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Introduction to Basemap Vector Tile Style Editor
August 23, 2023

Overview
This training will introduce you to the ArcGIS Vector Tile Style Editor to customize Esri basemaps.

Goal
The goal of this training is to provide a high level overview of the ArcGIS Vector Tile Style Editor tools that allow you to change colors, font, feature sizes, patterns, and then save it to your AGOL account.

Finished Product (if applicable)
Esri Vector Tile Style Editor

Recording found here!

1. Open the Esri Vector Tile Style Editor

2. '+ New Style'

3. Choose a basemap as a template

Quick Style Editor
4. The Style Editor will open on the 'Quick Style' panel on the left

Here you will see a few layers listed and their current HEX colors, options for label color and label contrast, a place to choose the font, and a place to adjust the size of labels and width of roads.

If you choose a basemap without a reference layer, the font options will not show up here.

On the right side of the screen, there will be 4 windows showing different locations in the basemap that you have chosen to edit. You can zoom into anywhere in these map frames to see how your edits will look at different places at one time.
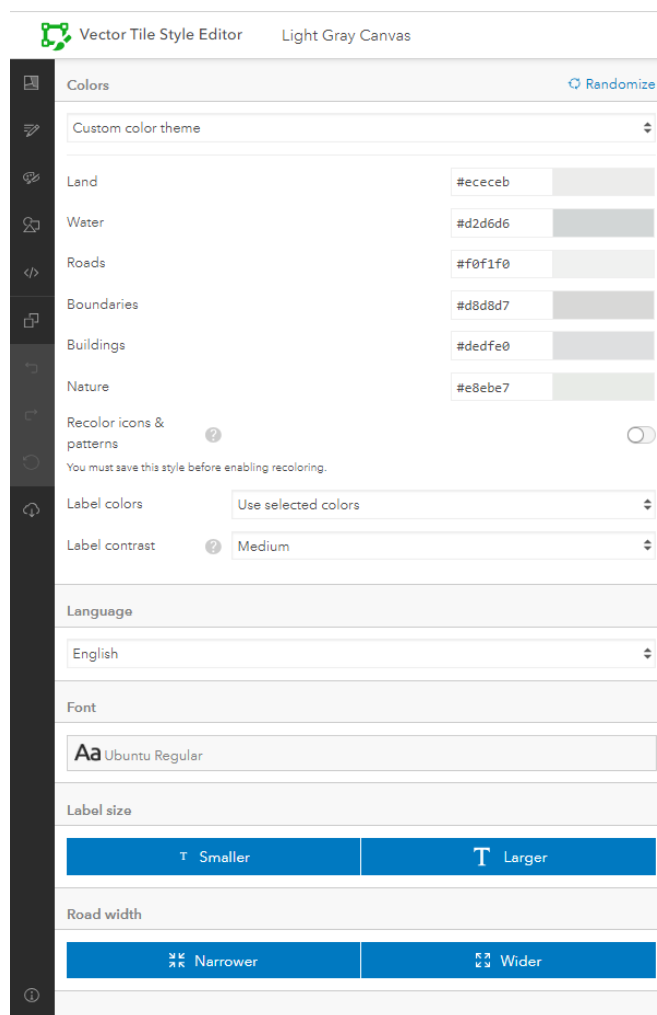
At the top of the Quick Edit panel, there is an option to randomize colors. Feel free to play around with the random colors generated by this tool.

Edit Layer Style

5. In the dark gray toolbar on the left, choose the second icon (a pencil with three lines to the left of it) to open the 'Edit Layer Style' panel

This panel will list the categories of layers as dropdowns. Choose one of these layer categories to explore the sub layers.
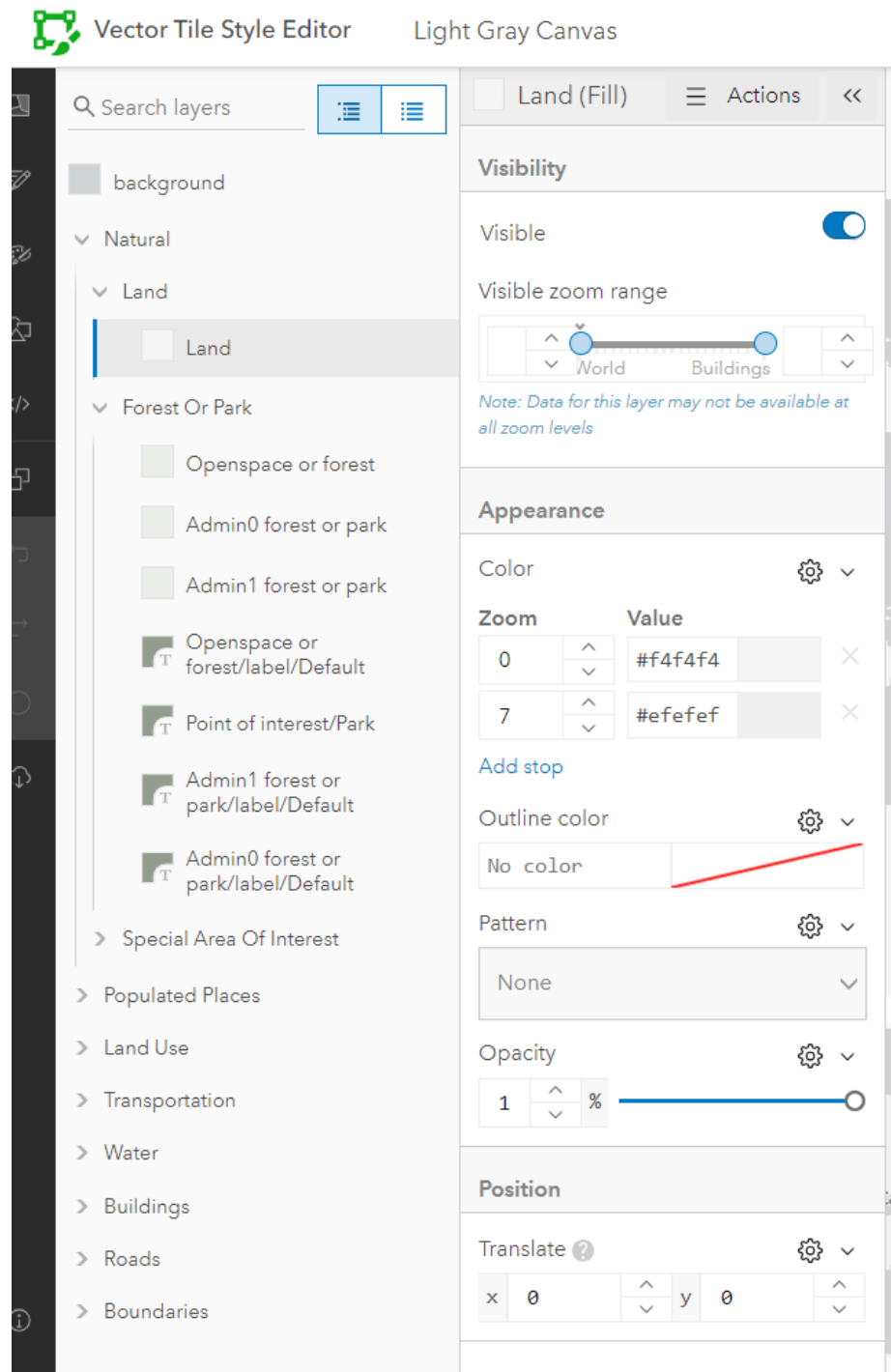
6. Click one of the squares next to a sub layer

Here you can toggle the visibility on or off, change the visibility range, choose a fill color, an outline, a pattern, and the opacity.
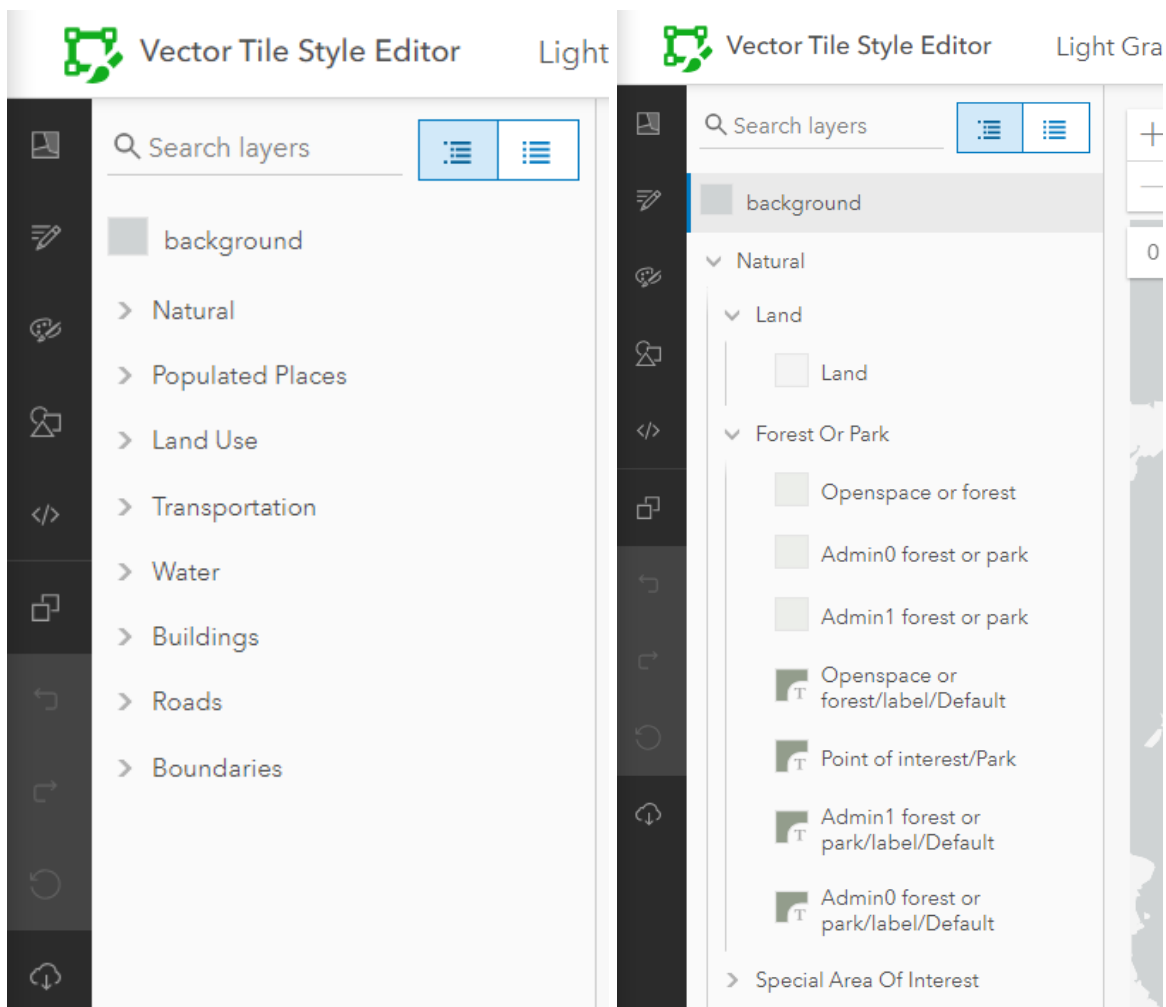
Another way to choose a layer to edit is by using the map.

7. Use the '+' icon that appears when you bring your mouse over the map to choose a layer. The same panel will appear to edit the color style.

In the 'Appearance' section of this panel, there are options to add color stops when you click the settings icon and choose 'Set value by zoom level'. Here you can choose the color at each zoom point. The default has 2 color stops, but you can add levels by choosing 'Add Stop' under the other two zoom options.
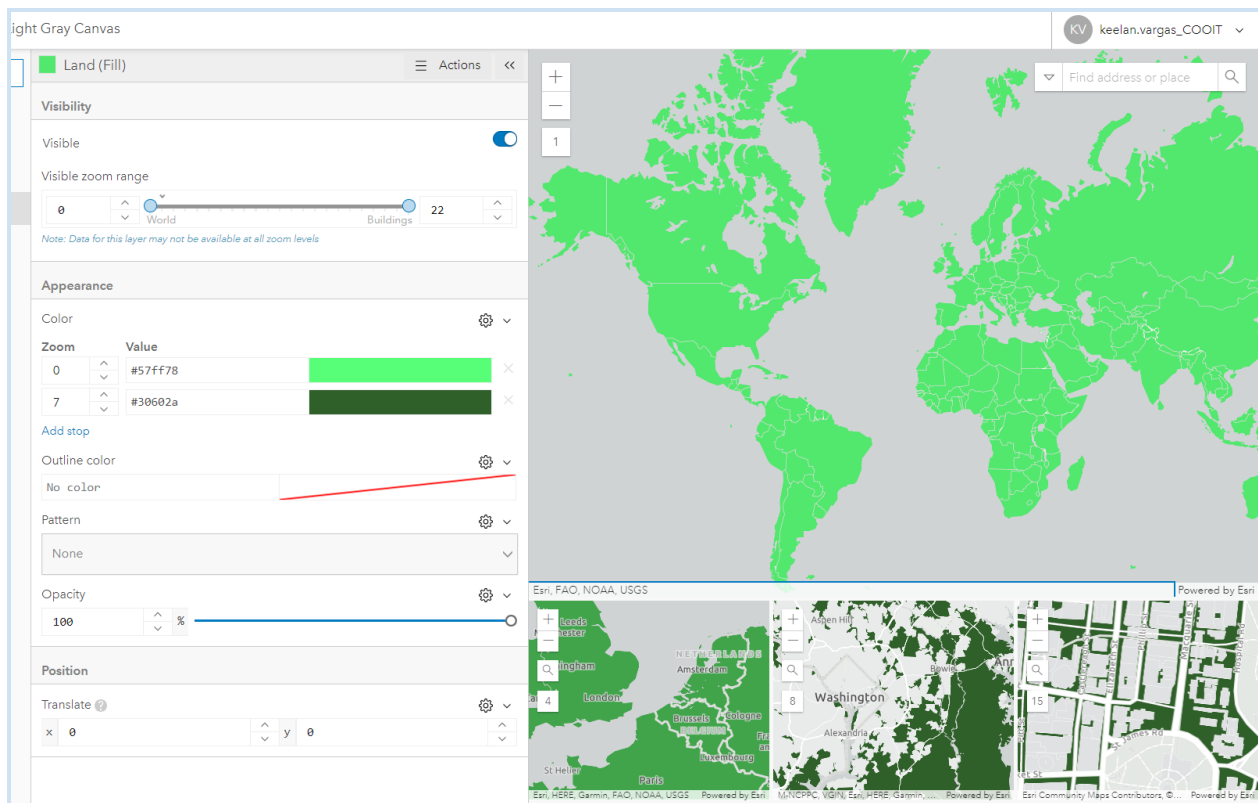
8. In addition to layers, you will find associated label layers indicated by a 'T' in the bottom right corner of the preview. Choose one of these text label layers.

9. Choose the 'Actions' button at the top of this panel. Here you can change the layer order. If you choose one of these options, you will see the layer order change in the layer list on the left.

In this panel, you will be able to change the visibility, add an image for the icon, change the font and font size, the color of the text, the display of the halo, the placement of the labels, and other text settings such as line height and letter spacing.

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Vector Tile Style Editor   Light Gray Canvas

Q Search layers   ☰   ☰   ▮T Point of interest/Park (Symbol)   ☰ Actions   «

background   Sort by drawing order ility

∨ Natural   Visible   ●

  ∨ Land   Visible zoom range

     ▮ Land   14 ⌃   ˅   ○——————○   22 ⌃
                                                        ˅   World   Buildings   ˅

  ∨ Forest Or Park   *Note: Data for this layer may not be available at all zoom levels*

     ▢ Openspace or forest   **Icon appearance**

     ▢ Admin0 forest or park   Image   ⚙ ˅

     ▢ Admin1 forest or park   None   ˅

     ▮T Openspace or
         forest/label/Default

     ▮T Point of interest/Park   **Text appearance**

     ▮T Admin1 forest or   Size   ⚙ ˅
         park/label/Default
                                                    9.5   ⌃   px
     ▮T Admin0 forest or   ˅
         park/label/Default
                                                    Font
  > Special Area Of Interest
                                                    Aa Ubuntu Regular
> Populated Places
                                                    Color   ⚙ ˅
> Land Use
                                                    #939d8c
> Transportation
                                                    Halo color   ⚙ ˅
> Water
                                                    #ebedeb
> Buildings
                                                    Halo width   ⚙ ˅
> Roads
                                                    1   ⌃   px
> Boundaries   ˅

                                                    Halo blur   ⚙ ˅

                                                    1   ⌃   px
                                                                                           ˅

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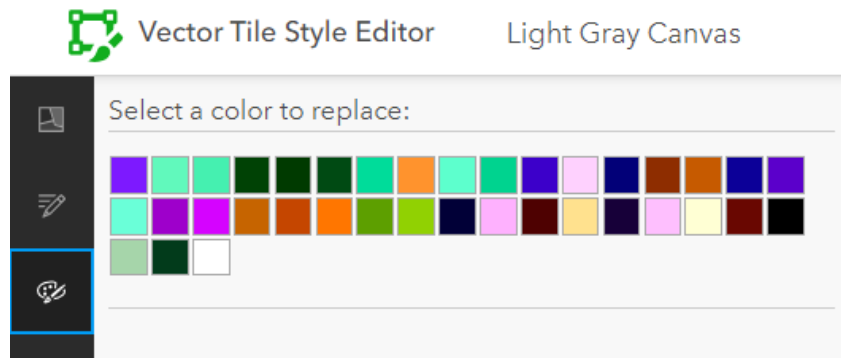Information Technology
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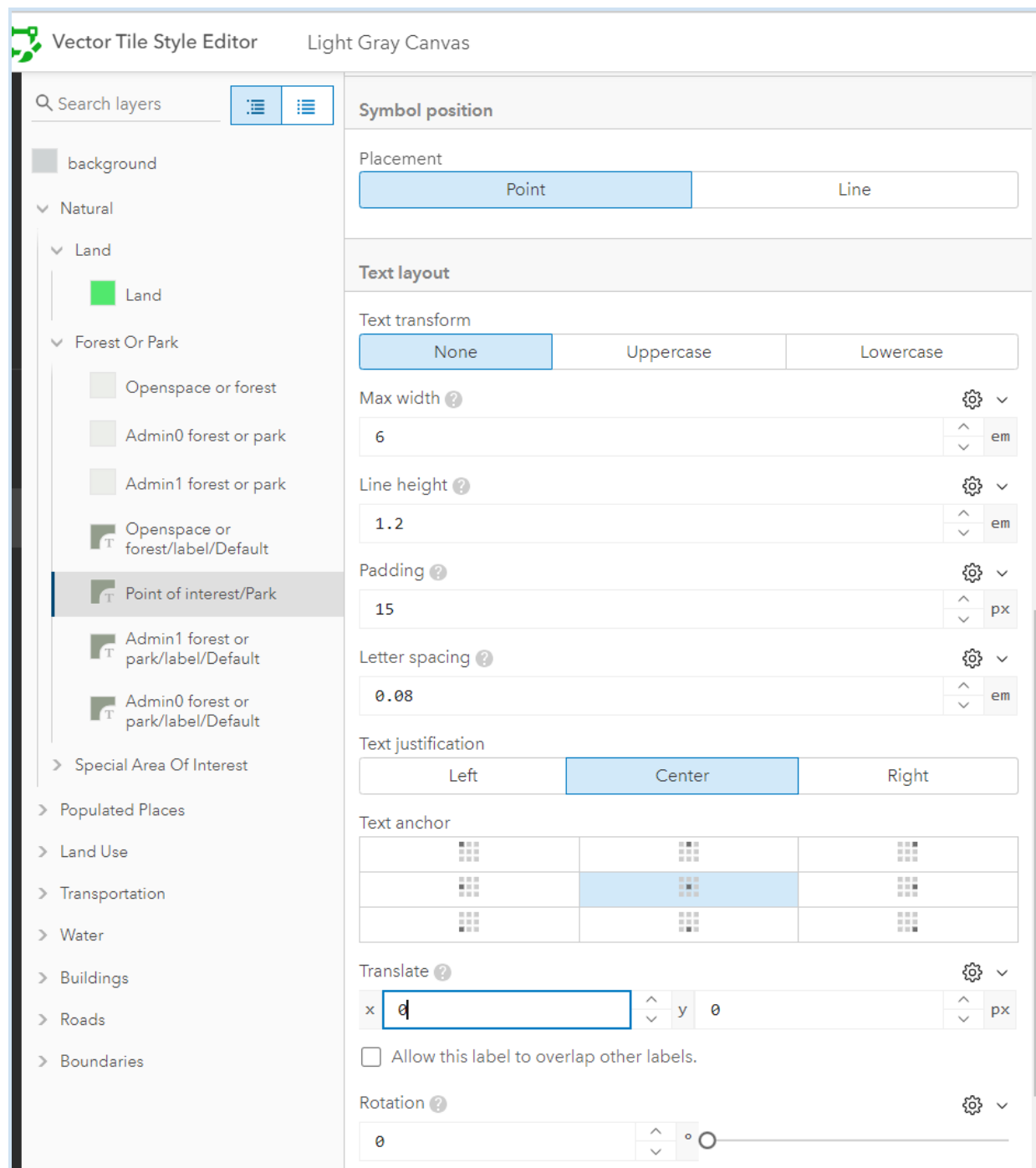
Edit by Color

   10. Choose the next icon, the color palette, in the black toolbar on the left to open the 'Edit by Color' panel

This panel will show every color that is currently in the basemap.

11. Choose a color from the grid and choose a new color. This panel will also show you all the layers that the color is currently applied to. Choose 'Apply' once you have selected a new color.
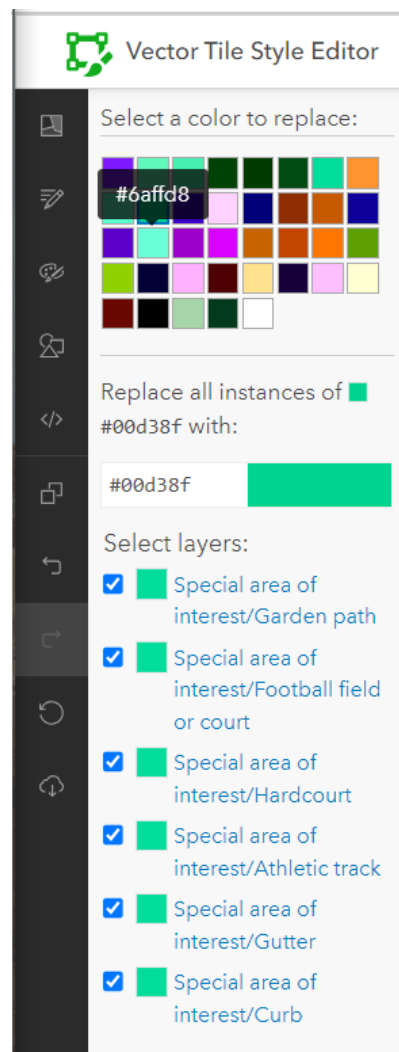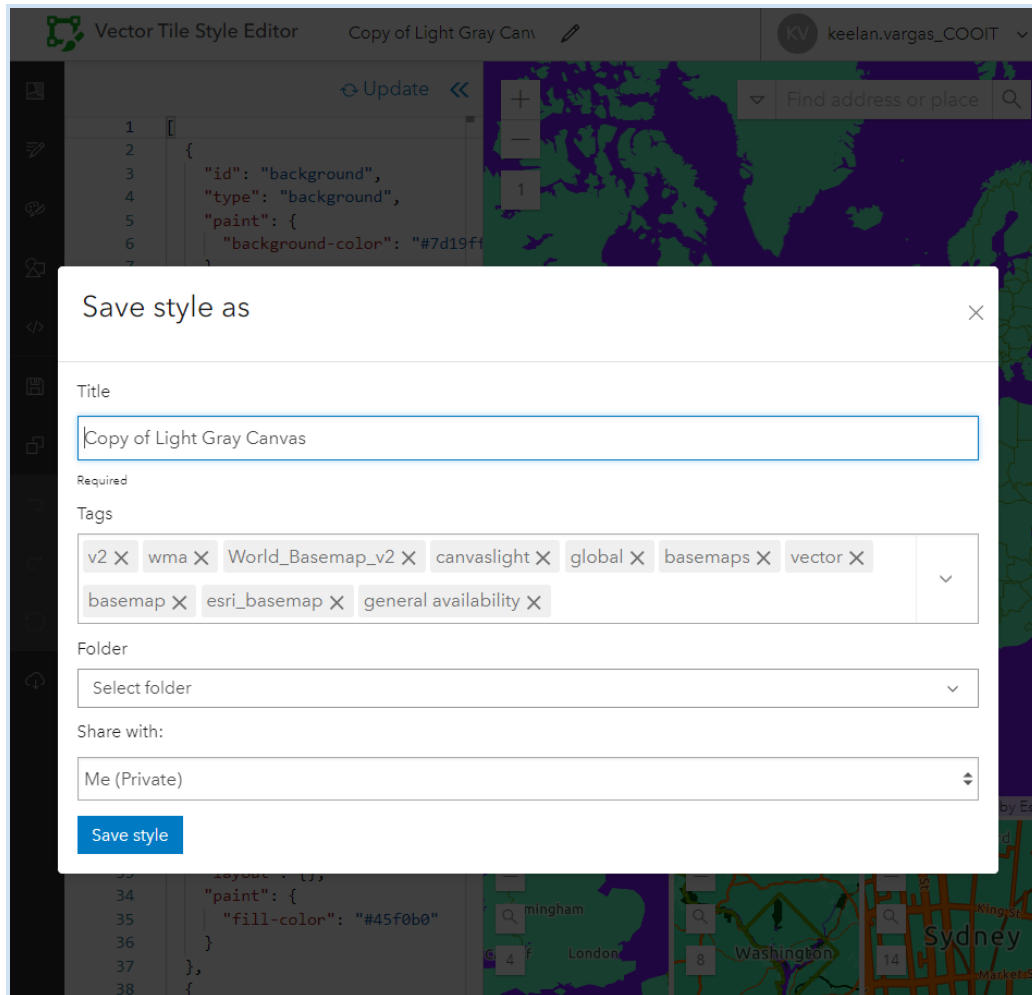
Edit icons and patterns

    12. Choose the icon with three shapes to open the 'Edit icons and patterns' panel

This panel will display every pattern that is currently used in the basemap. Hover over one of the patterns to see which layers it is illustrating.

Before the next step, you will have to save the style to your AGOL account.

    13. Choose the save icon in the black bar on the left. Use this window to change the title, add or remove tags, select the folder to store it in your AGOL, and choose the sharing settings.

    14. Choose one of the patterns. Here you can download the pattern, replace the pattern, or delete the pattern. In addition, you can add a tint color.

15. Choose a color for the tint. The window at the top will show you
      a preview of the pattern with the tint applied.

Edit JSON
16. Choose the icon '</>' to open the 'Edit JSON' panel

Here you can edit the JSON of the basemap. This tutorial will not explore how to edit the JSON, but the option is available in the Vector Tile Style Editor.

Below the 'Edit JSON' button, there is the 'Save' option that we used earlier (Before you save the initial style once, this will be 'Save As') and the 'Save As' button, denoted by two squares placed offset from each other.

In addition, you will find the following buttons:
-   Undo
-   Redo
-   Reset
-   Download current style

The 'Download current style' button will download the current JSON file locally.

The Esri Vector Tile Style Editor is a great tool for tweaking the Esri provided basemaps to fit your exact needs or to create something completely unique!

Other Resources:
-   [Basemap Basics StoryMap](#)
-   [Basemap Colors StoryMap](#)
-   [Basemap Lines StoryMap](#)
-   [Basemap Labels StoryMap](#)
-   [Basemap Icons & Patterns StoryMap](#)
-   [Vector Basemaps Showcase](#)
-   [Create a Custom Basemap Style](#)
-   [Create a Custom Basemap Style for Your Application Video](#)

As always, if you have any questions, reach out to us at oit_gis@state.co.us!