

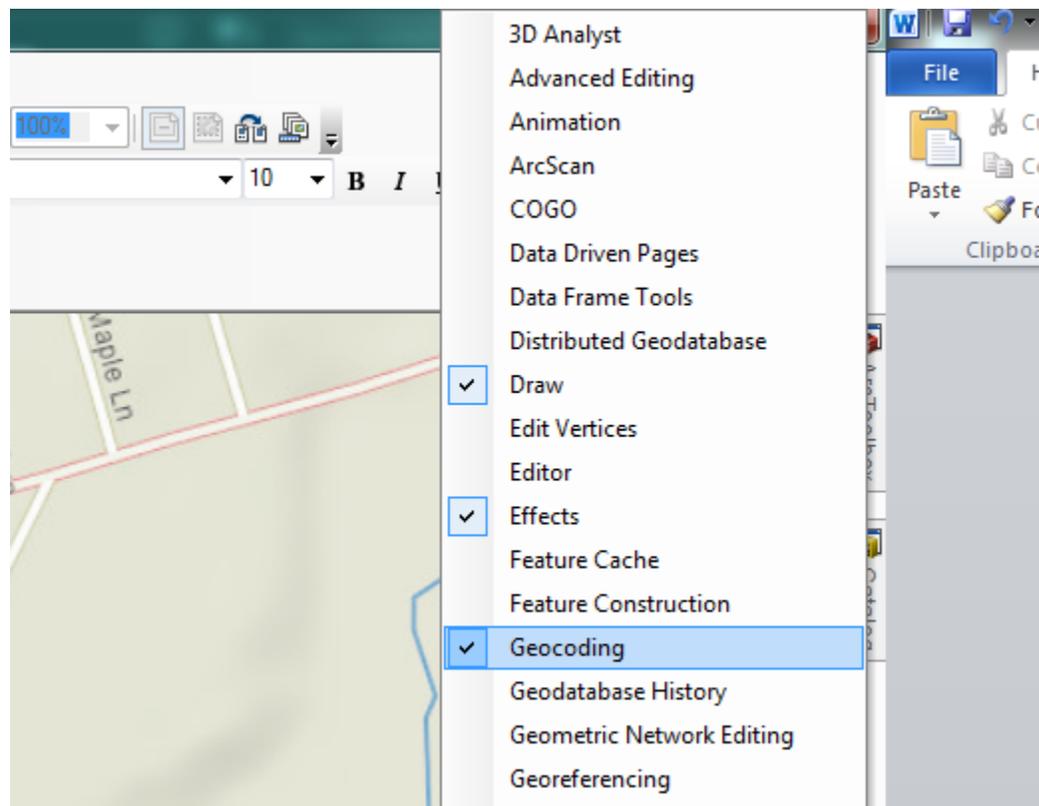
Geocoding Documentation

Geocoding services allow users to find discrete point locations from their address data. These point locations are calculated based on a physical street address. The FirstMap geocoder is a composite geocoding service. This means that the service will first look for a match in our address point dataset, which is comprised of e911 address points provided to us by each county. If a match is not found in the address point data the FirstMap geocoder then attempts to interpolate the location using the road centerlines also provided by each county. This multistep process is called a Composite Geocoder.

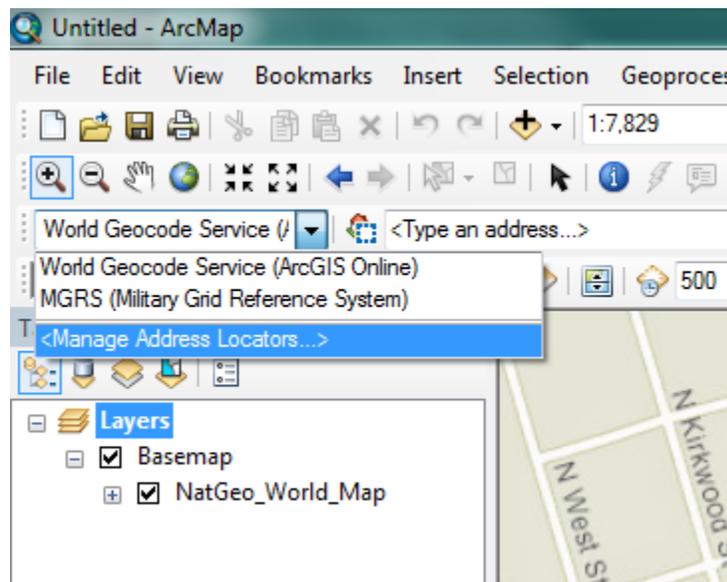
There are two ways to use the FirstMap Geocoder in ArcGIS Desktop, find a **single address** or geocode a table or “batch” **multiple of address**.

Find a single address

1. Add the FirstMap geocoding service to ArcMap.
If it is not already available add the Geocoding Toolbar to ArcMap by right clicking an open area in your toolbar section and select Geocoding.



2. Once added, click the down arrow and select <Manage Address Locators>



3. Navigate to your FirstMap connection in ArcMap by clicking the 'Add' button. Instructions for making connections can be found at:

<http://www.firstmap.delaware.gov/pdfs/public/FirstMapQuickRefSheet.pdf>

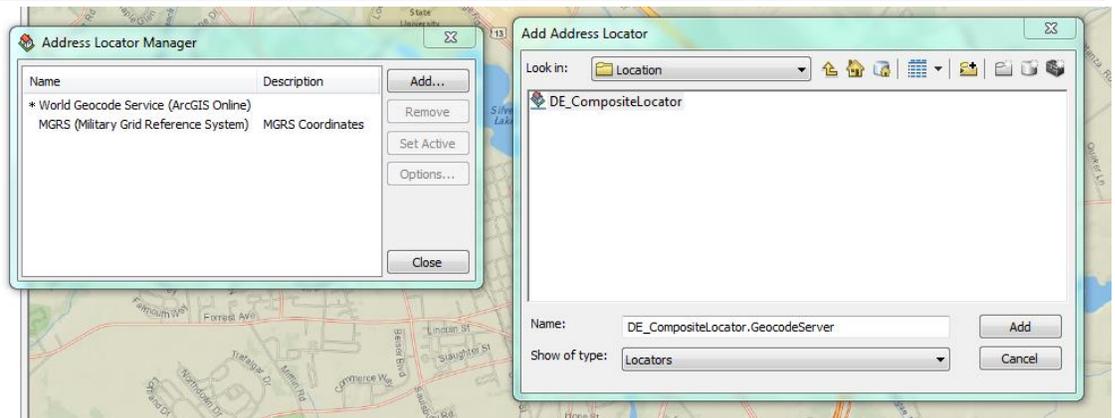
There are two versions of the Geocoder. The first version uses a public server and can be found at

http://firstmap.delaware.gov/arcgis/rest/services/Location/DE_CompositeLocator/GeocodeServer. This Geocoding service returns points in the WGS 1984 Web Mercator Projection by default. The second version is a private service available only to users on the State Network and is located at:

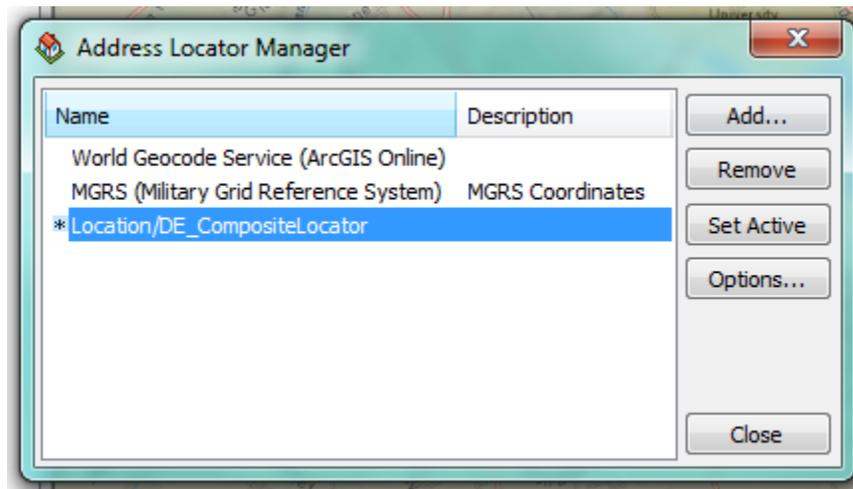
http://firstmap.dti.state.de.us/arcgis/rest/services/Location/DE_CompositeLocator/GeocodeServer

This service is identical in function, however, it returns points in the NAD 1983 Delaware State Plane projection by default.

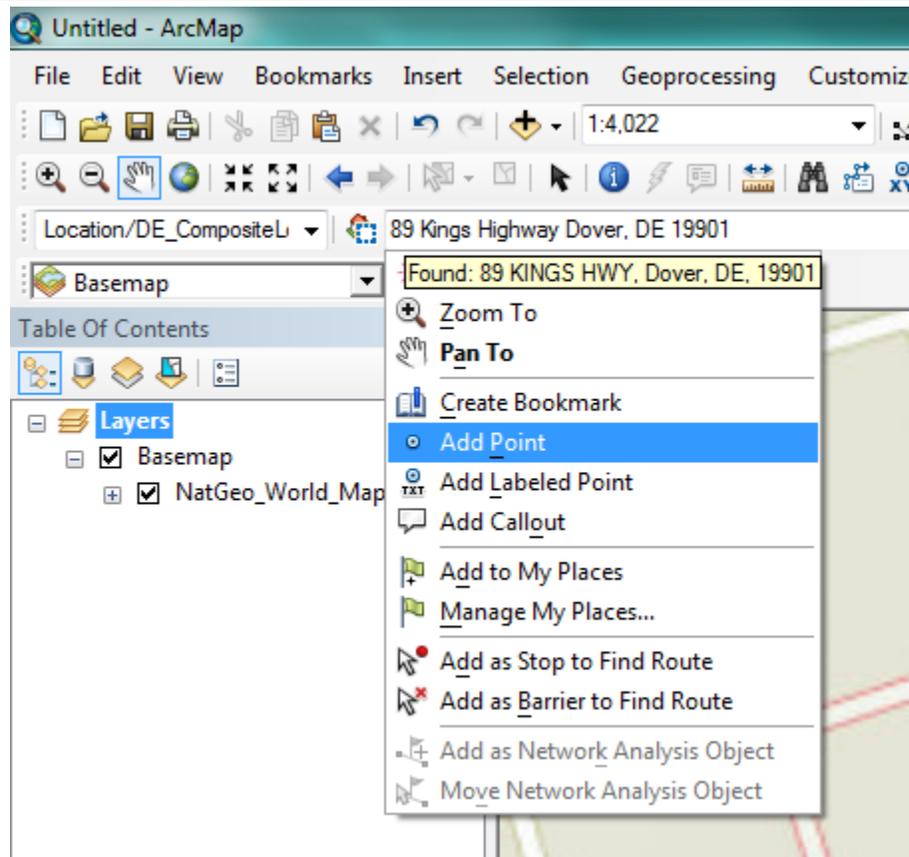
Once you click 'Add' and connect to FirstMap navigate to the Location folder. There you will find the DE_CompositeLocator. Select this service and click Add. Click 'Close' to close the Address Locator Manager.



Once the locator is added the Address Locator Manager should look like this

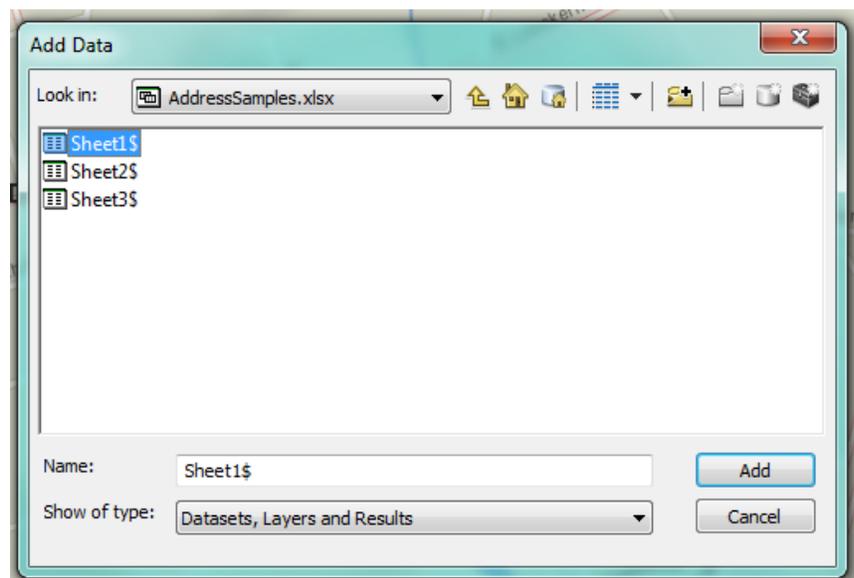


- To locate an address ensure that the Location/DE_CompositeLocator displays in your Geocoding toolbar. Enter an address in the box that says <Type an address> and click the 'enter' key. If a location is found the toolbar will highlight indicating a found address. You can right click the address you entered.

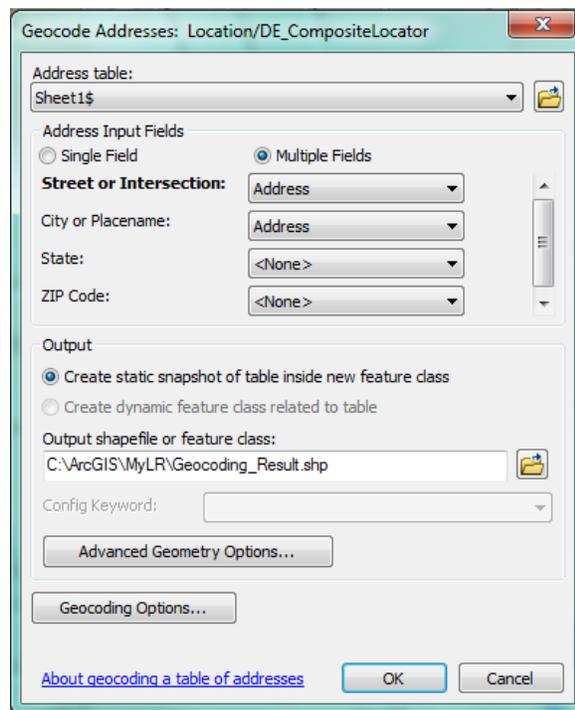


Geocode a table of addresses (Batch Geocode)

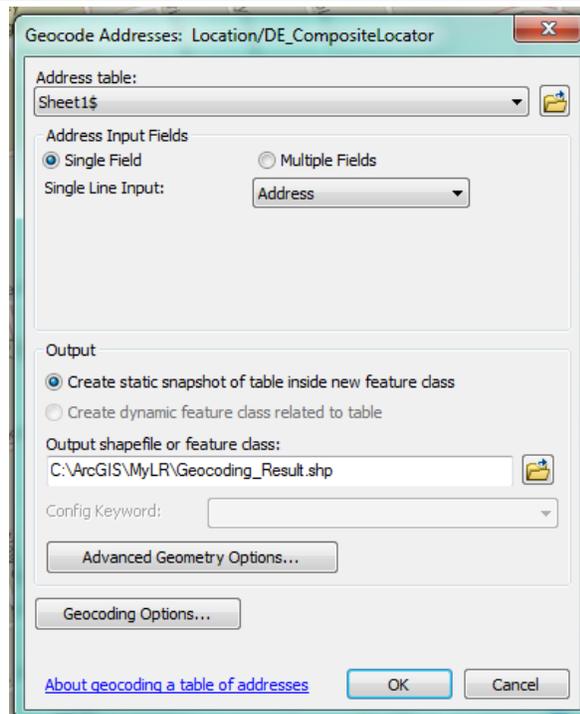
1. Add a table to ArcMap that contains addresses. An Excel spreadsheet is added in the example below:



2. With the table selected in the Table of Contents click the Geocode Addresses tool  and choose the FirstMap locator. If the FirstMap locator is not added please see section two under find a single address for instructions on how to add a locator to ArcMap.
3. This will open the Address Locator Manager. After ensuring the FirstMap Locator is selected click OK. This will open the Geocode Address tool. There are two options. If your table contains addresses separated into multiple fields select Multiple Fields:

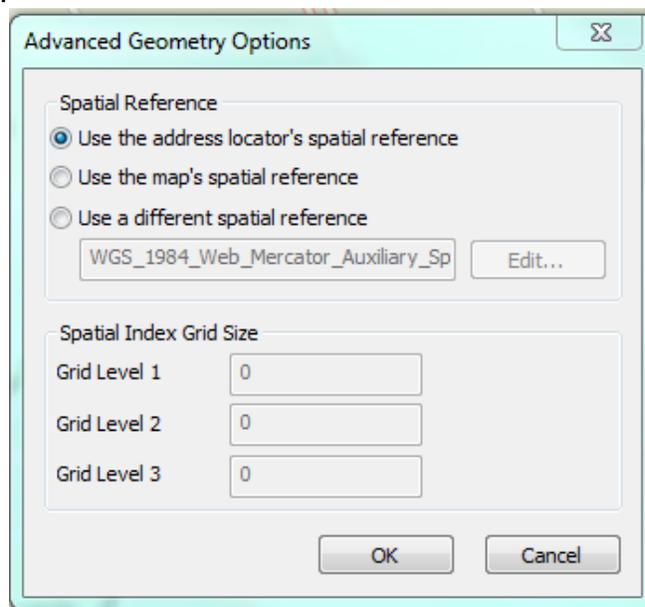


If your table contains addresses in a single field select Single Field:

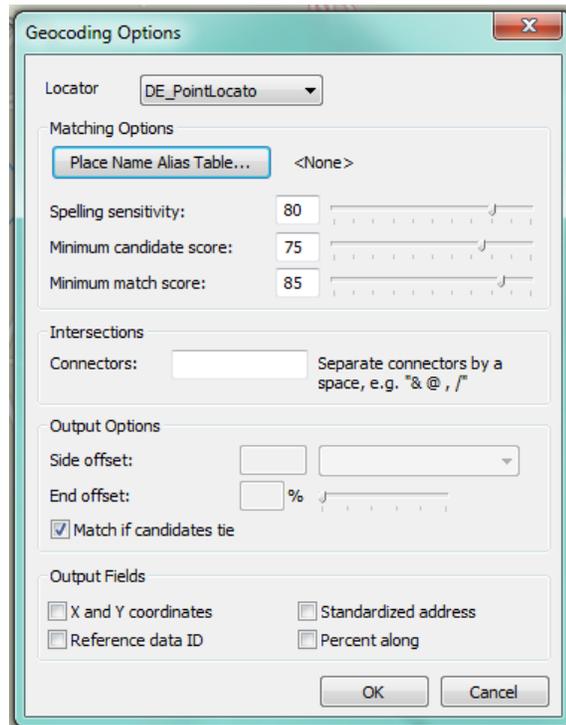


The output shapefile or feature class will be the location of the data that are created once the geocoding process completes. Ensure these data are where you want them.

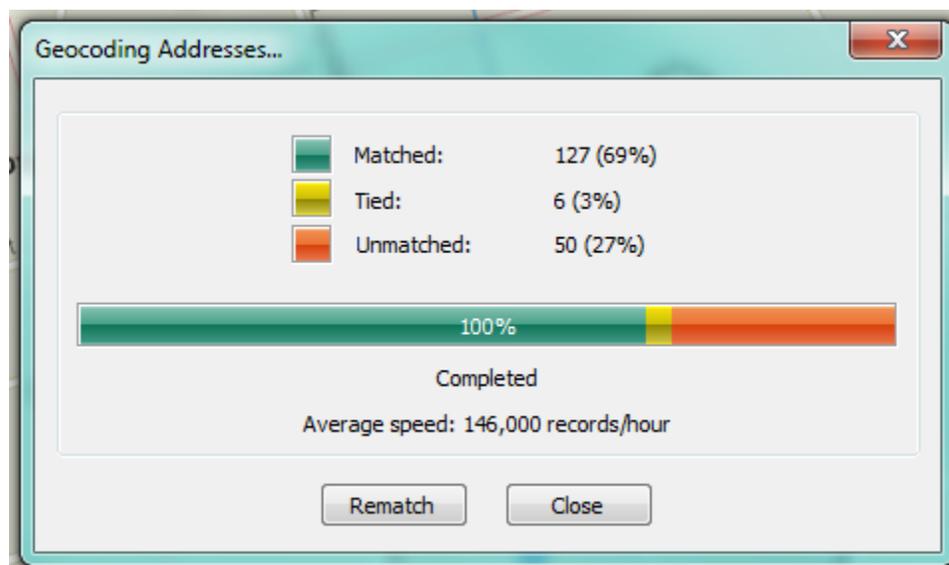
4. Select the appropriate fields for each of the geocoder inputs.
5. The Advanced Geometry Options will allow you to change the Spatial Reference of the results:



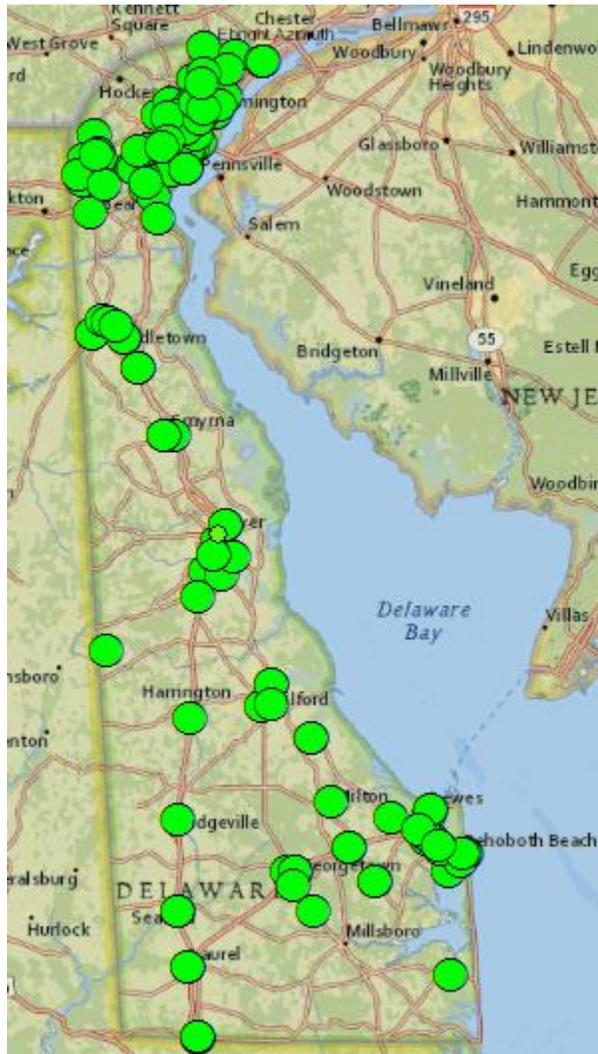
6. The Geocoding Options gives you greater control over your results:



- Once complete click the 'OK' button on the Geocode Addresses dialog. The Geolocator will process and display the results:



- Click Close and your results will be added to the map:



9. You now have locations for the addresses in your table. Any addresses that do not match either the point address file or the road centerlines will not get a location. Inspect the resulting attributes to determine which addresses were not located. Once you correct the addresses in the source file you can run the Geolocator again to get better results if needed.
10. For more information on geocoding and using geocoding services in ArcMap:
<http://desktop.arcgis.com/en/desktop/latest/guide-books/geocoding/what-is-geocoding.htm>