University of Virginia – Open Space Preservation GIS Tool

Instructions

1. **Understand the Community Rating System (CRS), its Open Space Preservation (OSP) Activity, and the purpose of the GIS tool.**

If you are unfamiliar with any of these items, please refer to the Supplemental Resources document provided in the GitHub repository. Links to a variety of resources are provided to help you understand the purpose and scope of this project.

Note: If at any time you are experiencing trouble, or have questions about the project, please reach out to the developers. We are happy to help.

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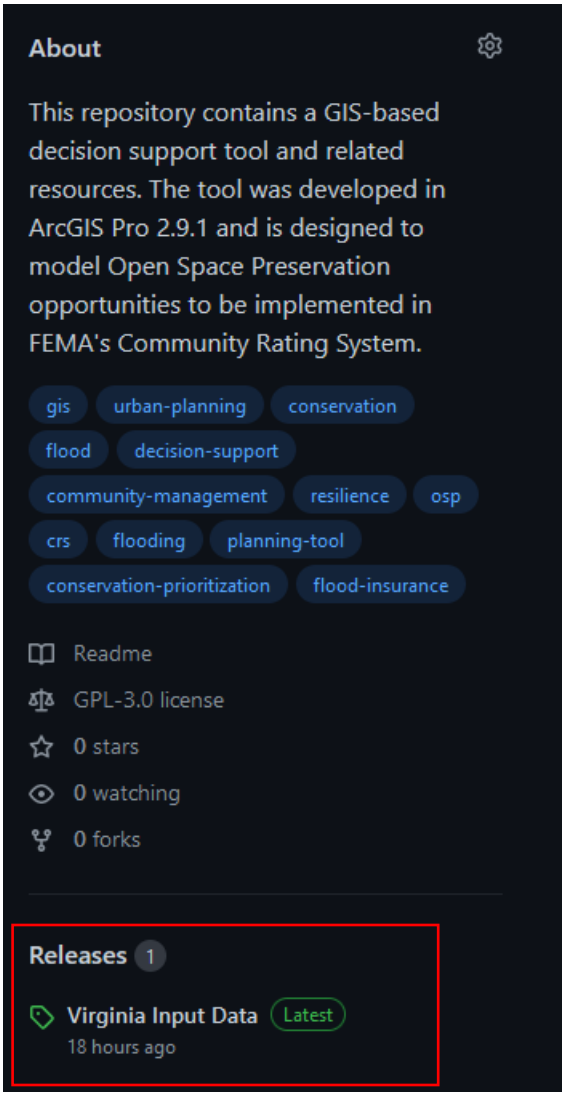
2. **Collect input data.**

The tool is designed to accept nationally available datasets, with the option to provide supplemental local data. At this time, we encourage communities to use only local tax parcels represented as polygons. If you would like to replace any other dataset with your own, please contact the developers.

Required datasets are as follows. For detailed download instructions, refer to NOAA's "How-To" guide for mapping OSP. It is highly recommended to download datasets directly onto your machine (as opposed to external drives or cloud storage), as this will significantly decrease processing time. You will want to remember the stored locations of your input datasets for later.

- FEMA's NFHL
- The National Hydrography Dataset
- Protected Areas Database of the United States
- National Land Cover Database

Note: If you are in Virginia, we have prepared the data for you and provided it as a 'Release' in the GitHub repository. See the screen-capture below. This is a large ZIP file containing a geodatabase; please be patient when downloading and unzipping.



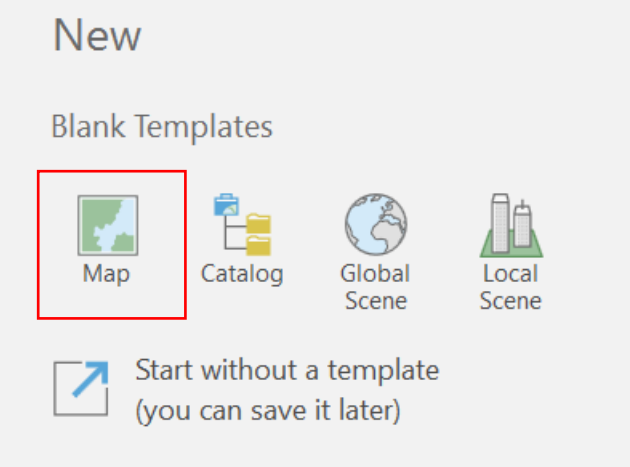
Screen-capture of the CRS GitHub repository. Virginia input data are provided as a Release

3. Set up the GIS tool.

The GIS tool is comprised of two files, which are provided in the GitHub repository as a ZIP file. Download and extract them to the same folder. The two files are:

1. CRS_Toolbox.tbx
2. OSP_Script.py

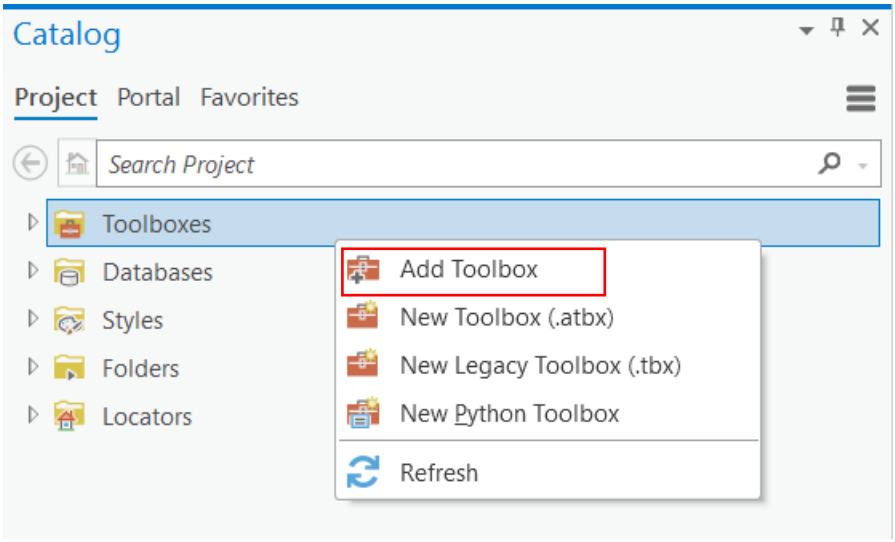
Start ArcGIS Pro and open a new map. Similar to the input data, we recommend saving this new project to your local storage. Note the location of the new project in your storage.



Screen-capture of ArcGIS Pro startup screen. Open a new project by clicking ‘Map’.

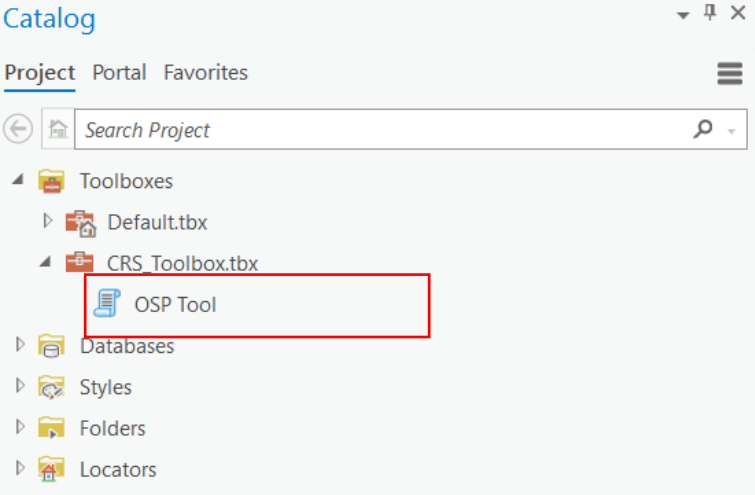
Make sure the Catalog Pane is visible. If it does not open automatically, click the ‘View’ tab at the top of the screen, and click ‘Catalog Pane’.

In the Catalog Pane, right click on ‘Toolboxes’ and click ‘Add Toolbox’. Navigate to the CRS_Toolbox.tbx file and add it.



Screen-capture of the ArcGIS Pro Catalog Pane. Click ‘Add Toolbox’ to add the GIS Tool to your project.

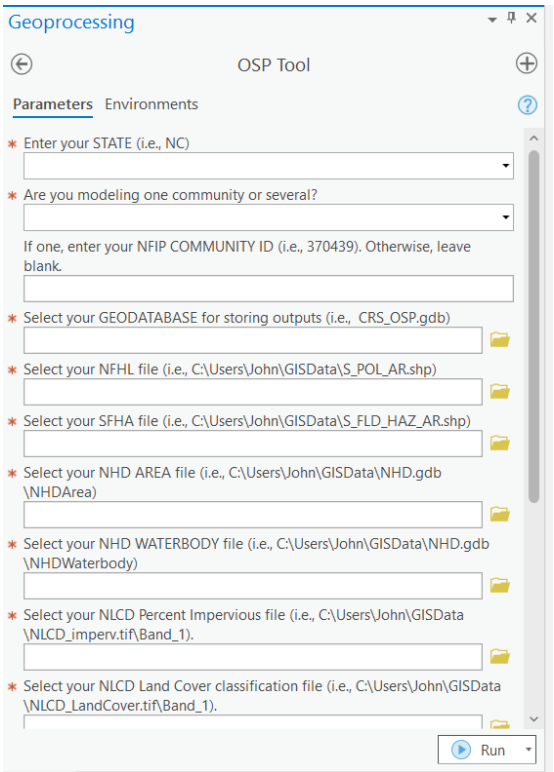
Double click on the newly added Toolbox and double click on the OSP Tool icon to open the GIS tool.



Double-click on the OSP Tool icon to open the GIS tool

4. **Select input data and run the tool.**

Required fields are denoted with a red asterisk. To select input files, click the folder icons and navigate to the datasets. For storing outputs, you will likely want to use the geodatabase that was automatically generated with your new ArcGIS Pro project. It will be located where you saved the project. Once required fields are filled, you may click 'Run'. Sit back, and let the tool go!



Screen-capture of the GIS tool user interface, open in the ArcGIS Pro Geoprocessing Pane

5. **Interpret the output**

As the tool runs, it will add various layers to the project. Interpreting these outputs may not be intuitive at first; therefore, we have prepared a comprehensive output guide to help you.