

## Lesson 4 Alternate: Using QGIS (version 3.4 or later) to Draw Field Boundaries and Create the Farm Map




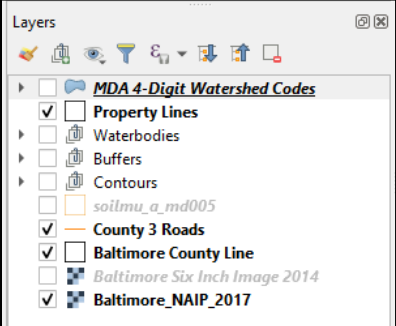
**INTRODUCTION** More recent versions of QGIS (version 3.4 or later) allow a user-friendly method to draw field boundaries and create maps for each farm directly within the software. This can still be done in earlier versions but is more complicated, therefore these guidelines are not applicable to earlier versions of QGIS.

**CONTENTS** In this document, you will find instructions for:

- [Creating Shapefiles and Drawing Field Boundaries in QGIS](#)
- [Adjusting Field Outline Color and Adding Field Labels](#)

### CREATING SHAPEFILES AND DRAWING FIELD BOUNDARIES IN QGIS

#### Instructions

Step	Action
1	Open QGIS 3.4 or later. Navigate to and open the county <u>Base Map</u> project file.
2	<p>Use the 'Pan'  and 'Zoom'  tools to locate the farm and field(s) of interest Map Canvas:</p> <div style="display: flex; align-items: flex-start;">  <div style="margin-left: 20px;"> <p>Turn on the 'Property Lines' layer to indicate property boundaries.</p>  </div> </div>

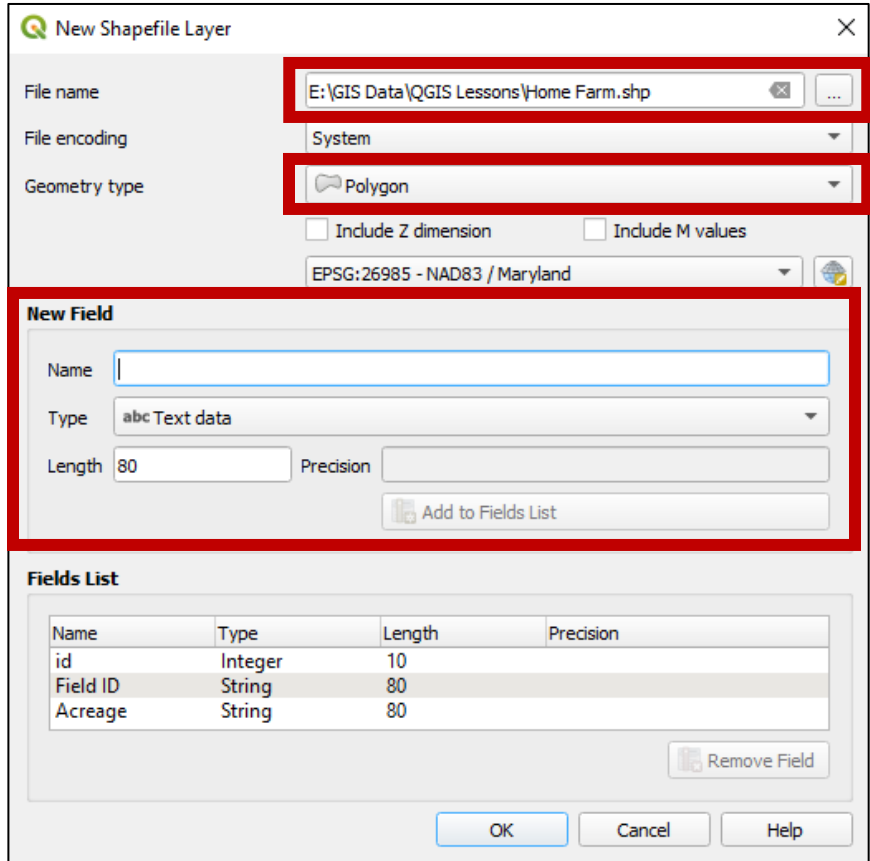
3

To draw a new field outline, click on the **'Create Shapefile Layer'** Tool. It is recommended to create one shapefile per farm property. You can add multiple fields per shapefile.



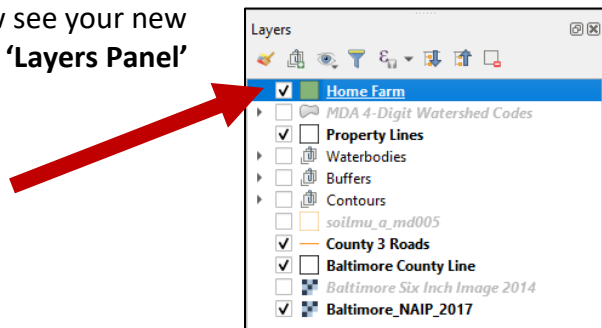
4

The **'New Shapefile Layer'** dialogue box will open.



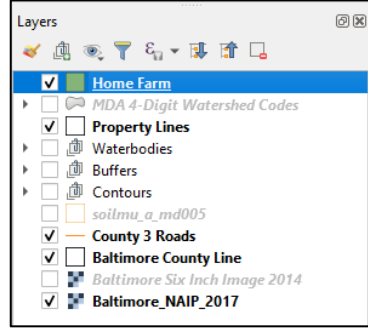
- For **File Name**, click on "...", select the location on your PC where you want to save the shapefile, and enter a filename (preferably the Farm name)
- For **Geometry Type**, select **'Polygon'**
- Add two categories under **New Field**
  - o **'Field ID'** (then click **Add to Fields List**)
  - o **'Acreage'** (then click **Add to Fields List**)
- Click "OK"

You should now see your new shapefile in the **'Layers Panel'**

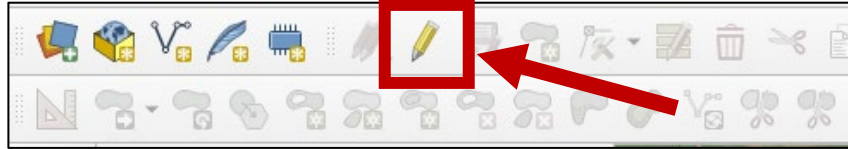


5

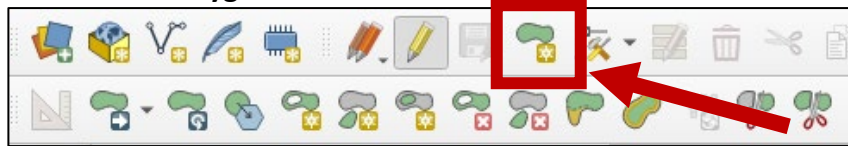
Click on the newly added Farm shapefile layer in the 'Layers Panel'...



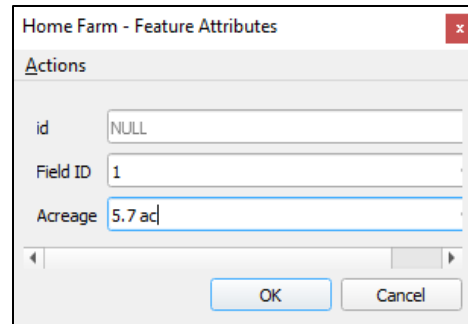
And then click on the 'Toggle Editing' tool...



You will now have more options highlighted in your toolbar. Click on the 'Add Polygon Feature' tool...



Next, move to 'Map Canvas' and use your cursor to click around the field perimeter to draw the field outline. Right click when completed. Once completed, a dialogue box will open. Fill in the 'Field ID' and 'Acreage' with information about this field, and Click **OK**.

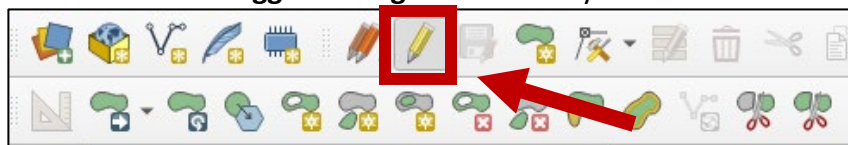


You should now see the field on the 'Map Canvas.'



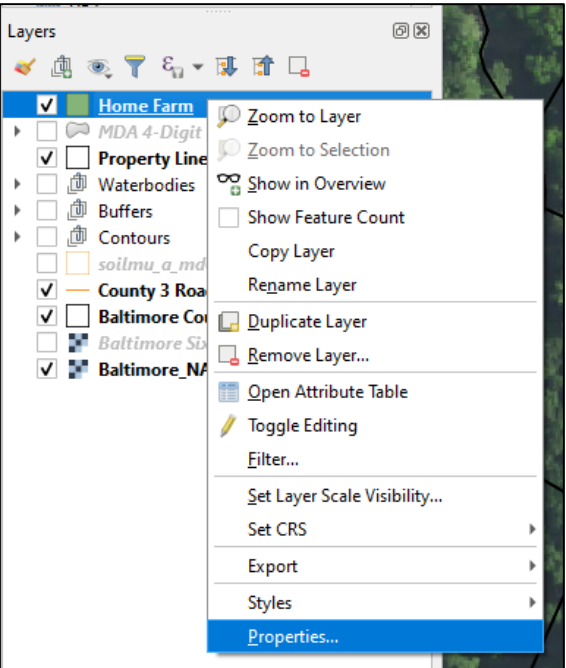
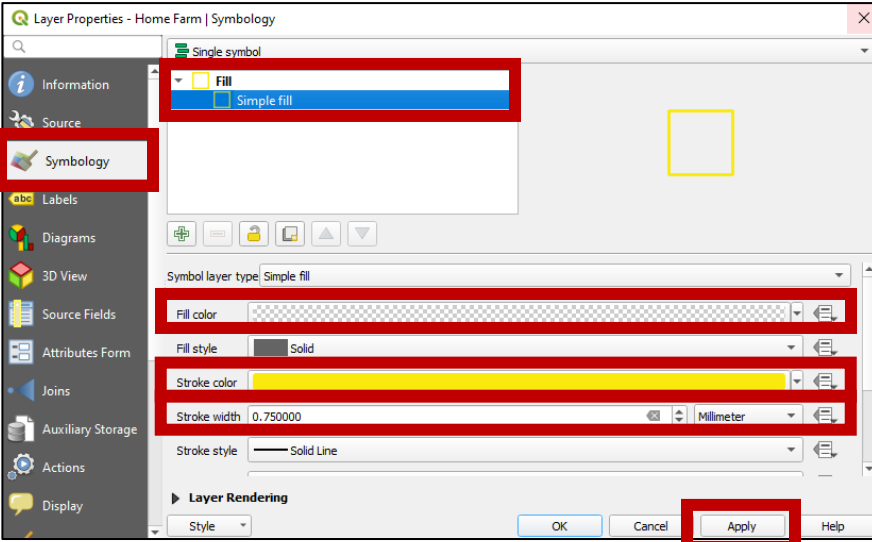
6

Repeat Step 5 for all fields on this farm property. When complete, click on the the 'Toggle Editing' tool to save your edits.

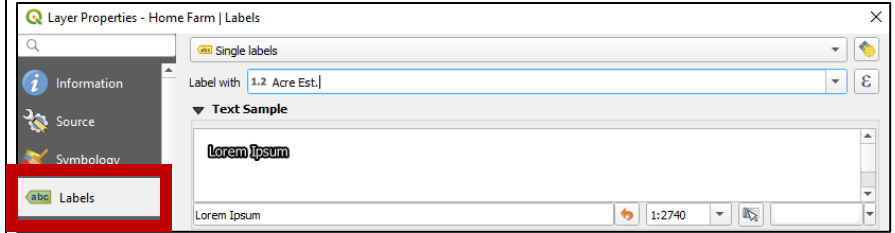


**ADJUSTING  
FIELD OUTLINE  
COLOR AND  
ADDING FIELD  
LABELS**

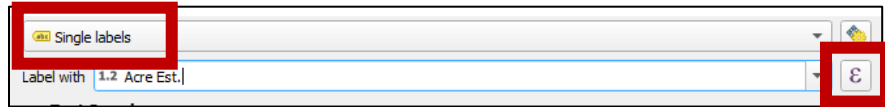
**Instructions**

Step	Action
1	<p>In the <b>'Layers Panel'</b>, right-click on your newly-created Farm shapefile layer and select <b>Properties...</b></p> 
2	<p>In the <b>'Layer Properties'</b> window, select <b>Symbology</b> from the left-hand list.</p> <ul style="list-style-type: none"> <li>- Click on <b>Simple Fill</b></li> <li>- For <b>Fill Color</b>, select <b>'Transparent Fill'</b></li> <li>- For <b>Stroke Color</b>, select the color you would like to use to show field outlines</li> <li>- For <b>Stroke Width</b>, between 0.5 – 1.0 mm is recommended</li> <li>- Click <b>Apply</b></li> </ul> 

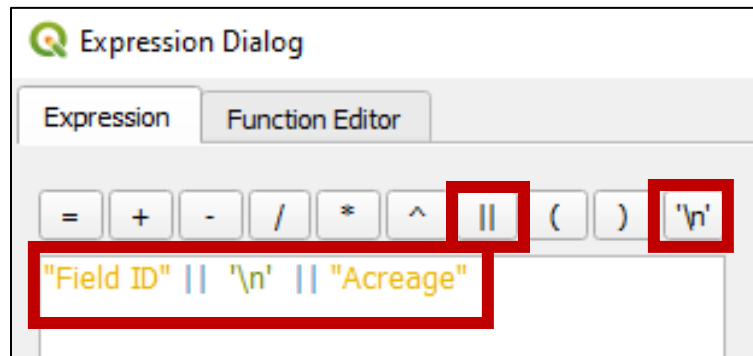
- 3 To add labels to each fields, in the **'Layer Properties'** window, select **Labels** from the left-hand list.



- In the top drop-down list, make sure **Single Labels** is selected.
- For **Label with**, click on the **£** symbol (stands for expression)



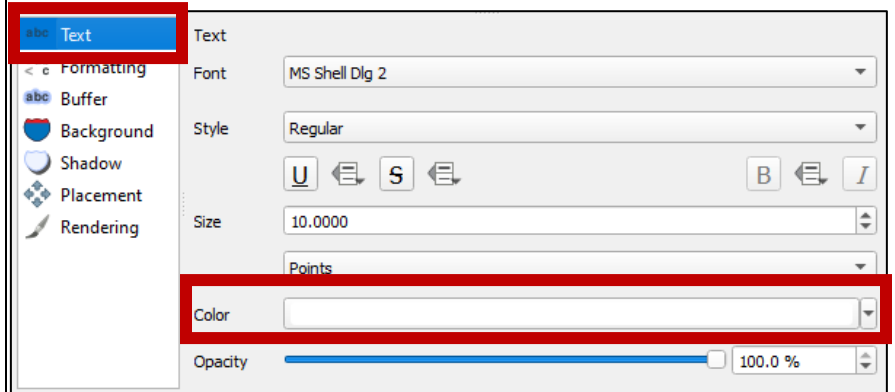
- 4 In the **Expression Dialogue** box, enter the equation as shown below, using the symbol buttons as needed.



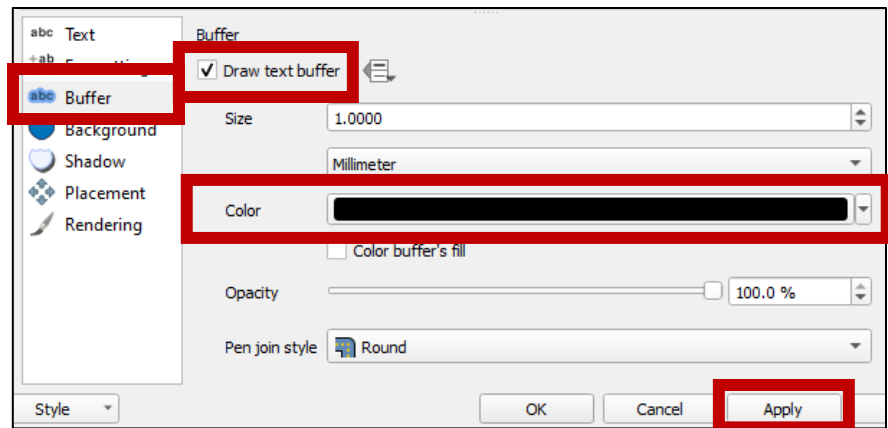
Then click **OK**.

- 5 White text with a black buffer is recommended for a clean looking label on the map.

- First change the **Text Color** to white...



- Then change the **Buffer Color** to black...



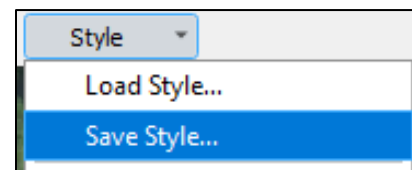
Finally, click **Apply**


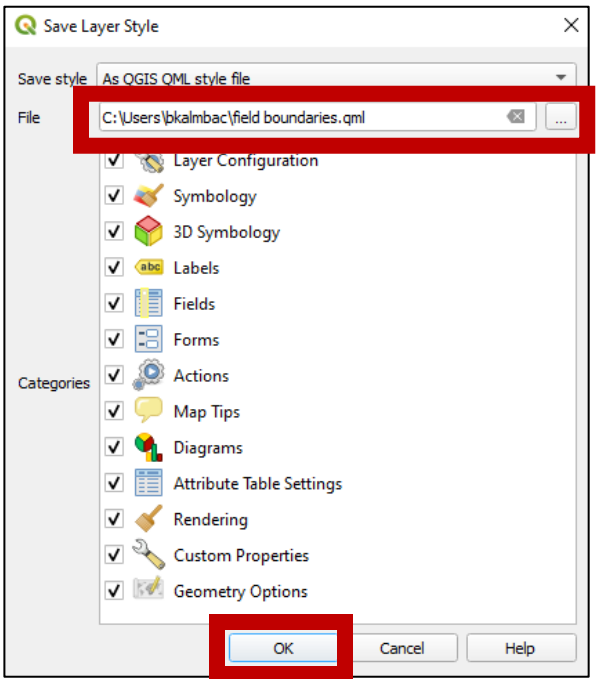
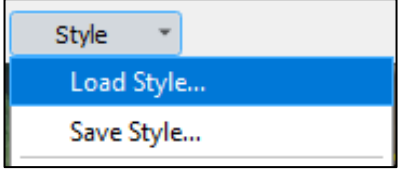
You should now see the field outlines on your map canvas in your selected outline color with labels for field ID and acreage, similar to below.



6

In order to save your chosen color scheme and label settings for future reference, click on **Style** in the bottom left-hand corner of the **Layer Properties** window and select **Save Style...**



	<p>Click on the  to choose a location to save the <b>Style</b> and give it a recognizable name. Click <b>OK</b>.</p>	
7	<p>When you want to use the same style for other shapefiles, click on the <b>Style</b> dropdown in the bottom left-hand corner of the <b>Layer Properties</b> window and select <b>Load Style...</b> and select the style you previously saved.</p>	

## FINISHING MAP IN MS WORD

### Instructions

Once you have the farm/field boundaries in QGIS, use the Windows 'Snipping Tool' to take a snapshot of the map and bring into MS Word. In Word, you can add text boxes to include other information such as field identifiers, acreage, farm name, account ID, etc.

Alternatively, skip to Lesson 7 to create a finished map product within QGIS (version 3.4 or later).