Working with Your Data in QGIS

Kurt Menke, GISP, Bird’s Eye View
The Mapping Workflow

Computer → GIS

Tablet/Smart Phone with apps

Internet Mapping
QGIS Browser

- File Tree
- Display Tabs
- Display Window
- Database Connections
Open Map Document

- Open QGIS Desktop.
- Click on the Project menu and choose Open
- Navigate to the QGIS folder and open the Spokane_workshop.qgs file.
QGIS Desktop

- Menu bar
- Toolbars
- Layers Panel
- Map Display

Layers Panel:
- Coffee Shops
- Hospitals
- Municipal boundaries
- Major Roads
- Minor Roads
- CasinoArea_Roads
- NeighborhoodStreets
- Lakes
- Streams
- Parks
- Buildings
The Data

https://my.spokanecity.org/opendata/gis/data/
Map Navigation Controls

- Touch Zoom and Pan
- Pan Map
- Pan Map to Selection
- Zoom In
- Zoom Out
- Zoom to Native Pixel Resolution
- Zoom to Full Extents
- Zoom to Selection
- Zoom to Layer
- Zoom Last
- Zoom Next
- Refresh
Turn on *CasinoArea_Roads* & Zoom In
### Map Bookmarks

- **View ➔ New Bookmark**

![Spatial Bookmarks Panel](image)

<table>
<thead>
<tr>
<th>Name</th>
<th>Project</th>
<th>xMin</th>
<th>yMin</th>
<th>xMax</th>
<th>yMax</th>
<th>SF</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eastern Hemishere</td>
<td>Global_Patterns....</td>
<td>130.487</td>
<td>-15.723</td>
<td>174.544</td>
<td>11.0037</td>
<td>34</td>
</tr>
<tr>
<td>Western Hemisph...</td>
<td>Global_Patterns....</td>
<td>-185.356</td>
<td>-12.1207</td>
<td>-134.786</td>
<td>18.5569</td>
<td>34</td>
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<tr>
<td>University</td>
<td>Seattle_map.qgs</td>
<td>1.2749e+06</td>
<td>239211</td>
<td>1.28248e+06</td>
<td>245854</td>
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<td>Main Map</td>
<td>Redondoo_Stream</td>
<td>351636</td>
<td>3.96863e+06</td>
<td>356639</td>
<td>3.97252e+06</td>
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<tr>
<td>NYC16</td>
<td>Walking.qgs</td>
<td>-8.24244e+06</td>
<td>4.96922e+06</td>
<td>-8.22936e+06</td>
<td>4.97814e+06</td>
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<tr>
<td>New bookmark</td>
<td>CHM_Workshop....</td>
<td>-77.1115</td>
<td>38.9877</td>
<td>-77.0815</td>
<td>39.0106</td>
<td>34</td>
</tr>
<tr>
<td>NIH</td>
<td>CHM_Workshop....</td>
<td>-77.1115</td>
<td>38.9877</td>
<td>-77.0815</td>
<td>39.0106</td>
<td>34</td>
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<tr>
<td>Northern Quest</td>
<td>Spokane_worksh...</td>
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<td>256772</td>
<td>2.44725e+06</td>
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</tr>
</tbody>
</table>
Layers Panel

- Layer Drawing Order
- Turning Layers On/Off
- Symbols

![Layers Panel Image]
Layers Panel

- Layer Drawing Order
- Turning Layers On/Off
- Symbols
- Right-click context menu
Layer Properties

- **General Tab** – basic info about the layer
- **Style Tab** – change the colors and symbols
- **Labels Tab** – label features
Layer Properties

- General Tab – basic info about the layer
- Style Tab – change the colors and symbols
- Labels Tab – label features
Layer Properties

- General Tab – basic info about the layer
- Style Tab – change the colors and symbols
- Labels Tab – label features
Adding Data

- Add Vector Layer
### Attribute Tables

The screenshot shows a table interface with various columns including `latitude`, `longitude`, `infrastructure`, `capacity`, `num_bikes`, `sign`, `tree`, `photo`, `photo_url`, and `date`. The table contains data entries with specific values for each column. For example, one entry shows `infrastructure` as `Tree`, `capacity` as `ALL`, `num_bikes` as `ALL`, and `sign` as `Marker pole`. The table also includes `photo` URLs and dates for each entry.
Using Identify
Styling Data

- Layer Properties → Style tab → Categorized
Styling Data

- Column → infrastruc
- Classify
Styling Data – Layer Effects

- Draw effects
Styling Data – Layer Effects
Using a Plugin – Adding Basemap

- Plugins → Manage Plugins
Using a Plugin – Adding Basemap

- Search ➔ Quick
Using a Plugin – Adding Basemap

- Web ➔ QuickMapServices ➔ Settings

![QuickMapServices Settings window with Attention! message and Get contributed pack button]
Using a Plugin – Adding Basemap
Making a Map

- Project ➔ New Print Composer
Print Composer

- Set Paper Size
- Items tab → Composition tab → Page size → Letter
Add Map to Composition

- **Add Map** button ➔ drag a box onto map canvas
Getting the Map Extent Correct

- Item Properties ➔ Set to map canvas extent
Getting the Map Extent Correct

- Set the map **Scale**
  - A bigger number will zoom out
  - A smaller number will zoom in
Fine Tuning the Map Extent

- Move item content button
  - Pans the map
  - Let’s you center the map image on the canvas
Adding a Title

- Add new label button
Type in the Title

- Click the **Font** button to adjust font
- Use **Font Color** to set text color
- Use **Alignment** buttons to align title
Add Legend

- Add Legend button
Edit Legend

- Uncheck Auto update & edit
Edit Layer Names

- Select the layer
- Click the *Edit* button
Remove Unnecessary Layers

- Select the layer
- Click the **Remove** button
Adding a Scale Bar

- Use the **Add scalebar** button
- Adjust style & units in **Item properties**
Adding a North Arrow

- Use the **Add image** button
- **Item properties** \(\rightarrow\) **Search directories** & choose arrow
Exporting Map

- Export as Image, SVG or PDF
Challenge Exercise

- Make a map of Coffee Shops to Try
The End!

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~ Unique to QGIS ~

Inverted Polygon Shapeburst Fills
~ Unique to QGIS ~
Live Layer Effects
Grazing Permit Retirement Opportunities in the Greater Gila Bioregion since 2005

Legend:
- Gila Bioregion
- National Forest Boundary
- Mexican Wolf Occupied Habitat (2010)
- Designated Wilderness

Allocation Status:
- Normal (2,542,887 ac.)
- Partly Stocked (2,090,885 ac.)
-Fully Stacked (744,760 ac.)
-Vacant/Downed (3,239,835 ac.)
-Permit Retirement Prospect (695,455 ac.)