ACCESS FOOTPRINTS IN ARCPRO

In collaboration with Cal Data and the Department of Finance, the Building Footprints Dataset enriches the Global ML Building Footprints with Census TIGER data for the state of California. Footprints may be accessed via URL, python, or ArcPro. What follows details the setup and use from within ArcPro.
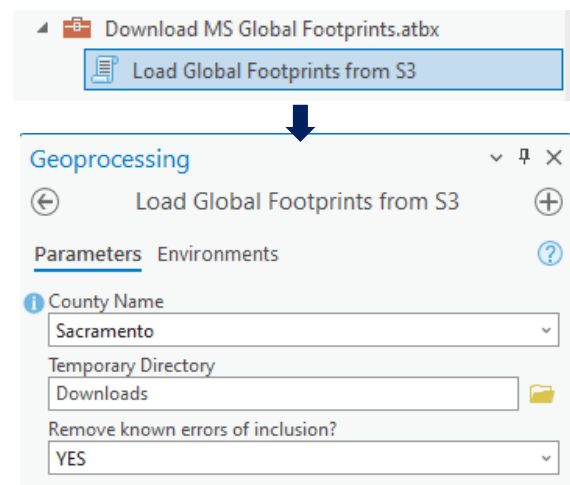
Setting up the Workspace

1) **Clone your Python Environment**: The default python environment in ArcPro cannot be edited and requires an alternate directory to be established. Within an ArcPro project, use the following steps to clone your Python directory from the Package Manager. If you already have a custom python directory, you may skip this step.
2) **Install Packages**: Ensure the cloned environment is activated. Install the packages GeoPandas 0.14.0 and Pandas 1.4.4 or greater within the Package Manager.
3) **Add the Toolbox**: Download the ESRI ArcPro Toolbox named Download MS Global Footprints.atbx. Connect to the toolbox within ArcPro 3.1.3 or greater.

Using the Tool

Within the toolbox, a single routine called **Load Global Footprints from S3** is present. Selecting the tool will prompt for three user inputs:

- *County Name* – the data may be downloaded for any California county, selected from the dropdown.
- *Temporary Directory* - This temporary location receives a shapefile briefly, which is deleted after being imported to your project geodatabase.
- *Remove known errors of inclusion?* – A Boolean value to exclude non-footprints from the extract. See the following section for more information on submitting new errors of inclusion.

When complete, the new footprints feature will be added to the map as **GLOBAL_[FIPS]** where FIPS is the 3-digit code corresponding to a county. The feature class is saved to your default project workspace.

Submitting Errors of Inclusion

No machine learning model is perfect, and the Global Building footprints dataset sometimes gets things wrong. The most common issue is errors of inclusion - locations such as mountain ranges, agricultural fields, water, and atmospheric noise that have been wrongfully included as a building footprint.

While known errors may be excluded from your extract within the tool, the underlying list is incomplete and additional problem areas exist. To submit new errors, please email Fennis.reed@dof.ca.gov or complete a brief survey. While we cannot make changes to the footprint product, we can make intentional exclusions when the data is accessed.