

ArcGIS Online Analysis

Spring 2021 GIS Workshop

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Links

Class Page

https://guides.lib.virginia.edu/gis/teaching_resources

ArcGIS Online

<https://uvalibrary.maps.arcgis.com/home/>

ArcGIS Online Analysis Tools Overview

<https://doc.arcgis.com/en/arcgis-online/analyze/perform-analysis.htm>

ArcGIS Online Analysis Tool Use


<https://doc.arcgis.com/en/arcgis-online/analyze/use-analysis-tools.htm>

Create or Login to ArcGIS Online Account

***If you're not a UVA affiliate, or don't have an Eservices login, please stop here and await further instructions or use your own ArcGIS Online account.

Go to: <https://uvalibrary.maps.arcgis.com/home/signin.html>

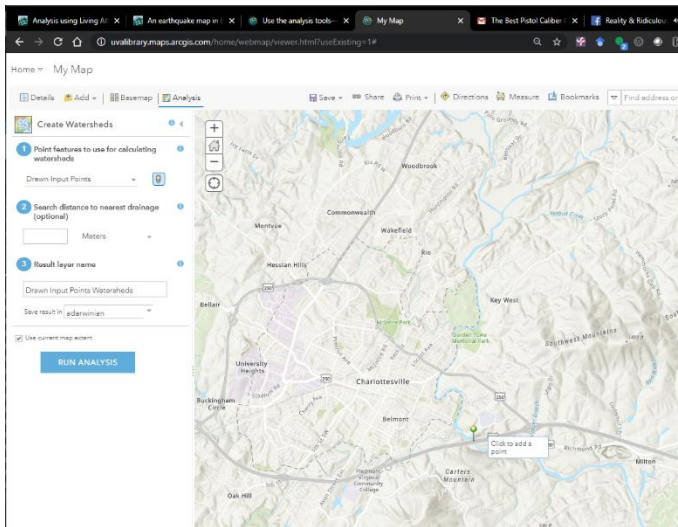
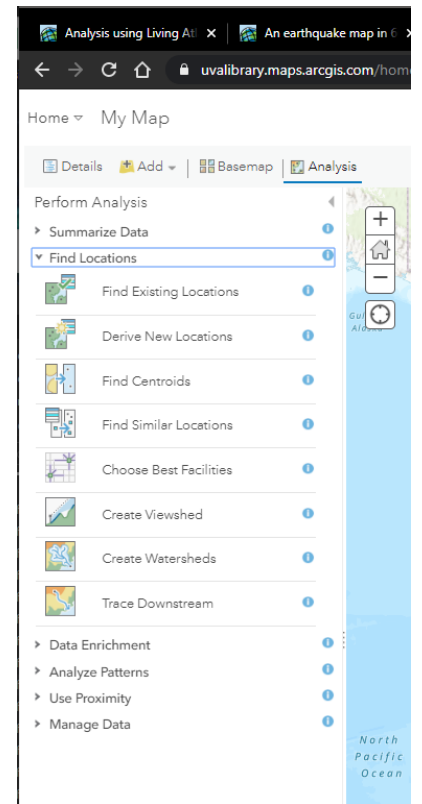
- Click **University of Virginia**

A blue rectangular button with the text "UNIVERSITY OF VIRGINIA" in white, uppercase letters.

- Sign in using your NetBadge credentials.

Watershed Analysis

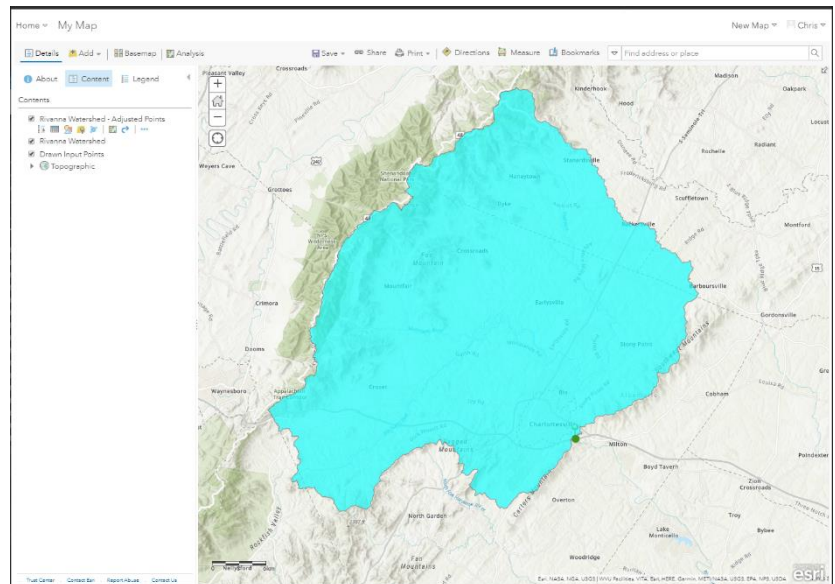
1. From the **Map**, click the **Analysis** tab.
2. Expand the **Find Locations** section.
3. Click **Create Watershed**.
4. Zoom to location of interest.
5. Place a point by clicking the Draw tool and clicking on the map.



6. Set Search distance of needed.
7. Give resultant layer a meaningful name.
8. Turn on/off **Use current map extent** as needed.
9. Click **Run Analysis**.

The pour point here is the Rivanna River at through the pass between Southwest and Carter Mountain.

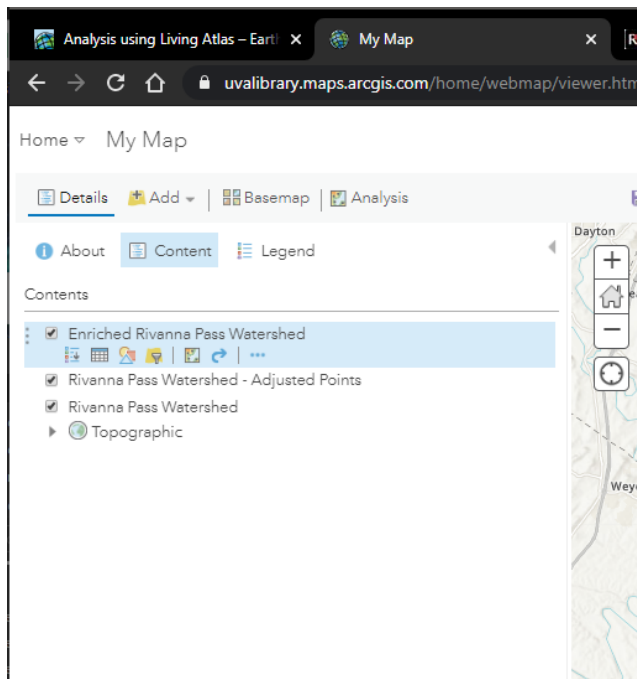
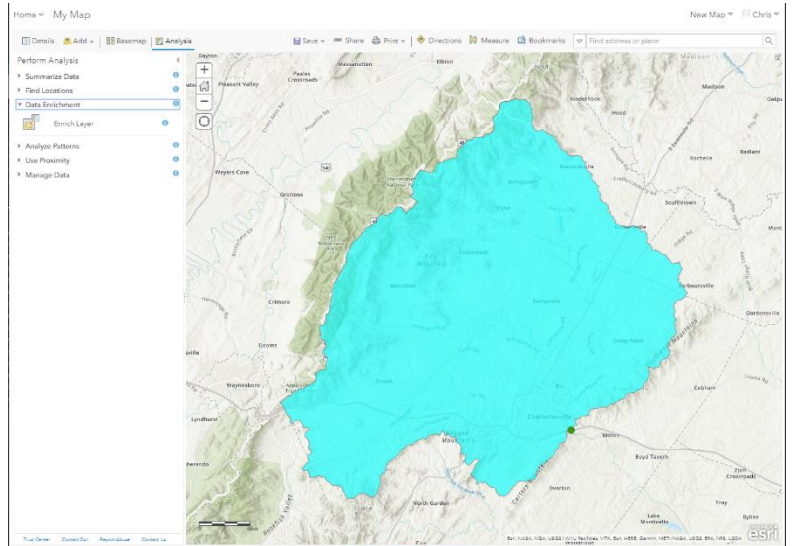
NOTE: The other method for inputting data for this tool is to use an existing point layer.



Enrich Watershed Layer

How many people live in the Rivanna Watershed above Carters Mountain?

1. Start with a fresh map if desired by clicking **New Map** (in upper left-hand corner of **Map** page).
2. Add the Rivanna Watershed layer by **Add > Search for Layers > My Organization**. Search “Rivanna” and select **Rivanna_Pass_Watershed** by **UVa_Data**.
3. Go to **Analysis > Data Enrichment > Enrich Layer**.
4. Select **Rivanna_Pass_Watershed** for the No. 1.
5. Select 2019 Total Population for No. 2 by clicking **Select Variables > Population > 2020 Total Population (Esri)**. Hit **Apply**.
6. Click **Run Analysis**.



7. Change result name to something meaningful keep in mind that layer names are unique within an organization.
8. View results by clicking **Show Table** under the resultant layer name.

Redefining Charlottesville Elementary School Boundaries by Shortest Distance

1. Start with a fresh map if desired.
2. Add Charlottesville School locations layer by clicking **Add > Search for Layers > My Organization** and searching “Charlottesville Elementary Schools” and selecting **UVa_Data** version.
3. Launch **Create Drive-Time** tool by clicking **Analysis > Use Proximity > Create Drive-Time Areas**.
4. Ensure our school location layer is used for No. 1.
5. Select **Walking Distance** and **Towards Facility** for No. 2.
6. Select **Split** for No. 3.
7. Give your new layer a meaningful name for No. 4.
8. Turn off **Use current map extent**.
9. Click **Run Analysis**.

The resultant layer creates network-derived buffers around each school with boundaries between the schools for equal distance. This layer extends far into the county but we can fix this!

10. Add Charlottesville boundary layer by clicking **Add > Search for Layers > My Organization** and searching “Charlottesville Boundary” and adding **UVa_Data** version.
12. Select **Overlay Layers** from **Manage Data** under **Analysis**.
12. Select school areas for No. 1.
13. Select Cville boundary for No. 2.
14. Select Intersect for No. 3.
15. Give new layer meaningful name for No. 4.
16. Click **Run Analysis**.

You can compare this layer to the actual school boundary layer. The City’s layer is called “Elementary School Zone Area” by CharlottesvilleAdmin

