# QGIS Application - Bug report #10356
# Buffer locks up system/fills swap (memory leak)

2014-05-26 03:58 AM - J H

| | | | |
|---|---|---|---|
| **Status:** | Closed | | |
| **Priority:** | Severe/Regression | | |
| **Assignee:** | | | |
| **Category:** | Processing/QGIS | | |
| **Affected QGIS version:** | master | **Regression?:** | |
| **Operating System:** | | **Easy fix?:** | |
| **Pull Request or Patch supplied:** | No | **Resolution:** | up/downstream |
| **Crashes QGIS or corrupts data:** | No | **Copied to github as #:** | 18777 |

**Description**

the memory usage goes up very quickly and my system becomes very unresponsive after about 30 seconds.
processing does not complete even after a few hours.
offending shp file attached.
buffer input is as follows

- segments: 5
- buffer distance: 0.013
- same thing happens with or without dissolve.

i'm using git master commit:d652a8099fc5c234eeb3b19e754d91e001f2f956

QGIS version ---------- 2.3.0-Master
QGIS code revision -------- d652a80
Compiled against Qt ------- 4.8.5
Running against Qt -------- 4.8.5
Compiled against GDAL/OGR - 1.10.1
Running against GDAL/OGR -- 1.10.1
Compiled against GEOS ----- 3.4.2-CAPI-1.8.2
Running against GEOS ------ 3.4.2-CAPI-1.8.2 r3921
PostgreSQL Client Version - 9.3.4
SpatiaLite Version -------- 3.0.1
QWT Version ---------- 5.2.3
PROJ.4 Version ---------- 480
QScintilla2 Version ------- 2.8
Python ---------- 2.7.6

## History

**#1 - 2014-05-26 04:23 AM - Johannes Kroeger**

I tried this on a machine with more RAM than JH's. The process worked but ended up using about 7 Gigabytes for this operation. What is worse, it did not free this memory afterwards. I had to close QGIS to free it.

I loaded the shapefile. Vector -> Geoprocessing Tools -> Buffer. Left the segments at 5, set the distance to 0.013, set a filename to output and clicked OK.

QGIS version 2.3.0-Master
QGIS code revision commit:acd574d

#### #2 - 2014-05-26 05:38 AM - Giovanni Manghi

*- Target version set to Version 2.4*
*- Operating System deleted (linux)*
*- Priority changed from Normal to Severe/Regression*
*- Subject changed from Buffer locks up system/fills swap to Buffer locks up system/fills swap (memory leak)*
*- File buffer.zip added*

A few notes:

- the problem seems to be related to the "complexity" of the geometry, a slightly generalized version of the line allows the qgis buffer operation to run in a few seconds without issues.

- also GRASS v.buffer (run in the processing toolbox) seems to hang with the original geometry (but with no memory leak), but works with the simplified/generalized one

- SAGA buffer (run in the processing toolbox) produces a result in a few seconds using the original geometry as input

- older releases of QGIS (<= 2.0.1) didn't created an output with the original vector (the message at the end of the operation was that the result had an invalid geometry) but also didn't had the memory leak and didn't froze the program

#### #3 - 2014-06-09 07:45 AM - Martin Dobias

*- Resolution set to up/downstream*
*- Status changed from Open to Closed*

The issue with high memory consumption / memory leaks lies inside of the GEOS library. I was able to create a test case that does not involve QGIS.

The input shape is not really small: it contains nearly 32 thousand vertices.

With smaller buffer width (e.g. 0.001) or greater width (e.g. 1.0) the memory consumption stays low.

#### #4 - 2014-06-09 07:55 AM - Martin Dobias

Created GEOS bug report for the issue: http://trac.osgeo.org/geos/ticket/693

#### #5 - 2017-05-01 01:21 AM - Giovanni Manghi

The "ftools" category is being removed from the tracker, changing the category of this ticket to "Processing/QGIS" to not leave the category orphaned.

### Files

| | | | |
|---|---|---|---|
| x2.shp.tar.gz | 296 KB | 2014-05-26 | J H |
| buffer.zip | 190 KB | 2014-05-26 | Giovanni Manghi |