NEMSIS TAC Whitepaper

NEMSIS V3 Agency Service Area Builder User Guide

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Overview
This guide helps EMS agency administrators use the NEMSIS V3 Agency Service Area Builder to identify their EMS agency service area in terms of states, counties, census tracts, and ZIP codes. The Builder provides a map-based interface that supports quick and easy identification of an agency's service area.

Purpose
The purpose of the NEMSIS V3 Agency Service Area Builder is to enable EMS agency administrators to correctly document the following data elements in their NEMSIS V3 agency demographic data:

- dAgency.05 - EMS Agency Service Area States
- dAgency.06 - EMS Agency Service Area County(ies)
- dAgency.07 - EMS Agency Census Tracts
- dAgency.08 - EMS Agency Service Area ZIP Codes

The purpose of the Builder *is not* to identify the precise boundary of an EMS agency service area. Instead, its purpose is to identify all census tracts and ZIP codes (and, by extension, counties and states) that intersect, or overlap, an agency's service area. Thus, even if an agency serves only a portion of a particular census tract, the Builder identifies that census tract as part of the service area.

Once you have built a service area using the Builder, you can enter the service area information into your NEMSIS-compliant ePCR software or download the service area information for future reference.
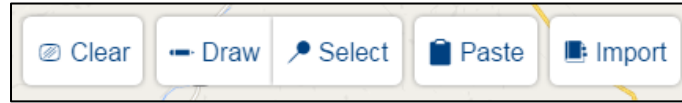
Accessing the State Data Set Builder
The NEMSIS V3 Agency Service Area Builder is available online at www.nemsis.org/media/serviceareabuilder. It is web-based. It works with all currently supported versions of web browsers. (For Internet Explorer, version 10 or higher is required.)

If you choose to share your location, the Builder will initially center the map on your location. You can pan and zoom the map as needed using the usual Google Maps features.

Building a Service Area

The toolbar at the top of the map provides the following features to help you build your service area:

As you use the tools to build your service area, the service area will be highlighted on the map, and information regarding the identified service area will be listed on the left side of the screen.

Clear

If you built a service area and wish to start over, the Clear button will completely clear all information about your service area in the Builder, resetting the Builder to a clean slate.

Draw

Toggle the Draw button to enable the drawing tool. Then click/tap on the map to set each point of the outline.
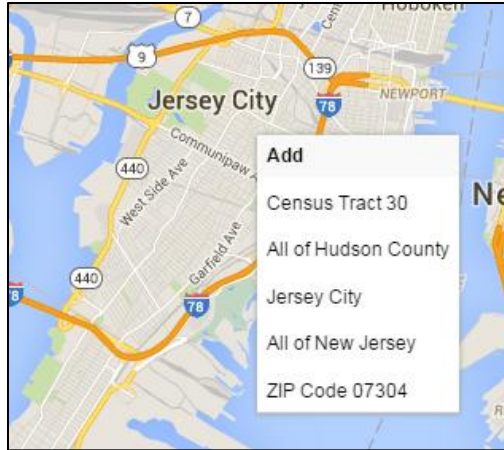
Click/tap again on either the first point or the last point to complete the outline. When you complete the outline, the Builder will identify all census tracts, ZIP codes, counties, and states that overlap the shape you drew. It will highlight the census tracts on the map. Then it will remove the specific shape you outlined.
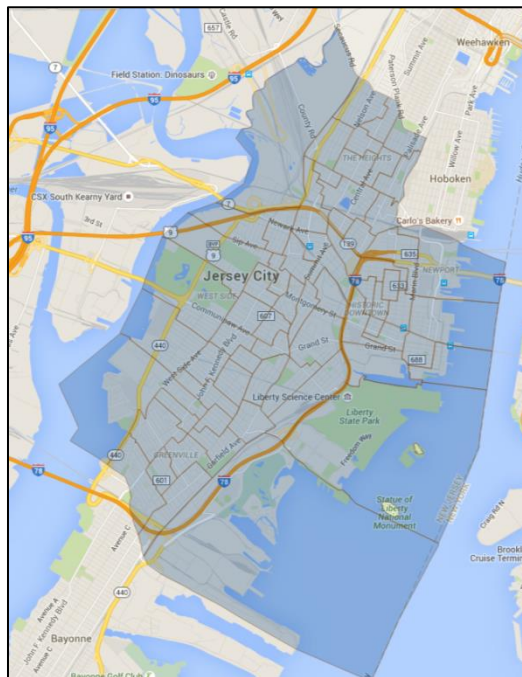

Select

Toggle the `Select` button to enable the selection tool. Then click/tap on the map to select areas to add to your service area. When you click/tap, an "Add" menu will appear:

Select an item on the menu, and the Builder will identify all census tracts, ZIP codes, counties, and states that overlap the item you chose. It will highlight the census tracts on the map.
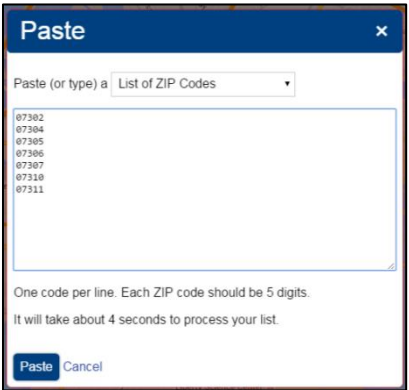

To remove areas from your service area, click/tap on an area that is already highlighted as part of the service area. A "Remove" menu will appear. Select an item on the menu, and the Builder will remove the census tracts, ZIP codes, counties, and states that overlap the item you chose.

Paste

Select Paste to open the Paste dialog. Using the Paste dialog, you can manually add areas to your service area by typing or by copying and pasting from a list that you already have. First, select the type of list you will be providing:
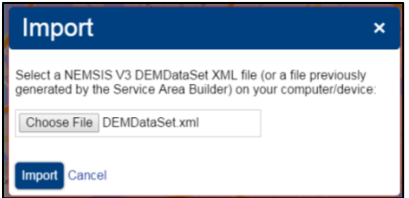
Then, paste or type your list of codes:

Select Paste at the bottom of the Paste dialog, and the Builder will identify all census tracts, ZIP codes, counties, and states that overlap the codes on your list. It will highlight the census tracts on the map.

If you choose to paste a "GIS Shape", the GIS shape should be a single polygon in well-known text (WKT) format.

Import

Select the Import button to import service area information from a NEMSIS V3 DEMDataSet XML file (or a file previously generated by the Service Area Builder). Select the file on your computer/device:
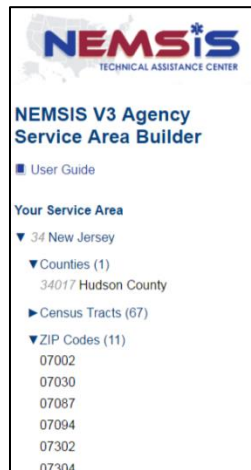

Select Import, and the Builder will import the information in the file. It will highlight the census tracts on the map.

If your DEMDataSet XML file contains more than one agency, the Builder will only import the first agency's service area information.

If the imported file contains census tract information, the Builder will ignore the ZIP code information. Instead it will add all Zip codes that it knows to overlap with the census tracts listed in the imported file. If the imported file does not contain census tract information, it will use the ZIP code information to identify all census tracts that overlap with the ZIP codes listed in the file. If the imported file only contains state and county information, nothing will be imported.

Viewing the Code List for Your Service Area

While you are building your service area on the map, the Builder maintains a list of all areas that are included in your service area. The list appears on the left side of the screen once you have added at least one area to your service area. The list is organized by state. Within each state, the Builder displays all counties, census tracts, and ZIP codes that are part of your service area. Select ► or ▼ to show or hide a list.

Viewing Census Statistics for Your Service Area

At the bottom of the service area list on the left side of the screen, the Builder includes a section titled "Census Statistics." Select ► or ▼ to show or hide a list of statistics from the US Census Bureau about your service area. The statistics are updated as you modify your service area. The statistics come from the Decennial Census and the American Community Survey. Hover over each statistic for information about its definition and data source.

Remember that the purpose of the Builder *is not* to identify the precise boundary of an EMS agency service area. Instead, its purpose is to identify all census tracts that intersect, or overlap, an agency's service area. The Census statistics reflect the entirety of all census tracts identified in the agency's service area, even though the agency may serve only portions of some census tracts. As a result, the area and population reported by the Builder may be larger than the actual area and population served by the agency.

You may use the area and population information to record dAgency.16 Total Primary Service Area Size and dAgency.17 Total Service Area Population in your agency demographic data.

Printing Service Area Information

Select the `Print` button to print your service area information. The printout will include the lists of census tracts, ZIP codes, counties, and states in your service area, as well as a map highlighting your service area.

Downloading the Service Area Code List

Select the `Download` button to download your agency service area information. The download is an XML file containing the NEMSIS V3 dAgency.AgencyServiceGroup structure as found in NEMSIS DEMDataset XML files. The XML data is not a complete NEMSIS agency demographic data file. It only contains service area information. To import the information into a NEMSIS V3 software product, you will need to copy the XML data into an existing NEMSIS V3 agency demographic data file and then import that file.

Questions

When I access the NEMSIS V3 Agency Service Area Builder, I see an error message saying that something went wrong. What should I do?

You may see a message saying, "Something went wrong. Try reloading. If that doesn't work, please contact the NEMSIS TAC." Generally, the message means that the Builder was unable to access all of the resources that it needs in order to work correctly. If the problem persists after you try the `Reload` button, please contact the NEMSIS TAC, and staff will help you to troubleshoot the problem.

Why does the NEMSIS V3 Agency Service Area Builder highlight a larger area than the outline I drew for my service area?

The purpose of the Builder *is not* to identify the precise boundary of an EMS agency service area. Instead, its purpose is to identify all census tracts and ZIP codes (and, by extension, counties and states) that intersect, or overlap, an agency's service area. Thus, even if an agency serves only a portion of a particular census tract, the Builder identifies that census tract as part of the service area.

Can I include areas that are outside the U.S. in my service area?

No. The NEMSIS V3 standard only supports areas within the U.S. for defining an agency service area.

ZIP Codes aren't purely geographical. How does the NEMSIS V3 Agency Service Area Builder figure out ZIP code coverage?

The Builder uses ZIP Code Tabulation Area (ZCTA) data from the U.S. Census Bureau, which are generalized geographical representations of United States Postal Service (USPS) ZIP Code areas.

I'm a software developer. Can I build my own app that accesses the same data used by the NEMSIS V3 Agency Service Area Builder?

Yes. The Builder is supported by a publicly available REST web service maintained by the NEMSIS TAC and publicly available REST web services maintained by the US Census Bureau. Contact the NEMSIS TAC for more information.

What census year does the NEMSIS V3 Agency Service Area Builder use?

It uses the census tracts from the 2010 decennial census as required by the NEMSIS V3 standard. The "Census Statistics" section uses data from the 2010 decennial census and the 2014 American Community Survey.

Conclusions

The NEMSIS V3 Agency Service Area Builder is provided by the NEMSIS TAC to enable EMS agency administrators to easily identify the census tracts, ZIP codes, counties, and states that are within their service area. By reporting accurate service area information in NEMSIS agency demographics data, EMS agencies make it possible for the NEMSIS TAC to provide richer reporting capabilities.