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HYPLOT MAX

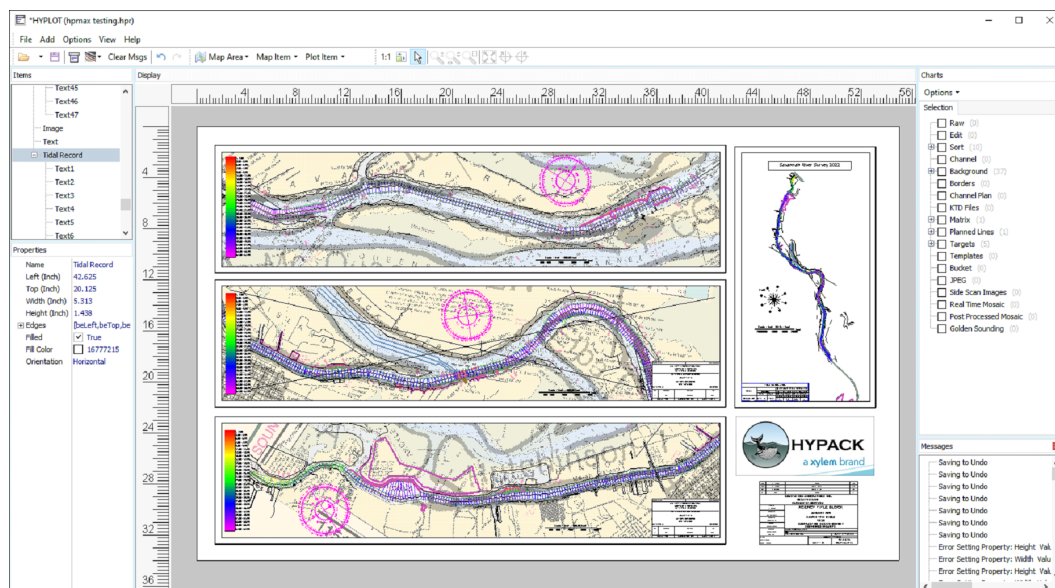
By Caroline Liu

This year we are unveiling HYPLOT MAX, which replaces our HYPLOT-Multi program. HYPLOT MAX comes with several improvements:

- The use of paper space
- Multiple maps and PLT files can be plotted to one sheet
- PLT files are no longer required to create a plot area
- Plots all background files
- Items like map areas, map items, and plot items can be locked to prevent accidental editing
- Undo multiple actions
- Easily define item properties in the main window

Figure 1 shows an example of a finished plot layout made in HYPLOT MAX. Once finished, the plot can be exported as a PDF or TIF file. Note that layout files are now saved as HYPLOT Project (*.hpr) files instead of Layout (*.lot) files.

FIGURE 1. HYPLOT MAX Plot Example

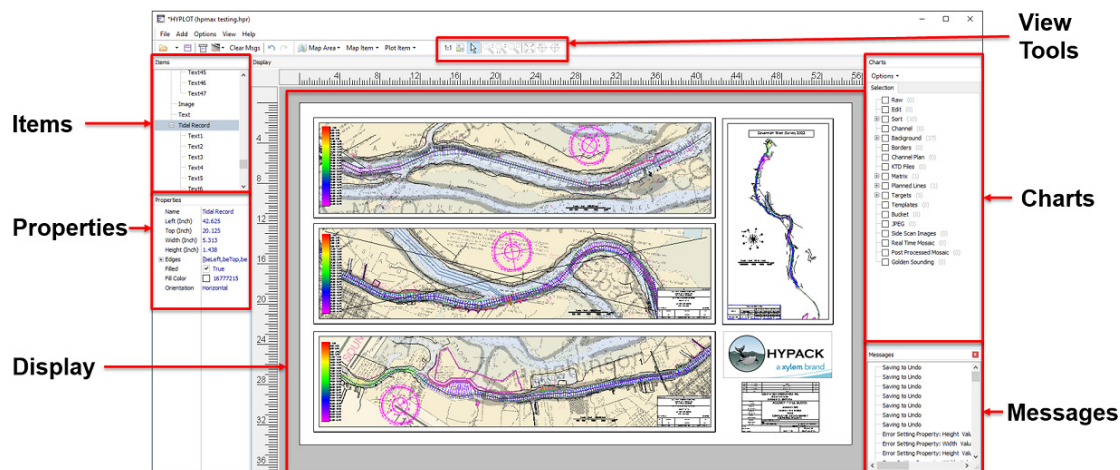


HYPLOT MAX INTERFACE

In addition to the above updates, the HYPLOT MAX interface now displays and allows you to update multiple settings in the same window as your plot layout:

- Items: Lists map areas, loaded plot files (*.plt), text boxes, title blocks, arrows, etc.
- Properties: Define and edit attributes of a selected item
- Display: Shows the plotting sheet
- View Tools: Includes select, zoom, pan, etc.
- Charts: Enable or disable project files for plotting from here
- Messages: Tracks and lists all activities performed on the sheet

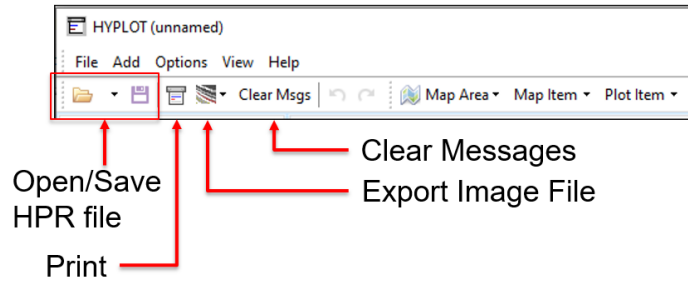
FIGURE 2. HYPLOT MAX Interface



In addition to the tree views displayed on the left and right of the sheet, you can perform multiple actions to the sheet by clicking the icons on the top toolbar. From left to right, these icons are:

- Open HPR File - Open a previously created layout file.
- Save HPR File - Save current layout file.
- Print - Send to printer or print as PDF.
- Export Image File - Export the sheet as a PDF or TIFF.
- Clear Messages - Clears messages from the Messages Box in the bottom right.
- Undo and Redo - Undo or redo previous action.
- Map Area - Create a new map area or select a plot sheet file (*.plt).
- Map Item - Add a color bar, compass, north arrow, or scale bar to any map area you've added.
- Plot Item - Add an arrow, picture, shape, text, or time stamp anywhere on your sheet.

FIGURE 3. *HYPLOT MAX Top Toolbar*



RUNNING HYPLOT MAX

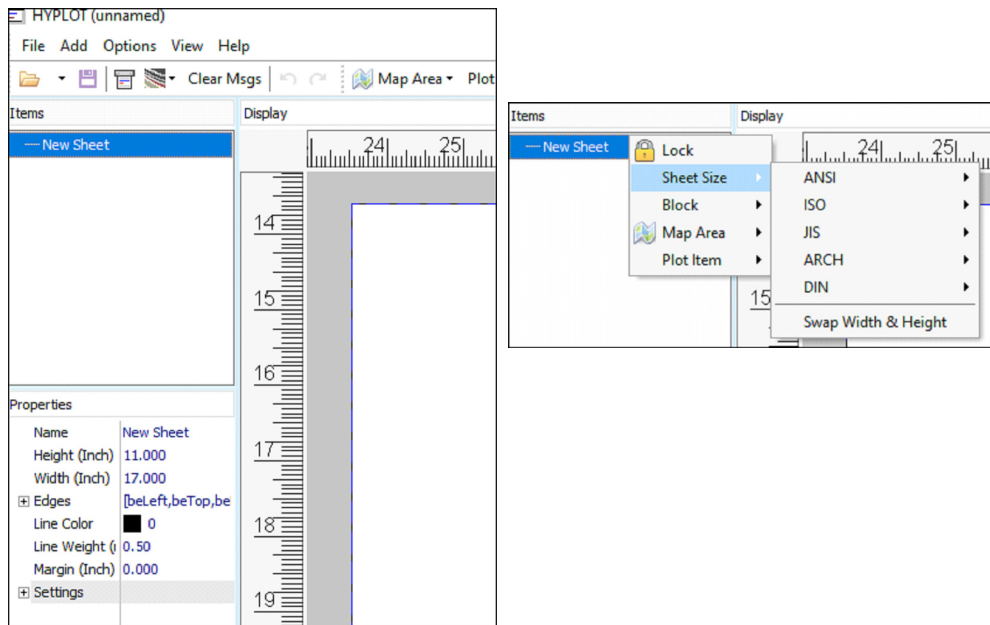
To launch **HYPLOT MAX**, open HYPACK 2022 and select Final Products > HYPLOT MAX from the top toolbar. HYPLOT MAX will open with a blank paper space by default. A new sheet is automatically created and available under the Items tree view on the left. Note that a Plotting Sheet File (*.plt) is no longer required to start HYPLOT MAX.

SHEET PROPERTIES

Click New Sheet in the Items tree view to display the sheet's settings in Properties beneath the Items tree view. From here, you can see the name, height, width, and the line color, weight, and margins of the edges of the sheet.

To change the sheet dimensions, right click the sheet item and click Sheet Size. The menu displays multiple predefined sizes and also offers the option to swap the width and height of the sheet. Sheet size standards that are currently included in HYPLOT are ANSI, ISO, JIS, ARCH, and DIN. However, sheet size will change to fit a larger map area.

FIGURE 4. *Sheet Size and Properties*



ADD MAP AREAS

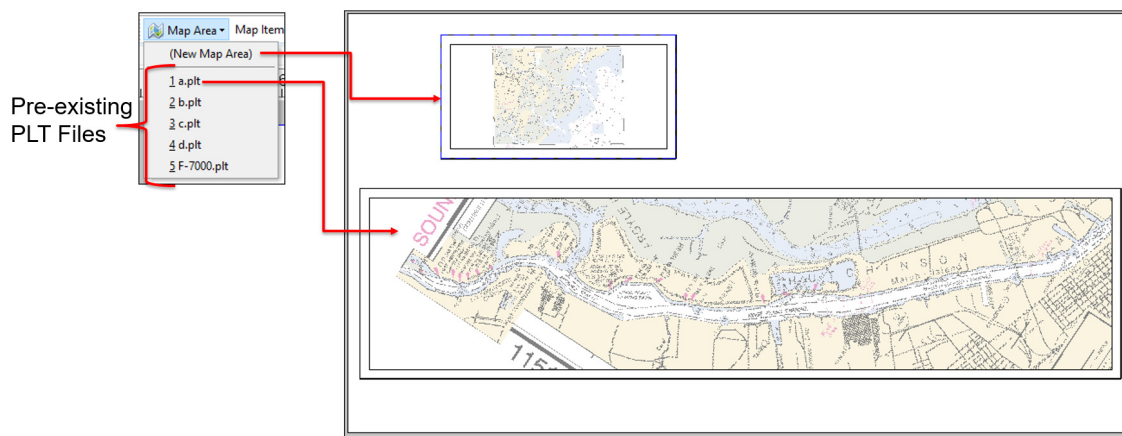
You can add multiple map areas to your sheet. **To add a new map area:**

1. From the top toolbar of the HYPLOT MAX window, click Map Area > (New Map Area). A plot border will appear on the sheet.
2. Drag the edges of the plot border to resize the new map area.
3. Use view tools to define what is displayed in the map area.
4. Click and drag the map area to position it anywhere on the sheet.

You can also add a previously created *.plt file to a map area. To do so:

1. From the toolbar at the top of the HYPLOT MAX window, click Map Area and select a previously created *.plt file from the list.
2. The map area will load the pre-sized *.plt file, so you do not need to define the plot area.
3. Click and drag the map area to position it anywhere on the sheet.

FIGURE 5. Adding New Map Area and Map Area from a *.plt File



ADD AND EDIT PROJECT FILES AND ITEMS IN A MAP AREA

You can easily edit each map area in HYPLOT MAX. The sheet in the Items tree view will display the name of each map area or *.plt file. Click the name of the map area to bring up its settings in the Properties tree view.

To **change project file properties for the map area**, click on the sheet to select it, then go to the Properties tree view and click Settings. You will see multiple display options that are similar to Shell settings, such as Charts, Raw Files, Border Files, Contours, etc.

To enable or disable project files displayed within a map area, click the map area, then select the project files from Charts on the upper right.

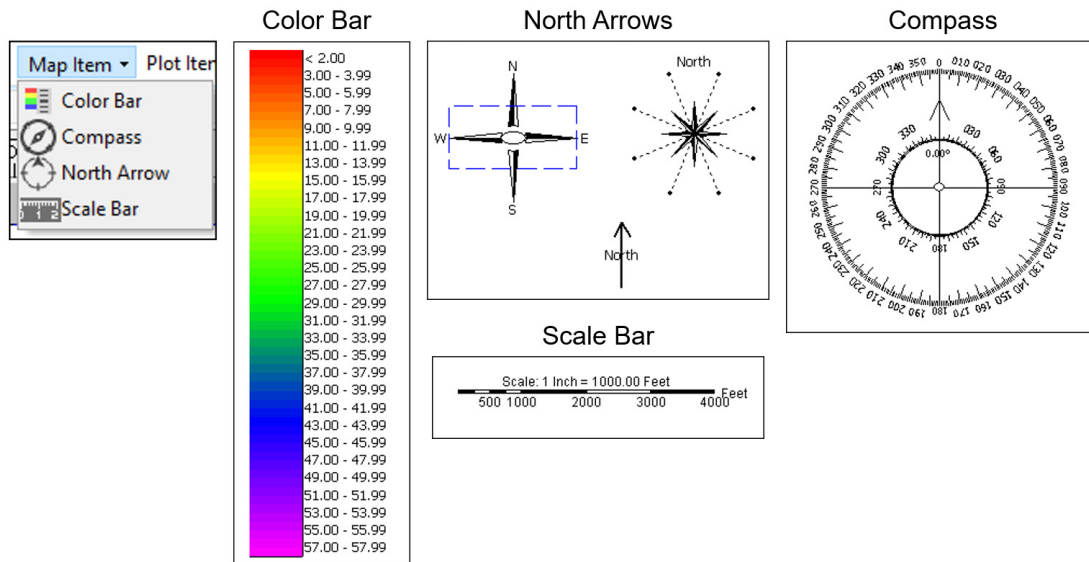
Use the Map Items drop down to add a Color Bar, Scale Bar, Compass, or North Arrow. You can drag these symbols anywhere on the map. Click on the name of the symbol in the Items tree view to display and modify its settings from Properties.

MAP ITEMS

The Map Item menu contains symbols that you can insert within each map area to add context and clarity. The following map items are currently available for you to add to your sheets:

- Color Bar - Display the color bar in Depth or Elevation Mode.
- Compass - Display Grid North or Geodetic North
- North Arrow - There are multiple north arrows for you to choose from.
- Scale Bar - Can adjust its opacity against a map.

FIGURE 6. Map Items and Menu

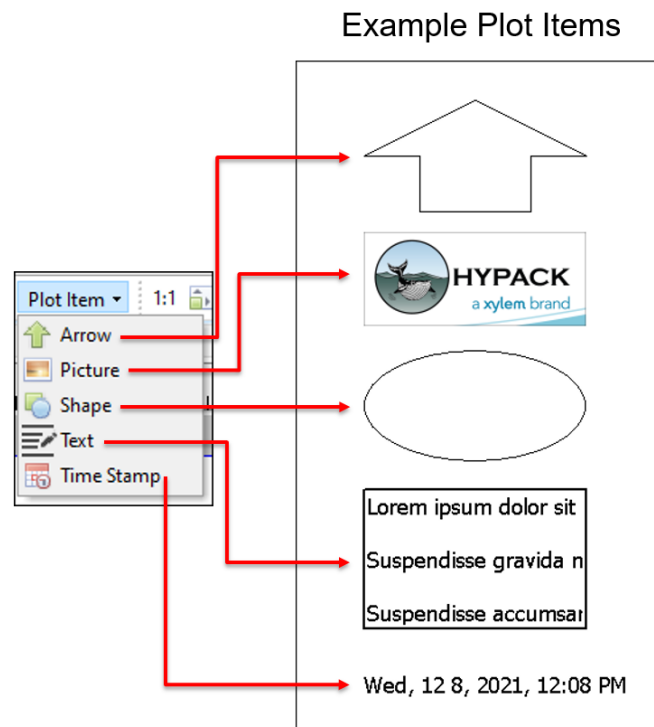


PLOT ITEMS

The Plot Item menu contains symbols and text boxes that you can insert anywhere on your sheet. Unlike map items, plot items do not show data derived from a map area. The following symbols are currently available for you to add to your sheets:

- Arrow - Add an arrow shape. You change its name, size, color, fill, and direction.
- Picture - Insert an image into your sheet. JPG, PNG, TIF, BMP, and ICO files are accepted at this time.
- Shape - You can currently insert an ellipse or triangle, however more shapes will be added. You can change its name, size, color, fill, and swap between an ellipse or triangle.
- Text - Insert a text box. You can change the font size, color, alignment, etc.
- Time Stamp - Inserts a time stamp on the sheet. You can change the time stamp style, font size, etc.

FIGURE 7. Plot Items and Menu

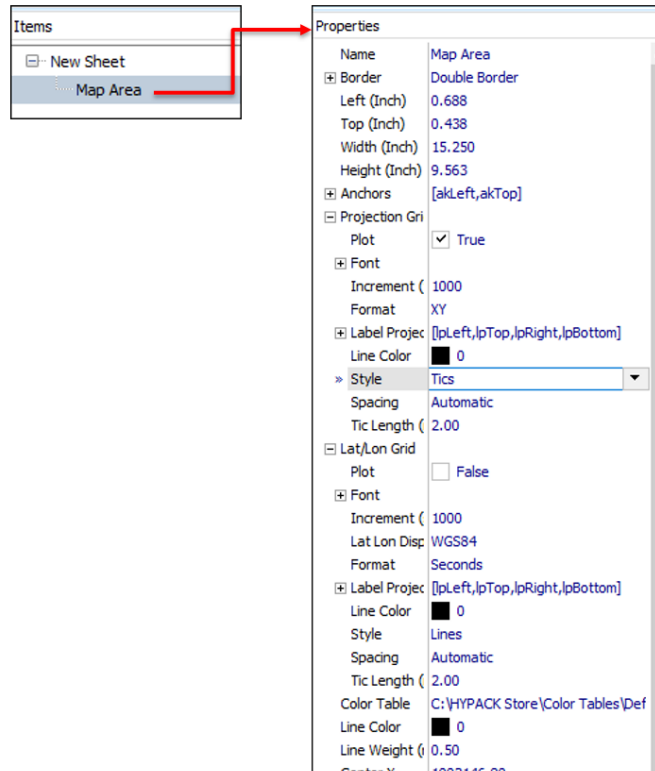


MAP AREA PROPERTIES

After creating or loading a map area, you can update its properties. From the Items tree view, click the name of the map area to display its settings in Properties. The following map area properties are available to edit:

- **Borders** - Switch between single and double lines, title area, IHO Chinese, and Russian.
- **Projection Grid** - Select whether or not to display the grid. Change lines, tic style, spacing, line color, axis format, and labels.
- **Lat/Lon Grid** - Select whether or not to display the grid. Change lines, tic style, spacing, line color, axis format, and labels.

FIGURE 8. Map Area Properties



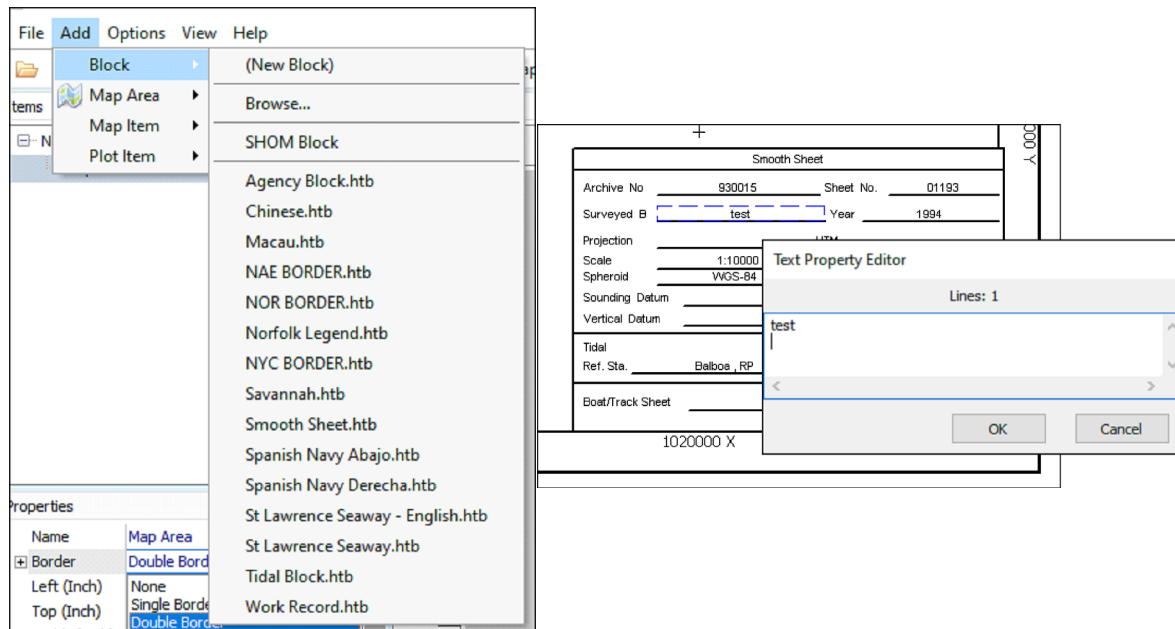
TITLE BLOCKS

HYPLLOT MAX offers multiple predefined title blocks that you can add to your sheet. You can directly edit the data fields of these predefined title blocks from your sheet. However, if you would like a customized title block, use the Title Block Editor to create a new one.

To insert a predefined title block:

1. **Insert title block.** From the top toolbar, click Add > Block and select one of the default *.htb title block files from the list. If you have a custom title block that is not listed, click [Browse...] and select the *.htb file you would like to use from the File Explorer.
2. **Modify predefined title block fields on the sheet.** Right click the text you would like to edit. The Text Property Editor will appear with a text box. Type in text you want displayed in that field, then click [OK].
3. **Move title block.** Hold the SHIFT key, then click and drag the title block to the desired location.

FIGURE 9. Adding and Editing Predefined Title Blocks



To create your own title block:

1. **Open the Title Block Editor.** From the top toolbar, click View > Block Editor.
2. **Add images, shapes, and text.** In the Block Editor, from the Items tree view, right click the Block item and select Picture, Shape, or Text depending on what you would like to insert.
3. **Modify the block items from the Properties tree view.** Note that you can add multiple lines of text.
4. Once you are finished, click File > Save to **save your custom title block** as a *.htb file.
5. **Add your newly created title block** to the sheet by clicking Add > Block > Browse, then select the *.htb file you just saved.

PRINT AND EXPORT

Once you have finished configuring and creating your plot, you may print your HYPlot MAX layout to any Windows-based printer or export the sheet as a PDF or TIFF.

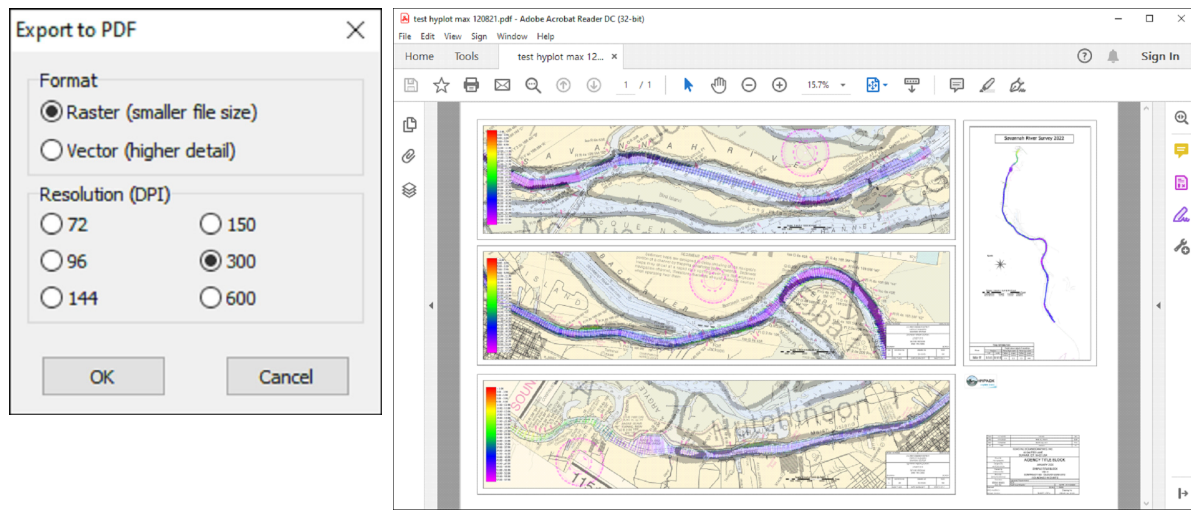
To export the sheet as a PDF:

1. From the top toolbar, **click on the Export Image File icon** and select PDF from the drop down menu.
2. **Set the PDF format.** In the Export to PDF window, select whether to generate the PDF as a raster or vector file. Raster PDFs will be smaller in size, however image quality may blur as you zoom in on the sheet. Vector PDFs will preserve the sharpness and detail of the sheet as you zoom in, however the file size will be larger.
3. **Set the resolution.** This is enabled only for Raster outputs. Currently, the PDF can be saved at 72, 96, 144, 150, 300, or 600 DPI.
4. **Click [OK].**

5. **Name your PDF** and select the folder to save it to, then click [Save].

The PDF of the sheet is automatically generated and saved in the designated folder.

FIGURE 10. *Exporting Plot to PDF*



To save the sheet as a TIF File:

1. From the top toolbar, **click on the Export Image File icon** and select TIF Files from the drop down menu. The Print to TIF window appears and displays the Plot Width and Plot Height at the top.
2. **Set the resolution of the image.** Currently, TIF file resolution can be set to 72, 96, 144, 150, 300, or 600 pixels per inch. The corresponding TIF width and TIF height (pixels) as well as the calculated size (MB) of the TIF file are displayed in the boxes below.
3. **Click [Output .TIF]** to generate a TIF file from your plot.

FIGURE 11. *Print Plot as TIF File*

The image shows the 'Print to TIF' dialog box. It contains several input fields and a set of radio buttons. At the top, 'Plot Width' is 55.00 Inch and 'Plot Height' is 34.00 Inch. Below that, the 'Resolution (Pixels per Inch)' section has radio buttons for 72, 144, 300 (selected), 96, 150, and 600. Further down, 'TIF Width' is 16500 px and 'TIF Height' is 10200 px. At the bottom, the 'Memory' field shows 481.51 mb. There are two buttons at the very bottom: 'Output .TIF' and 'Close'.