

Introduction to QGIS

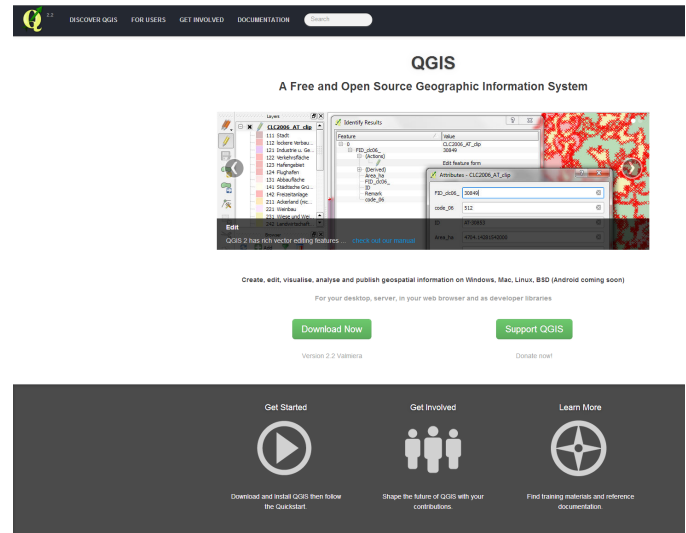
QGIS 2.2.0 Valmiera

Welcome to the Essential ArcGIS Task Sheet Series. This series supplements the Iowa State University GIS Geospatial Technology Training Program short course series, “Essential ArcGIS Tutorial Series.” The task sheets are designed to provide quick, easy instructions for performing specific tasks in GIS.

QGIS (formerly Quantum GIS) is an open source geographic information system (GIS). This software is a free alternative to proprietary GIS software such as ESRI’s ArcGIS products which can be very expensive. QGIS incorporates similar functions and features as its proprietary counterparts and allows users to display, manipulate and create spatial data. It supports a variety of spatial data file extensions (.shp, .tif, .csv, .img, etc.) and is compatible on Linux, Unix, Mac, and Windows operating systems. This task sheet will introduce you to QGIS software and using it to create a basic map.

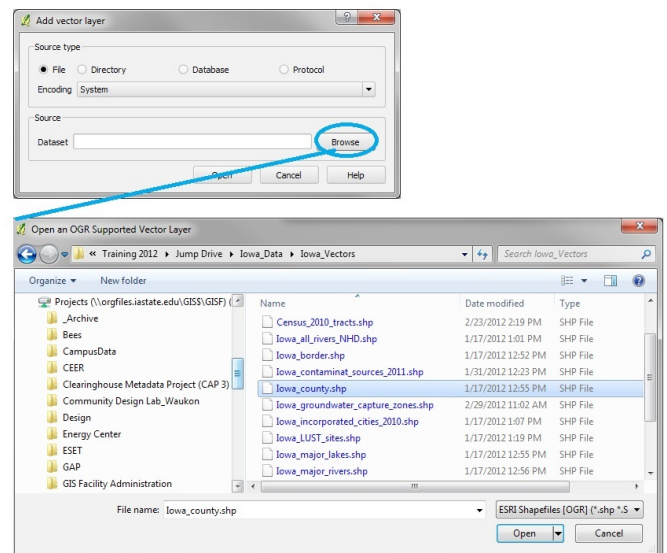
1. Download QGIS

- QGIS software is available for download at the official QGIS website: www.qgis.org/. Click on the **Download Now** button and choose the tab that corresponds with your operating system and machine specifications. Choose the **QGIS Standalone Installer Version 2.0.1** and use the installer wizard to install the program. If you have trouble downloading QGIS to your machine, make sure to check your security/privacy settings.
- Download the data used in this task sheet by navigating to <http://issueogtp.github.io/GISTaskSheets/TaskSheetData/PM2082-14c.zip> in a web browser. The files you for this tutorial will automatically be downloaded. This data originated from the Iowa Natural Resource Geographic Information Systems Library (NRGIS Library) and can also be found at: <https://programs.iowadnr.gov/nrgislibx/>.



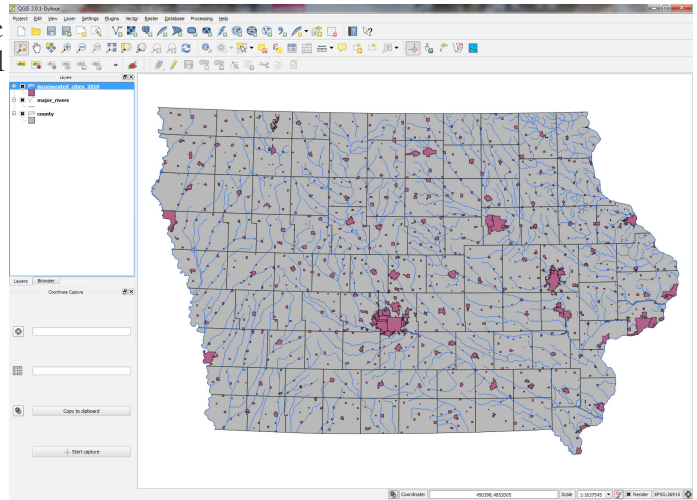
2. Open GIS and Add Shapefiles

- Click on the QGIS software icon and open the program. Once the QGIS program open, click on the **Add Vector Tool** icon. This tool will allow you to add the data downloaded in the previous step.
- The **Add vector layer** window will appear at the top of the page. Leave the **Source type** option set to the default **File** option. Use the **Browse** button to browse to the location of the shapefiles downloaded in step 1b. Click **Open** in the file browser window after selecting a shapefile, click **Open** in the **Add vector layer** window. *Note: hold down the Shift key to add more than one file at a time.*
- You should now see the **incorporated_cities_2010**, **major_rivers**, and **county** layers in your QGIS map. If




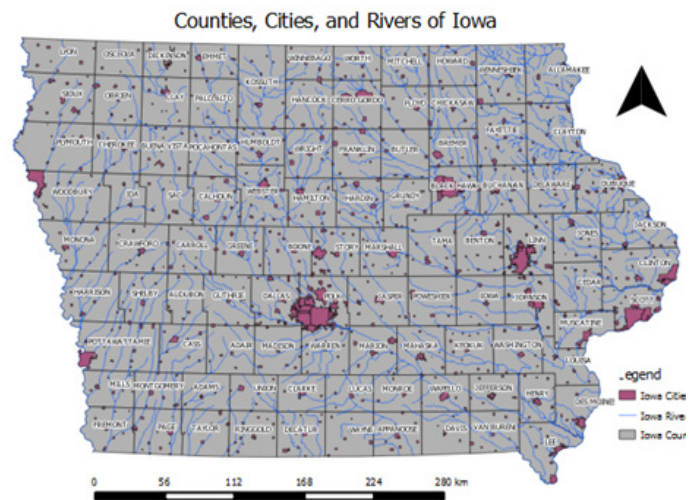
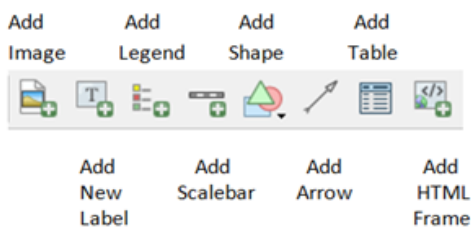
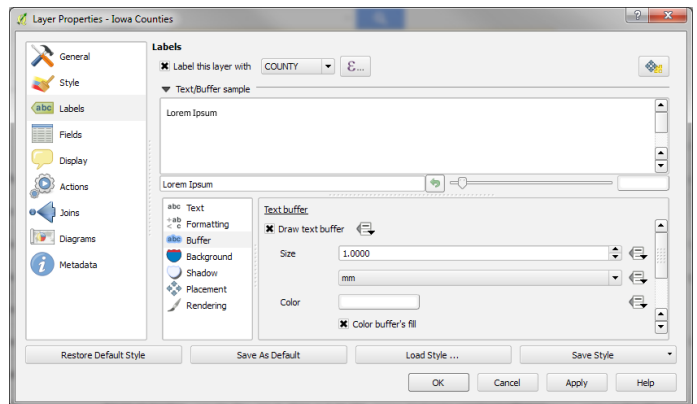
you are having trouble viewing all three layers make sure that the layers are listed in that order in the **Layers** panel in QGIS. If you need to rearrange the drawing order of the layers, click on a layer and drag it up or down to the appropriate order.

- d. Next, add labels to the county layer. Right click on **County** in the **Layer Panel** and select **Properties**.
- e. When the **Layer Properties** window opens click on the **Labels** tab. Check the box next to **Label this layer with...** and use the drop-down menu to select **COUNTY**. Click on the **Buffer** tab and check the box next to **Draw text buffer**. Then click **OK**. Now the **County** layer should be labeled with the name of the county.



3. Creating a Map Layout

- a. Click on **Project** in the top left of the menu toolbar. Select **New Print Composer**. In the **Composer Title box**, type **Counties, Cities, and Rivers of Iowa** and click **OK**.
- b. Click on the **Add New Map**  icon in the toolbar on the left side. Using your mouse, draw a square that covers the white space of the print composer. Your map should now appear within that square. The toolbar below shows several other tools that could be used to create your map.
- c. Experiment with the tools to create a map similar to the one shown.



Contact:

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