

Calculating Line Lengths and Statistics

QGIS Tutorials and Tips



Author

Ujaval Gandhi

<http://google.com/+UjavalGandhi>

Translations by

SongHyun Choi

□□ □□□□□ □□

QGIS□ □, □□, □□ □ □□□ □□□□□ □□ □□ □□ □□ □ □□ □□ □□□□. □ □□□□ □ □□ □□ □□□□ □□ □□ □□ □□□□ **Field Calculator** □ □□□ □□□□ □□ □□□□.

□□ □□

□□□□ □□□□□ □□ □□□□ □□□□ □□ □□ □□□□□ □□ □□ □□□□ □□ □ □□□□.

■ ■ ■ ■ ■ ■ ■ ■ ■ ■

- □□□ □□□□ □□□ □□
- □□□□□□ □□□ □□□(Projected Coordinate Reference System, CRS)□ □□□ □ □□.
- □□□□□ □□□□ □□ □□

□□□ □□

`Natural Earth
<<http://www.naturalearthdata.com/downloads/10m-cultural-vectors/railroads/>>`_□□
□□ □□□ □□ □□□□□ □□□□. □□□□ `North America supplement <http://www.naturalearthdata.com/http://www.naturalearthdata.com/download/10m/cultural/ne_10m_railroads_north_america.zip>`_□□□□□□ □□□□ □□□□.

For convenience, you may directly download a copy of the dataset from the link below:

[ne_10m_railroads_north_america..zip](http://www.naturalearthdata.com/http://www.naturalearthdata.com/download/10m/cultural/ne_10m_railroads_north_america..zip)

□□□ □□ [NATURALEARTH]

□□

1. □□□□ :menuselection: `Layer --> Add Vector Layer` □ □□□□.



2. ``ne_10m_railroads_north_america.zip`` □□□ □□□ :guilabel: `OK` □ □□□□□.



3. In the Select layers to add... dialog, choose *ne_10m_railroads_north_america.shp* layer.



4. 이 레이어를 추가한 후, 레이어 목록에서 'ne_10m_railroads_north_america.shp' 레이어를 선택하고, 레이어 속성 대화 상자에서 'Open Attribute Table' 버튼을 클릭합니다.

Attribute table - ne_10m_railroads_north_america :: Features total: 1127, filtered: 1127, selected: 0

	scalerank	featurecla	sov_a3	uident	add	natrscale	continent
0	8	Railroad	USA	1506	0	0	North America
1	9	Railroad	USA	1606	1	5	North America
2	8	Railroad	USA	1706	0	0	North America
3	8	Railroad	USA	1806	0	0	North America
4	8	Railroad	USA	1906	0	0	North America
5	8	Railroad	USA	2006	0	0	North America
6	8	Railroad	USA	2106	0	0	North America
7	9	Railroad	USA	2206	1	5	North America
8	8	Railroad	USA	2306	0	0	North America
9	8	Railroad	USA	2406	0	0	North America
10	8	Railroad	USA	2506	0	0	North America
11	8	Railroad	USA	2606	0	0	North America
12	8	Railroad	USA	2706	0	0	North America
13	8	Railroad	USA	2806	0	0	North America
14	9	Railroad	USA	2906	1	5	North America
15	9	Railroad	USA	3006	1	5	North America
16	8	Railroad	USA	3106	0	0	North America
17	8	Railroad	USA	3206	0	0	North America
18	8	Railroad	USA	3306	0	0	North America
19	8	Railroad	USA	3506	0	0	North America
20	8	Railroad	USA	3606	0	0	North America
21	8	Railroad	USA	3706	0	0	North America
22	8	Railroad	USA	3806	0	0	North America
23	9	Railroad	USA	3906	1	5	North America

Show All Features

6. ☐ ☐ ☐ Attribute Table` ☐ ☐ ☐ ☐ ☐ :guilabel:`Select features using an expression ☐ ☐ ☐ ☐.

Attribute table - ne_10m_railroads_north_america :: Features total: 1127, filtered: 1127, selected: 0

Select features using an expression

	scalerank		uid	add	natrscale	continent
0	8	Railroad	1506	0	0	North America
1	9	Railroad	1606	1	5	North America
2	8	Railroad	1706	0	0	North America
3	8	Railroad	1806	0	0	North America
4	8	Railroad	1906	0	0	North America
5	8	Railroad	2006	0	0	North America
6	8	Railroad	2106	0	0	North America
7	9	Railroad	2206	1	5	North America
8	8	Railroad	2306	0	0	North America
9	8	Railroad	2406	0	0	North America
10	8	Railroad	2506	0	0	North America
11	8	Railroad	2606	0	0	North America
12	8	Railroad	2706	0	0	North America
13	8	Railroad	2806	0	0	North America
14	9	Railroad	2906	1	5	North America
15	9	Railroad	3006	1	5	North America
16	8	Railroad	3106	0	0	North America
17	8	Railroad	3206	0	0	North America
18	8	Railroad	3306	0	0	North America
19	8	Railroad	3506	0	0	North America
20	8	Railroad	3606	0	0	North America
21	8	Railroad	3706	0	0	North America
22	8	Railroad	3806	0	0	North America
23	9	Railroad	3906	1	5	North America

Show All Features

7. Select By Expression. Functions list Fields and Values sov_a3. Expression: "sov_a3" = 'USA'. Select. Close.



8. Back in the main QGIS window, you will see that all lines that fall in USA are selected and appear in yellow.



9. `ne_10m_railroads_north_america`, `Save Selection As...`



10. `:guilabel: 'Browse'` `usa_railroads.shp` `:guilabel: 'CRS'` `:guilabel: 'Browse'`

Note

CRS `EPSG:4326` `**degrees**` `**degrees**` `square degrees` `**meters` `**feet**`



11. `Filter` north america equ` CRS` :guilabel: `North_America_Equidistant_Conic EPSG:102010` OK``



12. ☐ ☐ ☐ ☐ ☐ Save vector layer as... ☐ ☐ ☐ ☐ ☐ ☐
☐ ☐ ☐ ☐ ☐ :guilabel: 'Add saved file to map' ☐ ☐ ☐ ☐ ☐ ☐ :guilabel: 'OK' ☐ ☐ ☐ ☐ ☐.



13. □□ □□□□ □□□ □□□ □□□□ □□□□
 usa_railroads`~ ■■■■ QGIS ■■■■. ■■■■ ``ne_10m_railroads_north_america
 □□□□ □□□□ □□□□ □□□ □□□ □□□ □□□ □□□ □□□.



14. ``usa_railroads`` □□□□ □□ □□ □□□□ □□ □□ □□ :guilabel: ``Open Attribute Table`` □ □□□□□.



17. 属性表 Attribute Table 中，单击“长度”列的表头，在弹出的对话框中，将“输出字段名”设置为 length_km，将“输出字段类型”设置为“十进制数（实数）”，将“输出字段宽度”设置为 10，将“精度”设置为 2，单击“确定”按钮，完成长度字段的创建。

Basics statistics

Input Vector Layer
usa_railroads

☐ Use only selected features

Target field
length_km

Statistics output

Parameter	Value
Mean	127.751569149
StdDev	125.80562595
Sum	96069.18
Min	0.01
Max	936.6
N	752.0
CV	0.984767755...
Number of unique values	743

Press Ctrl+C to copy results to the clipboard

0% OK Close