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GIS Process Log File

12/2/2022

| **Task No.** | **Task Description** |
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| 1 | Create a new GIS map project in the project directory. Select Light Grey Canvas as the basemap, and remove the reference layer. |
| 2 | Download shapefiles from the Pittsburgh PA GIS Open Data Portal:   1. Neighborhoods with SNAP Data ([link](https://pghgishub-pittsburghpa.opendata.arcgis.com/datasets/pittsburghpa::neighborhoods-with-snap-data/about)) as a geodatabase 2. City of Pittsburgh Boundary ([link](https://pghgishub-pittsburghpa.opendata.arcgis.com/datasets/pittsburghpa::pittsburgh-city-boundary/explore?location=40.430815%2C-79.979816%2C12.25)) as a shapefile   Unzip both of these files and move the resulting contents to the **data/** folder of the project directory |
| 3 | In the GIS Project, select Connections > Database > Add Database and select the Neighborhoods with SNAP Data, then adding the contained **.gdb** file (it should have a long name).  In the Catalog pane, drag and drop the “Neighborhood\_SNAP” layer from the new geodatabase into the project. |
| 4 | In the GIS Project, use the Feature Class to Feature Class tool to access the Pittsburgh\_City\_Boundary shapefile and import it into the project geodatabase. Title the output name “City\_Boundary”. |
| 5 | Perform the following steps to run the R script:   1. Select the GISProject.Rproj file to open the directory in RStudio 2. Select the “Source” button in the top-right corner of the script window pane, or on Windows press **Ctr**+**Shift**+**Enter** to run the entire script    1. If you run this for the first time without already having **Data/smell\_data.csv** downloaded, it will take around one minute to query all the data. 3. Close RStudio |
| 6 | In the GIS Project, use the Table to Table tool with the input rows as the smell\_data.csv file and the output name smell\_data.  Use the XY Table to Point with the following settings:   * Input Table: smell\_data * Output feature class: smell\_points * X Field: longitude * Y Field: latitude * Coordinate System: GCS\_WGS1984   Use the Erase Point tool to clip the smell reports layer to the Neighborhood\_SNAP layer, with the Operation Type setting set to “Outside” to eliminate all smell reports falling outside the city of Pittsburgh. |
| 7 | Download Shapefiles from the Alleghany County GIS Open Data Source   1. Water Features ([link](https://openac-alcogis.opendata.arcgis.com/datasets/AlCoGIS::allegheny-county-hydrology-areas/explore?location=40.434655%2C-80.022402%2C9.65)) as a shapefile   Unzip the file and move the resulting contents to the **data/** folder of the project directory. In the GIS Project, use the Feature Class to Feature Class tool to access the Hydrology\_Areas shapefile and import it into the project geodatabase. Title the output name “Water”. |
| 8 | Change the project coordinate system to NAD 1983 StatePlane Pennsylvania South FIPS 3702 (US Feet) |