .pdf. Select File – New Print Composer.



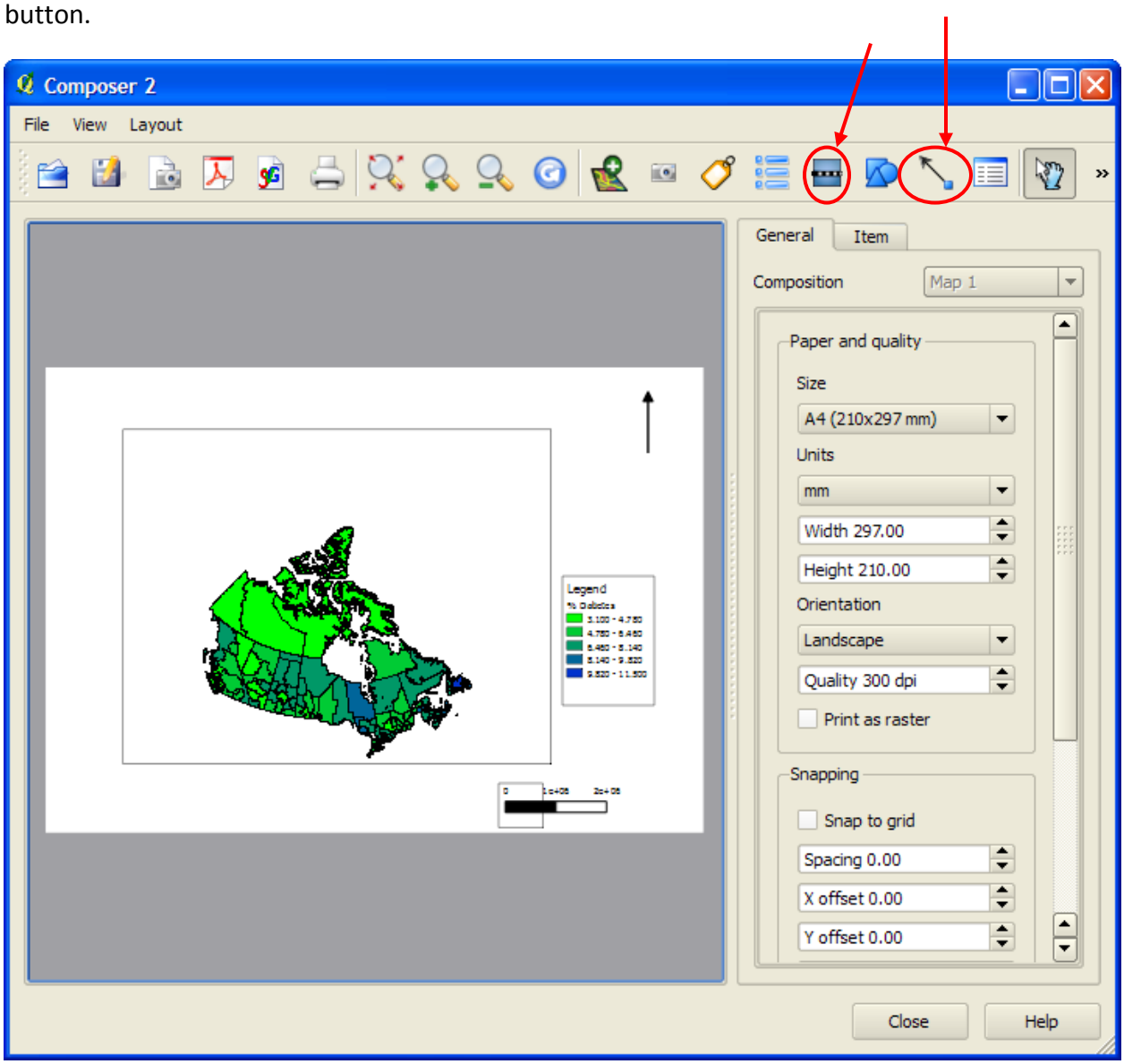
In the Print Composer box that pops up, select the Add new box button, and draw a box on the screen to place the Thematic map in the Print Composer.



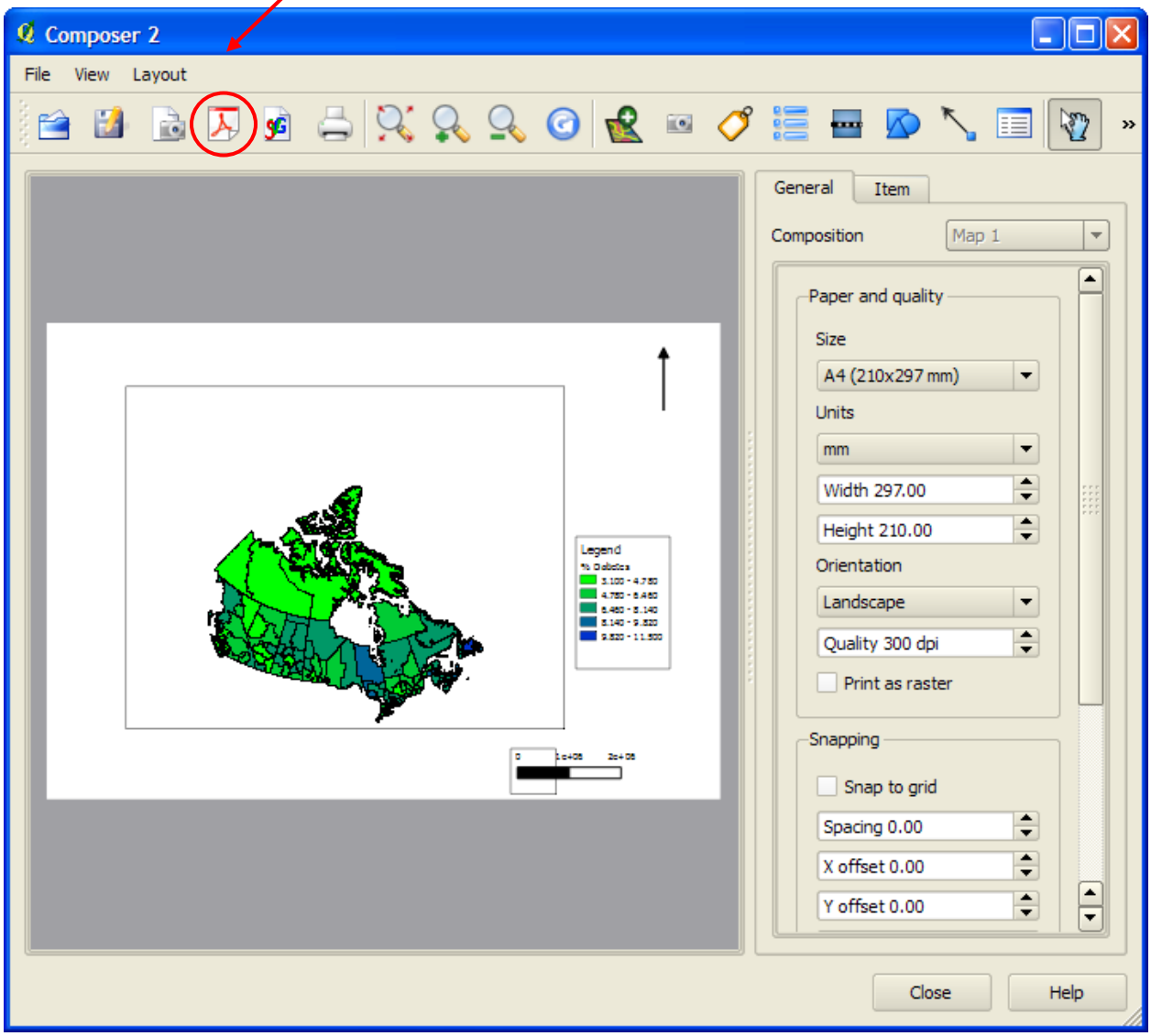
Add the legend by selecting the Add new vect legend button. Try changing the position of the legend on the layout.



Add a North Arrow and a scale bar by selecting the Add arrow button and the Add new scalebar button.



9)Export the map as a .pdf by clicking on the Export as PDF button. Then save the map and give it a meaningful name.



The resulting map should appear similar to the results below.