App Description

App Idea - Main purpose of this app is for students to learn how to monitor different sections of streams, and label them with different descriptors (pool/riffle, wet/dry). This app will collect GPS data from students using the app to record stream characteristics. Users will have the option to add Point of Interests (POI) should they choose to. Users will also be able to look at other users' data from other classes.

App Users - (education level: familiar with technology, college level) There will be users who are gathering data in the field and there will also be users who will analyze the data in the lab.

- Short-term: Students (Individuals and/or Co-Surveyors) and Faculty Researchers
- Long-term: Volunteers, New Classes, Groups (covid permitting)

App Workflow - Start at a position downstream, turn the app on, put in some data, walk up the stream, as they're walking up the stream, record the GPS trail that the students take while the app is on, can mark whether the stream is dry, wet or other, riffle or pool - fast flowing stream, if stream is wet. If the stream falls into the "Other" category, users must input a description and picture. Then after the collection of data, the user will go to a computer and download the required files to read / interpret / sort the data. Users can export data that matches their search queries to a CSV.

App Data Type - GPS data points, pictures, sites, text descriptions, wet/dry/other value, pool/riffle value, points of interest.

Views –

- Login view
- General Map view
- Record data view
- Add POI view
- Export/Search data view

Data –

- Username (and co-surveyors)
- Stream name (and/or stream branch)
- wet/dry/other toggles or sliders.
- Location data

- Pictures
- POI's (GPS locations, unique IDs, date, stream, picture)

Anticipated Challenges –

- Displaying map details on the main page.
- Creating sessions for students.
- Standardizing names for streams, sessions/classes, users.
- Distinguishing between wet, dry, and other.