

How to Create a Service Area Map Using the UDS Mapper

Updated October 10, 2014

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I. What to Know About Saving Capabilities in the UDS Mapper

UDS Mapper has limited ability to save mapping information. **We recommend that you complete your map on a single computer, using a single internet browser. Wait until you have enough time in one sitting to finish and export your map to a PDF or word document.**

Before you begin your service area map, there are a few important things to know about saving capabilities in the UDS Mapper.

- a) If you close or refresh the UDS Mapper, and then open it again in the **same browser** on the **same computer**, you will **RETAIN**:
- The area you were zoomed in to on the map
 - The main map or background you had selected
 - The features you had selected, including MUAs/HPSAs, Geographic Boundaries and/or Geographic Labels, and Health Care Facilities
 - If you had uploaded and saved a set of addresses using the QuickGeocodes tool (described in Section IX), you will be able to quickly add those back to the map

You will **NOT retain** anything you added with the Drawing Tools, including:

- Labels you manually added, such as those for health care facilities or other locations
- Shapes or lines you manually drew to outline the service area

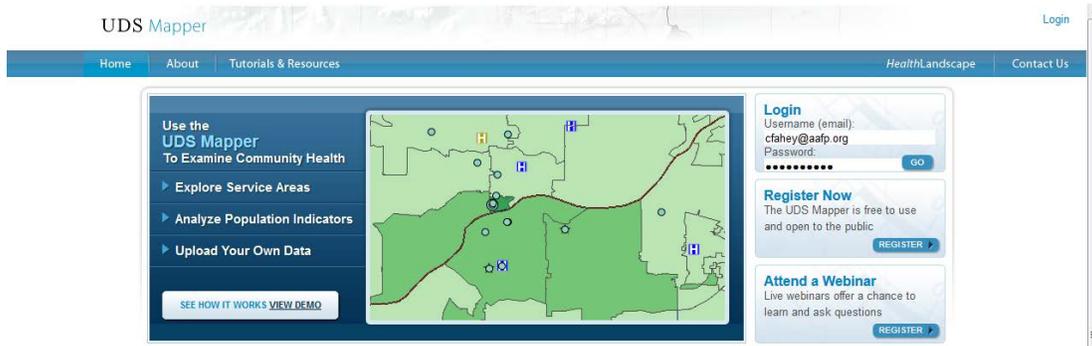


- b) If you log in to the UDS Mapper on a **different computer** or via a **different browser**, you will **NOT retain** anything you worked on using the first computer or browser EXCEPT address sets you uploaded and saved in the QuickGeocodes tool

II. Registering for the UDS Mapper

Anyone can use the UDS Mapper. The UDS Mapper is free of cost and open to the public. You simply need to register.

1. Go to www.udsmapper.org and click “Register Now”



2. Fill out and submit the short registration form (email address, password, name, ZIP Code, Title and Organization)

The screenshot shows the registration form on the UDS Mapper website. The form is titled "Registration" and is divided into several sections. The "Create Your Account" section includes fields for "Email" and "Confirm Email", both with placeholder text "Your Email". The "Password" section includes a "Password" field and a "Retype Password" field, with a note: "A minimum of 8 characters including 1+ upper case letters, 1+ lower case letters and 1+ numbers." The "About You" section includes fields for "First Name", "Last Name", "ZIP Code", "Title", "Organization Name", and "Organization Type" (a dropdown menu). The "Site Access" section has checkboxes for "UDS Mapper" and "HealthLandscape", both of which are checked. The "Terms of Use" section includes a "Web Site Terms and Conditions of Use" section with a scrollable area containing the text "1. Terms" and "By accessing this web site, you are agreeing to be bound by these web site Terms and Conditions of Use, all applicable laws and regulations, and agree that you are responsible for compliance with any applicable local laws. If you do not agree with any of these terms, you are prohibited from using or accessing this site. The materials contained in this web site are protected by applicable". Below this is a checkbox for "I agree to the Terms of Use". At the bottom of the form, there is a "View Privacy Policy" link, a note "* Indicates a required field", and a "Submit" button.

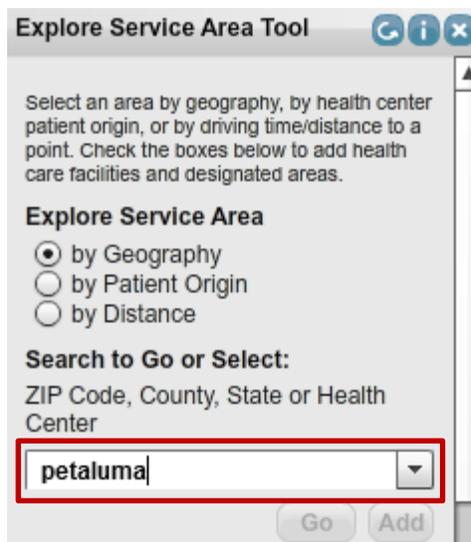
As soon as you have submitted your registration, you can log in and begin using the UDS Mapper. See the “Introduction to UDS Mapper” tutorial at <http://www.udsmapper.org/tutorials.cfm> to get a feel for the site, especially slides 8-15 (data and map tools), slide 28 (Tools menu), and slide 31 (how to clear the map).

III. Zooming and Adjusting the Map View

When you first log in, you will see a map of the continental United States. You can zoom and center on your location by using the search box or manually zooming and then panning the map.

Zooming with the Search Box

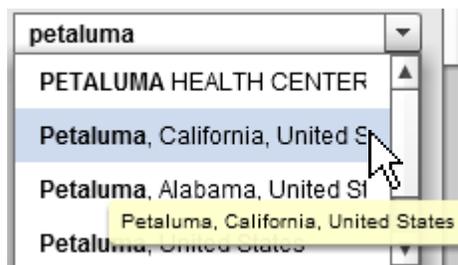
1. Click in the search box within the Explore Service Area Tool (on the right side of the screen)
 - a. If you do not see 'Explore Service Area Tool', click 'Tools' above the map and check 'Explore Service Area Tool' to add this tool to the right side of the screen)
2. Type in a ZIP Code, ZIP Code Tabulation Area (ZCTA)*, County, State, or the name of a Health Center Program grantee or look-alike



3. Wait for a drop-down box to appear with search results



4. Select your desired result



5. Click "Go" to focus the map on that geographic area



Manually Zooming

- a) The Scale Bar
 - Located in the upper left-hand corner of the map
 - The blue line on the Scale Bar indicates your current zoom level
 - To zoom in to a smaller area, click the “+” at the top of the Scale Bar OR click and drag the blue line up
 - To zoom out to a larger area, click the “-” at the bottom of the Scale Bar OR click and drag the blue line down
- b) Double Click
 - Double click on a place on the map to zoom in one level and center on that location
- c) Box Zoom
 1. Press and hold down “Shift” on your keyboard
 2. Click on the map and hold down the mouse button
 3. While holding down the mouse button, drag your mouse—notice a rectangle form
 4. Draw the rectangle around an area
 5. Let go of your mouse to zoom to the boxed area
- d) Mouse Wheel
 - If your mouse has a “wheel”: Scroll away to zoom in, or toward you to zoom out



Panning

Once you are zoomed to the desired level, you may want to move or re-center your map.

1. Click on the map and hold down your mouse button (your cursor will become a fist) 
2. While holding down your mouse button, “pull” or “push” the map to bring the area you wish to see into view
3. Repeat as necessary until the map is centered on the desired location

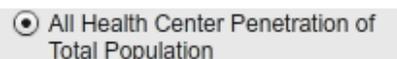
IV. Selecting a Main Map Background

By default, the UDS Mapper will show the Health Center Penetration of the Low-Income Population in shades of green as the map background. To see or change which Main Map is selected:

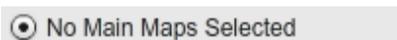
- a) Click ‘Main Maps’ on the right side of the screen to open this tool (or if you do not see ‘Main Maps’ on the right side of the screen, click ‘Tools’ above the map and check ‘Main Maps’)



- b) Select the Main Map of your choice
 - a) For example, if the application asks you to map the health center penetration of the total population, select ‘All Health Center Penetration of the Total Population’



- b) If the application does not ask for a specific Main Map, you may select ‘No Main Maps Selected’



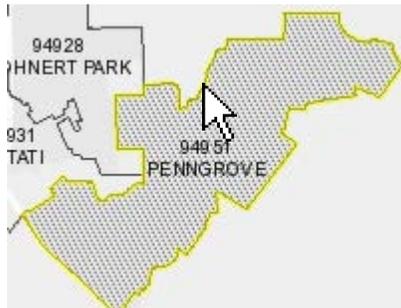
V. Highlighting Your Service Area

If the application instructions ask you to select your service area on the map or produce a data table, you should select the ZIP Code Tabulation Areas (ZCTAs) that make up or approximate your service area.

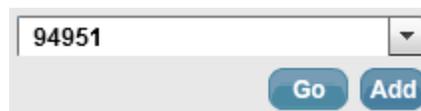
Note: ZCTAs are approximate area representations of U.S. Postal Service ZIP Codes, created by the US Census Bureau.¹ In most cases, ZCTAs and ZIP Codes will match. However, if you cannot find a ZIP Code where you think it should be on the map, you should click 'Tutorials and Resources' and use the '[ZIP Code to ZCTA Crosswalk](#)' to determine which ZCTA to use in place of that ZIP Code.

Note: If you define your service area with a different geography, such as a County, you should select the ZCTAs that best approximate that geography.

1. *Optional:* To turn on County boundaries/labels as a reference for selecting your ZCTAs, open the Basemaps and Optional Layers tool and check the boxes to the left and right of 'Counties'
2. Open the Explore Service Area Tool again (by clicking its title on the right side of the screen)
3. There are several ways to select a ZCTA; three are described here:
 - a) Click on the ZCTA on the map. Once selected, ZCTAs will appear outlined in yellow and dotted in black on the map.



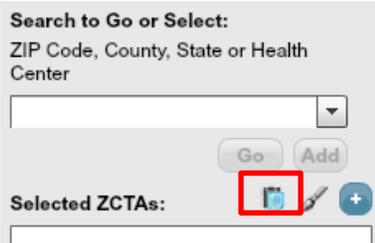
- b) OR individually type the 5-digit ZCTA into the search box within the Explore Service Area Tool, select the ZCTA from the drop-down results, and click 'Add'.

A screenshot of the Explore Service Area Tool search box. The search box contains the text '94951'. Below the search box are two buttons: 'Go' and 'Add'.

¹ http://www.census.gov/geo/reference/gtc/gtc_zcta.html

c) OR Use the Copy/Paste ZCTAs Tool:

1. Click on the notepad icon below the “Search to Go or Select box”



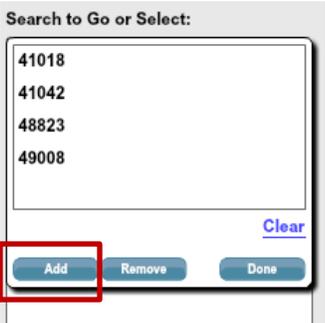
This box below will appear



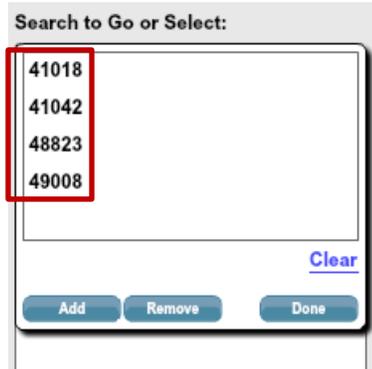
2. Copy the list of desired ZCTAs from a spreadsheet.

	A	B
	48823	
	49008	
	41018	
	41042	
5		

3. Paste them into the box and click “Add”



- Each ZCTA you select (or paste in) will be listed in the large white box in Explore Service Area Tool.



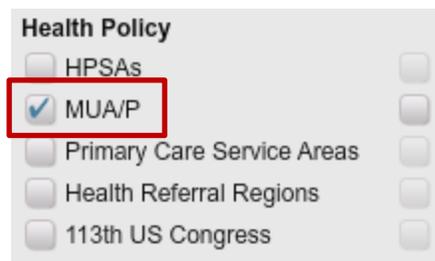
VI. Adding Medically Underserved Areas/Populations

If the application instructions ask you to add Medically Underserved Areas/Populations (MUA/Ps):

- Click 'Basemaps and Optional Layers' on the right side of the screen to open this tool

Basemaps and Optional Layers

- Scroll down to the bottom and check the left-side box for MUA/P
- If the instructions ask you to label each MUA/P, check the right-side box to add the labels



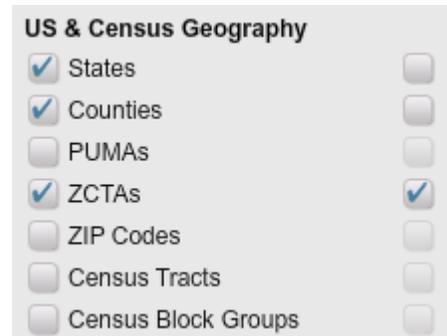
Medically Underserved Areas/Populations will be marked on the map with red diagonal lines (MUAs) or red horizontal lines (MUPs).



VII. Adding Geographic Boundaries/Labels

If the application instructions ask you to include specific geographic boundaries or layers, you can select the following in the Basemaps and Optional Layers tool:

- a) States
- b) Counties
- c) Public Use Microdata Areas (PUMAs)
- d) ZIP Code Tabulation Areas (ZCTAs)
- e) ZIP Codes
- f) Census Tracts
- g) Census Block Groups



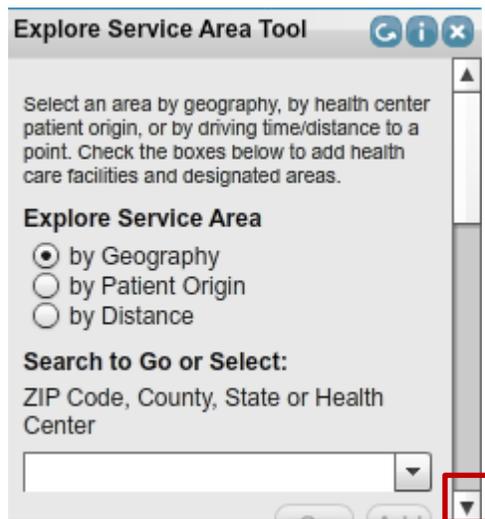
The left-side check box will turn on the boundary.

The right-side check box will turn on the label (e.g., county name). State, County and ZCTA boundaries as well as ZCTA labels will be turned on by default.

Unless the instructions require you to label ZCTAs, Counties, MUA/Ps, or other geographies, you may un-check all boxes on the right side in order to limit clutter on the map.

VIII. Adding Health Care Facilities Available in the UDS Mapper

1. Open the Explore Service Area Tool again (by clicking its title on the right side of the screen)
2. Use the scroll bar to scroll down to the bottom of the Explore Service Area tool



3. Check the left-side boxes for each facility type that the application instructions ask you to include. These are the facilities available in the UDS Mapper:
 - a) Health Center Administrative Locations (for Health Center Program grantees and look-alikes)
 - b) Health Center Service Access Points (for Health Center Program grantees and look-alikes)
 - c) National Health Service Corps (NHSC) Sites (by # of Primary Care Provider FTEs)
 - d) Rural Health Clinics

- e) Facility and Point Health Professional Shortage Areas (HPSAs)
- f) Hospitals



IX. Using QuickGeocodes to Add New or Additional Provider Sites

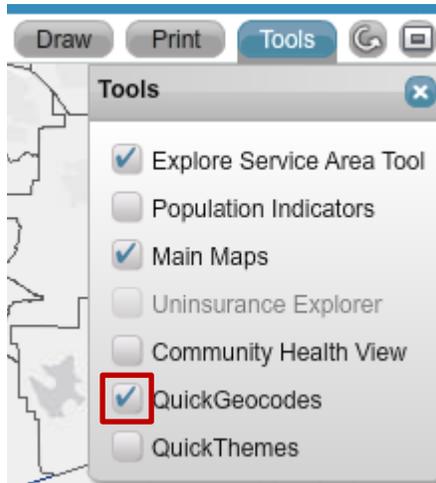
If the application instructions require you to map other relevant providers that are not readily available in the UDS Mapper (Step VIII), follow the steps below.

1. Minimize the UDS Mapper (If you close the website, everything from the steps above will save when you next log in, as long as you return on the same computer and internet browser)
2. Determine the address of each provider
3. Open a spreadsheet program (e.g., Microsoft Excel)
4. In the first row of the first column, write "Name"
5. Title the second column "Address"
6. Title the third column "City"
7. Title the fourth column "State"
8. Title the fifth column "ZIP"
9. *Optional:* Add column titles for other information, such as "Type" (example types: Community Mental Health Center, Free Clinic, Health Department, etc.)
10. Fill in the name, address, and optional information for each provider in the rows below
 - 1) Only one dot will show on the map per address, so if two providers have the same address you should combine their names in the "Name" cell for that row (e.g., FGH Health Services and JKL Primary Care)
11. Select all of the text in the spreadsheet (including the header row), and press "Ctrl +C" on your keyboard to copy the text

	A	B	C	D	E	F	G
1	Name	Address	City	State	ZIP	Default	Type
2	ABC Medical Services	819 Abbot Road	East Lansing	MI	48823	Facilities	Free Clinics
3	XYZ Health Clinic	950 Abbot Rd	East Lansing	MI	48823	Facilities	Community Mental Health Center
4	FGH Health Services and JKL Primary Care	101 Linden St	East Lansing	MI	48823	Facilities	Free Clinics
5	PCA Dental Associates	35 Crosswinds Dr	Kalamzoo	MI	49008	Facilities	Dental Clinic

12. Return to the UDS Mapper

13. Click the “Tools” button above the map, and check the box next to “QuickGeocodes”



14. On the right side of the screen, within the QuickGeocodes tool, click ‘Click here to begin’

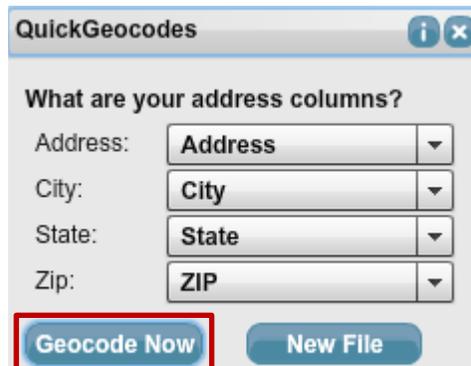


15. Click anywhere within the white box, and press Ctrl+V on your keyboard to paste

Step 2: Select address columns and click "Geocode".

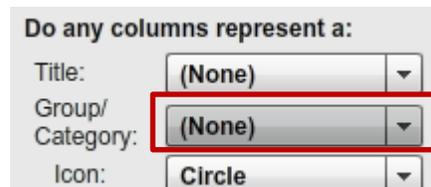
Name	Address	City	State	ZIP	Default	Type
ABC Medical Services	819 Abbot Road	East Lansing	MI	48823	Facilities	Free Clinics
XYZ Health Clinic	950 Abbot Rd	East Lansing	MI	48823	Facilities	Community Mental Health Center
FGH Health Services and JKL Primary Care	101 Linden St	East Lansing	MI	48823	Facilities	Free Clinics
PCA Dental Associates	35 Crosswinds Dr	Kalamzoo	MI	49008	Facilities	Dental Clinic

16. On the right side of the screen in the QuickGeocodes tool, click "Geocode Now" to add the addresses to the map. They will appear as blue dots (this may take a few seconds).

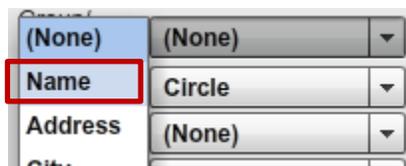


17. *Optional:* If you have 10 or fewer addresses, you can make each dot a unique color and include the names in the Legend. This way, you will not have to add labels to the map for these sites.

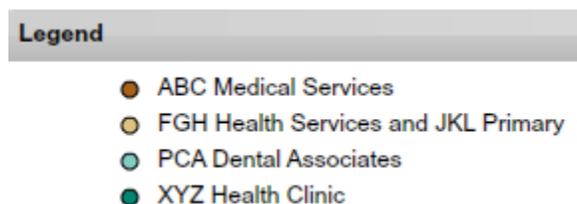
1) Click the drop-down next to 'Group/Category'



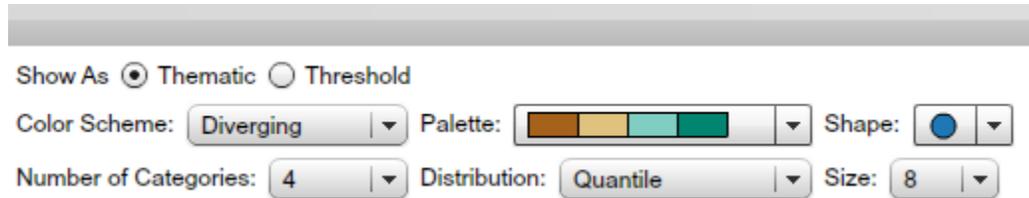
2) Select 'Name'



3) Check the Legend below the map to see that each uniquely colored dot is identified by name



18. *Optional:* If you have more than 10 addresses but fewer than 10 types of locations, you can color code the dots by location type. Follow Step 17 but select 'Type' instead of 'Name'.
19. *Optional:* To differentiate these points from Health Center Program locations, click the 'Icon' drop-down (which by default is 'Circle') and select 'Diamond'
20. *Optional:* You can change the color scheme, color palette, number of categories, size of points, and distribution. Keep in mind that to do this, you will need to select a column in the 'Group/Category' dropdown.



21. *Optional:* If you want to change the size of the points, but keep all of the points blue, you will need to click the dropdown next to 'Group/Category' and choose your Default column.
22. Within the QuickGeocodes tool, click 'Save As New ID', give your data a title, and click 'OK'



23. *Optional:* If you exit the UDS Mapper and want to reload your saved addresses when you return:
 - 1) Open the QuickGeocodes tool
 - 2) Click the title of your data under 'My Saved QuickGeocodes'
 - 3) Click 'Restore'

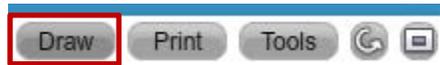


IMPORTANT: While the steps on the previous pages will save within the UDS Mapper (on the same computer and in the same internet browser), the following steps cannot be saved within the UDS Mapper. Before you add labels or draw outlines, you should make sure you have enough time to finish your map in one sitting.

X. Outlining Your Service Area

If you use ZCTAs as the unit of geography to define your service area, the yellow outline and black dots covering the ZCTAs (after you have selected all of them) may be sufficient to highlight your service area. However, if the application instructions ask you to outline your service area, or if you use a unit of geography other than ZCTAs to define your service area, you can use the Drawing Tools to manually draw an outline around your service area.

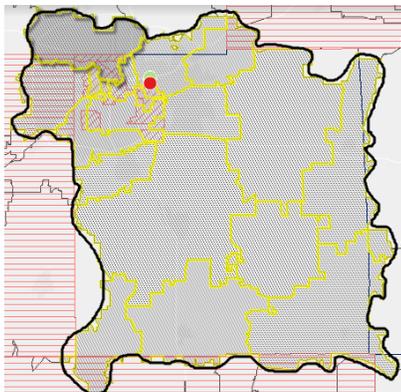
1. Click 'Draw' (above the map) to open the Drawing Tools



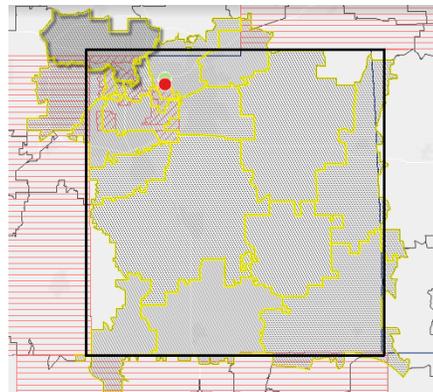
2. Use the Line, Free Line, Label, Rectangle, or Polygon tools to outline what you define as your service area
 - a) If the area includes a partial ZCTA, draw your outline through the ZCTA
 - b) Unless the instructions ask you to precisely trace the geographic boundaries of the area, you may approximately outline the area using straight lines, a rectangle, or a polygon



- 1) First choose the Shape Color (black is suggested)
- 2) If you are drawing a rectangle or polygon, you should first check the 'Outline Only' box
- 3) Click the desired line or shape button
- 4) Click and hold down on the map to draw a line, free line, or rectangle. If you are drawing a polygon, single click to create points and double click to complete.
- 5) If you make a mistake, click 'Erase' and then click on the line/shape on the map



XI. Ac Free Line tracing a ZCTA- defined service area



Rectangle outlining a county-defined service area

If the application instructions require you to propose a new access point, you can add it to the map by using the QuickGeocodes tool described in Section IX, or using the 'Point' button in the Drawing Tools. You can either place the point in the approximate location planned, or if you have an exact address you can follow these steps:

1. In the Explore Service Area Tool, click 'by Distance'
2. Type the address in the search box, wait for the drop-down results, and select the desired result (see the pushpin on the map)
3. Click 'Draw' (above the map) to open the Drawing Tools
4. Choose a Shape Color, then click 'Point'
5. Click on the place where the pushpin enters the map, to place a point at that location

6. Click 'by Geography' in the Explore Service Area Tool to turn off the red area indicating distance

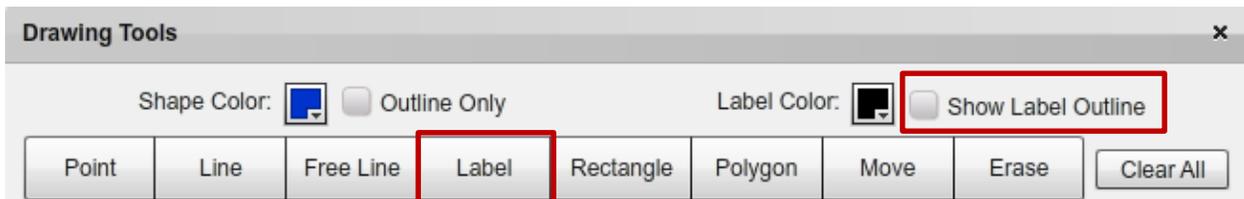
XII. Manually Adding Labels

If the application instructions ask you to label health care facilities or other locations, you can use the Drawing Tools to manually create labels. Before creating your labels, please note the following:

- a) Check the application instructions to determine which sites must be labeled on the map (e.g., Health Center Program grantees/look-alikes, other providers, new access points)
- b) If you used Section IX. QuickGeocodes to add locations and followed the optional step (17) to add the names to the Legend, you do not need to label these sites on the map

To manually add a label:

1. Click 'Draw' (above the map) to open the Drawing Tools
2. If you want your label(s) to have a white background, first check the 'Show Label Outline' box
3. Click 'Label'



4. Click on the map and type your label text (e.g., "ABC Medical Services")
5. **Press Enter** on your keyboard to make the label stick



6. You can move the label by clicking 'Move' and then dragging the label to where you want it
7. If you need to edit a label's text, click 'Erase', click the label on the map, then add a new label

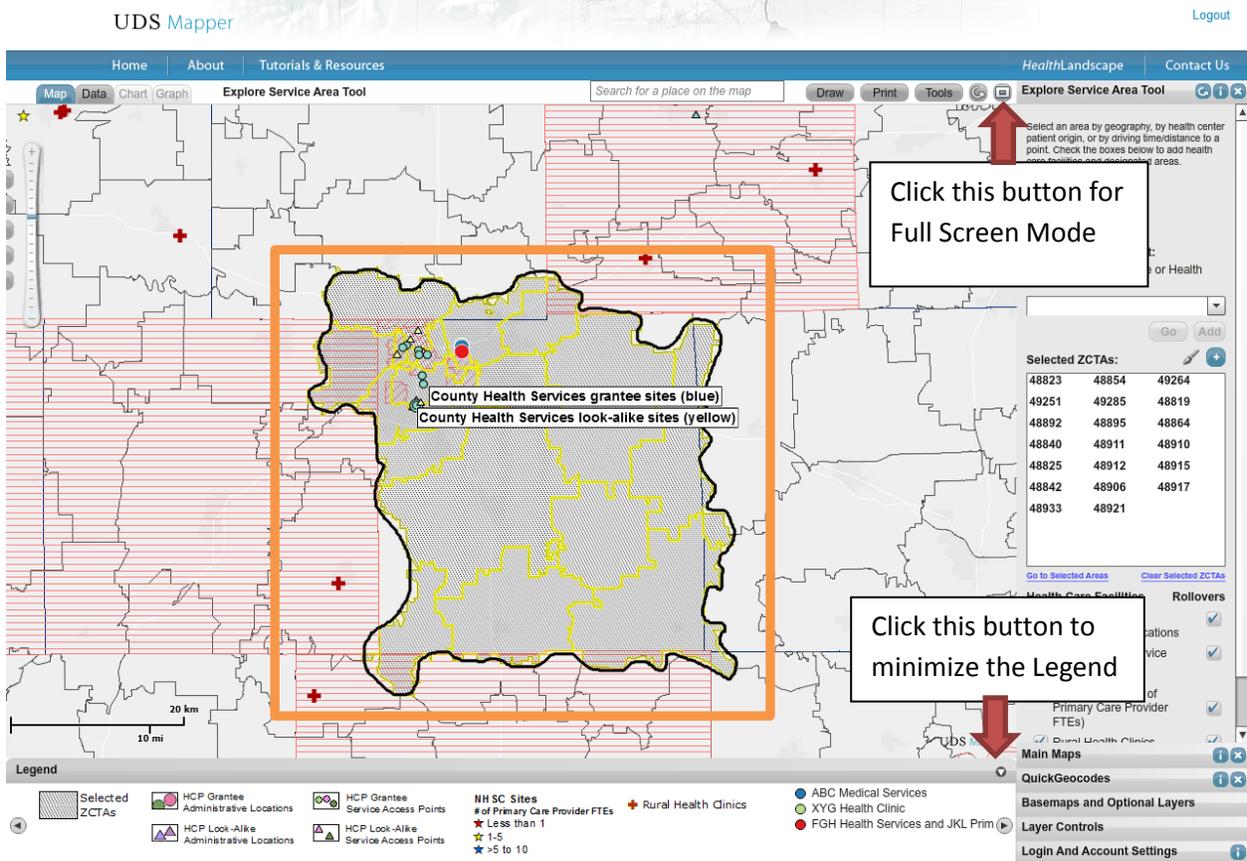
Note: There is no way to change the font size. This means that if the map is zoomed out after adding labels, labels that were close together may become overlapped. It is recommended that you have the map set at the final desired zoom level prior to creating labels.

XIII. Saving Your Completed Map as a Document

You will save your final map as a document. The 'Print' tool in the UDS Mapper enables you to create a PDF (Option A). If you are having difficulty fitting your map into the window of the 'Print' tool, you may instead take one or more screen captures of the map and Legend and insert these images into a word document (Option B). With very large service areas, or multiple areas that do not touch, you may find that you have to zoom out very far to include the entire area in one image. In this case, you may want to consider taking two or more map screen captures.

Option A: Using the 'Print' Tool to Save Your Map/Data Table

1. Make sure the Explore Service Area Tool is the open tool on the right side of the screen

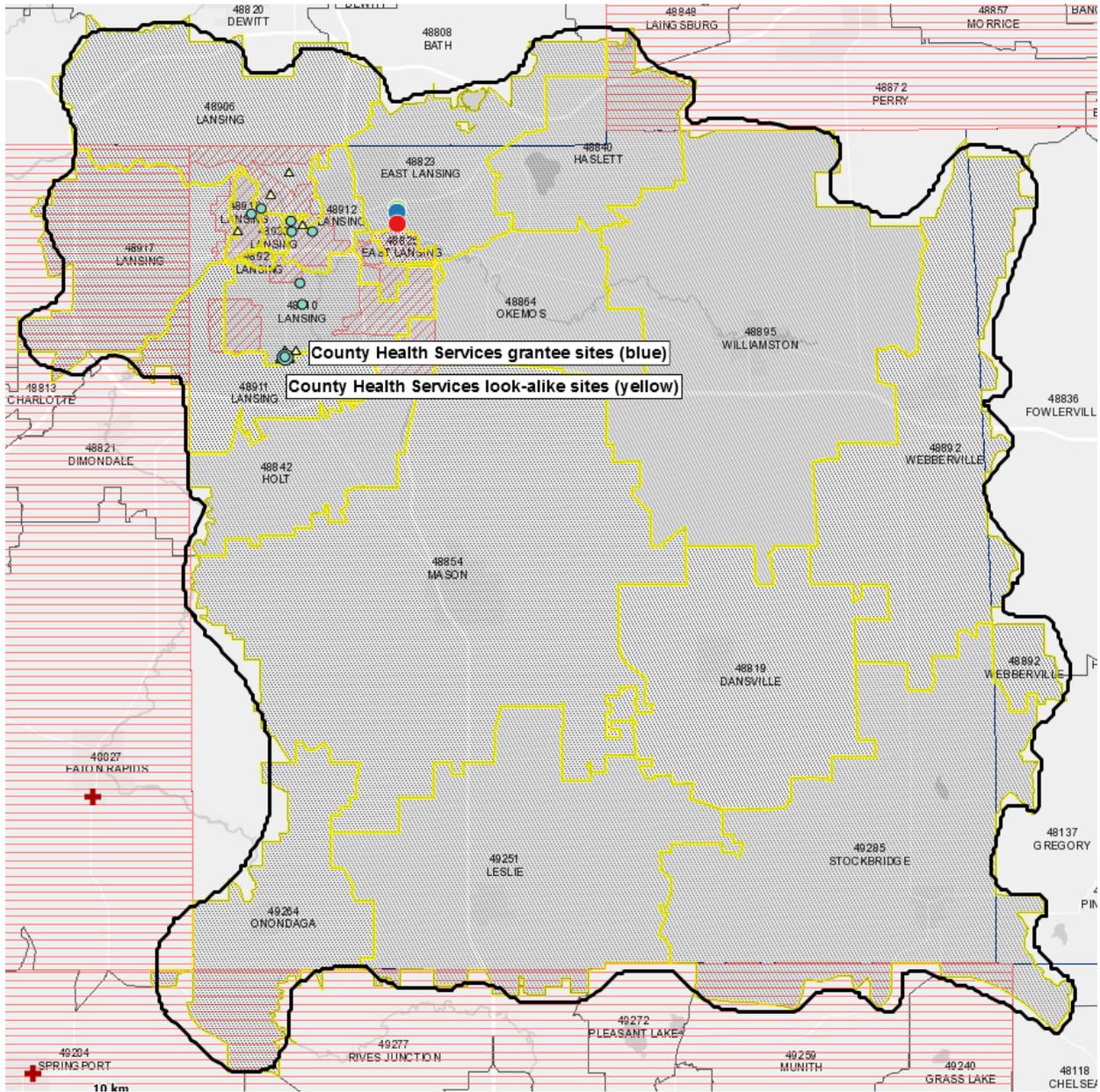


Make sure to also capture the Legend. You may need to scroll over in the Legend and take additional screen capture(s) in order to include the entire Legend (see the example on the next page). You could even take individual screenshots of the legend items to customize placement on your final document.

If you need to include the Data Table, you can either:

1. Create a PDF: Follow the instructions for Option A, but uncheck 'Map' in the Print Window
2. Create a CSV spreadsheet (and format it as you wish)
 - 1) Make sure the Explore Service Area Tool is open on the right side, and ZCTAs are selected
 - 2) Click the 'Data' tab above the map
 - 3) Click 'Export'
 - 4) In the Save As window, type a File Name (make sure .csv is typed at the end) and click Save

County Health Service Area Map (Example)



Legend

Selected ZCTAs	HCP Grantee Administrative Locations	HCP Grantee Service Access Points	HHSC Sites	Rural Health Clinics
HCP Look-Alike Administrative Locations	HCP Look-Alike Service Access Points	# of Primary Care Provider FTEs	Less than 1	Medically Underserved Area
ABC Medical Services	XYG Health Clinic	1-5	>5 to 10	Governor Designated
FGH Health Services and JKL Primary Care	States	Counties	ZCTAs	Medically Underserved Population