IOWA STATE UNIVERSITY
Extension and Outreach

GIS
Training and Services

**Geospatial Technology
Training Program**

Custom Basemaps with Mapbox Studio

Welcome to the Essential ArcGIS Task Sheet Series. This series supplements the Iowa State University Geospatial Technology Training Program short course series. The task sheets are designed to provide quick, easy instructions for performing mapping tasks.
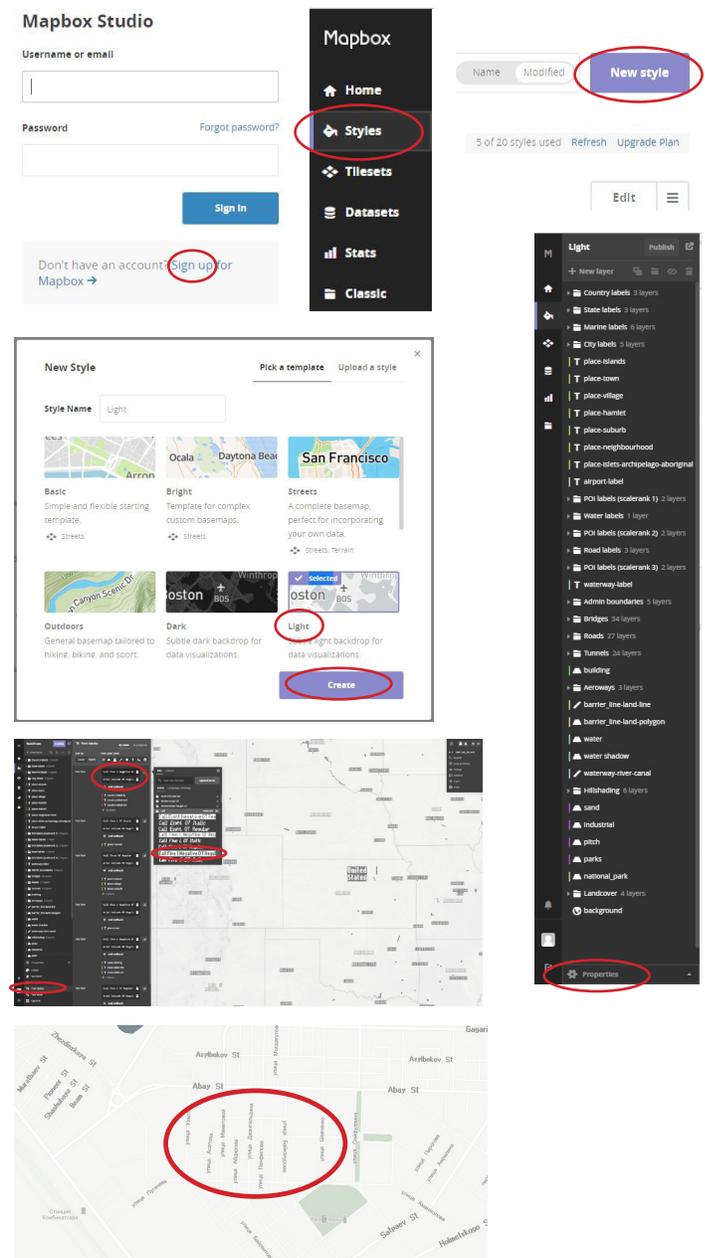
Mapbox is a versatile mapping platform that allows users to build maps and apps. This tasksheet will focus on Mapbox Studio, an interface for styling custom basemaps. Mapbox provides seven template styles from which to start, or users can start from scratch. Check out what has been done with Mapbox here: **https://www.mapbox.com/gallery/**. Mapbox uses data from Open Street Maps (OSM), so it would be helpful to be familar with OSM: **https://wiki.openstreetmap.org/wiki/Map_Features**. This tasksheet will guide you in customizing a basemap that emphasizes water and parks.

1. Getting Started

a. To get started, navigate to **https://www.mapbox.com/studio/** in a web browser. If you do not already have a username, go ahead and sign up for Mapbox here.

b. Once you have logged in or created an account, click on **Styles** in the left hand panel. One the next page, click **New Style** to begin customizing a basemap.

c. You have the option to start from **Empty** style or begin from a template. In this case we are going to build off a template. Select **Light** and click **Create**.
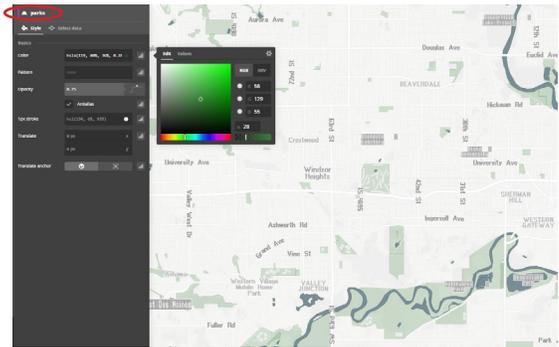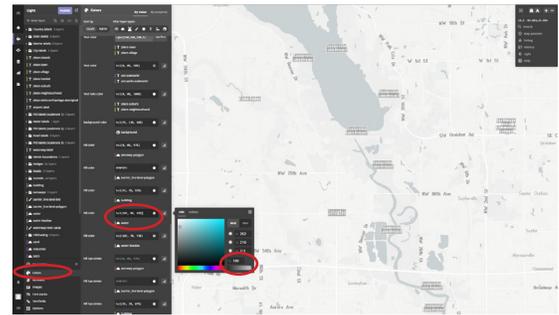
2. Customizing Labels

a. There are multiple ways to change the font, size, halo, and color of text fields. One way is to open the **Fonts stacks** panel by clicking **Properties**, and select **Font stacks**.

b. This will open up all the different text sytles set previously in the map template. By default, they are arranged in groups **By value**, which show all the types of text that have the same style. To see each type of text, select **By property**.

c. Sort the Font stacks **by Value**. There should be six groups of text types. We will be changing the first font listed for each group. The second font listed is the fallback font, which will be used if the primary font is not supported (See example where the fallback font is used for street names in a different language).

d. For the first two groups, change the primary font to **Call Five S Negative OT Reg**. For the remaining groups, use a font called **Call Five L OT Regular**. Leave the secondary font as the default.
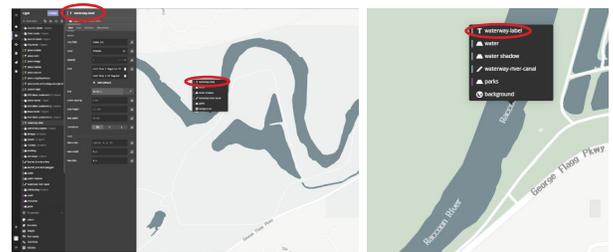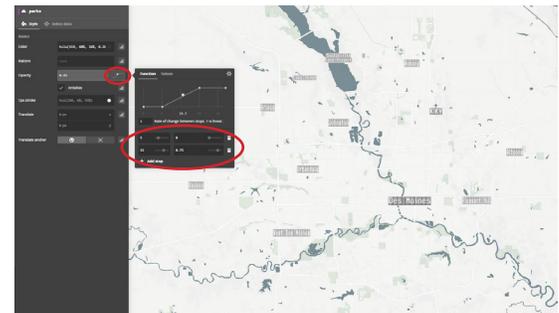
3. Customizing fill colors

a. At the bottom of the layers panel, click **Properties**, and then click **Colors**. Just as with the **Font stacks**, **Colors** can be sorted **by value** or **by property**.

b. Find the **Fill color** for **water** features. Click on the color code to open the the editing box. Adjust the color to be a bold, deep blue of your liking. Adjust the opacity slider at the bottom of the editing box to 50%.

c. Now, find the **parks** feature. Click on **parks** to open up the style panel. Find a nice green to represent parks.

d. Next, click on the icon next to **Opacity** and **Enable zoom function**. Here, we can adjust the **Opacity** according to the level of zoom. For the first stop, use a **zoom level** of **5** and an **opacity** of **0**. For the second stop, use a **zoom** of **15** and an **opacity** of **.75**. This will create an effect of parks slowly appearing as you zoom into the map.

4. Editing, Publishing, Sharing

a. As aforementioned, there are multiple ways to edit how features are displayed. Another way is to **click directly on the map**—a list of features in that location will appear. Click on the name of the feature to start editing.

b. As you move around your map, you might find some issues. For example, now that we've changed the color of water features, the text labels for water features may be difficult to see. Simply click on the label, select **waterway-label**, and change to the text color so that it contrasts with the water.

c. After you are satisfied with the changes you've made to your map, change the name of your style to **Water & Parks,** and then click **Publish**. (If you publish without renaming the style, it will simply update the Light style).

d. After you have Published your map style, click **Preview, develop & use**.

e. The following page provides the links and tools you need to share your map with others, use it as a basemap in a Leaflet web map, or integrate it into a GIS app.

Contact: