# QGIS Application - Bug report #19775
## Error on calculation $area

2018-09-05 04:37 PM - Franck-Yves DABIN

| | | | |
|---|---|---|---|
| **Status:** | Closed | | |
| **Priority:** | Normal | | |
| **Assignee:** | | | |
| **Category:** | Field calculator | | |
| **Affected QGIS version:** | 3.2.2 | **Regression?:** | No |
| **Operating System:** | Windows 10 | **Easy fix?:** | No |
| **Pull Request or Patch supplied:** | No | **Resolution:** | no timely feedback |
| **Crashes QGIS or corrupts data:** | No | **Copied to github as #:** | 27600 |

### Description

Hi,

I work on QGIS 3.2.2.

I have a project in EPSG:32630 with a POSTGIS layer in EPSG:32630. No problem with the $area calculation.

When I define my project in EPSG: 32629, the $area function give me a different result (1755 Ha) than :

- Export/Add Geomtry columns in the vector menu of QGIS (1732 Ha)
- FME (Safe Software) (1732 Ha)
- ArcGIS (1732 Ha)

An example of data is associated to this post.

Thanks for your reply,

## History

### #1 - 2018-09-05 05:00 PM - Franck-Yves DABIN

*- File example_3.zip added*

Here an example more detailed :

- Column "superf_30" calculated with $area / Layer EPSG:32630 / Project EPSG:32630 (in Ha)
- Column "superf_29" calculated with $area / Layer EPSG:32630 / Project EPSG:32629 (in Ha)
- Column "superf_no" calculated with $area / Layer EPSG:32630 / Project No projection (in Ha)
- Column "superf_29b" calculated with $area / Layer EPSG:32629 / Project EPSG:32629 (in Ha)
- Column "area" calculated with Export/Add Geometry columns in the vector menu of QGIS / Layer EPSG:32629 / Project EPSG:32629 (in square meters)

This last area is the same than in FME and ArcGIS and seems to be true.

### #2 - 2018-09-05 07:01 PM - Harrissou Santanna

*- Status changed from Open to Feedback*

Sorry I did not view the attached data but are you aware that, as stated in their help panel, the $area returns the ellipsoidal (if set, otherwise planimetric) area based on the **project CRS** while area($geometry) returns the planimetric area in the **layer CRS**?

### #3 - 2018-09-05 09:57 PM - Franck-Yves DABIN

Thanks for your reply, Sorry for this false ticket.

If I understand the  $area (based on  ellipsoid) have a better precision than the area($geometry) (based on plan) ?

However, there remains an anomaly : We use custom dialogs for editing the POSTGIS layer and the area is calculated automatically by the function "$area" but the result is the same than "area($geometry)".

If I do a "$area" manually on the attribute table, the result is different from the "$area" of the custom dialogs.

**#4 - 2018-09-06 12:00 PM - Giovanni Manghi**

> *However, there remains an anomaly : We use custom dialogs for editing the POSTGIS layer and the area is calculated automatically by the function "$area" but the result is the same than "area($geometry)".*
> *If I do a "$area" manually on the attribute table, the result is different from the "$area" of the custom dialogs.*

can you update the subject and description of this ticket then? thanks!

**#5 - 2019-02-23 08:37 PM - Jürgen Fischer**

*- Resolution set to no timely feedback*

*- Status changed from Feedback to Closed*

Bulk closing 82 tickets in feedback state for more than 90 days affecting an old version. Feel free to reopen if it still applies to a current version and you have more information that clarify the issue.

## Files

| | | | |
|---|---|---|---|
| example.zip | 2.82 KB | 2018-09-05 | Franck-Yves DABIN |
| example_3.zip | 2.63 KB | 2018-09-05 | Franck-Yves DABIN |