



NOAA Custom Chart User Guide

Version 3.0TM - April 10, 2025

The [NOAA Custom Chart](#) (NCC) tool is an online application that enables users to create their own customized nautical charts directly from the latest official NOAA Electronic Navigational Chart (NOAA ENC®) data.

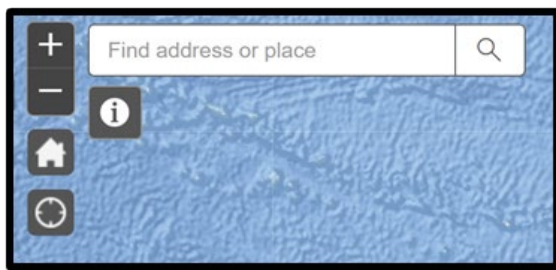
NCC outputs geospatially referenced Portable Document Format (PDF) files with “paper chart” symbology using the paper size and orientation, and the chart scale and location specified by the user. Depths may be displayed in meters, feet, or fathoms and there are other display options, such as changing the depth at which shallow water blue tint is applied and the depiction of a “safety contour” based on a vessel's draft. Users may also select the number and placement of compass roses to be displayed on the chart. The parameters of custom chart designs may be saved in a chart catalog, which may be reloaded into NCC at a later date to refresh and re-export the cataloged charts from more current ENC data that NOAA updates every weekday.





The data portrayed on NCC charts is referenced to the World Geodetic System 1984 (WGS84) and charts are created in the Mercator projection. The best output is produced when the scale of the custom chart matches the scale of the available underlying ENC data. NCC charts are composed in a standard rectangular format featuring a single chart panel – there are no insets. A graphic and a representative fraction scale, and other marginalia appear next to the chart panel. Separate 8.5” x 11” PDF pages contain notes and a zone of confidence or CATZOC diagram, similar to the survey source diagrams seen on traditional nautical charts.

Topics

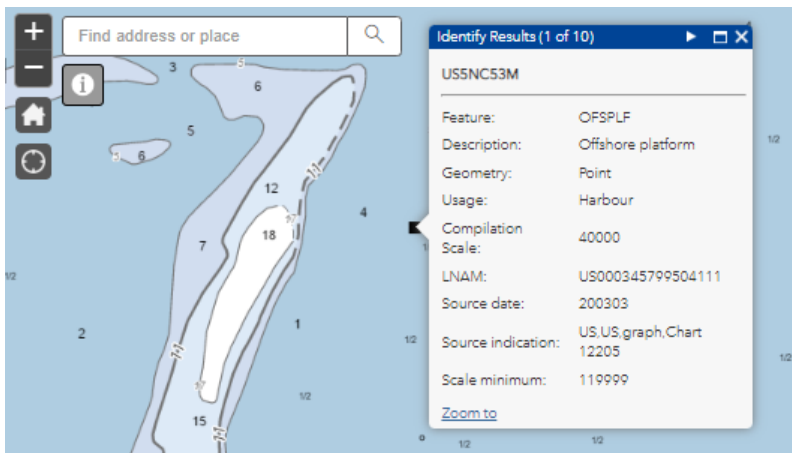
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


Map Window Navigation



The controls in the upper-left corner of the map window allow you to navigate within the NCC map window. Use the **Plus**  or **Minus**  icons, or roll the mouse wheel, to zoom the map in and out. The **Home**  icon will zoom out to the default display of North America. If you are using a GPS enabled device, clicking the **My Location**  icon will center the map at your current position. Typing into the **Find address or place** field will display a list of suggested locations to choose from. Click on a location to zoom to that spot. You may have to continue to zoom in to see chart features appear.

Identify Tool

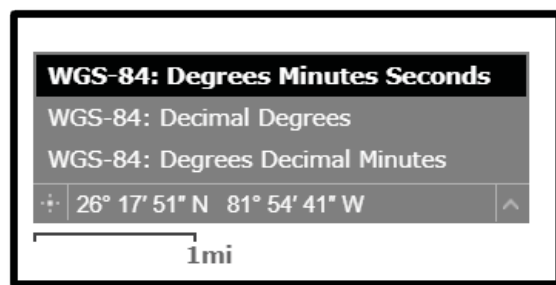




Click the **Identify**  icon and tap in the map window to get more information about a particular feature. An **Identify Results** window will appear with the number of features found at that location indicated in parentheses. Use the arrows   at the top of the window to cycle through the features. The name of the ENC cell from which the feature was extracted is displayed at the top. Area features being described will be outlined in light blue. The **Identify**  icon will turn gray when active, click it again to deactivate the tool.



*It is best to deactivate the **Identify** tool before adding new chart extents to the map.*

Coordinate Display



A **Coordinate Display** and **Scale Bar** are in the lower-left corner of the map window. A value in feet or statute miles is displayed next to the bar to indicate the distance represented by the length of the bar. The running coordinate display shows the latitude and longitude of the mouse as it moves across the map. Clicking the crosshair  icon will allow you to drop a pin  and freeze the coordinate display of the position until you click the crosshair again. The default display is in degrees, minutes, and seconds.

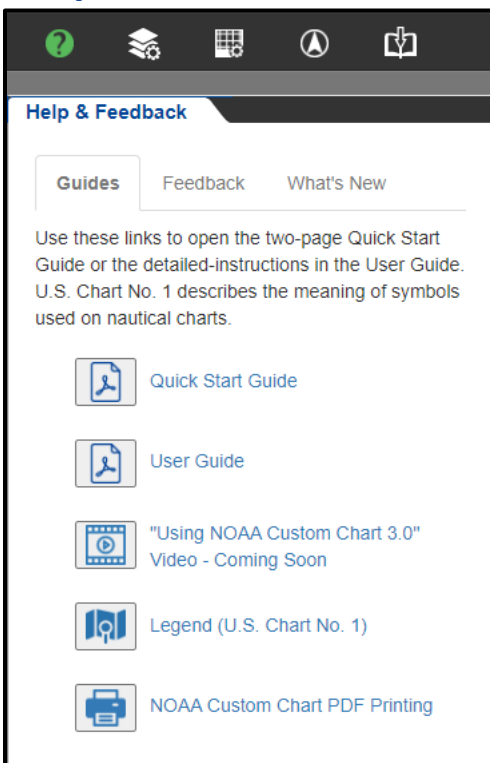
This can be changed to decimal degrees or degrees and decimal minutes by clicking on the up arrow on the right side of the display and selecting the desired format.

Control Panels

When NCC opens, five icons are displayed at the top-left side of the application window. Clicking on an icon changes its color to green and reveals the associated panel in the pane below. Each panel's function is summarized below and described in more detail in separate sections that follow.

	Help Documentation	Links to a two-page Quick Start Guide, this user guide, how-to video, the U.S. Chart No. 1 (chart symbology guide), and version updates.
	Layer Settings	Controls for the selection of ENC cells used to create the NCC.
	Chart Settings	Select chart scale, paper size and orientation, and center of the area to be charted.
	Add Compass Roses	Tools for placing and managing compass roses on custom charts.
	Export Functions	Tools for downloading custom charts and creating personal chart catalogs.

Help Documentation



Click the **Help Documentation** icon to open the panel. The **Guides Tab** has links to several useful guides, described below.

The **Quick Start Guide** provides a brief overview of the application and serves as a handy reminder of the steps in the chart creation process.

The **User Guide** is a step-by-step guide for creating NOAA Custom Charts, saving chart designs to a personal chart catalog, sharing charts, and how to update previously created custom charts.

One or more **video tutorials** are available on a variety of topics.

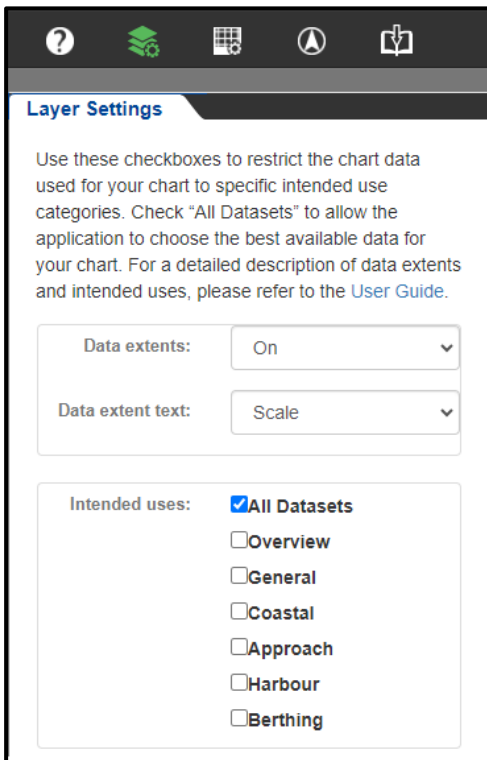
The **Legend (U.S. Chart No. 1)** is the U.S. Chart No. 1, *Symbols, Abbreviations and Terms used on Paper and Electronic Navigational Charts*. This 100+ page document serves as the legend for NOAA paper charts, such as NCC custom charts, as well as for ENC's displayed in an Electronic Chart Display and Information System (ECDIS).


The **NOAA Custom Chart PDF Printing** button links to a list of print-on-demand chart vendors that can print large-format custom charts.

The **Feedback Tab** provides a link to the NOAA Office of Coast Survey's online [ASSIST](#) customer feedback tool. See Annex C for more information on how to submit questions or suggestions for improving the NOAA Custom Chart application.

The **What's New Tab** summarizes changes made in the latest NCC software revision, broken down into three categories. Enhancements provide a new or improved functionality within the application. Bug Fixes correct programing errors. Updates are often cosmetic, or might go unnoticed by the casual user, such as style changes that bring the NCC website site into compliance with current NOAA web design policies.

Layer Settings



Click the **Layer Settings**  icon to open the panel that manages the display of the “minimum bounding rectangle” (MBR) for each ENC cell. Each red MBR displayed in the **NCC Map Window** represents the smallest, vertically-aligned box in which an ENC cell will fit, regardless of its shape. NOAA is rescheming irregularly shaped ENCs into a regular grid of rectangular cells. Although all reschemed ENCs are rectangular, some irregularly-shaped “legacy” ENCs that have not yet been reschemed will have data coverage that does not completely fill their MBR. The actual extent of each ENC cell may be viewed in the NOAA [Chart Locator](#).

The **Data extents** dropdown menu enables all ENC MBRs to be turned *On* or *Off*. The display of labels for the extents – ENC scale, ENC name, both, or none – is controlled by the **Data extent text** dropdown.

Scale is the relationship between a distance shown on a chart and the corresponding distance on the Earth. This is often expressed as ratio, such as 1:10,000. This ratio value indicates that one unit of distance on the map represents 10,000 of the same units on the Earth’s surface. Nautical charts and ENCs are broken into six scale categories. Small scale charts, such as Overview and General charts cover large areas

– like the North Pacific Ocean – and show the least amount of detail. Large scale charts, such as Harbor or Berthing charts, cover small areas – like a harbor or just a particular set of wharfs or piers – and show the greatest amount of detail. Coastal and Approach charts are in the middle. These categories are referred to as a chart’s “Intended Use” in NCC and correspond to the six ENC “Usage Bands.”

The **Intended uses** section of the Layer Settings panel has a checkbox for each of the six ENC usage bands. The default is set to **All Datasets**, which shows the MBRs for every one of NOAA’s thousands of ENCs. Checking or unchecking a box toggles the display of MBRs in the band on and off. Multiple boxes may be checked, e.g., checking both **Berthing** and **Harbor** will display the MBRs of the largest and second largest scale ENCs. Selecting just one or a few usage bands is extremely useful to reduce the clutter and to show only those ENCs that are near the same scale as the custom chart that you want to create.

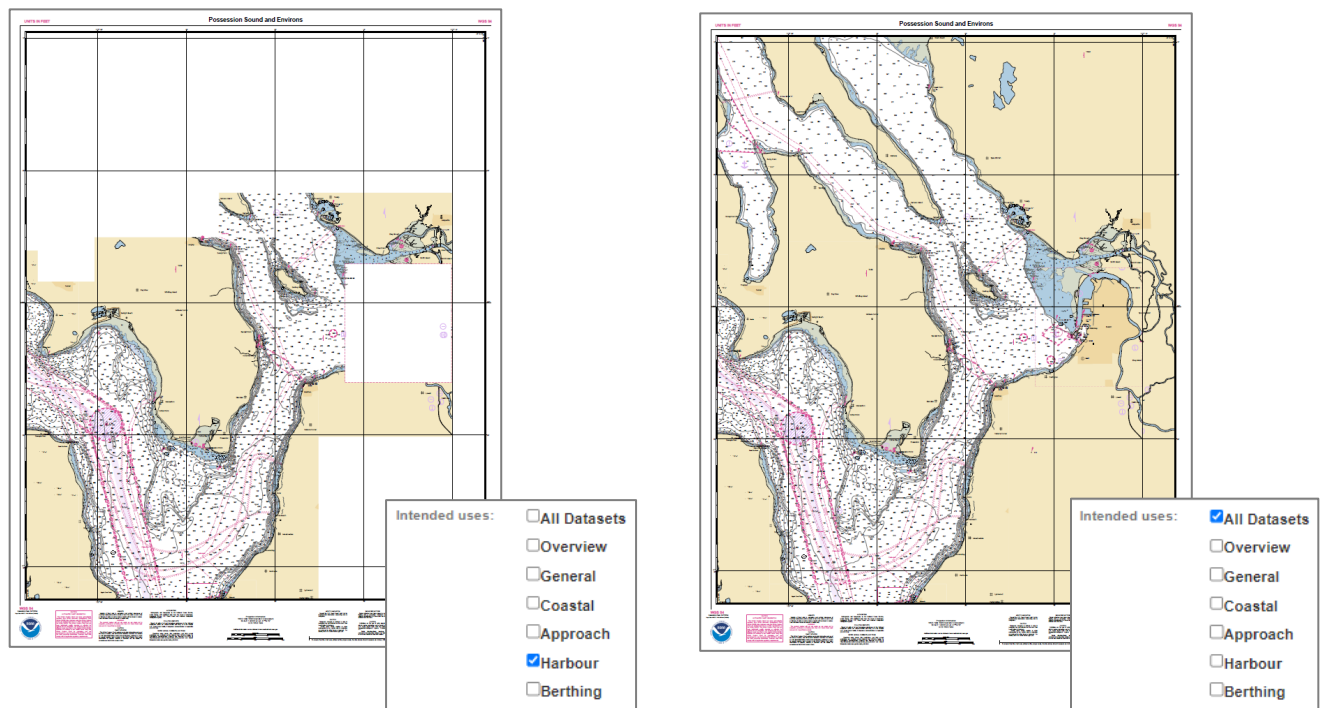
The **Intended uses** check boxes **also control the data that is available to be placed on custom charts**. For example, if the All Datasets box is unchecked and the Harbor box is checked, NCC will only place usage band 5 (harbor) data on the custom chart. In some cases, NCC would be able to “fill in” areas that do not have band 5 coverage if the All Datasets box is checked.



Check just one or two of the Intended Usage boxes that are near the same scale range as the chart that is being created. This makes it easy to see if the appropriate scale data is available in the chart area or if making a different scale custom chart might be more appropriate.

*Before exporting a custom chart, recheck the **All Datasets** box. This enables the application to fill-in areas on the chart that do not have ENC coverage in the same scale as the custom chart being created. Since this fill-in data is compiled at a different scale, features – especially soundings – will be noticeably more sparse or dense than in areas where more appropriate scale data is available.*

The two 1:40,000 scale custom charts shown below were created in an area that is only partially covered by 1:40,000 ENC data. The chart on the left was exported with the Harbor intended uses box checked and NCC only placed usage band 5 (Harbor) data on the chart. The chart on the right was exported with the All Datasets box checked and NCC filled in areas that did not have ENC harbor data available with data from other usage bands. The change in scale is noticeable by the change in the density of soundings and other features.

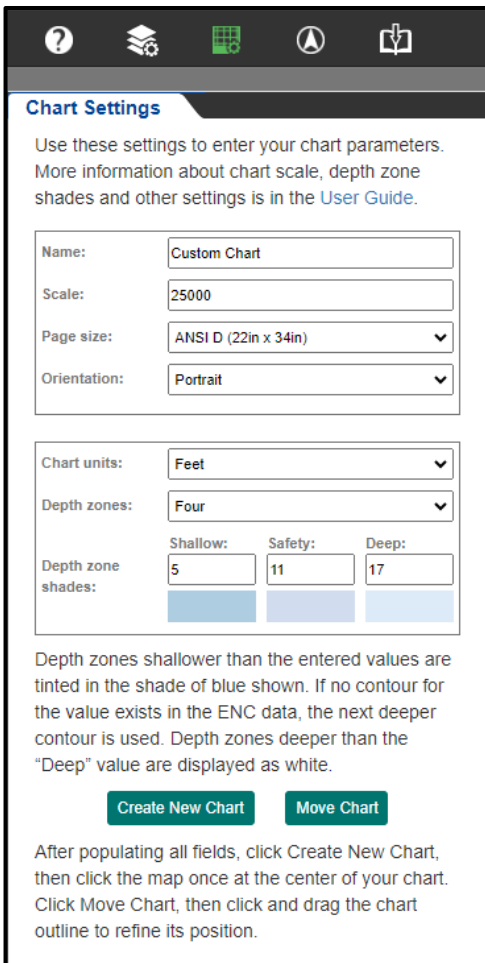


Legacy ENC data was compiled in over 100 different scales and the range of scales for each intended use overlaps to some extent with the range of scales used in adjacent intended use categories. Reschemed ENCs are compiled in just 12 scales. The table below shows the scales for both legacy ENCs and the final scales for reschemed ENCs.


More than one intended use box may have to be checked to see all the ENC MBRs for a particular scale. For example, even though all reschemed 1:45,000 scale ENCs are in the Approach (band 4) intended use, 1:45,000 legacy ENCs may be in either the Approach (band 4) or Harbor (band 5) intended uses. Thus, to ensure all 1:45,000 scale ENC MBRs are displayed, both the Approach and Harbor boxes must be checked.

ENC Usage Band	Intended Use	Legacy NOAA ENC Scale Ranges	Reschemed NOAA ENC Scales	Level of Detail Shown on Charts	Relative Scale Size
1	Overview	1:10,000,000 1:587,870	1:10,000,000 1:3,500,000	<div style="text-align: center;"> <p>Less</p> <p>More</p> </div>	<div style="text-align: center;"> <p>Smaller Scale</p> <p>Larger Scale</p> </div>
2	General	1:1,534,076 1:240,000	1:1,500,000 1:700,000		
3	Coastal	1:600,000 1:150,000	1:350,000 1:180,000		
4	Approach	1:150,000 1:25,000	1:90,000 1:45,000		
5	Harbor	1:51,639 1:5,000	1:22,000 1:12,000		
6	Berthing	1:12,000 1:2,500	1:4,000 1:2,000		

Chart Settings



The screenshot shows the 'Chart Settings' panel. At the top, there's a header with icons for help, layers, chart settings, location, and a map. Below the header, the title 'Chart Settings' is followed by a brief instruction: 'Use these settings to enter your chart parameters. More information about chart scale, depth zone shades and other settings is in the User Guide.' The settings are organized into two main sections. The first section contains four fields: 'Name' (set to 'Custom Chart'), 'Scale' (set to '25000'), 'Page size' (a dropdown menu set to 'ANSI D (22in x 34in)'), and 'Orientation' (a dropdown menu set to 'Portrait'). The second section contains three dropdown menus: 'Chart units' (set to 'Feet'), 'Depth zones' (set to 'Four'), and 'Depth zone shades'. Below these are three input fields for 'Shallow:', 'Safety:', and 'Deep:' with values '5', '11', and '17' respectively. To the right of these fields are three corresponding blue rectangular color swatches. At the bottom of the panel, there's a paragraph explaining the depth zones: 'Depth zones shallower than the entered values are tinted in the shade of blue shown. If no contour for the value exists in the ENC data, the next deeper contour is used. Depth zones deeper than the "Deep" value are displayed as white.' Below this paragraph are two buttons: 'Create New Chart' and 'Move Chart'. At the very bottom, another paragraph reads: 'After populating all fields, click Create New Chart, then click the map once at the center of your chart. Click Move Chart, then click and drag the chart outline to refine its position.'

Click the **Chart Settings**  icon to open the panel. Beneath the descriptive text are two large boxes. One asks for specifications for your custom chart, the other asks for depth value input.

Enter a chart title (of 100 characters or less) in the **Name** field. Special characters, such as, # % & + [] \ / : * ? " < > |, and carriage return or line feed are not allowed. Especially long titles may not fit on smaller paper sizes. A title may also be added or changed in the **Chart Queue** on the **Export Functions** panel.

Scale is the scale your custom chart will be created at, up to as large as 1:1,000 (which would be entered as 1000 in the Scale box). Unlike some online mapping tools that display greater detail nearly anywhere a user chooses to zoom in, some areas on nautical charts do not have larger scale data available.



Make note of the scale of the underlying ENC data from which your custom chart will be generated.

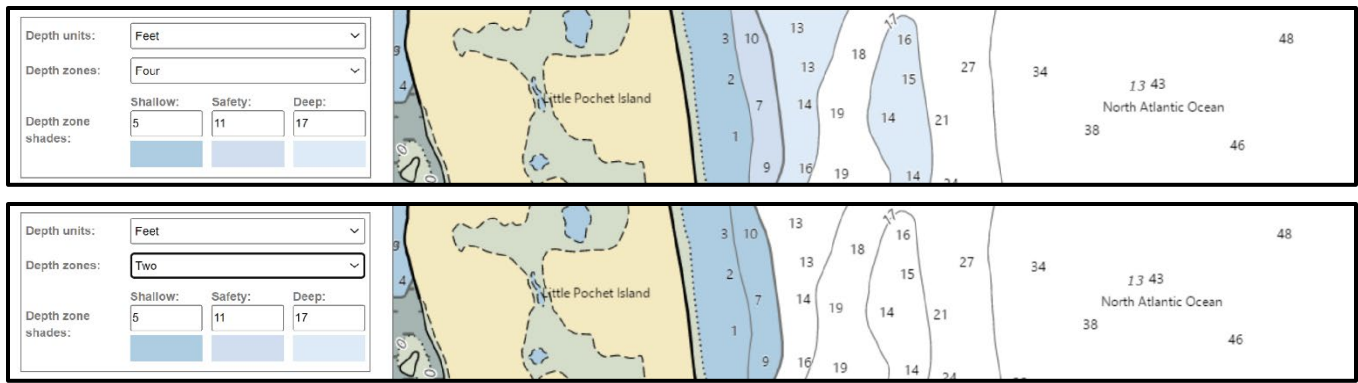
Attempting to make a large scale chart where only small scale ENC data exists will yield poor results.

Page size defines the size of the paper on which the chart will be printed, from plotter size 42" x 60" sheets to 8.5" x 11" letter-size pages. Several International (ISO 216) and North American (ANSI/ASME Y14.1)

standard paper sizes are available. Their dimensions are shown in Appendix A. Selecting an appropriate paper size is an important factor in creating a useful chart.

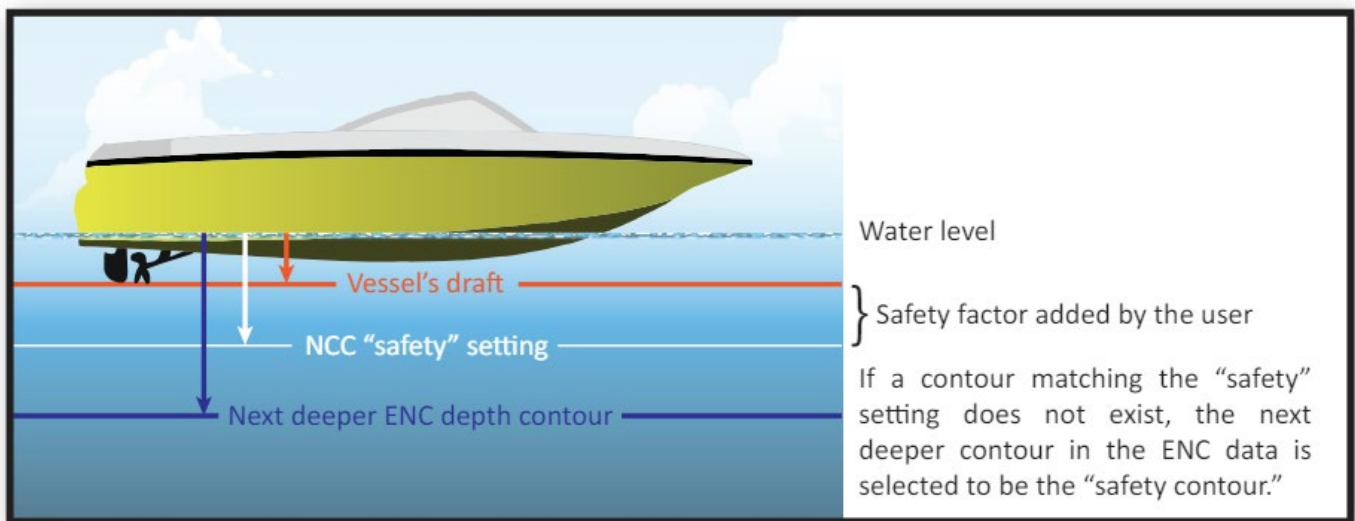
Orientation allows a choice of Portrait (taller than wide) or Landscape (wider than tall). The default setting for **Chart units** is *Feet*, though the user may also choose to display depths in *Fathoms / Feet* or *Meters*. When units are set to *Feet*, values of soundings, depth contours, over-head clearances, and aids to navigation heights will display in feet. If units are set to *Fathoms / Feet*, depths will display in fathoms and feet, and all clearances and heights will display in feet. When units are set to *Meters*, all values will display in meters and decimeters. When Feet or Fathoms / Feet are selected, it is common for NCC to display soundings and depth contour values as one whole unit shallower than depths that would be shown on the corresponding traditional paper chart. This is a result of the rounding rules applied when depths stored in meters on ENCs are converted back to feet or fathoms on custom charts. ***However, one cannot assume that the actual depths are one unit deeper than shown on the NCC custom chart.***

Shallow water tints are customizable in NCC. The **Depth zones** control sets the number of shades of blue used to tint shallow water on the chart. Four shades will use dark blue to represent the shallowest water and two successively lighter shades to show the next deeper depth areas. The fourth "shade" is white, which represents deep water. When set to two shades, the dark blue tint extends to the safety contour. Any deeper water is shown as white. Four and two shade renderings of a chart with the default tint settings of 5, 11, and 17 feet are shown in the examples below.

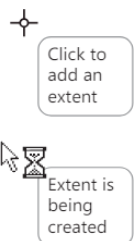


NCC enables users to set a “safety” value that controls where blue shallow water tints are shown on the chart. Some navigation systems that use ENC data can sound an alarm when a ship is heading towards shallow water, based on the safety contour value that has been entered into the system for the ship’s draft. NCC provides a similar awareness in an analog fashion by displaying a selected “safety contour” with a thick dark gray line. If the ENC data used to create the custom chart does not have a depth contour matching the user-entered safety value, the next deeper ENC contour is used as the safety contour. Generally, seaward of the safety contour is “*preferred* underkeel clearance” and shoreward is “*minimum* under- keel clearance,” or non-navigable altogether.


As you consider the appropriate safety value to use for your custom chart, keep the following in mind. Changes to a ship’s draft can result from its load, speed, and sea conditions. The changing nature of the seabed due to silting and other factors, as well as the relative accuracy of the hydrography in an area, contribute to the risk associated with any given transit. All of these factors should be considered when calculating your vessels draft plus a prudent additional cushion to use as the NCC safety setting.

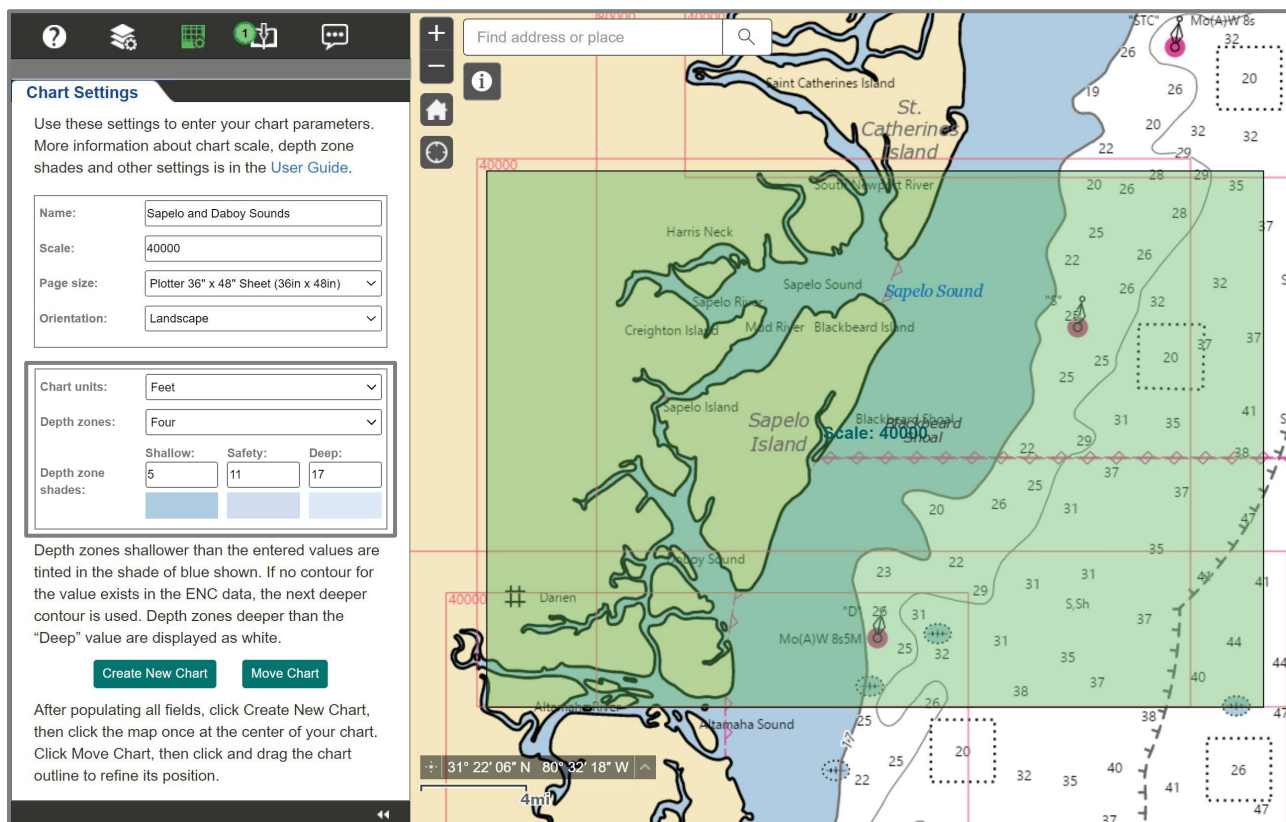



Once the chart settings are established, click the **Create New Chart** [Create New Chart](#) button. When clicked, the button will turn green and a crosshair cursor with a prompt to **Click to add an extent** will appear. The dimensions of the extent are determined by the values entered into **Chart Settings** fields. Clicking begins the process, and the prompt changes to **Extent is being created**. *Please be patient – this could take 10-15 seconds or more.*



Paper size and chart scale both affect the size of the area covered by your custom chart. Larger paper or a smaller scale will both increase the size of the chart’s “footprint” on the ground, while use of smaller paper sizes or a larger scale will shrink the chart’s footprint. Some experimentation may be necessary to find the balance of coverage (footprint size) and level of detail (scale) that you prefer.

After a few seconds, a green rectangle showing the chart extent is displayed with a label showing the scale. The number of chart extents created and available to export is displayed to the left of the **Export Functions**  icon.



If the chart is not in the desired position, it may be moved by clicking the **Move Chart**  button. Clicking **Move Chart** changes the text prompt next to the cursor to **Select a custom extent for moving**. Since more than one extent can be added at a time, this feature allows you to choose which extent to move. The extent outline changes to gray while it is being placed in its new location. While the application calculates the new extent, the rectangle changes to a darker green and the text prompt changes to **Extent is being moved**. *This may take a few seconds*. After processing, the final extent changes back to a lighter green, and the scale label returns to the middle of the area.



Create Larger Scale Charts First


When creating several overlapping charts, one after another, it may be difficult to select a chart to move, if it becomes “trapped” under another chart that covers it. Creating and repositioning larger scale (smaller footprint) charts first and then creating and repositioning the smaller scale (larger footprint) charts that may cover them last will avoid this problem.

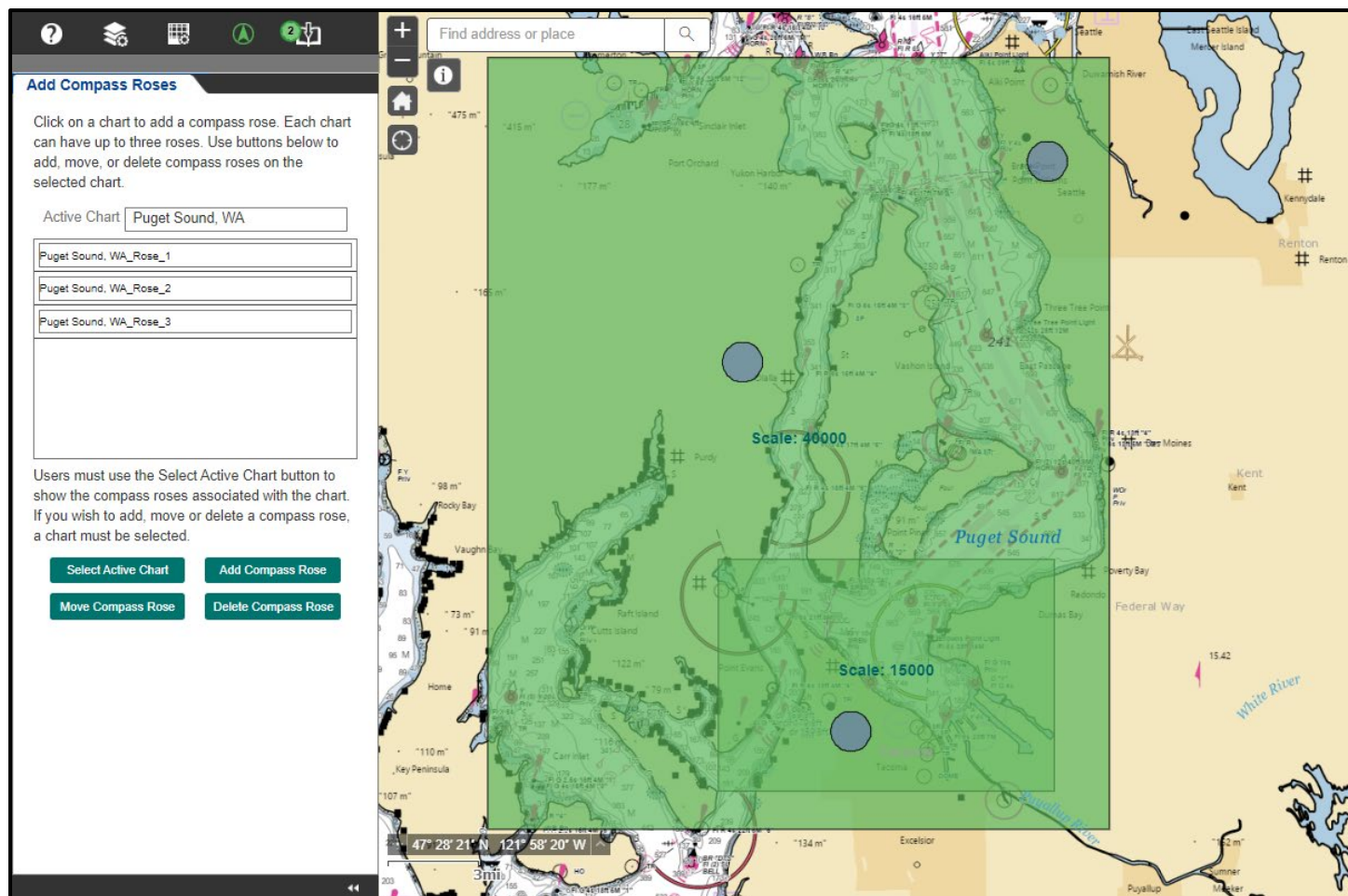



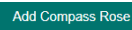
Place Compass Roses on each Chart before Creating the Next

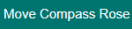

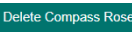
Compass roses should be placed on each chart after its final position is set and before any new chart that may cover it is created. Each chart must be selected prior to placing compass roses on it and the same difficulty in selecting an underlying chart, as described above, may arise.

Add Compass Roses


Click the **Add Compass Roses**  icon to open the panel. Up to three 3-inch diameter compass roses may be placed on each custom chart. The magnetic variation (also called magnetic declination) and the annual change in the variation is displayed for the position at the center of each rose. These values are extracted from the [World Magnetic Model](#), which is updated every five years. Compass roses show magnetic variation as either East or West of true north. The rose's outer ring – marked with a star at the zero-degree position – shows true bearings (or azimuths) measured clockwise from true north (0° to 360°). The inner ring shows bearings from magnetic north at the rose's position.








The best positions for compass roses are over land or offshore away from heavily trafficked areas. To start, click the **Select Active Chart**  button and click on a chart in the map window. The selected chart will turn a darker shade of green and the chart title will appear in the **Active Chart** window. Click the **Add Compass Rose**  button and then click on the selected chart to place up to three compass roses.

A circle representing each compass rose will be displayed over the chart and each rose will be listed in the panel. To move a compass rose, click the **Move Compass Rose**  button and then click and drag any rose into the desired position. To delete a rose, click the **Select Active Chart**  button, click on a chart in the map window, and click on a compass rose on the active chart. Then click the **Delete Compass Rose**  button and click **OK** when prompted. If a chart extent is deleted or moved, all compass roses linked to that chart are deleted. Thus, one should ensure that each chart extent is positioned correctly before compass roses are placed.

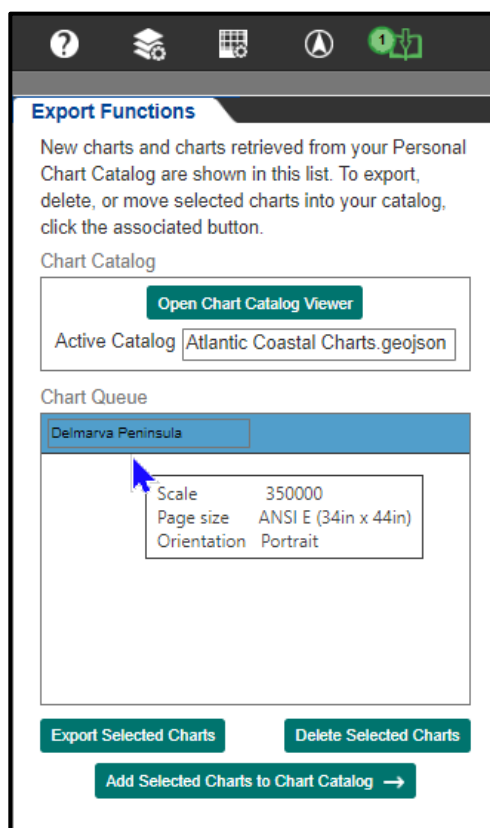


If a chart becomes “trapped” under a larger overlying chart while trying to move it or to place compass roses on it, it can be brought to the top of a stack of charts by going to the **Export Functions**  panel and selecting the trapped chart in the **Export Queue** by clicking anywhere in the row with the chart’s name. Then one may either:

- Return to the **Chart Settings**  panel and click the **Move Chart**  button before clicking and dragging the chart to a new position or,
- Return to the **Add Compass Roses**  panel and “re-select” the chart by first clicking the **Select Active Chart**  button and then clicking on the chart. Compass roses may now be placed on the previously trapped chart.

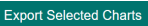
With all the chart extents and compass roses in place, the next step is to export it, that is create a PDF file of the chart. To do this, click the **Export Functions**  icon to open the panel.

Export Functions



The **Export Functions** panel manages two distinct operations. Exporting charts from the **Chart Queue** is discussed here. Creating and using a **Chart Catalog** is discussed in the next section.

Charts created in the **Chart Settings** panel appear in the **Chart Queue** with the names they were given. The name may be changed at any point by typing in a new name and hitting enter. Hovering over a row in the queue reveals details about the chart, such as its scale, paper size and orientation.

To export a chart, click on a row in the queue or hold the shift key down and click on multiple rows to select more than one chart. Then click the **Export Selected Charts**  button. An export status bar will appear in the selected row next to the chart name. This displays elapsed time and percent complete for each export.

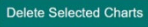
Once the export is finished, the Open  button appears. Clicking the button will open the custom chart PDF in your browser.



Most web browsers will open the Custom Chart PDF in a new browser tab. If it does not appear, check your browser settings.




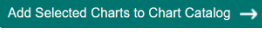
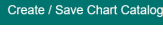
When printing a custom chart PDF, ensure that “Actual size” is selected in the Print dialog and a paper size is being used that is at least as large as the Page Size set in the NCC **Chart Settings**.

To delete a chart, select the chart in the queue, click the **Delete Selected Charts**  button and click OK when prompted.

Personal Chart Catalog

```
{
  "properties": {
    "Date": "2024-06-28T19:27:47.593Z",
    "Unique ID": "Boston and Georges Bank_350000",
    "E_Landscape": "69.103 41.731_Feet_depthZoneFour_shallow5.0",
    "safety": 11.0,
    "Updates": "None",
    "Title": "Boston and Georges Bank",
    "Scale": 350000,
    "Page Size": "ANSI E",
    "Orientation": "Landscape",
    "Center Coordinates": "41.731\u00b0N 69.103\u00b0W",
    "Depth Units": "Feet",
    "Depth Zone Tints": "Four",
    "Shallow Tint": "5.0",
    "Safety Tint": "11.0",
    "Deep Tint": "17.0",
    "CompassRose1": {
      "-70.87020775369044",
      "41.88906275987292"
    },
    "CompassRose2": {
      "-67.13576258199186",
      "42.704939334194535"
    },
    "CompassRose3": {
      "-67.88924153001881",
      "40.83466914478275"
    }
  }
}
```

The **Export Functions**  panel enables users to create a **Personal Chart Catalog** to save their chart designs and to share them with others in a GeoJSON file. GeoJSON is an open standard file format that uses simple text – a sample of which is shown at left – to store and transmit information about geospatial objects (such as the center coordinates of a NOAA Custom Chart) along with other object characteristics (such as a chart’s export date, title, scale, paper size, orientation, depth units, depth zone tints, and compass rose positions). GeoJSON files are only a few kilobytes in size and can easily be emailed to others as an attachment. Chart information saved in a catalog may be reloaded into NCC and re-exported with updated data from the latest ENC’s. To create a **Chart**

Catalog with one or more of the charts from the **Chart Queue**, select the chart(s) in the queue and click the **Add Selected Charts to Chart Catalog**  button. This will open the **Chart Catalog Viewer** and load the charts into the catalog. Even though the charts are displayed in the viewer, the catalog doesn’t exist until it is saved. To do this, click the **Create / Save Chart Catalog**  button. When a chart is added or deleted in the viewer, the catalog must be resaved or the changes will be lost when the application is closed. The NCC default file name is “ChartCatalog.geojson,” if overwriting the original file name is desired, select the previous catalog name and click Save. The orange text at the top and bottom of the viewer provides the reminder,

Catalog changes will be lost if you close the application before clicking “Create / Save Chart Catalog.”

Chart Catalog Viewer

Catalog changes will be lost if you close the application before clicking "Create / Save Chart Catalog".

NEW - Check for Updates

Opens NOAA Navigation Updates Website










Open Existing Chart Catalog

Create / Save Chart Catalog

Charts in Active Chart Catalog Atlantic Coastal Charts.geojson

Search

Search by Date, Title, Scale or Page Size...

Actions	Export Date	Updates	Title	Scale	Page Size	Orientation	Coordinates	Depth Units	Depth Zone Tints	Shallow Tint	Safety Tint	Deep Tint
<input type="checkbox"/> 	5/22/2024	None	Gulf of Maine	350000	ANSI E	Landscape	43.707°N 68.777°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	5/22/2024	None	Boston and Georges Bank	350000	ANSI E	Landscape	41.731°N 69.103°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	5/22/2024	None	Long Island Sound and New Jersey	350000	ANSI E	Landscape	40.752°N 72.512°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/25/2023	Available	Miami, Florida	350000	ANSI E	Portrait	25.924°N 79.923°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/8/2023	Available	Houston, Texas	350000	ANSI E	Portrait	27.442°N 96.590°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/8/2023	Available	Galveston, Texas	350000	ANSI E	Landscape	29.033°N 94.089°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/8/2023	Available	New Orleans, Louisiana	350000	ANSI E	Landscape	29.214°N 91.082°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/8/2023	Available	Mobile, Alabama	350000	ANSI E	Landscape	29.618°N 88.462°W	Feet	Four	5.0	11.0	17.0
<input type="checkbox"/> 	9/8/2023	Available	Tampa, Florida	350000	ANSI E	Portrait	28.223°N 82.405°W	Feet	Four	5.0	11.0	17.0

0 of 16 Selected

Select All

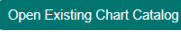
Select Updated


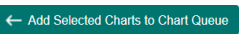
Clear Selection

Delete Selected

← Add Selected Charts to Chart Queue

Catalog changes will be lost if you close the application before clicking "Create / Save Chart Catalog".

To open an existing catalog, click the **Open Existing Chart Catalog**  button and browse to the desired GeoJSON file. The name of the active catalog will be displayed in the Charts in Active Chart Catalog window at the top of the viewer.


To reload charts from a catalog, check the box on the left side of each chart in the viewer to select individual charts or click the **Select All**  button and click the **Add Selected Charts to Chart Queue**  button. It will take a moment to load each chart. The charts will appear in the **Chart Queue** as they are loaded

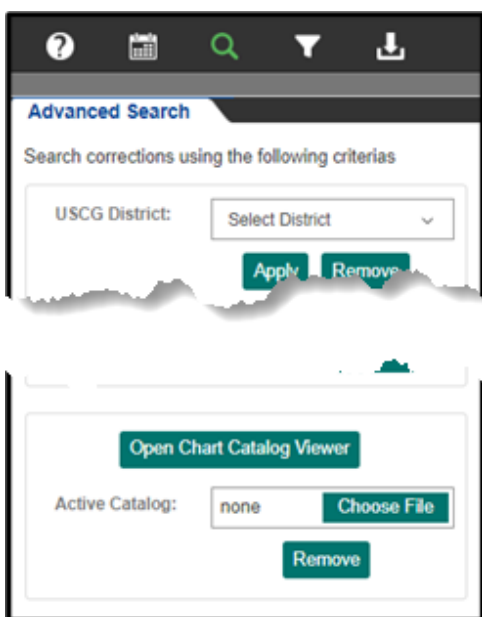
and the entire process will be completed when the bright green **← Add Selected Charts to Chart Queue** button changes back to its original color.

Charts in the Chart Queue may be deleted by highlighting the chart in the list and clicking the **Delete Selected Charts** **Delete Selected Charts** button. Charts in the Chart Catalog Viewer may be deleted by clicking on the **Delete** **Delete** button and clicking “OK” in response to the “Are you sure ...” prompt.

Updating Custom Charts

The NOAA Navigation Updates website at <https://distribution.charts.noaa.gov/navigation-updates> can be used to determine if any of the ENC data that NCC used to make a custom chart has been updated since the chart was last exported. The Updates website can also be used to search for ENC changes using a variety of spatial queries, but this section of the user guide only discusses the method for searching within the extents of NCC custom charts. These searches use the custom chart specifications found in NCC chart catalog GeoJSON files.

To check for updates, open the **NOAA Navigation Updates** (NNU) website at the URL shown above or click the **Check for Updates** **NEW - Check for Updates** button at the top right of the **Chart Catalog Viewer** in the NOAA Custom Chart application. Once NNU is open, click the **Advanced Search**  icon to open the panel from which NCC created chart catalogs can be loaded.



Open a chart catalog by clicking the **Open Chart Catalog Viewer** **Open Chart Catalog Viewer** button at the bottom of the panel. Then click the **Open Existing Chart Catalog** **Open Existing Chart Catalog** button inside the **Catalog Viewer**, the same way that this is done in the NOAA Custom Chart application.


In the **Chart Catalog Viewer**, select individual charts by checking the boxes to the left of each chart or click the **Select All** **Select All** button to select the charts that are to be checked for updates. Then click the **Search Updates for Selected Charts**  **Search Updates for Selected Charts** button to determine if any ENC data has changed within the footprint of each custom chart. This will take a minute or two, depending on how many charts are being checked.

Chart rows turn green as each update search is completed. A chart for which any ENC data has been updated – of any scale that is within the chart’s footprint – will show “Available” in the Updates column.

Chart Catalog Viewer

Catalog updates will be lost if you close the application before clicking "Save Updated Chart Catalog".

Open Existing Chart Catalog Save Updated Chart Catalog

Charts in Active Chart Catalog Atlantic Coastal Charts.geojson Search: Search by Date, Title, Scale or Page Size...

Updates	Exported Date	Title	Scale	Page Size	Orientation	Coordinates	Depth Units	Depth Zone Tints	Shallow Tint	Safety Tint	Deep Tint
<input checked="" type="checkbox"/> None	22/5/2024	Gulf of Maine	350000	ANSI E	Landscape	43.707°N 68.777°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> None	22/5/2024	Boston and Georges Bank	350000	ANSI E	Landscape	41.731°N 69.103°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> None	22/5/2024	Long Island Sound and New Jersey	350000	ANSI E	Landscape	40.752°N 72.512°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Delmarva Peninsula	350000	ANSI E	Portrait	38.524°N 75.408°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Norfolk, Virginia	350000	ANSI E	Portrait	35.995°N 75.774°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Cape Fear, South Carolina	350000	ANSI E	Landscape	33.758°N 78.014°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Savannah, Georgia	350000	ANSI E	Portrait	31.451°N 80.232°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Mobile, Alabama	350000	ANSI E	Landscape	29.618°N 88.462°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Cape San Blas, Florida	350000	ANSI E	Landscape	29.540°N 85.114°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	New Orleans, Louisiana	350000	ANSI E	Landscape	29.214°N 91.082°W	Feet	Four	5.0	11.0	17.0
<input checked="" type="checkbox"/> Available	8/9/2023	Galveston, Texas	350000	ANSI E	Landscape	29.033°N 94.089°W	Feet	Four	5.0	11.0	17.0

Select All Clear Selection

Search Updates for Selected Charts

Catalog updates will be lost if you close the application before clicking "Save Updated Chart Catalog".

If any charts have updates available, save (overwrite) the catalog and close the **NOAA Navigation Updates** application. Follow these steps to incorporate any updated ENC data into the charts.

1. Open the **NOAA Custom Chart** application.
2. Open the **Chart Catalog Viewer** in the **Export Functions** panel.
3. Click the **Open Existing Chart Catalog** **Open Existing Chart Catalog** and open the chart catalog just updated in the **NOAA Navigation Updates** application.
4. Click the **Select Updated** **Select Updated** button to select all charts with available updates, or use the check boxes to select individual charts.
5. Starting with an empty **Chart Queue**, click the **Add Selected Charts to Chart Queue** **← Add Selected Charts to Chart Queue** button.
6. In the **Export Functions** panel, select all the charts in the **Chart Queue**.
7. Click the **Export Selected Charts** **Export Selected Charts** button and save the new chart PDF files.
8. Click the **Add Selected Charts to Chart Catalog** **Add Selected Charts to Chart Catalog →** button to add the charts – with their new export dates – back into the catalog.
9. Save the updated catalog so the updated export dates will be available the next time the **NOAA Navigation Updates** website is used to check for new data.

Export Functions

New charts and charts retrieved from your Personal Chart Catalog are shown in this list. To export, delete, or move selected charts into your catalog, click the associated button.

Chart Catalog

Active Catalog Atlantic Coastal Charts geojson

Open Chart Catalog Viewer

Chart Queue

Delmarva Peninsula 0:01:20 Export Succeeded Open

Cape Fear, South Carolina 0:01:10 Export Succeeded Open

Norfolk, Virginia 0:01:20 Export Succeeded Open

Savannah, Georgia 0:01:14 Export Succeeded

Export Selected Charts Delete Selected Charts

Add Selected Charts to Chart Catalog →

Chart Catalog Viewer

Catalog changes will be lost if you close the application before clicking "Create / Save Chart Catalog".

Open Existing Chart Catalog Create / Save Chart Catalog

Charts in Active Chart Catalog Atlantic Coastal Charts geojson

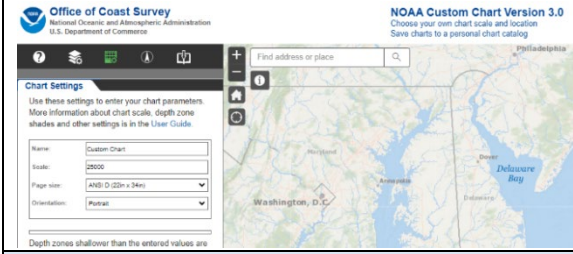
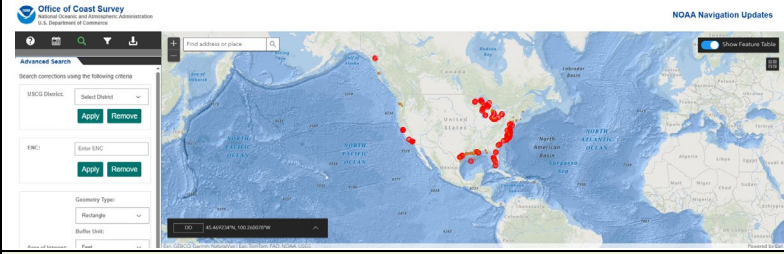
	Actions	Export Date	Updates	Title	Scale	Page Size	Orientation	Coordinates	Depth
<input type="checkbox"/>	Delete	5/22/2024	None	Boston and Georges Bank	350000	ANSI E	Landscape	41.731°N 69.103°W	Feet
<input type="checkbox"/>	Delete	5/23/2024		Cape Canaveral, Florida	350000	ANSI E	Portrait	28.687°N 80.275°W	Feet
<input checked="" type="checkbox"/>	Delete	9/8/2023	Available	Cape Canaveral, Florida	350000	ANSI E	Portrait	28.687°N 80.275°W	Feet
<input type="checkbox"/>	Delete	5/23/2024		Cape Fear, South Carolina	350000	ANSI E	Landscape	33.758°N 78.014°W	Feet
<input checked="" type="checkbox"/>	Delete	9/8/2023	Available	Cape Fear, South Carolina	350000	ANSI E	Landscape	33.758°N 78.014°W	Feet
<input type="checkbox"/>	Delete	5/23/2024		Cape San Blas, Florida	350000	ANSI E	Landscape	29.540°N 85.114°W	Feet
<input checked="" type="checkbox"/>	Delete	9/8/2023	Available	Cape San Blas, Florida	350000	ANSI E	Landscape	29.540°N 85.114°W	Feet
<input type="checkbox"/>	Delete	5/23/2024		Delmarva Peninsula	350000	ANSI E	Portrait	38.524°N 75.408°W	Feet

Select All Select Updated Clear Selection Delete Selected

← Add Selected Charts to Chart Queue

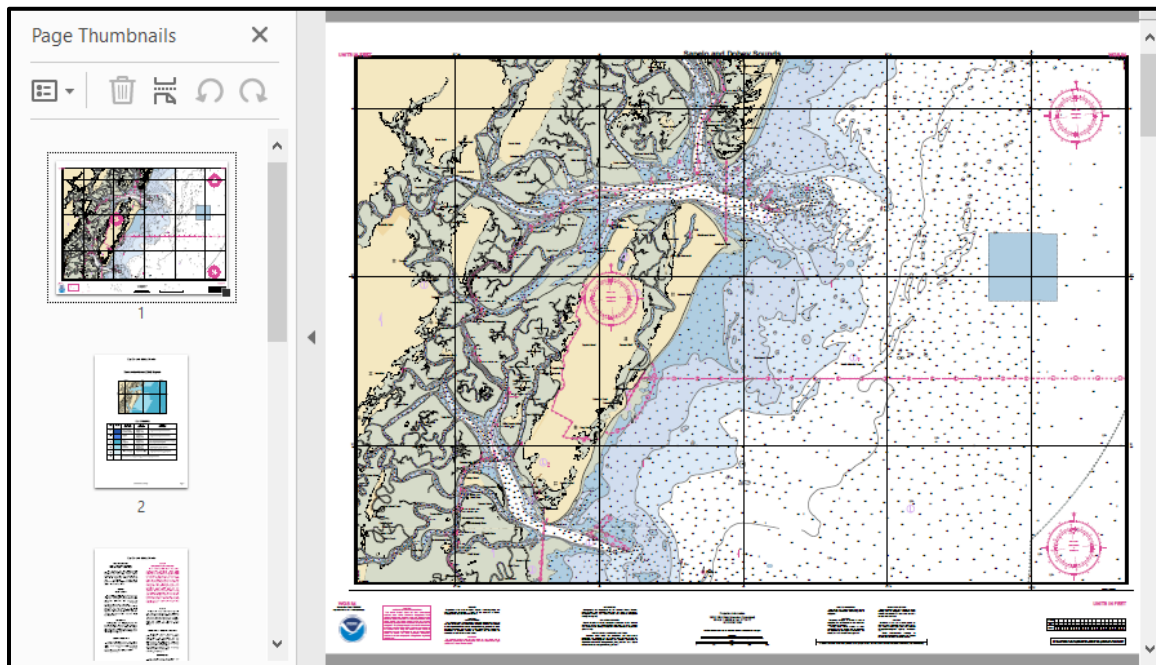
Catalog changes will be lost if you close the application before clicking "Create / Save Chart Catalog".

The process to create and update custom charts using the NOAA Custom Chart and NOAA Navigation Updates online applications is summarized below.

NOAA Custom Chart Application	NOAA Navigation Updates Application
	
1. Create custom chart	
2. Export chart	
3. Add chart to catalog	
4. Save catalog	Periodically check for updates.
	5. Open catalog
	6. Check charts for updates
When updates are available, re-export the chart(s).	7. Save catalog
8. Open catalog	
9. Add charts with updates to chart queue	
10. Export charts	
11. Add updated charts to catalog	
12. Save catalog	

Annex A – Custom Chart Content

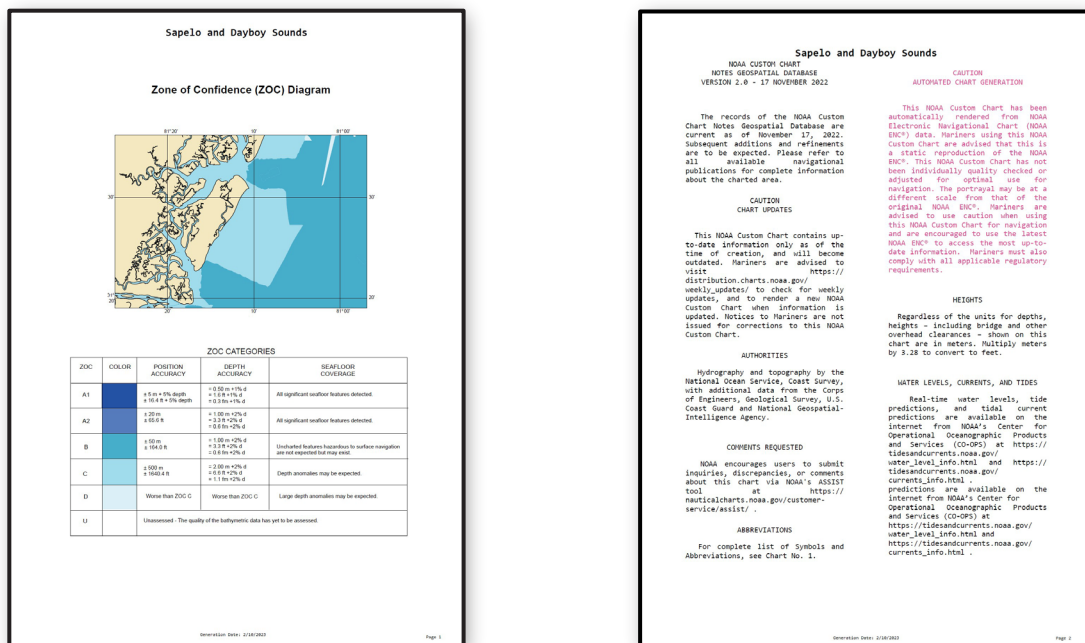
The first page of the PDF file is the custom chart in the size and orientation that you selected.



The second page of the PDF contains the Zone of Confidence Diagram formatted to 8.5" x 11" paper. Subsequent pages contain the notes that a traditional nautical chart would show within the body or around the margins of the chart, in a two-column format. The number of pages needed for a custom chart depends on the number of notes associated with that chart.

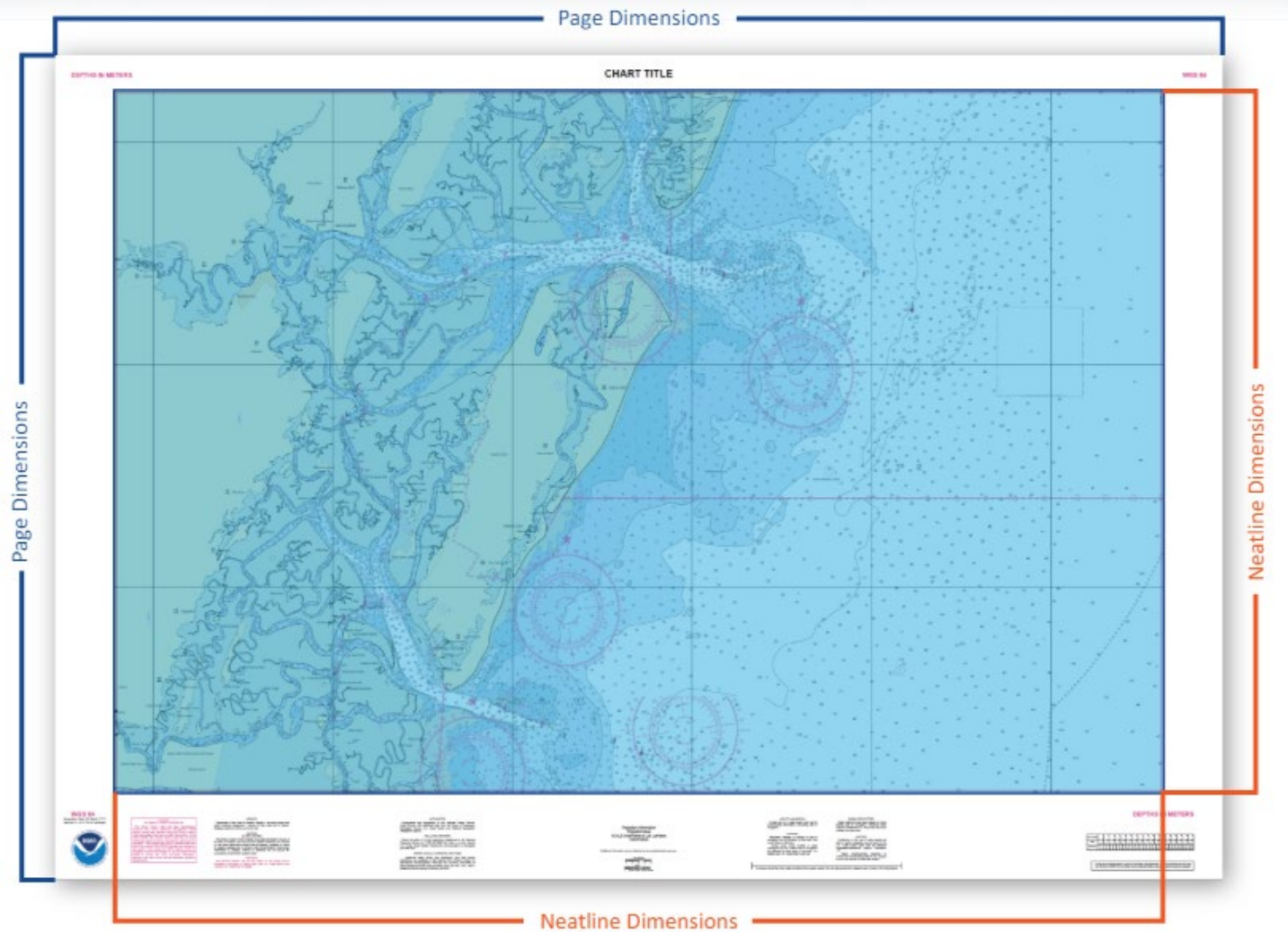
Each page shows the "Generation Date," on which the custom chart was exported. It is found on the lower-left side of the chart proper, just above the NOAA logo, and on the bottom-center of the other pages.

Zone of Confidence (ZOC) Diagrams are provided on NOAA Custom Charts to assist mariners in assessing



hydrographic survey data and the associated level of risk to navigate in a particular area. The age and accuracy of hydrographic survey data used on nautical charts varies. Depth information is based on data from the latest available hydrographic survey, which in many cases may be quite old. ZOC diagrams show the extent the hydrographic surveys used to compile the ENC data used on the NOAA custom charts. Different shades of blue are used to indicate one of five quality categories (A1, A2, B, C and D) assessed for the data in each “zone.” Areas for which the data quality has not yet been assessed are shown as white. An accompanying table provides a description of each category.

Annex B – Paper Sizes



International (ISO 216)

Size	Landscape Page Dimensions	Landscape Neatline Dimensions	Portrait Page Dimensions	Portrait Neatline Dimensions
A0	46.81 x 33.11 inches 1,189.00 x 841.00 mm	42.00 x 30.70 inches 1,066.80 x 779.78 mm	33.11 x 46.81 inches 841.00 x 1,189.00 mm	30.70 x 42.00 inches 779.78 x 1,066.80 mm
A1	33.11 x 23.39 inches 841.00 x 594.00 mm	28.30 x 21.00 inches 718.82 x 533.40 mm	23.39 x 33.11 inches 594.00 x 841.00 mm	21.00 x 28.30 inches 533.40 x 718.82 mm
A2	23.39 x 16.54 inches 594.00 x 420.00 mm	18.50 x 14.10 inches 469.90 x 358.14 mm	16.54 x 23.39 inches 420.00 x 594.00 mm	14.10 x 18.50 inches 358.14 x 469.90 mm
A3	16.54 x 11.69 inches 420.00 x 297.00 mm	13.20 x 9.50 inches 335.28 x 241.30 mm	11.69 x 16.54 inches 297.00 x 420.00 mm	9.50 x 13.20 inches 241.30 x 297.00 mm
A4	11.69 x 8.27 inches 297.00 x 210.00 mm	8.40 x 6.10 inches 213.36 x 154.94 mm	8.27 x 11.69 inches 210.00 x 297.00 mm	6.10 x 8.40 inches 154.94 x 213.63 mm


North American (ANSI/ASME Y14.1)

Size	Landscape Page Dimensions	Landscape Neatline Dimensions	Portrait Page Dimensions	Portrait Neatline Dimensions
ANSI E	44.00 x 34.00 inches 1,117.60 x 863.60 mm	39.10 x 31.60 inches 993.14 x 802.64 mm	34.00 x 44.00 inches 863.60 x 1,117.60 mm	31.60 x 39.10 inches 802.64 x 993.14 mm
ANSI D	34.00 x 22.00 inches 863.60 x 558.80 mm	29.10 x 19.50 inches 739.14 x 495.30 mm	22.00 x 34.00 inches 558.80 x 863.60 mm	19.50 x 29.10 inches 495.30 x 739.14 mm
ANSI C	22.00 x 17.00 inches 558.80 x 431.80 mm	17.20 x 14.50 inches 436.88 x 368.30 mm	17.00 x 22.00 inches 431.80 x 558.80 mm	14.50 x 17.20 inches 368.30 x 436.88 mm
ANSI B	17.00 x 11.00 inches 431.80 x 279.40 mm	13.66 x 8.81 inches 346.96 x 223.77 mm	11.00 x 17.00 inches 279.40 x 431.80 mm	8.81 x 13.66 inches 223.77 x 346.96 mm
Legal	14.00 x 8.50 inches 355.60 x 215.90 mm	7.90 x 6.30 inches 200.66 x 160.02 mm	8.50 x 14.00 inches 215.90 x 355.60 mm	6.30 x 7.90 inches 160.02 x 200.66 mm
Letter	11.00 x 8.50 inches 279.40 x 215.90 mm	7.90 x 6.30 inches 200.66 x 160.02 mm	8.50 x 11.00 inches 215.90 x 279.40 mm	6.30 x 7.90 inches 160.02 x 200.66 mm

Plotter Sheets

Size	Landscape Page Dimensions	Landscape Neatline Dimensions	Portrait Page Dimensions	Portrait Neatline Dimensions
Plotter 42" x 60" Sheet	60.00 x 42.00 inches 1,524.00 x 1,066.80 mm	57.59 in x 37.30 inches 1462.79 mm x 947.42 mm	42.00 x 60.00 inches 1,066.80 x 1,524.00 mm	39.70 in x 55.19 inches 1008.38 x 1401.83 mm
Plotter 36" x 56" Sheet	56.00 x 36.00 inches 1,422.40 x 914.40 mm	51.19 x 33.70 inches 1,300.23 x 855.98 mm	36.00 x 56.00 inches 914.40 x 1,422.40 mm	33.70 x 51.19 inches 855.98 x 1,300.23 mm
Plotter 36" x 48" Sheet	48.00 x 36.00 inches 1,219.20 x 914.40 mm	43.19 x 33.70 inches 1,097.03 x 855.98 mm	36.00 x 48.00 inches 914.40 x 1,219.20 mm	33.70 x 43.19 inches 855.98 x 1,097.03 mm

Annex C – Feedback

For further assistance or to suggest improvements to the NOAA Custom Chart application, click the **Help & Feedback**  icon, click on the **Feedback Tab**, and then click link to open the Office of Coast Survey's online [ASSIST](#) customer feedback tool.

ASSIST is the Office of Coast Survey's stakeholder engagement and feedback tool, which allows customers to submit questions and comments or to report an error with NOAA's nautical charts and products.

If you have a question or suggestion concerning a particular NOAA custom chart that you are trying to create, please tell us where the chart is of and attach the custom chart PDF or a screenshot of the area, if possible.

How may we ASSIST you today?

Questions & Comments

Report an Error

EMAIL *

VERIFY EMAIL *

WHAT TYPE OF USER ARE YOU? *

ENTER YOUR COMMENT OR QUESTION *

I

*required field

ATTACH FILE(S)

Submit

OMB Control #0648-0007
Expires on 8/31/24
[Public Reporting Burden Statement](#)

All Freedom of Information Act (FOIA) requests for records should be submitted to NOAA via [foia.gov](#).
Individuals may submit general questions via this portal.