QGIS Tips - a cheat sheet covering a small number of especially useful features

Main toolbar

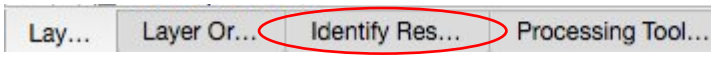
Layout will vary depending on which ToolBars you have enabled and any PlugIns you added.

Navigation:

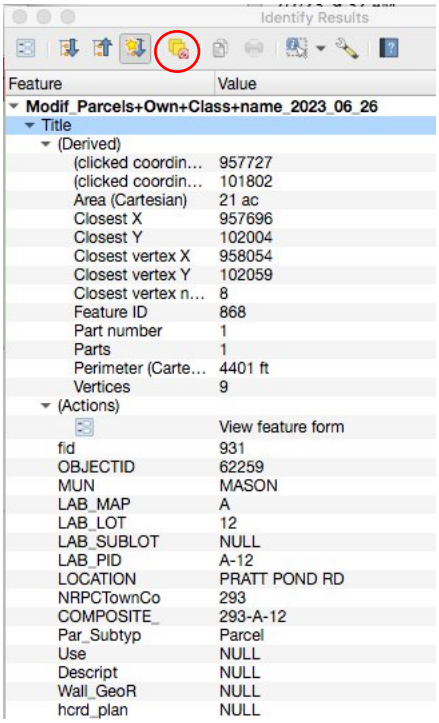
Hand: scroll image. *Note: holding Space bar down usually, but not always, temporarily changes current tool into Hand so you can scroll the map.*
Mag+: zooms closer
Mag-: zooms farther away. *Note: holding Option (Mac) switches Mag+ to Mag- and vice-versa.*
Zoom/Pan to selected layer: zooms & scrolls to fill display with ***selected*** layer.

Displaying info:

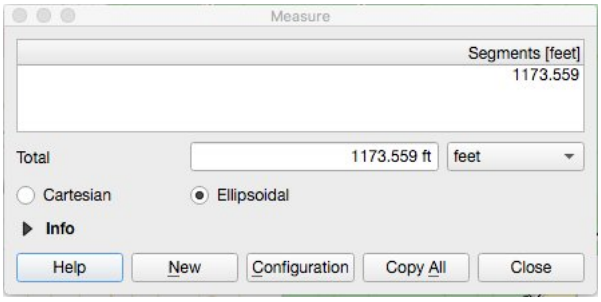
Identify Features: click on a feature (e.g., a parcel) in the ***selected*** layer to display its attributes in the "***Identify Results***" window. That window may either appear as a pane (see at right) or in a separate window, see to lower right.



The selected feature will be highlighted in red and all the attributes, some derived at the top, will be displayed. Click on circled tool in Identify Results window to dismiss the red highlighting.

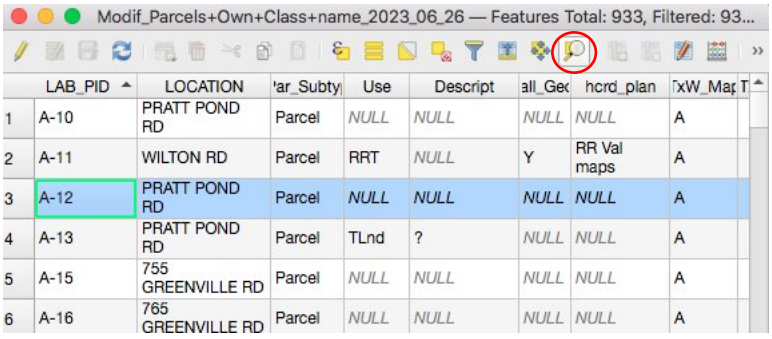


Measuring length, etc.: click and hold on down arrow to select Length, Area, Angle, etc. Then use selected tool to measure a features in the selected layer. Length and Angle measure between points; Area measures a closed polygon (click on vertices, then Control-click to finish polygon). Results will be shown in a separate window.



Selecting a feature and zooming to it:

Open Attribute Table: by clicking on icon The layer's Attribute Table will appear. Scroll down to item of interest, select it by clicking in left hand column - the entire row will highlight. Then click on circled magnifying glass to zoom and pan so as to center the selected feature in the map display.

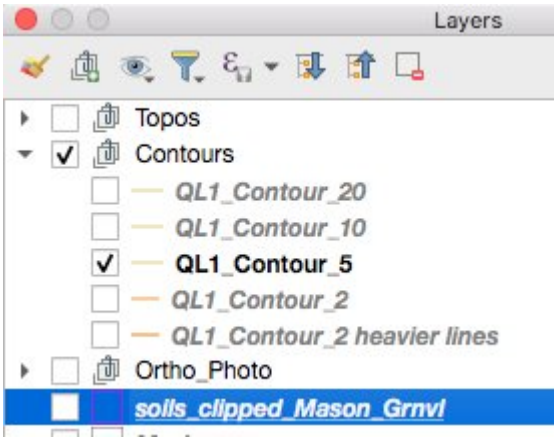


	LAB_PID	LOCATION	ar_Subty	Use	Descript	all_Ge	hcrd_plan	xW_Map
1	A-10	PRATT POND RD	Parcel	NULL	NULL	NULL	NULL	A
2	A-11	WILTON RD	Parcel	RRT	NULL	Y	RR Val maps	A
3	A-12	PRATT POND RD	Parcel	NULL	NULL	NULL	NULL	A
4	A-13	PRATT POND RD	Parcel	TLnd	?	NULL	NULL	A
5	A-15	755 GREENVILLE RD	Parcel	NULL	NULL	NULL	NULL	A
6	A-16	765 GREENVILLE RD	Parcel	NULL	NULL	NULL	NULL	A

Getting help: click on Help icon to access QGIS manual website.

Layers:

View > Panels > Layers to display the ***Layers*** window
Normally this panel is always kept open

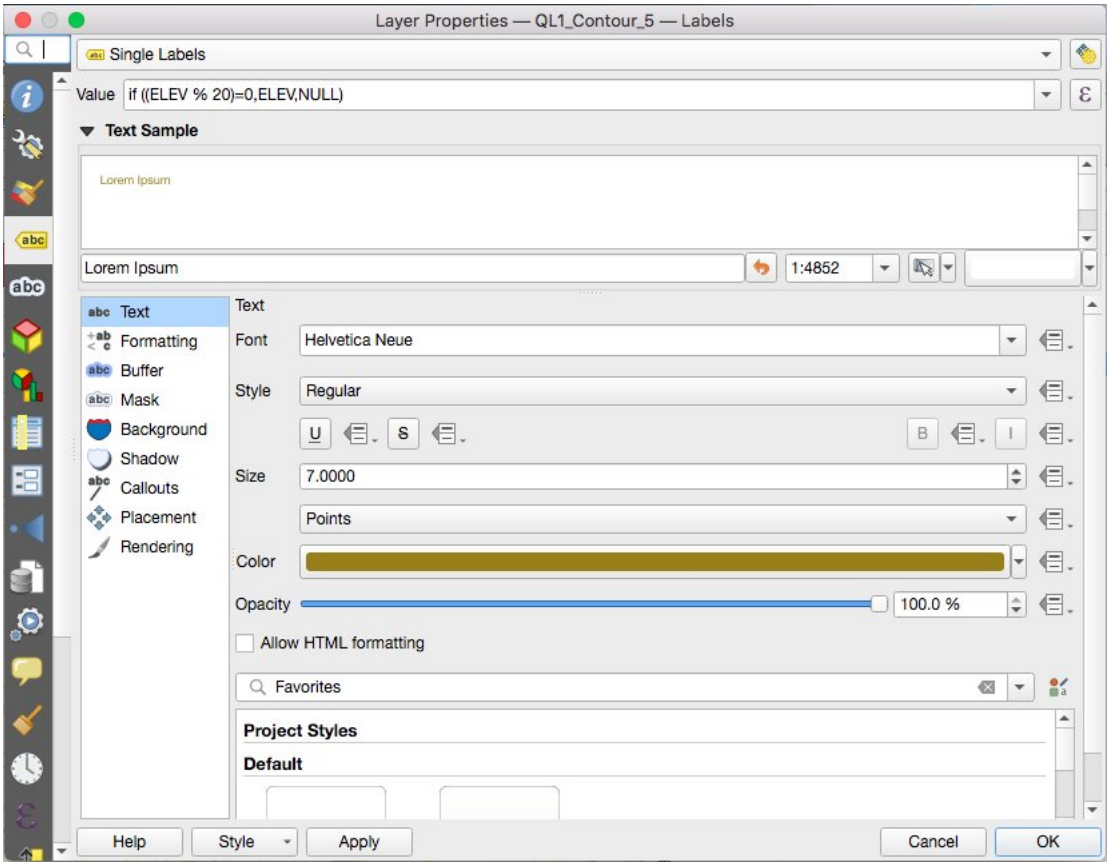


"*Topos*", "*Contours*", "*Ortho_Photo*" are ***Groups*** which can contain ***Layers*** and/or other Groups. The contents of a Group contents are displayed by clicking on the arrow in front ***Layers*** are linked to files to be displayed

The √ in front of "QL1_Contour_5" indicates it is ***enabled***. Because both it *and* its enclosing group are checked, the layer will be displayed in the map.

"Soils_clipped_Mason_Grnvl" is a ***selected*** layer, as indicated by being highlighted.

Double-clicking on a Layer brings up its ***Layer Properties*** window:



This is where you control all aspects of how the layer is displayed.
It this example we are setting up how contour lines are labeled: by elevation if the elevation is a multiple of 20', otherwise unlabeled. The labels will use 7 pt Helvetica Neue in a brown color, ...
Similar settings set the contour line colors and thickness (thicker for elevations a 20' intervals, thinner for in-between contours), etc.

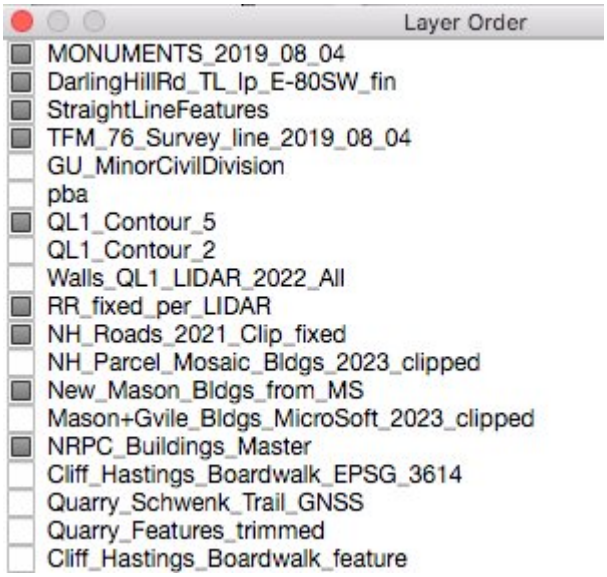
It is important to understand the separate functions:
The GIS ***file*** associated with the Layer contains all the geographical information.
The ***Layer Properties*** panel defines, in great detail, ***how*** that information will be displayed
The checkmarks in the ***Layers*** panel determine ***if*** the layer will be displayed

Modifying the Layer Properties does NOT modify the file's contents, only how they will display.
The Layer Properties settings are kept in the Project (.qgz or .qgs) file.

Layer order:

View > Panels > Layer Order to display the ***Layer Order*** window, or it may already be open as a tab which you click on to display

This lists all the layers in the order in which they will be "painted" onto the display. Blacked in boxes identify layers that are "enabled" to paint.



Painting order begins at the bottom and progresses upwards. In other words, layers lower on the list will be overlayed by layers higher on the list.

This primarily concerns layers, like ponds and wetlands, which have areas of solid colors. If such a layer is higher on the list than, say, Contours, it will obscure the contour lines where they fall under a solid painted area, e.g., wetlands.

Layer order is changed by selecting and dragging layers upwards or downwards in the list.

Generally one places "line" and "point" type layers, such as contour lines, rivers, location markers, etc., above "area" type layers such as wetlands or colored parcels.

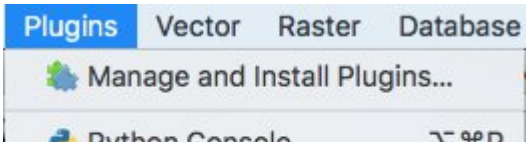
An alternate solution is to make the colors used in "area" layers transparent using the layer's ***Layer Properties*** settings.

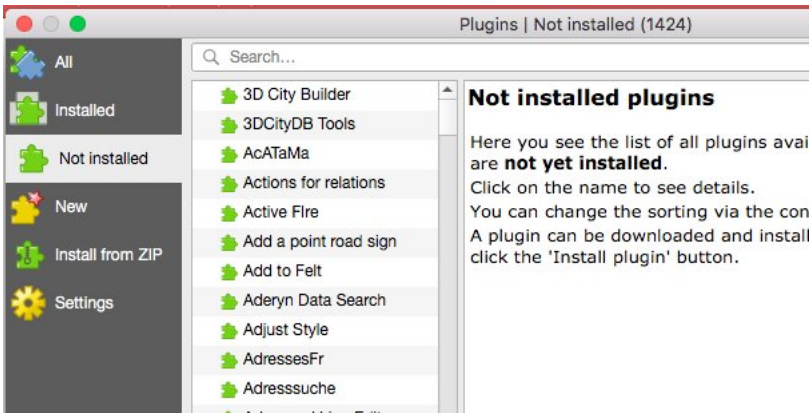
The Layer Order settings do not affect ***Labels***, which are always painted last above all other layers. However, the rendering of labels is affected by competition between layers for the available space for labels. When zooming out you will see some labels disappear as the available space diminishes. A layer's ***Layer Properties*** settings can control the priority assigned to its labels...

Plugins:

Plugins are optional tools which can be added to QGIS by downloading them via ***Plugins > Manage & Install Plugins***
Select the desired Plugin and click on **Install**
When installed a Plugin will add features in a variety of locations - perhaps the main menus, or as icons in a tool bar, or as options in the Process lists.
Plugins I use include:

Coordinate Capture
Freehand raster georeferencer
GarminCustomMap
Mask
Memory Layer Saver
Road Slope Calculator
Value Tool

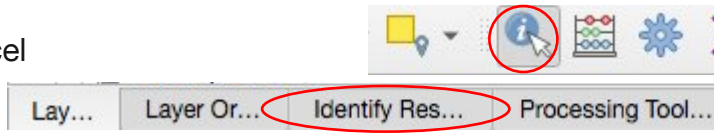




Example 1: You want to find information about a specific parcel.

Layer groups to enable: "NRPC Parcels", "Transport", "Hydro", "Wetlands"
Possibly enable "Walls" if parcel ID color is black (no survey)
Disable to avoid clutter: Ortho_Photo, Contours, Soils, Culverts, Trails, Wildlife, Wells, Geology, etc.

Select the parcel layer "Modif_Parcels+Own+Class+name_2023_06_26"
Scroll around to find the parcel of interest, say E-6
Select the ***Identify Features*** tool, click on the parcel
Open the ***Identify Results*** window,



I closed the first 2 sections ***Derived*** and ***Actions*** as they contain nothing relevant (Derived is just geometric info about the parcel)

The first section, "fid"..."hcrd_plan", contains information stored inside the "Modif_Parcels..." layer file. "LAB_PID" contains the complete parcel ID, i.e., LAB_Map-LAB-LOT-LAB_SUBLOT

A database "join" was set up such that records (parcels) in this layer would be joined by records in a separate file, "Mason_Owner_list_TRIM.csv", when they contained a field that matched "LAB_PID".
"Mason_Owner_list_TRIM" is a comma separted values text file (.csv) containing one line per rcord (parcel). It was generated from Mason's 2/2023 Owner List, with edits to add missing parcels...

The joined values all have a ***TxW_*** prefix (my abbreviation for Tax Warrant). So, for instance, ***TxW_acres*** is the ***Acres*** field from the E-6 record in the .csv file, i.e., the acreage shown in the owner list.

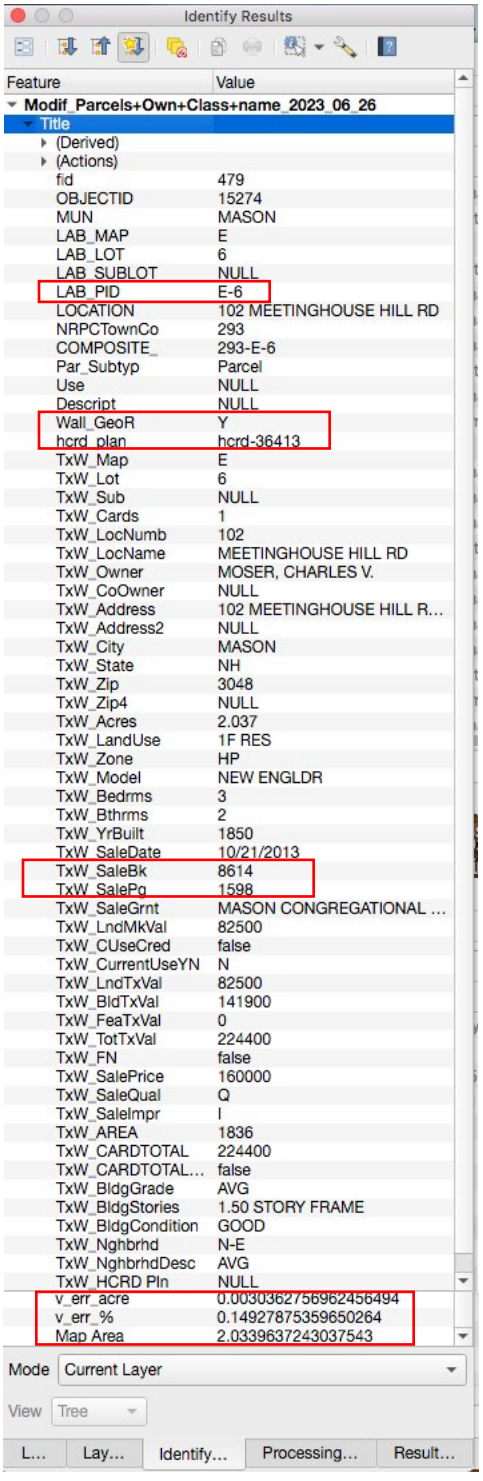
The actual (***as mapped***) acreage is shown in ***Map Area*** at the bottom of the list. Two other fields, ***v_err_acre*** and ***v_err_%***, show the difference between ***Map Area*** and ***TxW_acres*** as acres and % respectively.

A couple items of special interest: ***Wall_GeoR*** and ***hcrd_plan***.
If Wall-GeoR = 'Y' this indicates that a Plan was found in the Hillsborough County Registry of Deeds (HCRD), and the Plan Number is stored in hcrd_plan

If no Plan is available, ***TxW_SaleBk*** & ***TxW_SalePg*** provide the Resigstry of Deeds Book and Page for the deed.

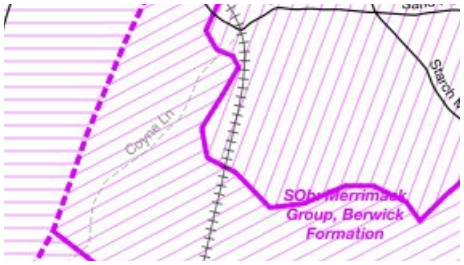
Fortunately, for E-6 there is a plan, #36413.

To view the plan open the Platts group, scroll down and enable the hcrd_36413 layer and, presto, you should see the survey plan superimposed over the parcel.

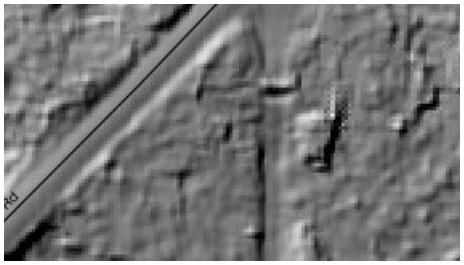


Layer Examples

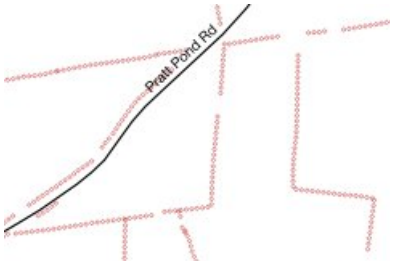
Bedrock Geology



LIDAR Hillshades for Road Detection (named & logging)



Stone Walls (from LIDAR)

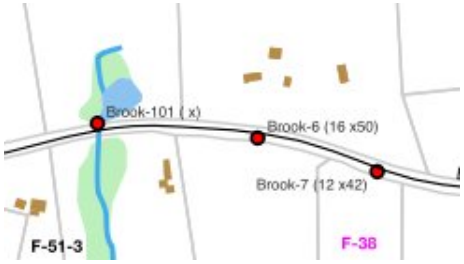


Contours

OrthoPhotography

Tax Map (2023)

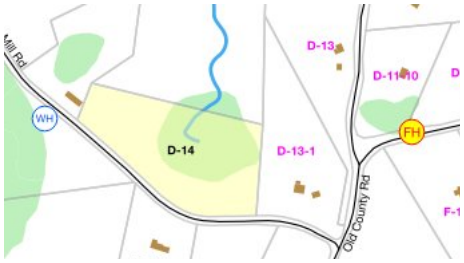
Culverts



Orthophotograpy, zoomed up

Topographic Maps (2004)

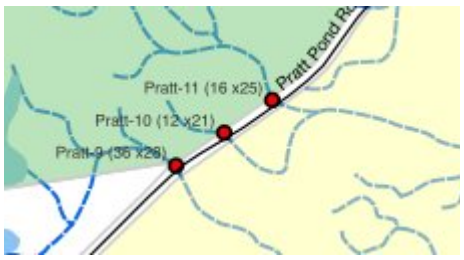
Fire Hydrants & Water Holes



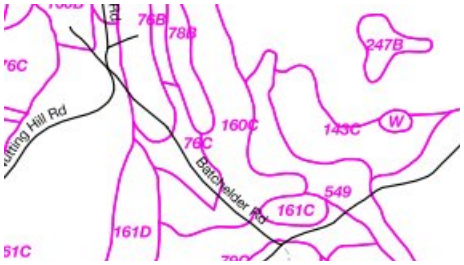
Survey Plan (HCRD)

Trails

Flow Channels (& Culverts)



Soils



Wells (1984…) vertical=depth horizontal = yield