Geographic Information Systems

Clipping Error 1: Cutline polygon is invalid

Asked 3 years, 11 months ago Active 2 years, 6 months ago Viewed 12k times

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I used the sample files located at this URL to learn QGIS: https://qgis.org/downloads/data/.

I tried to clip SR_50M_alaska_nad.tif using a shapefile as a mask (alaska.shp). The problem is I got this error which states that:

> Ring Self-intersection at or near point .... Error 1: Cutline polygon is invalid.

How do I solve my problem using QGIS 2.18.9?

qgis vector vector-layer

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edited Feb 26 2018 at 8:37

Marco

2,999 12 32

asked Feb 24 2018 at 12:58

bryan

141 1 1 3

4 Try running the algorithm `v.clean` on alaska or a `buffer` with 0 width. – Matthias Kuhn Feb 24 2018 at 13:16

I've opened the alaska.shp and it is good, without any validation errors. – jgrocha Feb 24 2018 at 14:16

I check the validity (again, with QGIS algorithm) and it detects the problem. I'll write the solution as an answer. – jgrocha Feb 24 2018 at 14:29

@Bryan Welcome to GIS SE! As a new user please take the tour to learn about our focused Q&A format. – Midavalo ♦ Feb 25 2018 at 16:43

@MatthiasKuhn thank you for your great answer! v.clean really did the thing.. – Marcel Gangwisch Nov 7 2019 at 8:11

2 Answers

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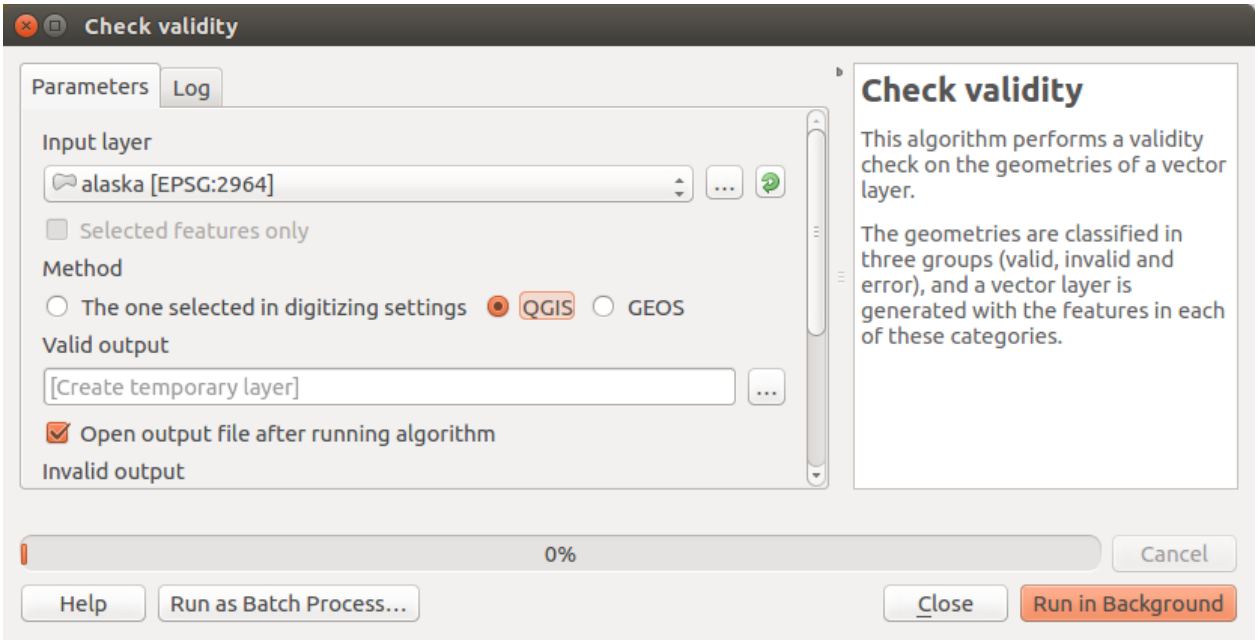
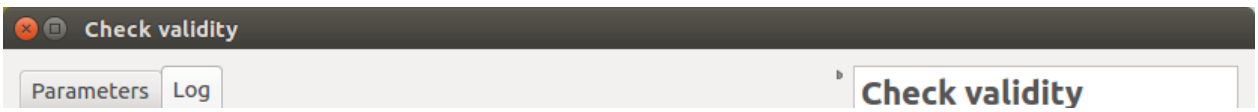
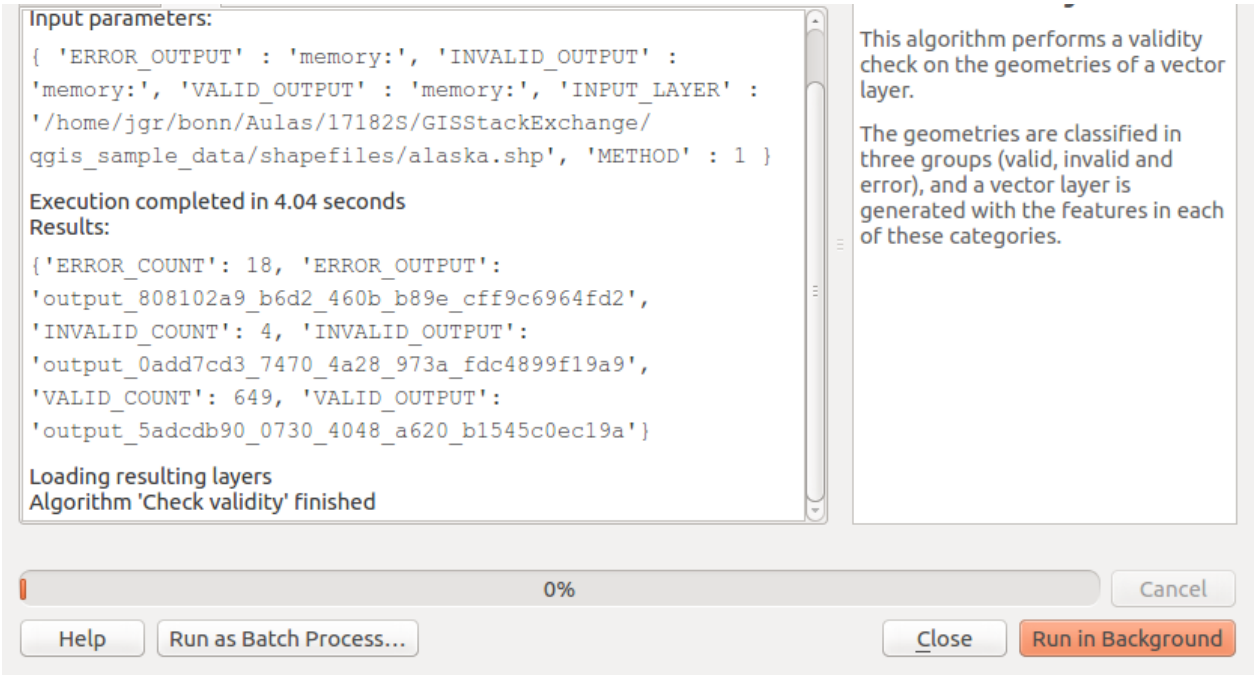
The original shapefile has geometry issues. I've run the **Check validity** with **GEOS** option selected and the output was "no erros". But I ran it again with **QGIS** selected and it detected errors.

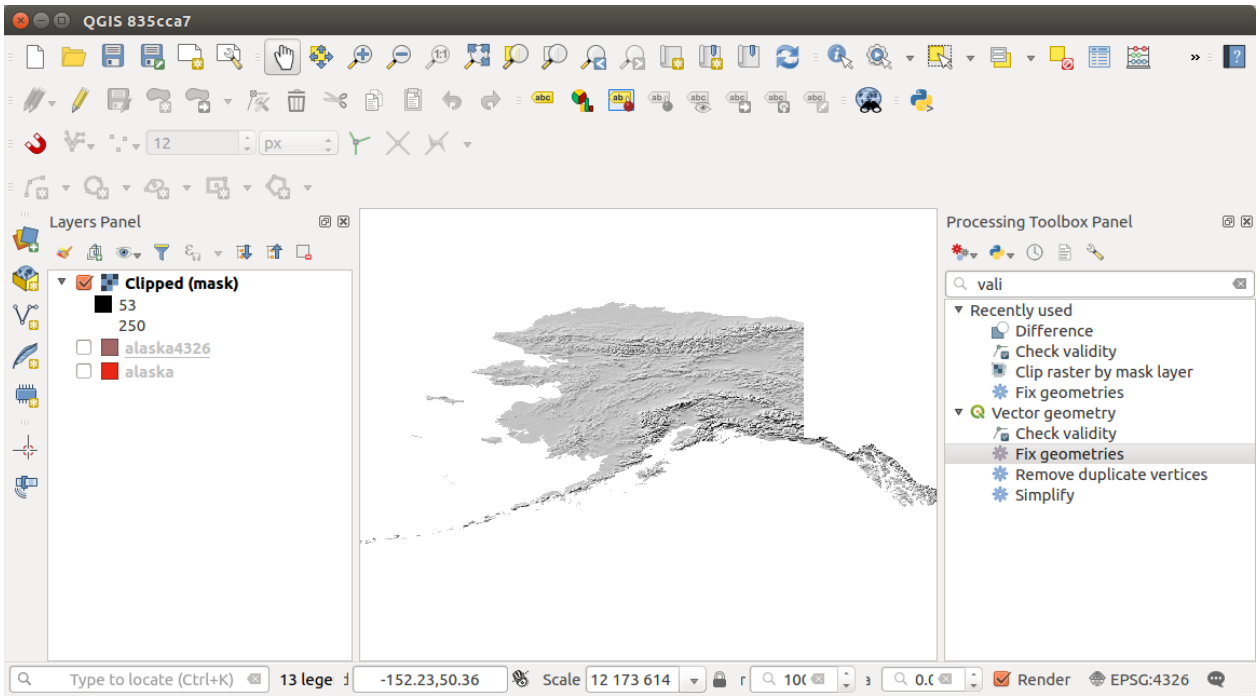


The output was:





Running **Fix geometries** algorithm fixes the invalid geometries. I've also created another alaska shapefile in WGS84, to make sure the clipping layer is in the same coordinates as the raster.



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answered Feb 24 2018 at 15:08

jgrocha
4,430 18 36

1 This **Fix geometries** algorithm is available is QGIS 3. – jgrocha Feb 25 2018 at 13:42

I was encountering the same issue. No problems were detected using either GEOS or QGIS settings in `check validity`. But after running `fix geometries` the problem went away. – DotPi Feb 18 2021 at 15:22

I fixed the issue using the `v.buffer.distance` algorithm with 0 width.

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edited Aug 5 2019 at 5:11

user2856
49.3k 5 89 158

answered Feb 25 2018 at 5:44

bryan
61 1

1 @Bryan Great that you were able to solve the problem yourself! Please edit your answer to give some more detail and some steps that you followed to actually fix the issue – Midavalo ♦ Feb 25 2018 at 16:41

I think `Fix geometries` is not available in QGIS 2.18.9, so @bryan you could mark your answer as the one that solved your problem, it will help others to identify a working approach – Marco Feb 26 2018 at 8:26