

Need a Custom USGS Topo Map? Here is How to Make it Yourself!

INTRODUCTION

The United States Geological Survey (USGS) has over 140 years of experience in providing high-quality topographic maps in the US. In 1879, the USGS began to map the Nation's topography. This mapping was done at different levels of detail, to support various land use and other purposes. As the years passed, the USGS produced new map versions of each area. These maps were published at several scales, the most popular being the 1:24,000 scale which displayed 7.5-minute quadrangle published between 1947 – 1992.

In 2011, as a goal of the Historic Topographic Map Collection (HTMC), the USGS constructed a digital repository of USGS 1:250,000 scale and larger maps printed between 1884 and 2006. There are currently over 178,000 maps in this historic collection in addition to the current digital US Topo series. Both the HTMC and the US Topo series are available as GeoPDFs through The

National Map (<https://www.usgs.gov/programs/national-geospatial-program/national-map>) and the USGS Store (<https://store.usgs.gov/>).

But ... what if you need a topographic map for a small area, or a map for a specific app and do not want to download an entire 7.5-minute USGS quadrangle? Well... the USGS has a solution called “topoBuilder”.

MAKING A CUSTOM TOPO MAP

“topoBuilder” is a USGS on-demand topo map application that can be accessed through The National Map or directly at: <https://topobuilder.nationalmap.gov>. The topoBuilder app permits the end-user to make your own topographic map, centered on your specified coordinates, in multiple formats, using the best available National Map data. The following steps demonstrate how to make a custom topo map for an area near Tallahassee, Florida starting at The National Map.

STEP 1

From “The National Map” web-viewer, select the topoBuilder app (upper right on banner)

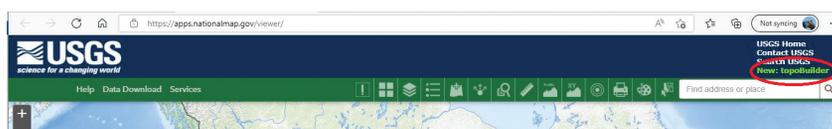


Figure 1. The topoBuilder (green) icon on the U.S. National Map.

STEP 2

That will get you to the topoBuilder app and selecting “Create an OnDemand Topo” will get you to the topoBuilder app. (You may need to read and then close any notifications.)

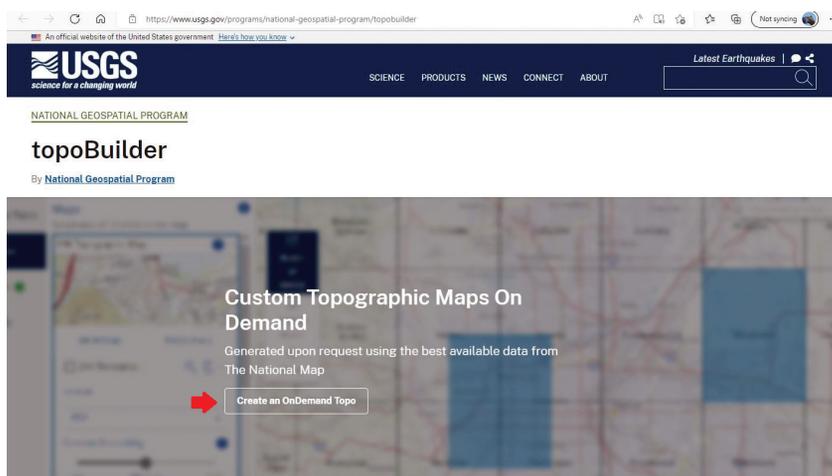


Figure 2. The topoBuilder introductory screen.

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STEP 3

On the topoBuilder app, select the map type by clicking on the map-type you want to make (in this case there is only the 7.5-minute topo) and click “NEXT” on the bottom center:

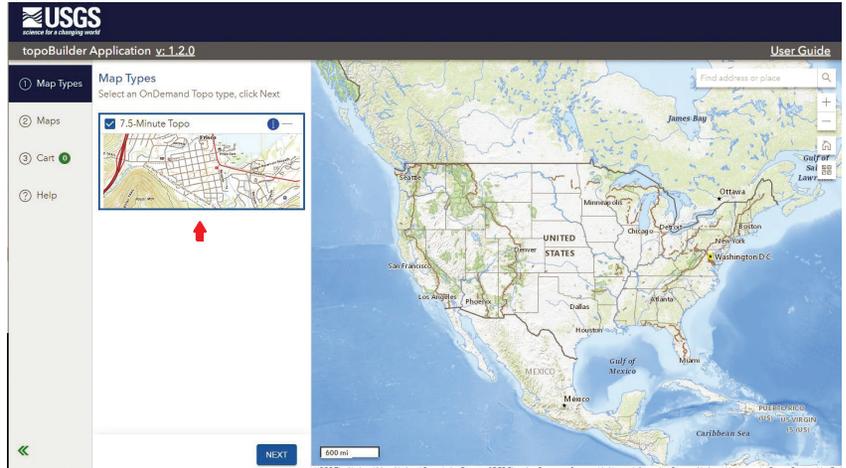


Figure 3. The topoBuilder interactive map interface.

STEP 4

Click on the “Custom Select” and using the mouse wheel, ZOOM-in to your area of interest. When you zoom-in, you will see a blue-shaded box that you can use to select a 7-minute quad area. Position the box centered on your area of interest and click the mouse (left-click) to select that area. In this case, I selected an area around Tallahassee, Florida that is centered on four x 7.5-minute quadrangles.

At this point, you can also choose your export options (PDF is the default, but you can use the dropdown to choose TIF) and choose the amount of Contour Smoothing (default is Medium) by sliding the slider.

Clicking “ADD” will put the map into your cart and go to the next step.

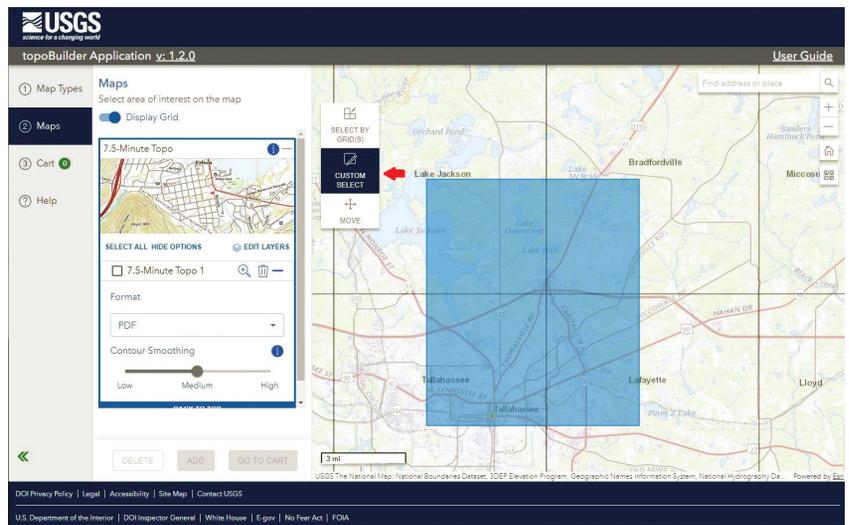


Figure 4. Selecting a custom area of interest on the topoBuilder map interface.

STEP 5

Selecting the EDIT MAPS option will let you review your choices and then pressing SAVE will save your map

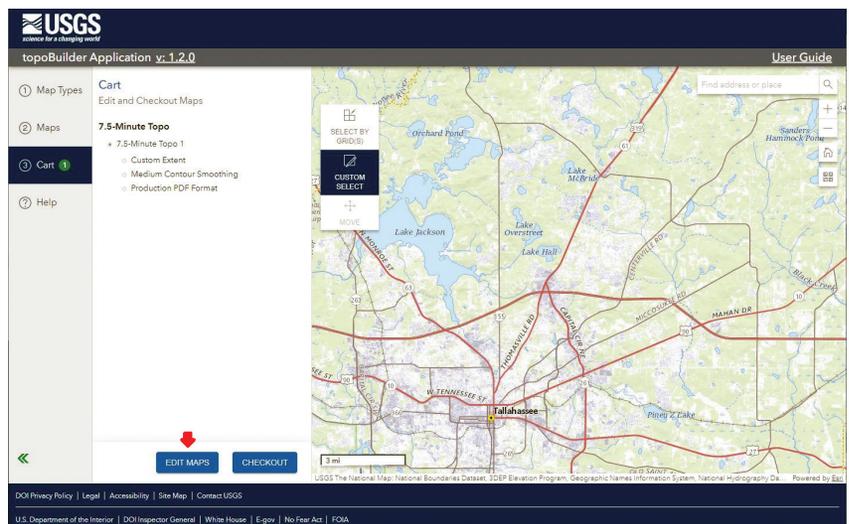


Figure 5. The Cart resulting from a custom area of interest from topoBuilder.

STEP 6

Use the CHECKOUT button to finalize your order and get to the Check Out screen where you will enter your e-mail address and press CHECKOUT (again):

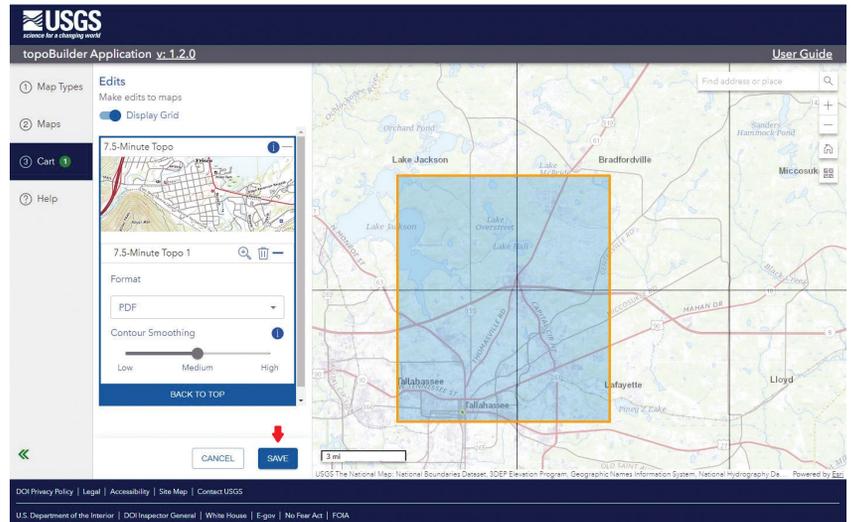


Figure 6. The confirmation and checkout screen from topoBuilder.

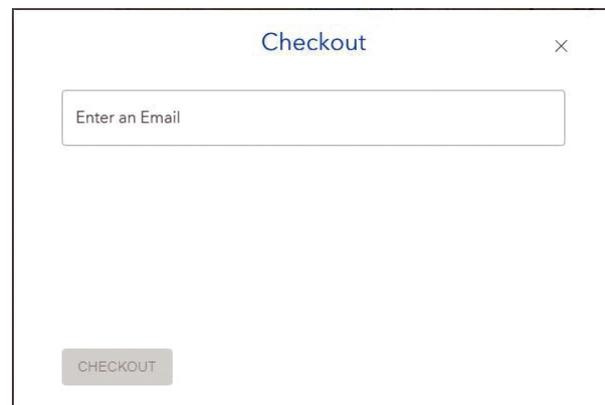


Figure 7. The Checkout Screen from topoBuilder. You need to enter your e-mail address to be used for sending the link to your quadmap. Once your e-mail address is entered, press “CHECKOUT” to complete.

The app will process your request, and after a short time, will return:

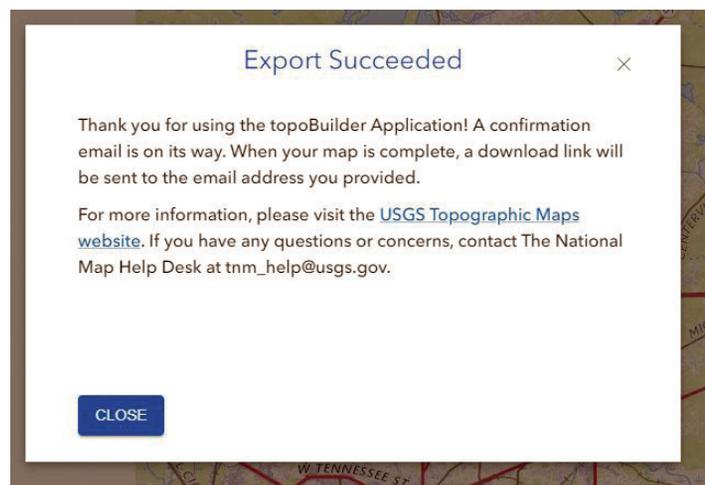


Figure 8. The Export Succeeded screen topoBuilder generates when your map has been successfully generated.

You can CLOSE this notice and you will receive an e-mail message that your map is being processed. When your map is ready, you will receive another e-mail with a link and download instructions.

Here is my finished map. Notice that there are no collars around the four 7.5-minute quadrangles that comprise my map and you can see the specific area (red rectangle) on the map collar,

Additional help is available at: <https://www.usgs.gov/programs/national-geospatial-program/topobuilder> and tnm_help@usgs.gov. Special thanks to Alexandra “Xan” Fredericks (AFredericks@USGSGov). Xan is the USGS National Map Liaison to Florida, Puerto Rico and the US Virgin Islands and demonstrated the topoBuilder application during the Spring 2022 Fl-ASPRS/UF Lidar Workshop. She is also a past president of the Florida Region – ASPRS.

Send your questions, comments, and tips to GISTT@ASPRS.org.

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Figure 9. The final topoBuilder map for the area of interest. Note (1) the area of interest is shown in the red box on the map collar, and (2) that the collars of the four USGS quadmaps have been removed to make a single mosaic.

Available on the ASPRS Website



The 4th Edition of the Manual of Remote Sensing!

The *Manual of Remote Sensing, 4th Ed.* (MRS-4) is an “enhanced” electronic publication available online from ASPRS. This edition expands its scope from previous editions, focusing on new and updated material since the turn of the 21st Century. Stanley Morain (Editor-in-Chief), and co-editors Michael Renslow and Amelia Budge have compiled material provided by numerous contributors who are experts in various aspects of remote sensing technologies, data preservation practices, data access mechanisms, data processing and modeling techniques, societal benefits, and legal aspects such as space policies and space law. These topics are organized into nine chapters. MRS4 is unique from previous editions in that it is a “living” document that can be updated easily in years to come as new technologies and practices evolve. It also is designed to include animated illustrations and videos to further enhance the reader’s experience.

MRS-4 is available to ASPRS Members as a member benefit or can be purchased by non-members. To access MRS-4, visit <https://my.asprs.org/mrs4>.

