SCHOLARS' LAB

ArcGIS Online Analysis

Spring 2022 GIS Workshop

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Links

Workshop Home 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

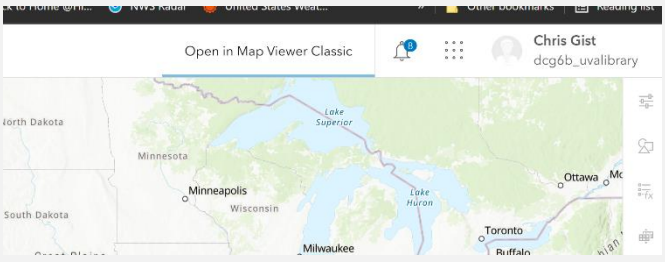
*****If you're not a UVA affiliate, or don't have an Eservices login, please stop here and await further instructions or use your own ArcGIS Online account.**

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

- Click **University of Virginia**

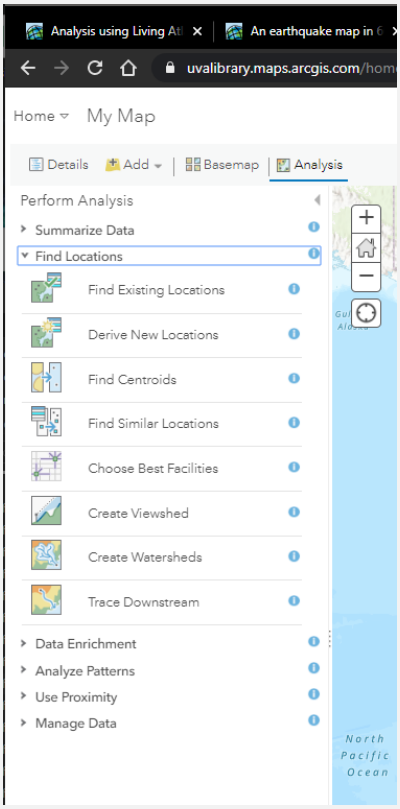
- Sign in using your NetBadge credentials.

ArcGIS Online now defaults to the new map viewer. This new viewer is great for visualizing data and giving users more interactivity with a map. However, it still lacks the analysis tools. We must open the old now "Map Viewer Classic" by clicking on the link near the upper right corner of the new viewer.

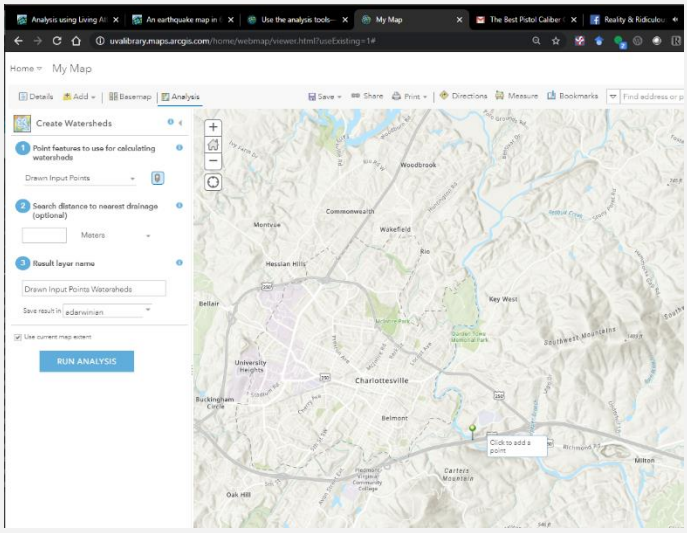


Watershed Analysis

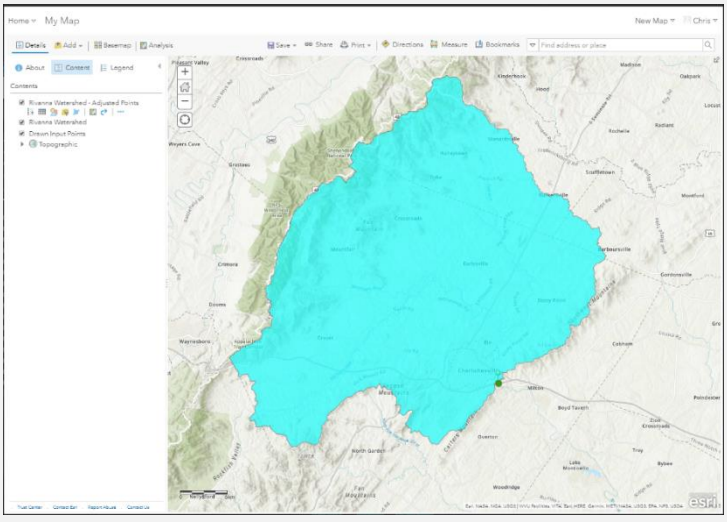
1. From the (classic) **Map**, click the **Analysis** tab.
2. Expand the **Find Locations** section.
3. Click **Create Watershed**.
4. Zoom to location of interest.
5. Place a point by clicking the Draw tool in the No. 1 section and clicking on the map.



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



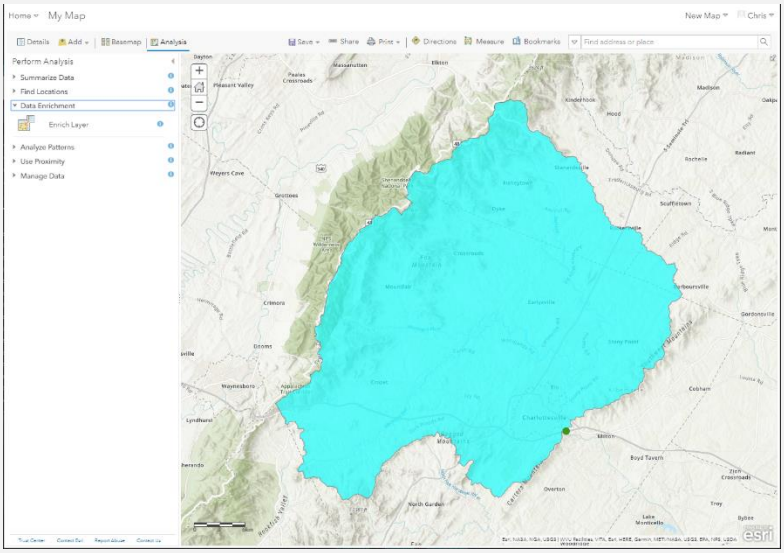
6. Set Search distance of needed. This sill find the highest draining point within the search radius.
7. Give resultant layer a meaningful name.
8. Turn on/off **Use current map extent** as needed.
9. Click **Run Analysis**.



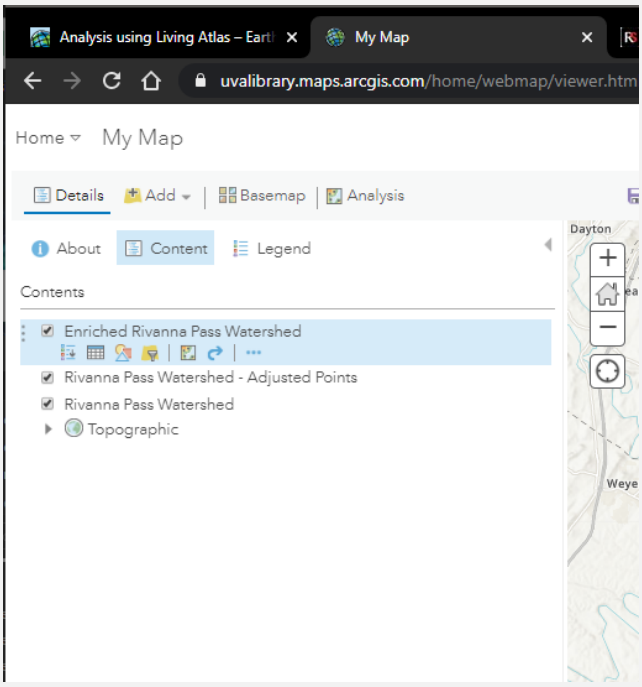
The pour point here is the Rivanna River at through the pass between Southwest and Carter Mountain.

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 right-hand corner of **Map** page) > **Create New Map**.
2. Add the Rivanna Watershed layer by **Add** > **Search for Layers** > **My Organization**. Search "Rivanna_pass" 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 2020 Total Polulation for No. 2 by clicking **Select Variables** > **Population** > **2020 Total Population (Esri)**. Hit **Apply**.



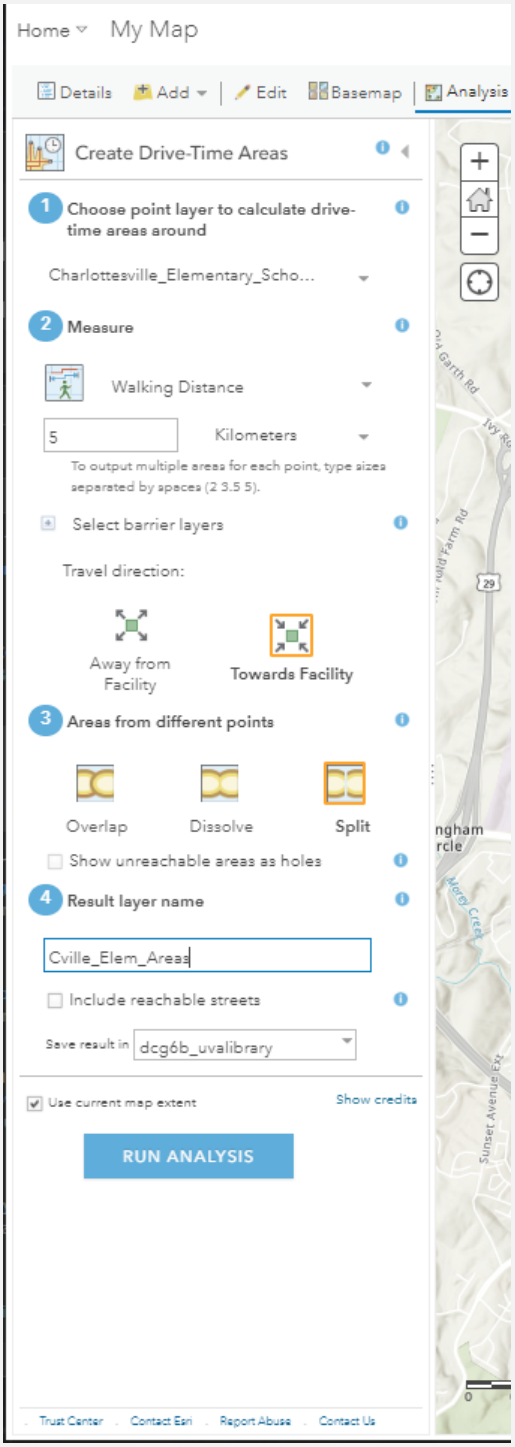
6. Change result name to something meaninful keep ing in mind that layer names are unique within an organization.

7. Click **Run Analysis**.

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 City 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 distnace. 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