**October 12, 2019 Trip Report**

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**Purpose**

* Implement hardware and software changes into all of the 5 phase 1 water stations.
  + Hardware
    - Placed 4x4 blocks underneath the stations to elevate the stations, making water accumulation less probable.
    - Drilled drain holes in all compartments.
    - Removed water-proof tarps (due to accumulation of bugs/snakes).
    - Improved lids for electrical boxes.
    - Implemented better water-proof connectors between weight sensors and the electrical box.
    - Implemented better weight sensor covers, from plastic bags to 3D-printed tight seals.
  + Software
    - Improved arduino and network control software.
    - Implemented station-dependent calibration to improve weight calculation.

**Past Error Observations**

* Phase 2 Station 6 case broke in center point due to weight. Trashed.
* Previous box connectors between weight sensors and electrical box were flooded. This can be seen in the images within the current working directory of this file. This explains why station 5 (confirmed) was not reporting correct values.
* Water accumulation in all compartment was true. This is due to a lack of drain holes.
  + Electrical boxes were compromised due to weak water seal in lids
  + Weight sensors were wet.

**Problems Encountered**

* Station 3 had different electrical configuration within the electrical box
  + Arduino in station 3 was powered from battery instead of solar charger.
* One of the weight sensors from station 5 was faulty, had to replace it by salvaging a sensor from broken phase 2 station 6 weight sensors. They are the same type of sensors, with the same max weight value (100 lbs).

**Post-Trip Tasks**

* Normalize station 3 electrical box to conform with the other electrical boxes .
* Monitor the operation of all the stations to ensure that they are working.

**Post-Trip Failures**

* Station 4 is not transmitting any information, need to help troubleshoot this station.
* Website is not updating google maps markers