

The Chesapeake Paddler



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Custom Navigation Charts Can Be Yours, for Free!

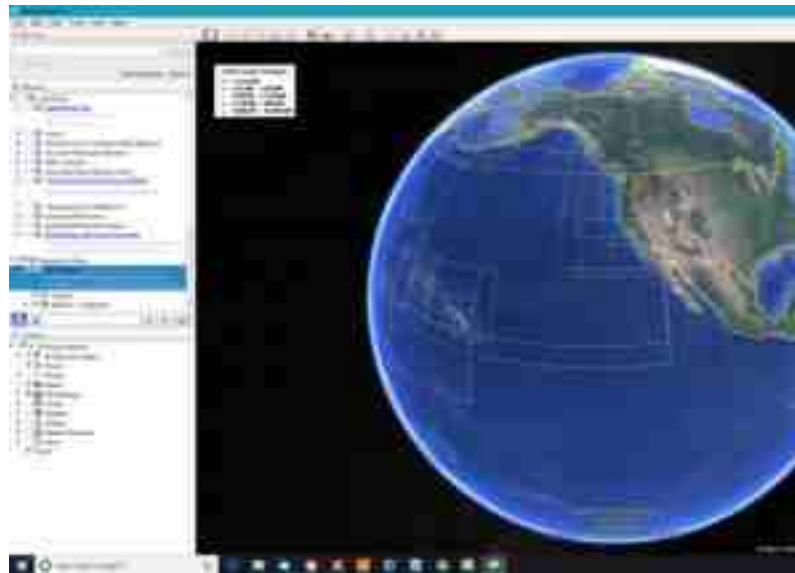
By Ralph E. Heimlich

Many of you are aware that NOAA has free digital Raster Navigation Charts (RNC) online for the entire United States coastline, including much of the St. Lawrence River and Great Lakes. The task of downloading these data and making useful charts, however, can appear daunting to the technically-challenged. My aim in this short article is to show you how to accomplish this task using Google Earth Pro, a free, downloadable mapping package. While it may seem difficult, I urge you to follow each step in this article while at the computer. You will find it much clearer than trying to memorize it and then going to the web.

Google Earth Pro™ is available for download online at <https://www.google.com/earth/versions/> in versions for use on the web, on a mobile app, and to download and use on a desktop or laptop PC or Mac. I'm old school, so these instructions are for the PC version of the latter. The mobile and web-based apps will be different. Download it, install it, and get comfortable with navigating around with the program. A tutorial may be found here: <https://support.google.com/earth/?hl=en#topic=7364880>.

After you have Google Earth Pro up and running, it is time to download the NOAA chart locator for use with Google Earth. Go to <https://nauticalcharts.noaa.gov/data/gis-data-and-services.html#seamless-raster-nautical-chart-services> and navigate to the Seamless Raster Nautical Chart Services section (3rd section) and expand it. At the bottom of that section, there is a row of service buttons for "Seamless RNC". Choose the fifth one, "KMZ" (which stands for *keyhole markup zipped*, a compressed file of keyhole markup language code). KMZ will download a .zip archive of data for the RNC index map. If you are using the Chrome browser, it will show up as a rectangle in the lower left-hand (LH) corner labeled "noaa.rncs.kmz". Click on that, and it will take you to the download folder, where you can either use it there or move it to a directory of your choice. If you will be using charts frequently, I suggest you set up a directory so you can reuse chart data without having to download it every time.

Now in Google Earth Pro, find the "File" command in the upper left hand corner and click on it, selecting "Import". Navigate to either the download directory, or the one you created and moved the .kmz archive to, and open that. You should change the file type to "all files (*.*)" and you should then see the noaa.rncs.kmz file. Click on it, and it should extract and s



how up under "Temporary Places" in the Places pane on the left hand side. It should look like this:

For clarity, I suggest you turn off (unclick) everything but the green (1:25,000 to 1:50,000) scale outlines since those are the most useful for coastal kayak navigation. Now navigate to the area of interest (Kent Island in our case) using the mouse (hand). If you have a less

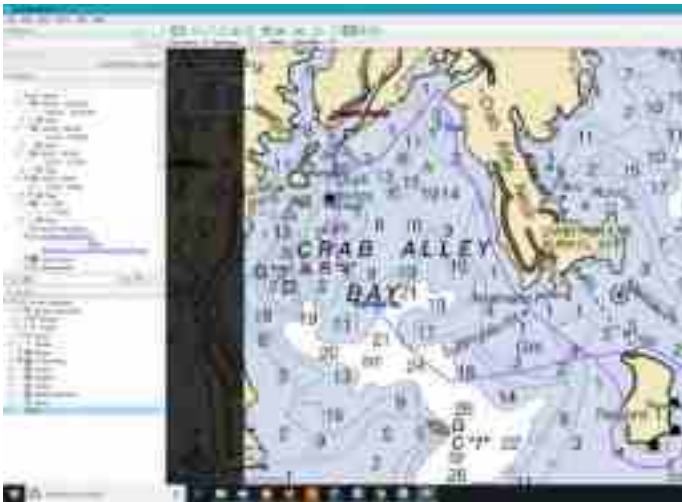
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powerful machine, this may take a while to redraw, but it should eventually look like this:



You can now zoom in further to pick up the depth markings and other navigation markings in Crab Alley Bay. For clarity, I like to put a marker on any launch or landing spots I intend to use on the trip. In this case, put one at the boat ramp at the end of Little Creek Road by clicking the “push pin” icon in the nav bar at the top to the left. I labeled it “Launch Ramp” in red, and chose a balloon icon with an L in it. You can also add an intended path for the paddle (3rd button to the right; I chose a purple line). It looks like this:



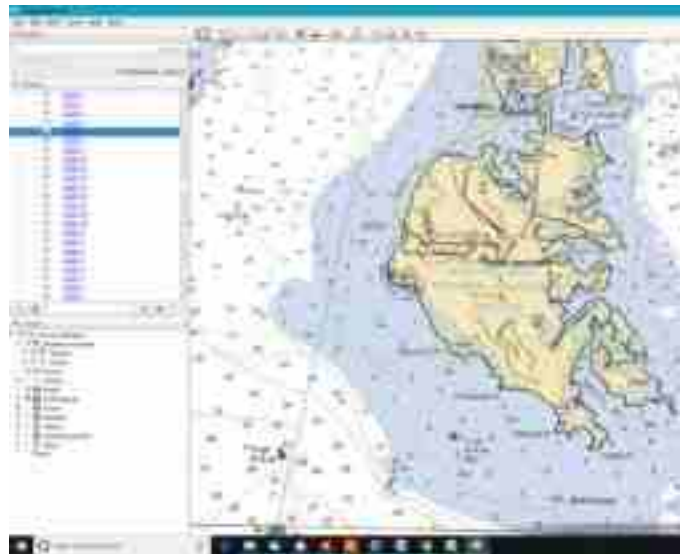
If you see a large red X across the mapping screen, you may need to uncheck the “Not for Navigation” item under NOAA RNCS in the Temporary Places section of the left hand side pane, or you may be zoomed to an inappropriate level for the scale of the charts you are viewing.

To print out your map, click the “File” command in the upper left hand corner, and select “Print”. You will then get a print area defined, with a number of print options, including title, legend, scale, compass (north arrow), scaling, and style. You can also choose the

resolution of the map (print quality in “page setup”). I tend to not want to clutter up my maps, so I unclick anything except scale and north arrow. You CAN print directly to a printer, but I like to “print” my maps to .pdf files which I can then save and reuse. To do that, click on the “Save PDF” button in the nav bar, choose a directory and save the file. You can then share this map with others, and print from it. You can print on waterproof chart paper (https://www.rainwriter.com/Default.asp?gclid=Cj0KCQiAr93gBRDSARIsADvHiOrIujgNr6fpF2LHW2fdGNeXxsHGIRpUTKJ-8Pfs1AUSUqUFclmPfu0aArLcEALw_wcB) or just use regular paper and a chart holder such as a loksak (<https://loksak.myshopify.com/collections/aloksak>).

To see what an example .pdf file looks like, download this.

What do you do if the area you need spills over from one chart to another? Zoom out until the green index lines appear again, then click (with the “hand”) on the border of the adjoining chart. A window will appear with the number of the chart. On that window, look down to “GE Overlay” and click the one with “collarless preview”. A seamless set of tiles for that chart will download and you can then zoom to whatever area you want. Here’s an example for just north of Kent Island to Eastern Neck Island. The double green lines are where chart 12270 and 12278_1 overlap in the middle of Eastern Neck Island:



Remember, however, that trying to print a large area of several charts on single sheet of 8.5 x 11 inch paper will not give useful detail. You need to zoom in enough to give useful detail on a sheet you can print.

This article just gives a quick introduction to the use of RNC charts. There are many other ways to use these datasets and many other options in Google Earth Pro. I encourage you to play around with it and let others know what you’ve found. Write your own article on some neat feature you find! ♦