



Office of Coast Survey

**Effective April 13, 2014,
the federal government stops lithographic printing of NOAA nautical charts**

Frequently Asked Questions

I buy my nautical charts at my local boating store. Why should I care whether the government prints NOAA charts?

The federal government prints the NOAA lithograph nautical charts, and then sells them to commercial chart agents who sell them to the public. As of April 13, 2014, the federal government no longer printed the paper nautical charts.

Why won't the government print nautical charts after April 13, 2014?

NOAA's Office of Coast Survey and its predecessor agencies have been printing lithograph charts since the Civil War. Taking the long view, over the last decade NOAA has been building the systems, products, partnerships, and distribution system to support the industry's evolution from stock paper charts to digital files.

In 1999, NOAA formed its first partnership with a print-on-demand chart distributor to print paper nautical charts that are up-to-date at the time of printing. Since that time, most of our non-government customers have switched to print-on-demand charts, and even more customers are using our charts digitally.

As much as we'd like to continue the tradition of lithography, it is no longer justified as a use of tax dollars. This is the right way to go.

Are federal budget constraints factors in the decision to end lithograph charts?

This change has minimal budget impact on NOAA. NOAA's lithographic charts were printed by the [Federal Aviation Administration](#), and the FAA decided to stop printing nautical charts "as a direct result of the federal government's constrained fiscal environment and the FAA's need to reduce all avoidable or unnecessary costs to the agency."

NOAA has neither the facilities, nor the budget, nor the expertise to stand up or contract for a print-stock-sell operation. Additionally, we believe the private sector is better suited to printing and selling charts – and we look forward to seeing how smart entrepreneurs tackle new opportunities in chart sales.

Is NOAA getting out of chart production altogether?

Absolutely not. While we regret that circumstances are such that the government will no longer print lithograph charts, we are still the nautical chartmaker for U.S. coastal waters. More than two dozen companies now print paper [“print-on-demand” charts](#) under agreement with NOAA. (We are open to more companies participating in the program.) We continue to improve [NOAA electronic navigational charts](#) (for display on computers, mobile apps, and electronic chart display systems) and [NOAA raster navigational charts](#) (used in a variety of electronic charting systems). We also make most [NOAA charts available as PDFs](#), free of charge.

What is the difference between a “lithograph” chart, a print-on-demand chart, and a PDF chart?

- The NOAA lithograph chart is the [traditional paper chart](#). The federal government printed each chart in large “print runs” at the time of a new edition, and kept it in stock until purchased. After a mariner buys a lithograph chart, they must make corrections by hand; this can entail hundreds of corrections through many years (until the next edition).
- The [Print-on-Demand chart](#) is available from companies that have are certified by NOAA. Charts that printed on demand contain corrections released in the weekly Notice to Mariners, up to the actual date of printing.
- The [PDF* chart](#) is a chart that may be viewed on screen or printed. The PDF chart, like the print-on-demand chart, depicts corrections released in the latest weekly Notice to Mariners at the time it is posted to our website. (*PDF is the Portable Document Format developed by Adobe Acrobat. The PDF “reader” can be downloaded free from get2.adobe.com/reader/)

Why do you offer different chart products?

Not everyone needs the same print quality; it depends on the chart’s intended use. We want to maximize consumer choice. For instance, we want to allow the free market to meet the needs of customers who are not required to adhere to the requirements of the International Convention for the Safety of Life at Sea (SOLAS). In addition, we think one of the most important features of a chart is that it is up-to-date, and we want to support on-board chart printing for vessels with that capability.

Can I use any print of a chart for navigation?

Federal [navigation safety regulations 33 CFR 164.01](#) and [33 CFR 164.33](#) specify that vessels of a certain class (displacement greater than 1600 gross tons, with exceptions) must carry “[m]arine charts of the area to be transited, published by the National Ocean Service, U.S. Army Corps of Engineers, or a river authority that—

(i) Are of a large enough scale and have enough detail to make safe navigation of the area possible; and

(ii) Are currently corrected.”

Certified NOAA print-on-demand nautical charts are considered to be “published” by the National Ocean Service for the purposes of this regulation. These charts are tolerant of water and UV damage, and stand up to repeated folding, writing, and erasing – similar to a traditional NOAA chart. NOAA makes no representations of the print quality of charts printed outside of a current POD agreement.

What drives the pricing for NOAA nautical charts?

Electronic and raster navigational charts are free, and are available for download at www.nauticalcharts.noaa.gov.

Most nautical charts are available free, as [PDF downloads](#).

The maximum price of print-on-demand charts is established in the business agreement between the companies and NOAA. Within that price, NOAA collects \$.50 per chart to offset the cost of managing the program.

There was a price cap on the traditional lithograph charts as well, though most were sold at a considerable discount to the list price.

You say that the lithograph alternatives – the print-on-demand and PDF charts – are constantly updated. Why do I need an updated chart?

Coast Survey cartographers apply tens of thousands of changes to NOAA charts every year. Some changes are minor, but many are critical to safe navigation. Those critical updates can include new shoals, wrecks, and obstructions, and the latest changes to navigation aids. Shorelines are changing all the time, due to natural forces, storms or infrastructure improvements. In years past, because issuing paper charts is such a time-consuming process, NOAA would collect hundreds of changes to each chart before issuing a new edition. Beginning in 2014, Coast Survey changes each chart as we receive the new data, and these changes will be available in updated charts every week. The electronic, raster, print-on-demand and PDF charts are updated at the same time.

How will I know when I need a new chart?

We continue to issue new editions using the same criteria as we have in the past. We will issue new editions when we have significant new information from sources like hydrographic surveys or shoreline updates, an accumulation of many small changes, or a large number of notice-to-mariners updates. These new editions will continue to be announced in [Local Notice to Mariners](#) and listed in the [Dates of Latest Editions](#). Print-on-demand chart distributors will have them available for print as soon as they are issued, at the same time digital editions are available.

I understand the safety factor – mariners benefit from up-to-date charts – but there is also the convenience factor. Won't boaters be inconvenienced?

There is no question that many boaters and tourists will miss the days when they could drop by a shop to pick up a traditional nautical chart that was printed by the government. Stores offer more than convenience... They are a valuable resource for local information, marine expertise, and friendship. While the federal government no longer prints lithographic nautical charts, we are gratified by how the private sector offers a high level of service.

Print-on-demand nautical chart distributors have access to each one of our thousand nautical charts, and they are required to make them all available for purchase. It is easy to order a chart online or by telephone, and have the chart delivered to your door. The Coast Survey website lists the print-on-demand chart providers: nauticalcharts.noaa.gov/staff/print_agents.html.

NOAA encourages potential print-on-demand partners to read more at [Opportunities](#).

How can I be sure that my print-on-demand chart is up to NOAA standards?

NOAA-certified print-on-demand chart companies must adhere to stringent standards of quality and service, as specified by NOAA. They must sell on print-on-demand charts made from the most recent NOAA file, and they must perform quality control.

The product format itself – the paper quality, size, and ink – must be approved by NOAA. Coast Survey chart experts review product standards, to determine if the companies can provide additional options for paper quality and chart size.

Certified companies have a contractual obligation to offer charts with a consistently high quality print. Their charts are true to scale, with true colors. They are water-tolerant, UV-resistant, and durable enough to withstand repeated handling, writing, and erasing without becoming illegible. The charts have similar performance characteristics to traditional lithograph charts, and meet the demands of professional mariners on SOLAS class vessels. As a result, these charts are considered “published” by NOAA’s National Ocean Service for the purposes of 33 CFR 164.33. Charts printed by other means may not have the same quality, and are not currently considered “published” by the National Ocean Service.

People enjoy displaying beautiful nautical charts. Can I still get an aesthetically pleasing chart?

The new printable [PDF charts](#) – at 400 dpi – continue the traditional look, with the same colors. Copies made from the PDF file are suitable for public display, although the public will have to find printers who can reproduce the colors and image resolution on paper selected by the customer.

And don’t forget that we have tens of thousands of historical charts free for download and printing, at nauticalcharts.noaa.gov/history. If you want to see true charting beauty, you should check out some of Coast Survey’s charts from the 1800s, when [James Whistler](#) (known for the iconic painting “Whistler’s Mother”) and [John Muir](#) (founder of the Sierra Club) worked for us.

I would like to have additional information printed in the margins of my POD chart, or on the back, for ready reference. Can I get the (CFR, tide tables, marina information, fishing regulations) printed on my chart?

This type of information, or anything else for that matter, can be printed in the margins or back of the chart if the printer thinks it adds value for their customers. NOAA does not specify, prepare, nor validate this extra information.

What are the new opportunities for commercial entrepreneurs?

While businesses will no longer be able to purchase and resell NOAA nautical charts printed by the government, we hope that entrepreneurs will look at new opportunities.

One option is to become a certified NOAA POD distributor, either by partnering directly with NOAA or by working with currently certified distributors. NOAA requires that charts sold as NOAA charts (to meet SOLAS class carriage requirements) are up to date and meet NOAA standards for print quality. We manage this standard through a strong partnership program. POD charts produced by NOAA’s

commercial partners carry a special certification so the customer knows they are using a certified chart. This allows partners to recoup the cost of the premium service they are providing to their customers.

We anticipate future growth in the use of NOAA electronic navigational charts (NOAA ENC®) and raster navigational charts (NOAA RNC®), which we continue to make available at no cost. Under [RNC distributor agreements](#), entities may be certified to download, redistribute, repackage, or in some cases reformat, official NOAA RNC® data, and have those RNCs retain their official status. [Distributorships for NOAA ENCs](#) are available for either exact copying and redistribution, or for “value added” products.

Anyone interested in exploring new opportunities should submit an inquiry, indicating your interest, at nauticalcharts.noaa.gov/inquiry.