

Report: This is a summary of the completed work for the General Sustainability and Social Justice Incentives Fund. Up to August 26th, 2024, there have been three rounds of testing completed at each of the local sites near Emory. These three sites are Ira B. Melton Park, Herbert Taylor Park, and Burbank Park. Each of the sites is registered under the adopt-a-stream program across the greater Atlanta area to increase community awareness about the health of local waterways. At each of these locations, the dissolved oxygen levels, pH levels, and water temperature were all in healthy ranges. The acceptable dissolved oxygen levels for rivers should be between 6.5-8.0 mg/L, pH levels between 6.5-8.2, and water temperature not exceeding 31.6°C.

Parameter (Average)	Ira B. Melton Park	Herbert Taylor Park	Burbank Park
Dissolved Oxygen (mg/L)	7.8	7.6	7.4
pH	6.7	6.8	7.2
Water Temperature (°C)	28.4	28.1	27.9
E. Coli (CFU/100 mL)	1258	764	833

According to adopt-a-stream protocols, E. Coli colony forming units per 100 mL should not exceed 1000 CFU. However, during the month of May, there were exceedingly high levels of E. Coli at each of the three test sites: 1700 CFU/100 mL, 1433 CFU/100 mL, and 2233 CFU/100 mL respectively. This was most likely due to heavy rains from the week before that caused sewage to spill into the rivers. In June and July, the levels of E. Coli dropped significantly below the threshold, leading to the overall E. Coli count to remain below the threshold value.

Our team is currently waiting on calibration standards for the heavy metal photometers before adding those parameters to the water sampling.

According to the data collected so far, it is safe to say that the relative quality of the local waterways surrounding Emory are healthy.

Our team also created a water quality educational module for middle school and high school students. It focuses heavily on the categories of water pollution, laws in place to safeguard our surface and groundwaters, and current water pollution events in Georgia. The module will be broken up into smaller sections that will include Kahoot activities, worksheets, and discussions that will engage the students and evoke greater critical thinking about the subject. We are currently planning on presenting this module to students at Stone Mountain High School.

The future of this project is to continue monitoring efforts for increasing the amount of data that local community members can access, as well as to notify officials if any parameters exceed acceptable levels.