Team Amalthea
July 14, 2017
Ambient 1
SECOND Team Assignment

Preamble:

- LOC to-date: 121
- Estimated LOC at completion
    - setup() – 68
    - draw() – 3
    - Brightness_Level() – 2
    - Color_Level() – 2
    - updateImage() – 19

Question: How will you scale and map the data from the original data source to 0-99 input to the ambient device?

We decided to use the difference of the outflow and inflow values to correspond with the input of our ambient device. By examining the data over time, we chose difference values that would indicate the different condition at the current time. For instance, if the difference of the outflow and inflow is below 0, meaning the inflow is greater than the outflow, the device will show a red color with a dark brightness to indicate danger. If the value is between 0 and 800, the device will show a yellow color and a dim brightness, indicating a warning. If the value is between 800 and 1200, the device will show a green color and a fairly bright brightness, indicating the current condition is OK. Lastly, if the difference value is above 1200, the device will show a blue color and a high brightness, indicating that the conditions are completely safe.

Since the data updates every hour, we also implemented a live update that will refresh the device every 10 seconds, allowing the colors and brightness to change upon any new data available.