

Prepare for nautical charts to go digital

By Ralph Heimlich

No matter how good GPS units get, the wise kayaker always has a paper chart on deck as a back up in case of battery failure, e-drowning, or other mishaps.

While paper charts are hundreds (thousands?) of years old, the way they are being produced is changing rapidly in the digital age.

In late 2019, the NOAA Office of Coast Survey told the marine industry that production of traditional paper charts would wind down by 2025. Replacing them would be a web app that served the Electronic Navigational Chart (ENC) data from NOAA.

The NOAA Custom Chart app (<https://devgis.charttools.noaa.gov/pod/>) prototype is being built in conjunction with ESRI using the ArcGIS Maritime extension. The Canadian Hydrographic Service (CHS) is also moving away from separate paper and digital products to the digital world only.

The maritime industry began the shift to digital navigation in 2009 when the International Maritime Organization (IMO) required all merchant ships to use an electronic chart display and information system to comply with Chapter V of the International Convention for the Safety of Life at Sea treaty.

What this did is force hydrographic offices around the world to focus on maintaining the vector digital databases behind all chart products and abandon production of purely paper charts.

Paper charts aren't going away, they will simply be produced as a by-product of maintaining digital chart databases.

Print-on-demand means that the output of a digital



Figure 1: A 1:25,000 scale chart of the area from Solomons Island to the Cove Point lighthouse.

database specified for a certain location and scale will be a .pdf file (not to be confused with a PDF). The .pdf file can then be printed and used as a paper back up to the electronic chart display.

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So, what can this mean for kayakers? Instead of buying cumbersome paper charts or expensive chart book collections for an area, a kayaker planning their trip can use the electronic chart tool to quickly customize and print out their own custom chart.

For example, figure 1 is a 1:25,000 chart of the area from Solomons Island to the Cove Point lighthouse.

This is an overview for a paddle in that area, output as a .pdf file that will print at 8.5" x 11" on plain paper or on waterproof chart paper.

The prospective route can be saved at more detailed scales, as well, such as the 1:5000 scale chart in figure 2. These were both done in about 10 minutes at the prototype site <https://devgis.charttools.noaa.gov/pod/>.

Take the opportunity to chart your next paddle or your favorite paddle location.

Note: This article was based on information published in <https://www.esri.com/about/newsroom/arcnews/nautical-charts-go-digital-with-help-from-gis/>.

Figure 2: Digital charts can be scaled to show more detail for a planned trip such as this 1:5000 scale enlargement of an area from the chart in Figure 1.



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