

QGIS Application - Bug report #17291

QGIS fixed-distance buffer skips features with invalid geometry

2017-10-16 09:29 PM - Steve Lowman

Status:	Closed		
Priority:	Normal		
Assignee:	Victor Olaya		
Category:	Processing/QGIS		
Affected QGIS version:	2.18.13	Regression?:	No
Operating System:		Easy fix?:	No
Pull Request or Patch supplied:		Resolution:	wontfix
Crashes QGIS or corrupts data:		Copied to github as #:	25189
Description The OGR 'Buffer vectors' algorithm will buffer polygon features with most (possibly all?) kinds of geometric errors, and with a zero-distance buffer it will fix them, too. We have used this as an easy way to fix invalid geometries, and it has consistently worked. However, the QGIS fixed-distance buffer skips features with geometric errors. There is no clear warning that features have been lost, which constitutes a risk to data security. And, it is not useful for fixing the invalid geometries, but the OGR buffer is still good for this.			
Related issues:			
Related to QGIS Application - Bug report # 17293: Processing output name call...		Closed	2017-10-16
Duplicated by QGIS Application - Bug report # 18080: Vector Fixed Distance Bu...		Closed	2018-02-12

History

#1 - 2017-10-16 09:31 PM - Steve Lowman

- File Processing vs OGR buffer on invalid geometries Demo2.mp4 added

Adding second video demo showing OGR buffer tool does not skip features with invalid geometries

#2 - 2017-10-16 09:43 PM - Steve Lowman

Cross ref to 17293. Both are about buffers, including both QGIS and OGR tools.

Also to comment, I think this may count as a regression, as the vector menu buffer tool now has this problem that was not there in the 2.14 buffer tool.

#3 - 2017-10-17 09:24 AM - Jürgen Fischer

- Related to Bug report #17293: Processing output name called after the operation name even when saved to file added

#4 - 2017-10-17 11:48 AM - Giovanni Manghi

Steve Lowman wrote:

Cross ref to 17293. Both are about buffers, including both QGIS and OGR tools.

Also to comment, I think this may count as a regression, as the vector menu buffer tool now has this problem that was not there in the 2.14 buffer tool.

that ticket is not about just the buffer tool, and anyway seems invalid (see my comments). This ticket is a about a completely different matter.

#5 - 2017-10-17 11:51 AM - Giovanni Manghi

- *Operating System deleted (W10)*
- *Status changed from Open to Feedback*

Steve Lowman wrote:

| *Adding second video demo showing OGR buffer tool does not skip features with invalid geometries*

The tools (that do the same geoprocessing/analysis operation) have different origins so is expected that they can behave in slightly different ways. In this case is widely known that QGIS native geoprocessing tools until 2.18 have issues handling and reporting about geometry errors in inputs. You must check in QGIS master (where this native QGIS tools are being ported to C++) to see if anything changed. Thanks.

#6 - 2017-10-17 11:52 AM - Giovanni Manghi

If you can please also attach your sample data.

#7 - 2017-10-17 04:14 PM - Steve Lowman

- *File TestForBugs.zip added*

Thanks Giovanni. I see this is related to #17132, which has a high priority. Sorry, I am just an LTR user and probably adopted 2.18 a bit too early with it still having bugs like this.

Adding a shapefile, the same as in the video, 76 features, of which 4 have errors that make the Fixed Distance Buffer tool skip them. They are features 22, 26, 44 and 70. The OGR Buffers tool handles them without a problem and fixes their errors when run with zero distance.

#8 - 2017-10-17 04:26 PM - Steve Lowman

- *Status changed from Feedback to Open*

Sample file and comment submitted in response to feedback, so now setting it back to 'Open'.

#9 - 2017-10-17 04:41 PM - Giovanni Manghi

- *Resolution set to wontfix*
- *Status changed from Open to Closed*

Steve Lowman wrote:

| *Sample file and comment submitted in response to feedback, so now setting it back to 'Open'.*

On 2.18.13 in the log there is the warning about the skipped geometries

2017-10-17T15:27:04 1 Feature 22 has invalid geometry. Skipping...
2017-10-17T15:27:04 1 Feature 36 has invalid geometry. Skipping...

2017-10-17T15:27:04 1 Feature 44 has invalid geometry. Skipping...
2017-10-17T15:27:04 1 Feature 70 has invalid geometry. Skipping...

and I believe that for this QGIS release is all that what could be done (this problem has been lengthy discussed in the past).
The same dataset will causes QGIS3 to lock completely, which is kind of a good news because there is the commitment to make this native qgis
geoprocessing tools work correctly in QGIS3. In the meantime in QGIS 2 use more robust alternatives available in the Processing toolbox.

Closed in favor of #17132

#10 - 2018-05-07 03:18 PM - Alessandro Pasotti
- Duplicated by Bug report #18080: Vector Fixed Distance Buffer added

Files			
Processing vs OGR buffer on invalid geometries Demo1.mp4	3.44 MB	2017-10-16	Steve Lowman
Processing vs OGR buffer on invalid geometries Demo2.mp4	3.29 MB	2017-10-16	Steve Lowman
TestForBugs.zip	43.4 KB	2017-10-17	Steve Lowman