

## Fixing Broken Shapefiles

Let's see if [the WPRDC's copy of the Neighborhoods shapefiles](#) will work for us. We're going to

- download the files,
- add Neighborhoods as a vector layer,
- add the cleaned up trees file as a delimited text layer, and
- run Count Points in Polygon.

If it doesn't work (spoiler: it won't), we'll try to do the repair. In slightly less detail than week 3's descriptions, here's what the fix looks like:

1. Open the Processing Toolbox (the icon looks like a gear) and find "check validity" under Vector Geometry. Run the tool.
2. Click the checkmark to have it show you any neighborhoods with invalid geometries.
3. Note the neighborhood ID of the Invalid Output layer, and select it from the Attribute Table of the Neighborhoods\_ layer.
4. Open the Toolbox (the gear beside Field Calculator), and search for "fix"
5. Open "Fix Geometries," make sure the input layer is Neighborhoods\_, make sure the "selected features only" box is checked, and give it a directory and new filename to save the fixed neighborhood to.
6. Now we're going to remove the broken neighborhood from our layer. Maybe you want to save your project first.
7. Go into the Attribute Table of Neighborhoods\_. Probably, the neighborhood with the geometry issues is still selected. (There's a "move selection to top" button!)
8. Click the pencil to put the table in Edit Mode, and then (making sure only the one row is highlighted) click the trash can to remove this attribute. Click the pencil again to exit edit mode, and save the changes.
9. Now we have to put our fixed neighborhood back into its parent layer. Go to Vector -> Data Management Tools -> Merge Vector Layers, and choose Neighborhoods\_ and Fixed geometries as your input layers. Give a location for the saved file to go (obviously, I called mine "fixed\_neighborhoods" when I did this in the past).
10. Now let's see if we can count the trees again!