NEXT STEPS/ IMPROVEMENTS:

With a total of 20 Analog and Digital I/O Pin available, the Arduino Uno enables this system to be highly scalable. Adding additional sensors to measure temperature and ph balance would be a logical next step. Potential power source alternatives, like solar power can be explored as well in order to store energy for our system in case of a power outages. Also, through the use of an Ethernet/Wifi Shield Expansion Board, networking and wireless capabilities can be considered. This feature could allow for real-time online data monitoring from our sensors to the World Wide Web.

There are a number of services on the Internet that offer Live Streaming Data Monitoring capabilities. One such service that our team came across is called Plotly, a free online analytic and data visualization tool providing multiple API’s and data graphing capabilities. With the use of services like these, data can be accessed from any device connected to the Internet.