

QGIS: Introduction to Print Layouts

Prepared using QGIS v3.10

Welcome to the Essential QGIS Task Sheet Series. This series supplements the Iowa State University Geospatial Technology Training Program and the Spatial Data Science workshops and short courses. The task sheets are designed to provide quick, easy instructions for performing a variety of mapping, analysis and data visualization tasks.

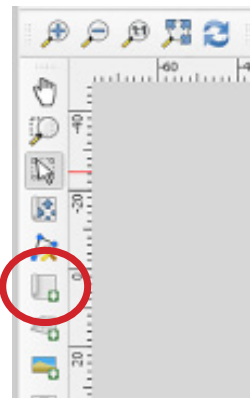
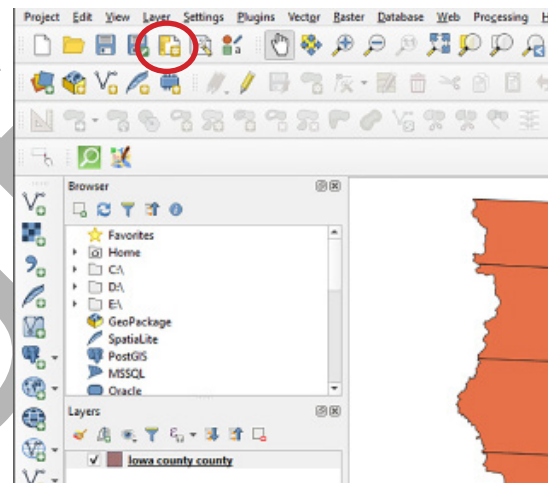
A map layout should be well organized and easy for your audience to understand. There are many details and options to keep in mind when preparing your map layouts to ensure your audience will fully and accurately understand the information you are presenting. In this task sheet you will learn how to use Print Layouts to create a map layout and add map elements such as a title, legend, compass, and scale bar.

1. Getting Started


- Download the data for this task sheet at https://issueogtp.github.io/TaskSheets/data/IowaCounties_UTM15n.zip.
- Open a new QGIS project, and add **county.shp** to the **Layers List**.

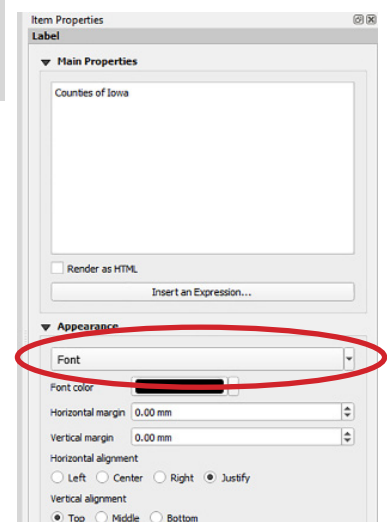
2. Creating New Print Layouts




- To add a layout, click the **New Print Layout** button on the **Toolbar**. Alternatively select **Project > New Print Layout** from the main menu.
- The **Create print layout title** will display. Enter a name for the layout such as **Counties of Iowa**. Click **OK** to continue. *Note that you can create and manage multiple map layouts.*
- A blank window containing a variety of menus, tools and a white page will open. You will create your layout here.
- Select **Add a New Map to the Layout** from the **Toolbox**. The mouse cursor will change to crosshairs. Click and drag a frame filling the entire page.
- An image of the map as it is currently displayed in the QGIS project window will appear in the space you created.

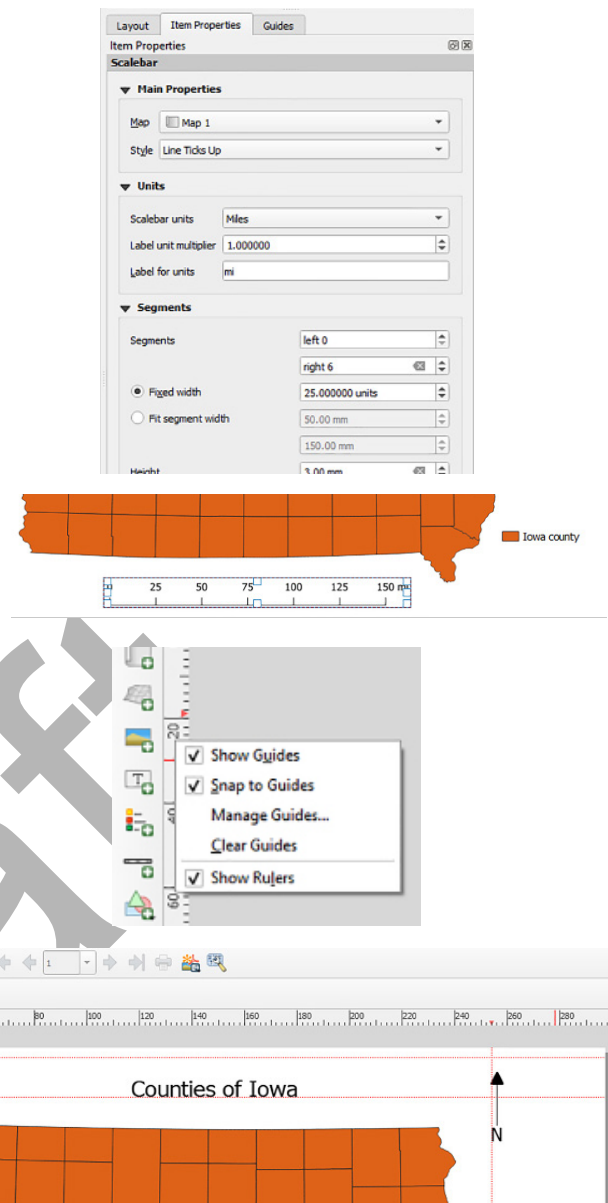


3. Adding Map Elements

- Now add map elements such as a title, from the **Toolbox** click **Add a new Label to the Layout**,  and draw a box above your map of counties for the title.
- Once you create the text box your right pane will change. Here you can adjust your text and font. Under **Main Properties** replace *Lorem ipsum* with a title such as **Counties of Iowa**.

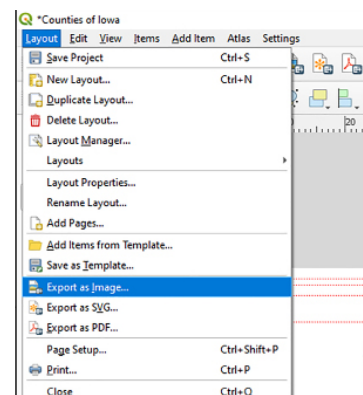


- c. In the **Appearance** properties click on **Font**, the **Text Format** window opens. Increase the font size to about **20**.
- d. Next click the **Legend** tool  in the **Toolbox**. Draw a box for the legend. You can add a legend title using the **Item Properties**. Explore the additional legend property options.
- e. Add a **Scale bar**  to your map, once added you can choose from a few different styles of scale bar as well as change the units of measurement.
- f. Use the **Arrow**  **Toolbox** button to add a north arrow or to pointing to an area of interest. Left-click once to start the arrow line. Click to add additional vertex points if needed. To end the arrow line, right-click and the line will end at the last placed vertex and an arrow head will appear.
- g. The arrow and line can be customized in from the **Item Properties**. The **Main Properties** pull-down menu provides access to the line properties. The arrow head can be adjusted under the **Line Markers** properties for size, color and width. Optional SVG graphics can be used for arrow heads. The arrow can also be set to either or both ends.
- h. Add a label box under your arrow and type a capitol **N** with a **20** point font.
- i. Right-click on the ruler around your layout to show the **Guides and Snap** options. Selecting the **Manage Guides** option will display the **Guides** option tab in the right window pane. If you click on the top or left ruler you can drag a guide onto the layout. This guide will automatically be added to the **Guides** option tab where you can edit the value to precisely locate the guide.



4. Saving and Sharing

- a. When your map layout is finished you can export your work as an image to be easily shared and added to documents.
- b. Open **Layout** from the main menu and select **Export as Image**. The **Save Layout As** window opens.
- c. Expand the **Save as Type** options at the bottom of the window to see all the image formats you can choose from.
- d. You can also export as a PDF file and there is an option for SVG files which are scalable vector file formats. These are useful when your project may need to be resized in the future. See task sheet PM2082-20i *Exporting Maps and Layouts as SVG* to learn more.



Contact: Thomas Petitti, Intern; Professor Christopher J. Seeger, ASLA, GISP cjseeger@iastate.edu, 515-509-0651 or GIS Specialist Bailey Hanson, GISP bahanson@iastate.edu, 515-520-1436. Additional task sheets and information about the Geospatial Technology and Spatial Data Science Programs is available at www.extension.iastate.edu/communities/gis. This institution is an equal opportunity provider. For the full non-discrimination statement or accommodation inquiries, go to www.extension.iastate.edu/diversity/ext.