CVWRF Sensor Setup

A brief summary of past and future ideas for setting up sensors at the pilot-scale RABR at Central Valley Water Reclamation Facility.

Past RABR setup at CVWRF.

▼ Table of Contents

Campbell Scientific Tripod

This is an example of a tripod and additional hardware. Some of these will already be in the lab building. The Campbell additional hardware can also be found at some hardware stores and is provided as an idea of the parts that are used.

- CM110 Tripod
  - Other Tripods
- Crossarms and Crossarm Brackets
  - Crossarm-to-Pole Mounting Kit
- Mounting Poles
- Other Tripods and Mounts

Enclosures

Ideas for Campbell Scientific and Raspberry Pi or similar enclosures. Also linked below are useful types of accessories for reference.

- Campbell Scientific Enclosures
- Campbell Scientific Mounting Hardware
  - Other U-Bolt
  - U-Bolt with Saddle Bracket
- Campbell Scientific Enclosure Supply Kit
  - Dessication Packets - Good for small enclosures
  - Dehumidifier Bags - Good for large enclosures
- Weatherproof Connection Box - Useful to place surge protectors
- Potential Raspberry Pi Waterproof Box - This will need cable glands and a mounting solution to work on the back
  - Cable Glands
  - Small Flanged Weatherproof Enclosure
  - Raspberry Pi IP65 Weatherproof IoT Project Enclosure
  - Rubicon Enclosure

Sensor Mounting

Ideas for Campbell Scientific and other sensors.

- Campbell Scientific Magnetic Mounting Stand
- AL-120 Solar Mounting Bracket with Leveling Plate
- Solar Sensor Mounting Stand with Level and Base
- 6-Plate Solar Radiation Shield

Some more DIY methods. A combination of pip brackets, pipe clamps, and magnets can be attached to wood, enclosures, or PVC poles to mount a variety of sensors. See the past example photos at CVWRF for a reference. * Pipe Bracket * Neodynium Magnets

Cameras

Ideas for Campbell Scientific and other sensors.

- Quick Release Camera Plate - can be used to swap mounts
- Camera Tripod - useful to setup a camera (will need to have sand bags so it doesn't blow over)
- Example of Outdoor Raspberry Pi Camera

MotionEye or MotionEyesOS

Easiest softare packages for managing a Raspberry Pi camera to take photos at regular intervals. MotionEye will install the frontend on an existing Raspberry Pi OS and MotionEyesOS will be the entire Raspberry Pi OS. There are plenty of tutorials online. * MotionEye Installation * Additional Tutorial * MotionEyeOS Installation * Additional Tutorial