Learn More About your Service Area: An Introduction to Community Analyst

Objective: A group of researchers are preparing a proposal to collaborate with community colleges in the University of Arkansas System to promote the integration of data science throughout existing curricula. To better understand the demographics in each area the researchers want to generate a demographic profile at 15-, 30-, and 45-minute driving distances for each community college campus. These data will help the researchers better understand the similarities and differences of the community college service areas. Special considerations: two of the area community colleges are multi-campus; one community college is in a metropolitan area while the others are in rural areas.

Technical Requirements: An ArcGIS Online (AGOL) user account that has been licensed with *Community Analyst* and has *Publisher* rights. An internet connection, a computer (with mouse and keyboard) with Google Chrome or Mozilla Firefox browser(s) installed.

Get Started!

1. Go to https://communityanalyst.arcgis.com

   Scroll down and click the large, green **Sign In** button.

2. On the home page, click the **Get Started Now** button.
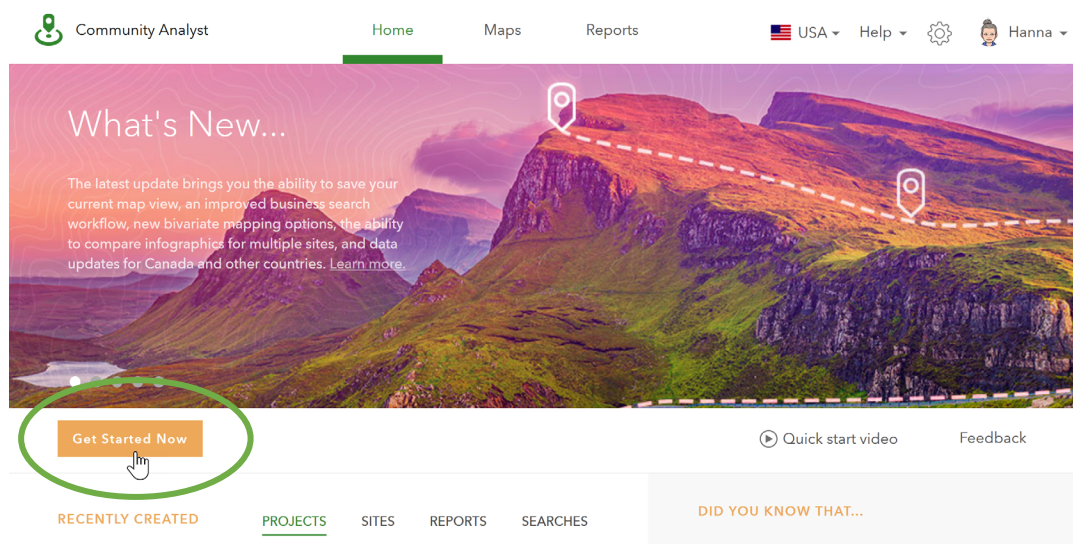
3. If this is your first time using the app, a window opens with information about projects in Business Analyst.

   If necessary, read through the information and click **Next** until you reach the final window. In the final window, click **Get Started Without Importing**.
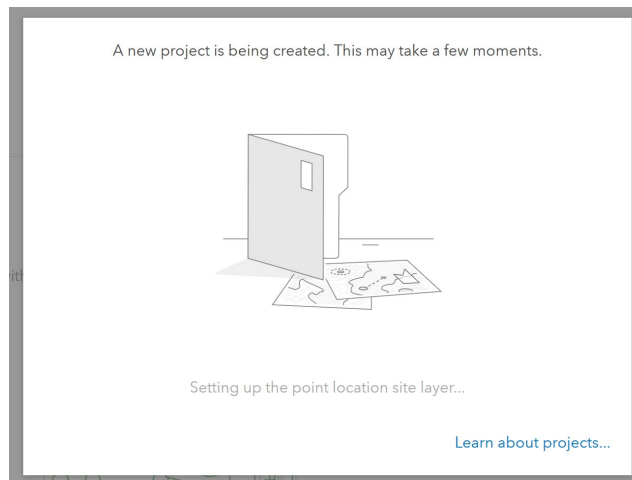
4. From the **Projects Page**, click the **Create Project** button.

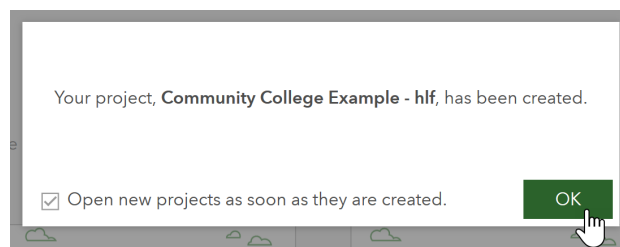On the Create Project dialog box**, enter a name for your project**.

Click the **Create** button.
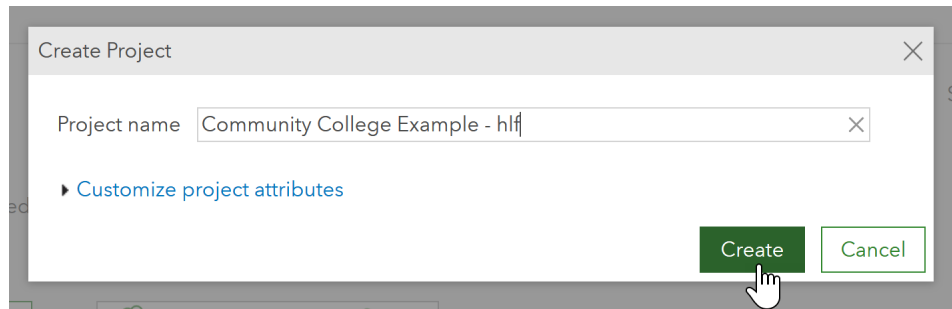
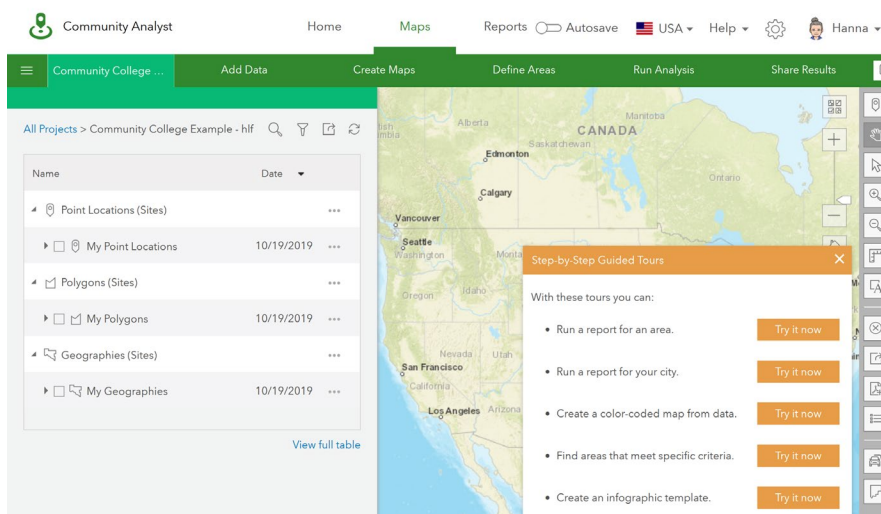While the project is being created the below message box will appear.

When the project is ready, a message box will confirm that has completed. Click the **Ok** button. Your project will open.

5. When your project opens it will look like the image below.

For now, we will close the Step-by-Step Guided Tour (Orange Box with Try it now buttons).

6. To get started we will import the locations of all the University of Arkansas System Community Colleges. We downloaded a list of these locations from the Institute for Education Science (IES) National Center for Education Statistics (NCES) Integrated Postsecondary Education Data System (IPEDS). Some data cleanup was performed on the table to ready it for use in this project.

|	A	B	D	E	F	G	H	I	J
	UnitID	Institution Name	Institution Alias Name	Street add	City	State	ZIP	Longitude	Latitude
	106795	Cossatot Community College of the Universit	CCCUA	183 Colleg	De Queen	AR	71832	-94.3673	34.04339
	107619	Phillips Community College of the University	PCCUA - Helena-West Helena	1000 Camp	Helena	AR	72342	-90.6169	34.54616
	107619	Phillips Community College of the University	PCCUA - DeWitt	1210 Rice	DeWitt	AR	72042		
	107619	Phillips Community College of the University	PCCUA - Stuttgart	2807 Hwy.	Stuttgart	AR	72160		
	107743	University of Arkansas Community College Ri	UACCRM	1100 Colle	Mena	AR	71953	-94.2198	34.59145
	106999	University of Arkansas Community College-Ba	UACCB	2005 Whit	Batesville	AR	72503	-91.6159	35.79292
	107725	University of Arkansas Community College-H	UACCH	2500 S Ma	Hope	AR	71801	-93.5968	33.64167
	107585	University of Arkansas Community College-M	UACCM	1537 Univ	Morrilton	AR	72110	-92.7285	35.17214
	107664	University of Arkansas-Pulaski Technical Colle	UAPTC - North Little Rock	3000 W Sc	North Littl	AR	72118	-92.2992	34.78278
	107664	University of Arkansas-Pulaski Technical Colle	UAPTC - Little Rock South	13000 Inte	Little Rock	AR	72210		
	107664	University of Arkansas-Pulaski Technical Colle	UAPTC - Aerospace Technology Center	1600 West	North Littl	AR	72120		
	107664	University of Arkansas-Pulaski Technical Colle	UAPTC - Business and Industry Center	3303 East	Little Rock	AR	72206		

Click the **Add Data** button located in the green ribbon above the map.

Select **Import File** from the options.
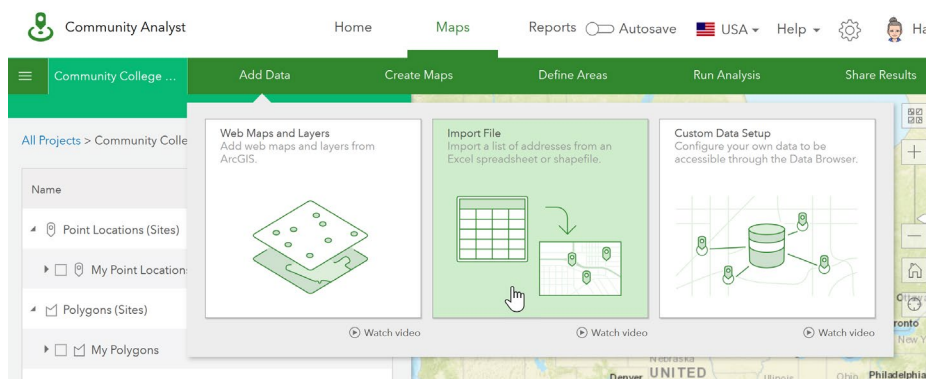
7. Import File – Step 1: Click the **Browse** button; Navigate to the location where the excel file is stored that contains the data downloaded from IPEDS (ipeds uaccs.xlsx); Click the **Open** button to return to the Community Analyst screen.

    Click the **Import** button.
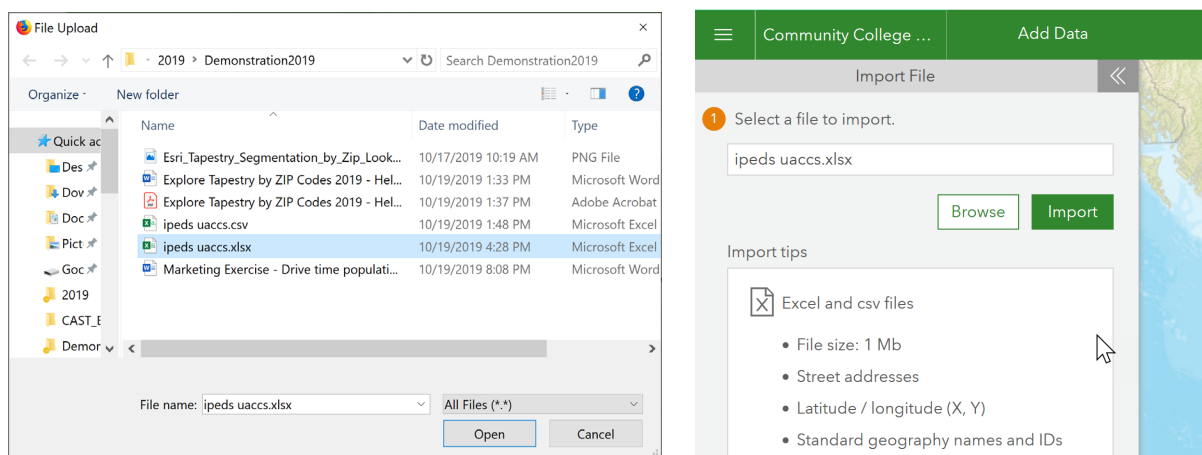
8. Import File – Step 2: Select the radio button for **Points** and click the **Next** button.

9. Import File – Step 3: In the first section, use the drop-down to select the field from the uploaded file that provides the **Address or Place**. In the ipeds uaccs.xlsx file the name of that field is **Street Address.** All other fields have matched automatically because the field names were the same.

    Since our file has some locations without a latitude and longitude those will be mapped using the address information to geocode each location on import. If all of our locations had an associated latitude and longitude, we could leave the first section blank.

    Click the **Next** button**.**

10. Import File – Step 4: The locations have now been added to the map. No changes are necessary on this step, click the **Next** button.
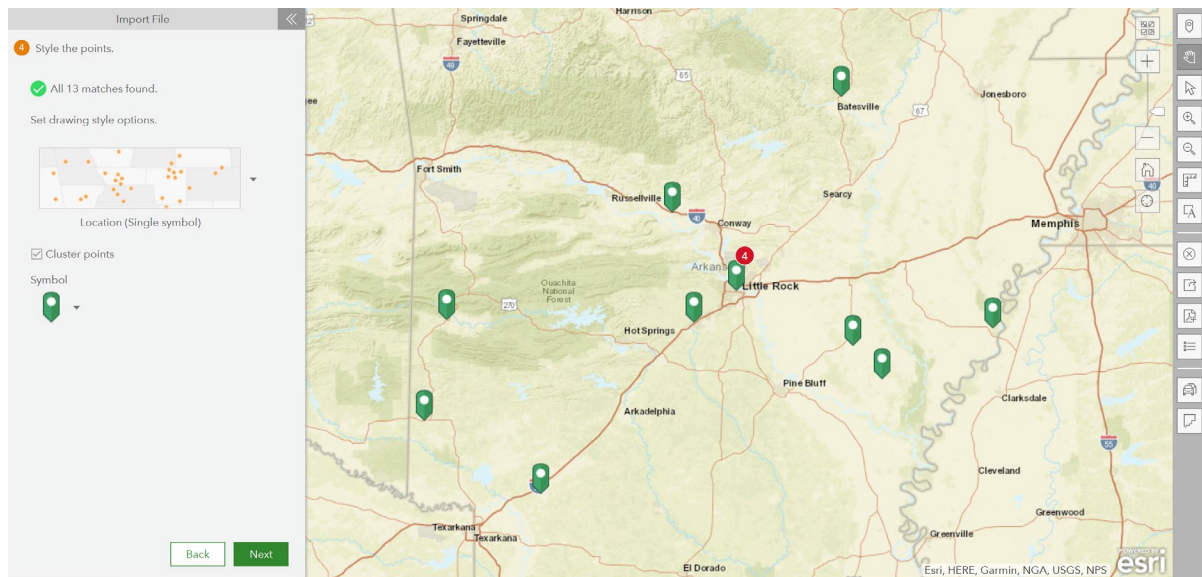
11. Import File – Step 5: Select the radio button for **Create and save sites for all points**;

Click on **Drive time** to enter times for distances in driving minutes. Enter **15, 30, and 45** into the boxes below. The unit of measure will remain minutes;

Enter a new layer name: **uaccs locations**; the column to be used for the site name will be **Institution Alias Name.** Finally, **Check the box** for Open all labels for imported data.

Click the **Save** button.
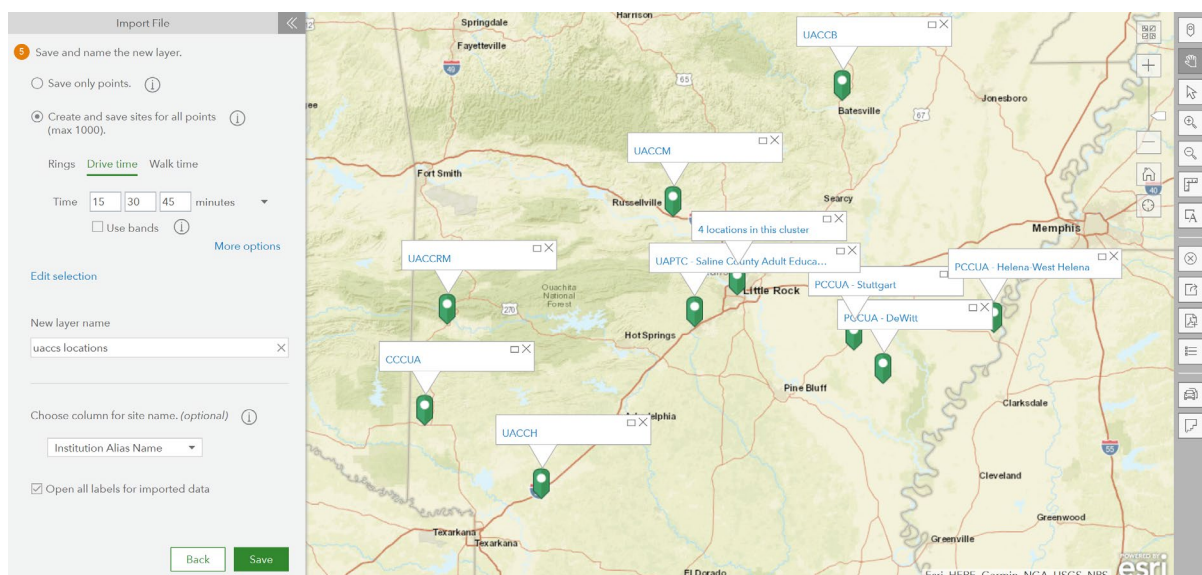
12. Import File – Step 6: The resulting map appears and will look like the one below.

Click on the button for **Run Reports.**
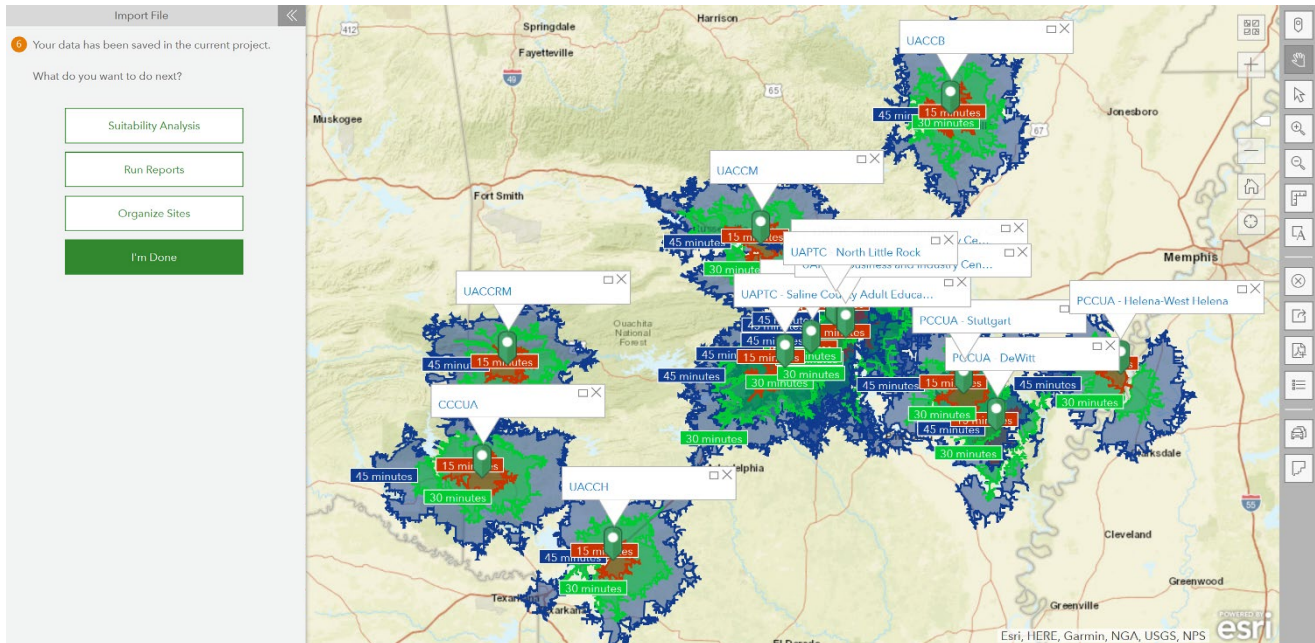
13. First, the team wants to review the demographics of each area.

Click on the **Comparison Reports** button in the green ribbon at the top.

Then click on the **Add Sites** button in the middle of the screen.
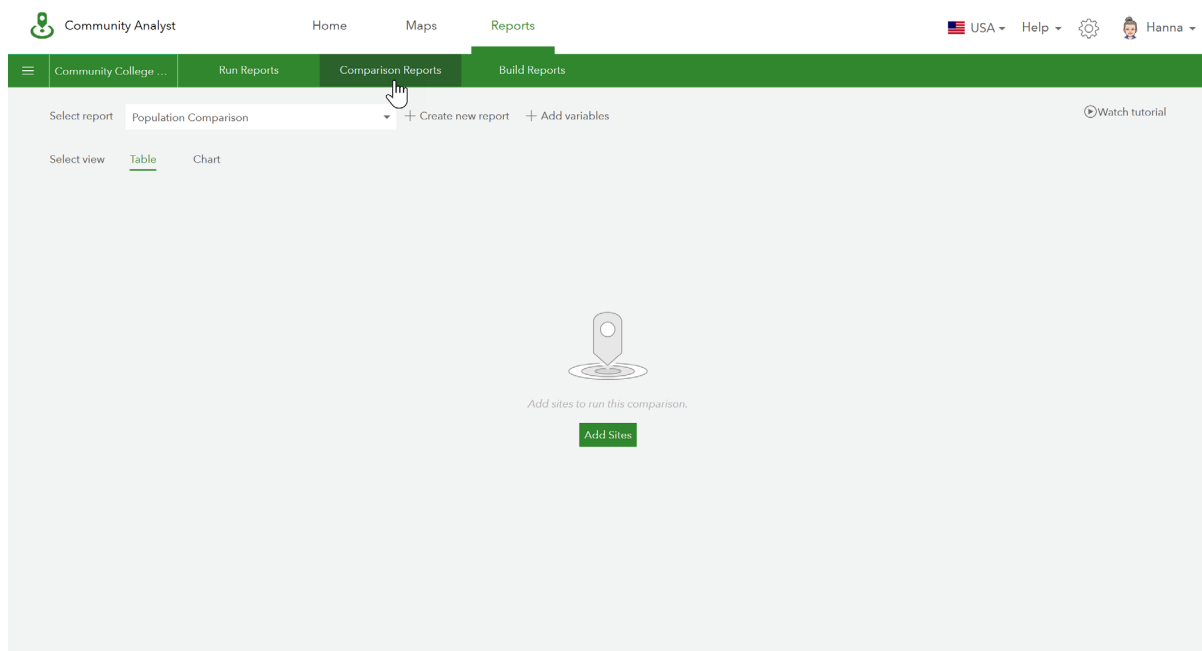
14. The Add Sites dialog box will appear.

Click on the option at the top of the dialog box for **Currently on map.**

Check the box to the left of Name in the upper-right of the table. This will select all the sites that are currently on the map.

Click the **Apply** button.
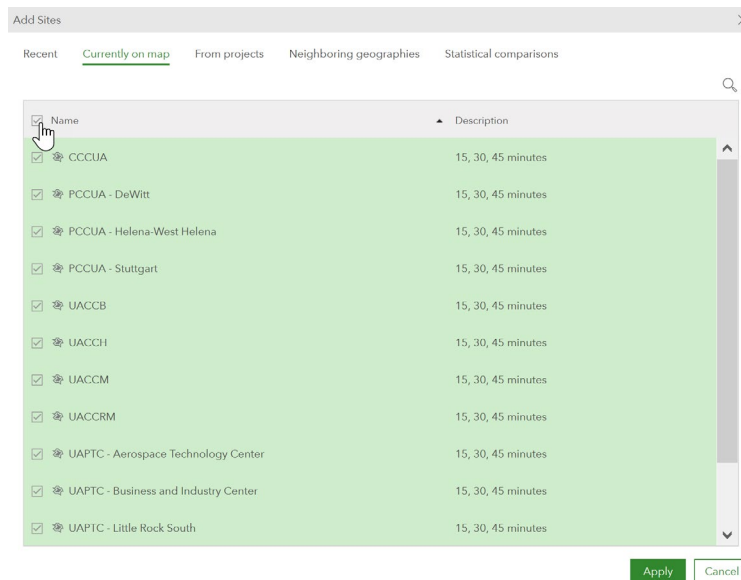
15. The comparison report will appear as a table, the default setting is to show the Population Comparison. We can easily see that within the 15-minute drive time area the populations in each service area vary quite a bit.

16. From this screen we can do several things.

1) Change view other types of comparisons, such as the **Income Comparison**.
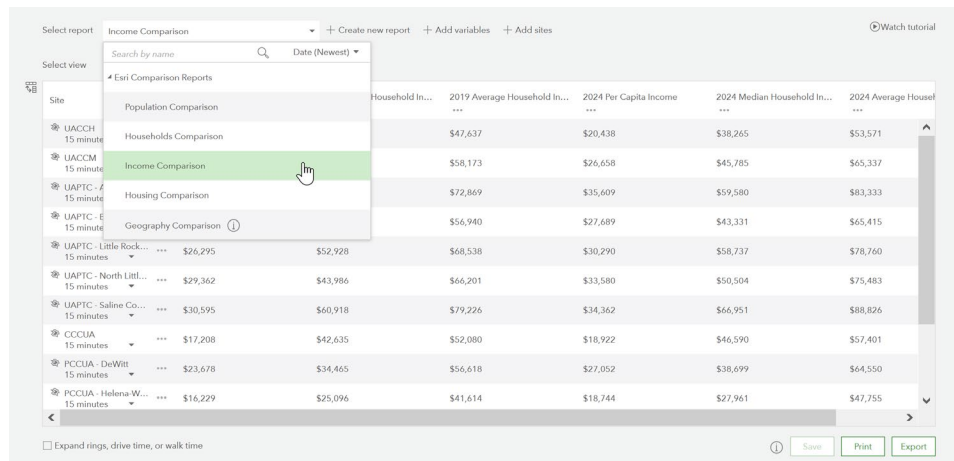
2) Swap to a **Chart** view of the data. Note the ability to make variable visible by checking the boxes in the legend.
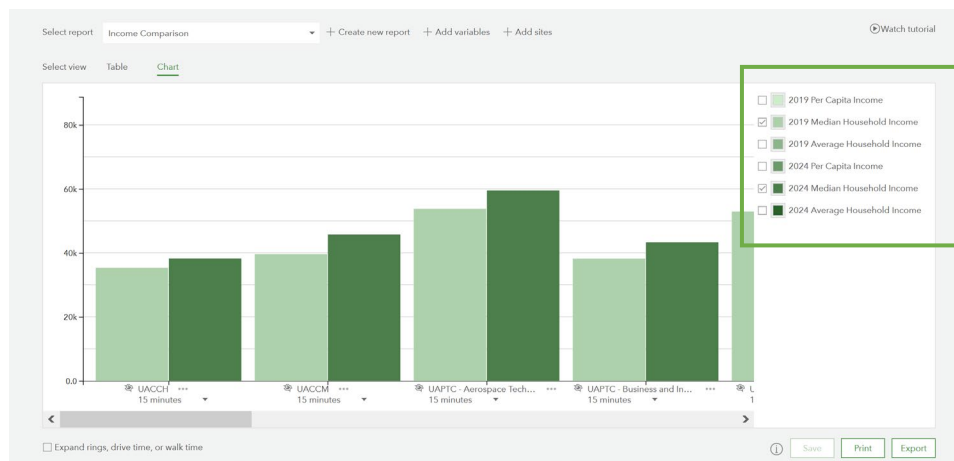
3) Change the data selection from 15-minute drive time service area to 30-mintue, or 45-mintue; or Expand all drive time service areas by checking the **Expand rings, drive time, or walk time** box in the lower left.

4) Data can also be exported to an Excel spreadsheet using the **Export** button.

17. Next, we will generate some infographics for each location and service area to create market profile summaries for each community college.

Click on the **Run Reports** button in the green ribbon and click on **Run Reports**.
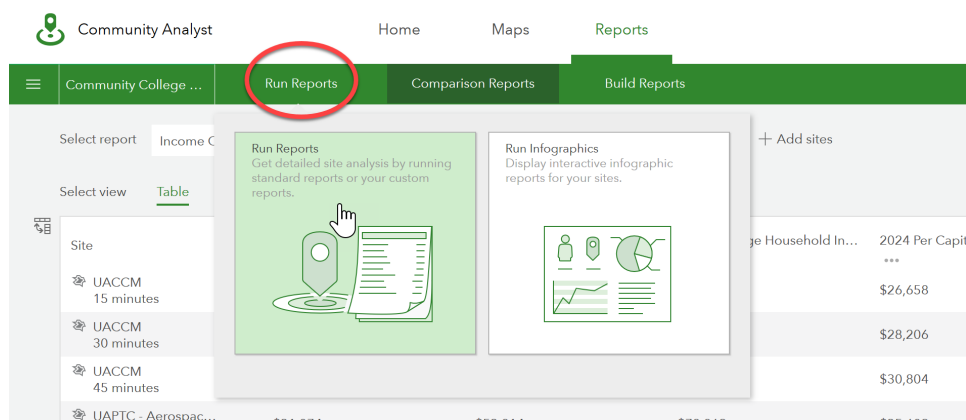

18. The steps for Run Reports are denoted by orange circles with numbers in them.

Run Reports – Step 1: Will select all 13 sites that you have imported to report on. No changes are necessary if this information is correct.

Run Reports – Step 2: Change from the Classic reports option to the **Infographics** option. Scroll through the table of Esri infographics and check the box for **Demographic Profile.**

Run Reports – Step 3: When the box for Demographic Profile is checked a separate Demographic Profile is added for each community college. **Find UACCM and click the Run now text.**
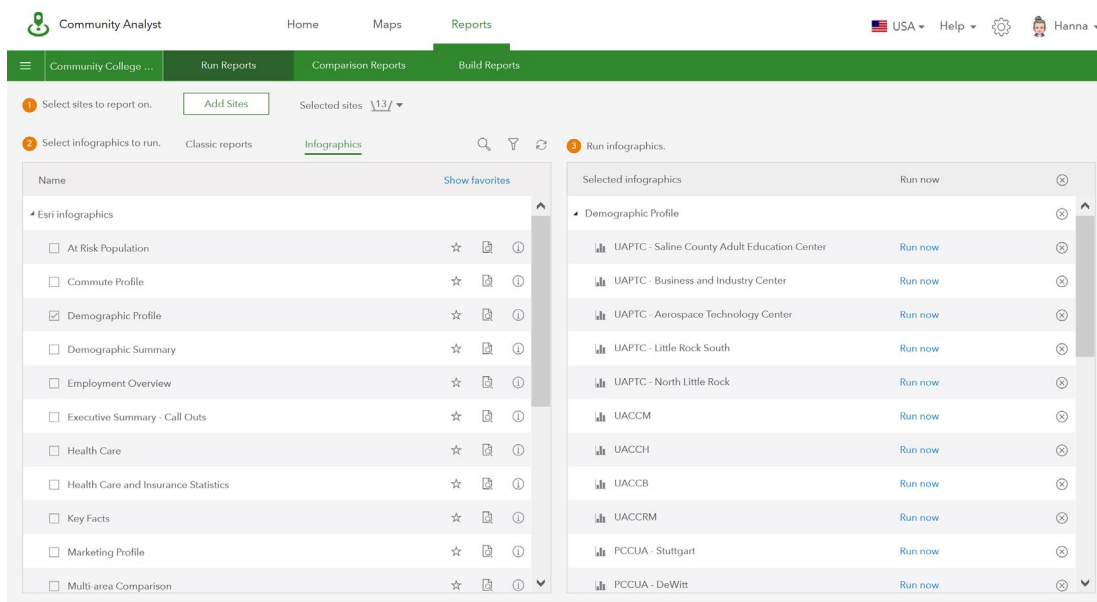
19. After a moment, the infographic for the UACCM, 15-minute drive time service area is generated. The researchers find this information helpful but would like to see a side-by-side comparison of the 3 drive time service areas.
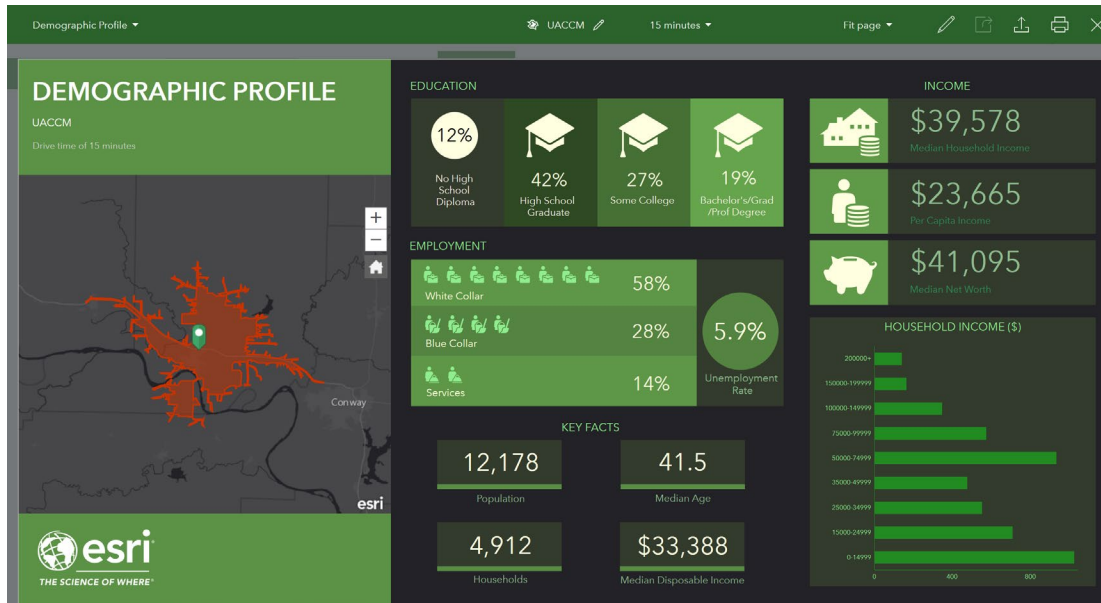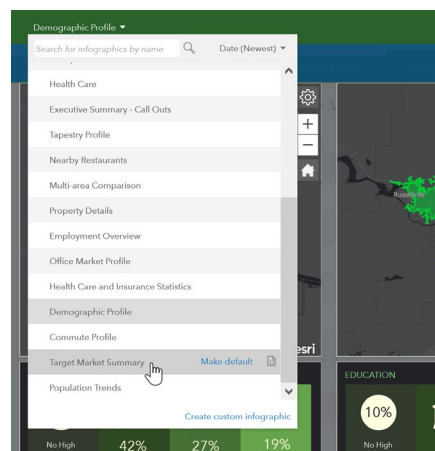

20. In the green ribbon across the top, click the drop-down arrow next to the text "15 minutes" and **click the toggle for Side by side comparison** to turn it on.
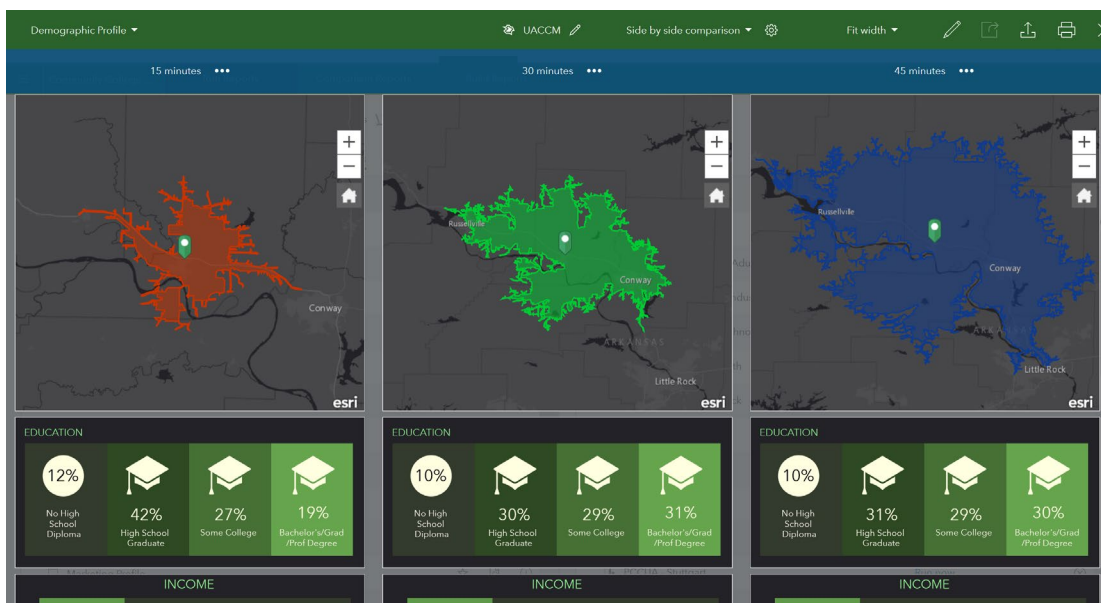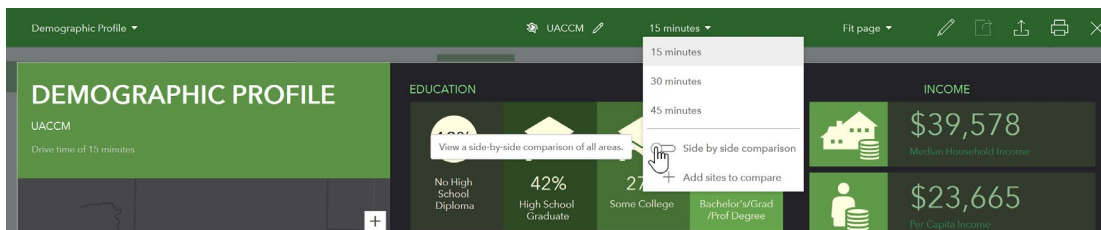
21. Scroll down through the infographic comparison to the section for **Key Facts**. Take note of the difference in population between the 15-minute drive service area and the 30-minute drive time service area.
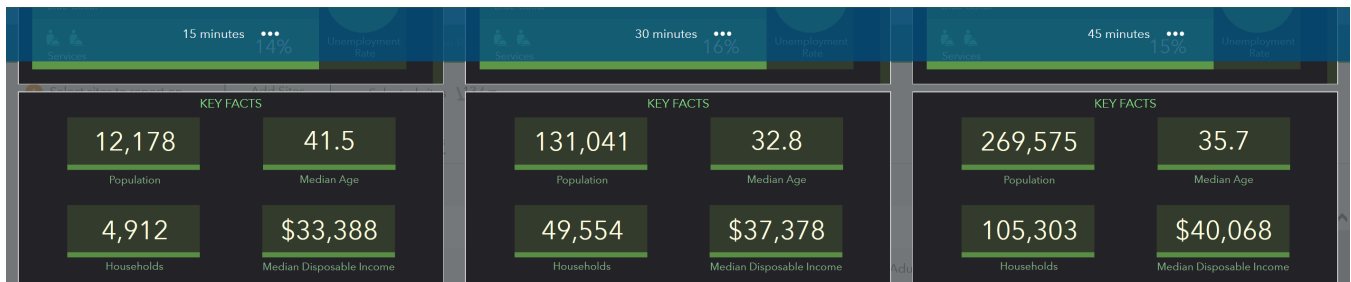
22. In the green ribbon across the top, click the drop-down arrow next to the text "Demographic Profile" and **click on Target Market Summary** in the drop-down menu.
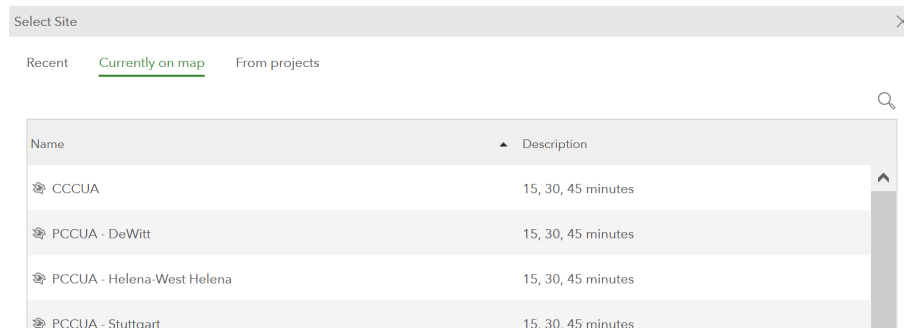

Scroll down and review the population by age largest groups and consumer spending sections.
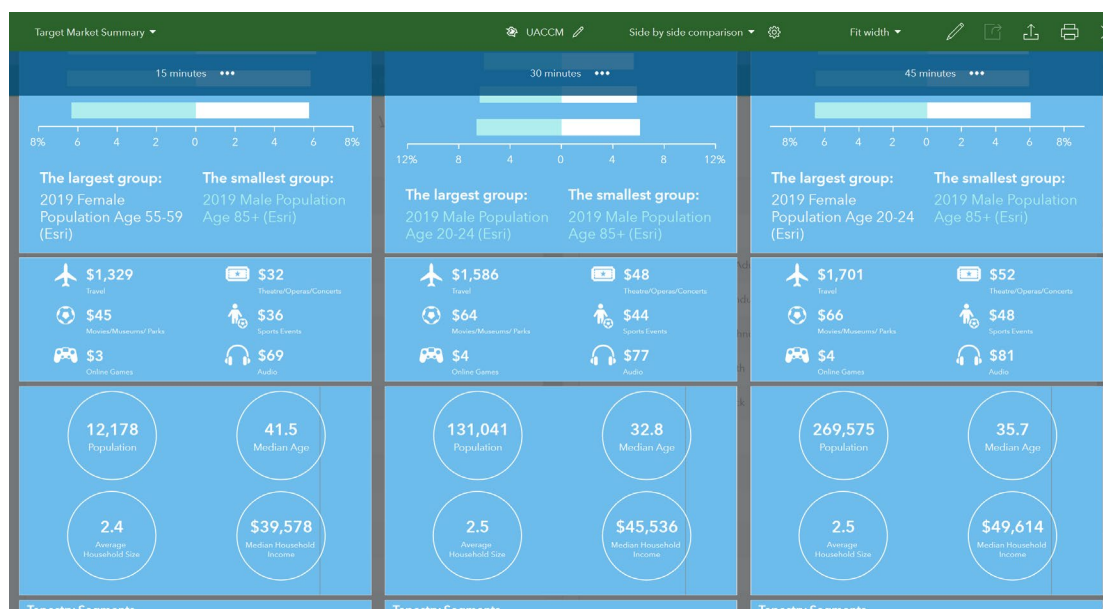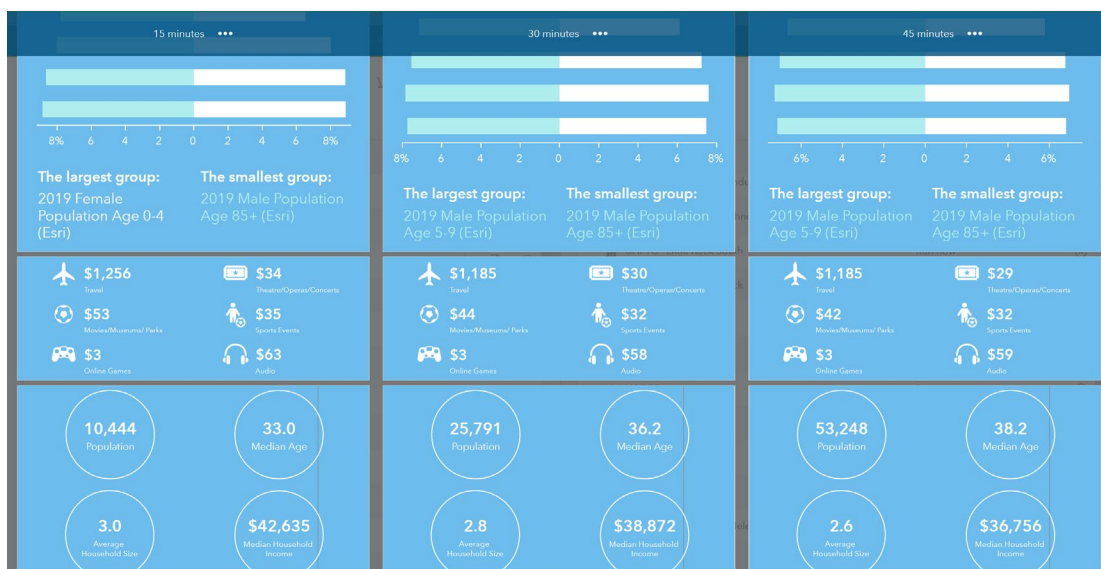
23. In the green ribbon across the top, click on the pencil icon next to the text "UACCM".

The **Select Site** dialog box will appear. Click on the text **Currently on map** to display the list of sites that are currently on the map.

Click on CCCUA.

24. Compare the population by age largest groups and consumer spending sections to those from UACCM (screenshot on previous page).


25. Infographics may be **Exported** or printed using the tools in the green ribbon along the top. Infographics may be exported as PDFs.

Custom Infographics can also be generated that compare Consumer Spending habitats of specific interest. Additional comparison views can be done among multiple sites, instead of or in addition to distance-based service areas.

26. In the green ribbon across the top, **click the green X in the upper-left corn**er to close the Reports/Infographics screen.

At the top of the page click on **Maps** to return to the map view.
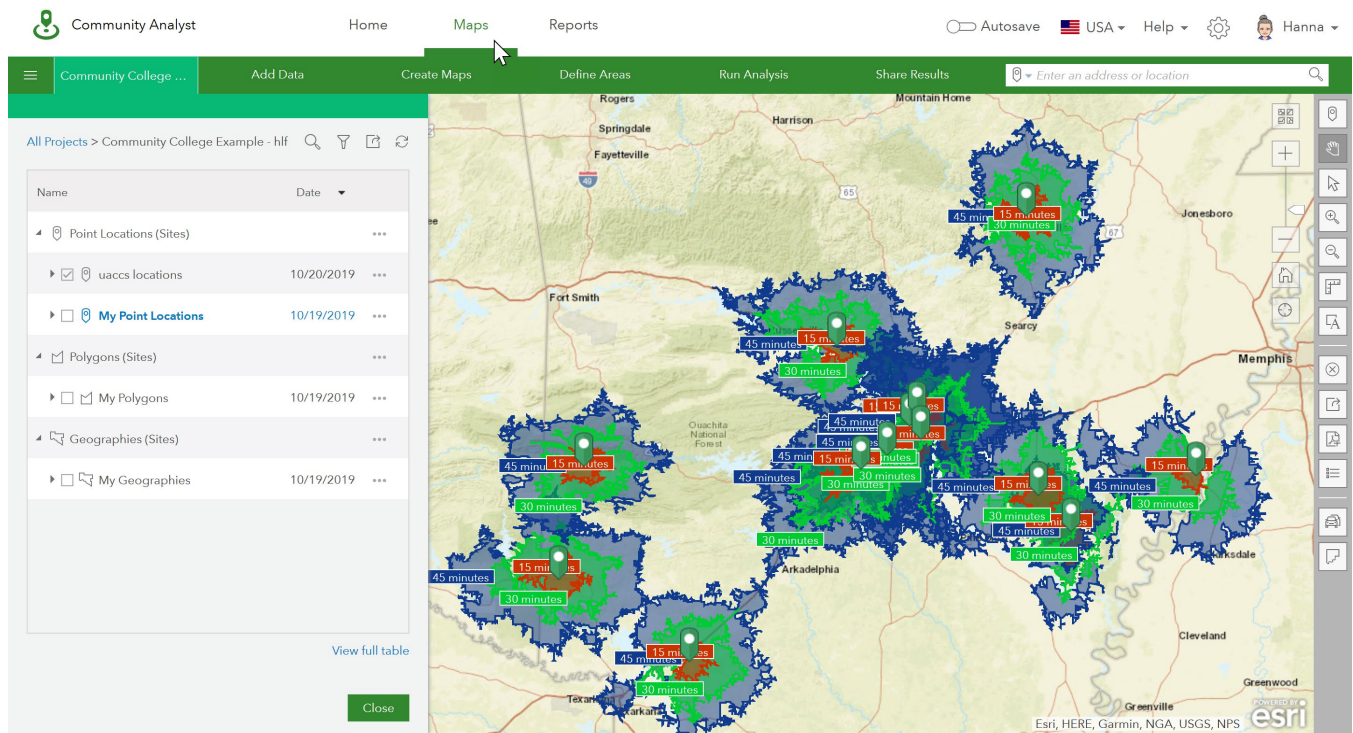
With these data the researchers can feel confident that they will identify key similarities and differences among these institutions that will help them to form their research objectives.