

Weather Station Set Up Directions

Weather Station Placement

Each study site has one weather station. Half of the weather station is located in an area under dense forest canopy and the other half is located in an adjacent open area.

Weather Station Set Up Materials

For Both Rain Gauges & Temperature

1. Tape measure
2. Log book and pen to record locations

For Rain Gauges:

1. 2 rain gauges with screws and mounting brackets
2. 2 landscaping posts (About 8ft long) (pressure treated timbers)
3. Shovel
4. Post hole digger (if available)
5. Vegetable oil (1 oz per gauge)
6. Screwdriver

For Temperature Loggers

1. Trowel
2. 3 temperature data loggers and 3 cases
3. Permanent marker
4. Screwdriver
5. Laptop computer and cable
6. Data logger software

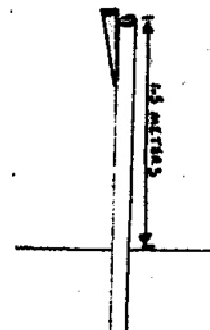
Weather Station Set Up Directions

Part A. Locate Station

1. Select location. Select an area within the study site that has low human traffic and is less likely to be disturbed than other areas. It should also have both dense canopy and open sections of forest adjacent to each other.

Part B. Rain Gauges

2. Dig hole. Under the dense canopy spot, use a shovel and/or a post hole digger to dig a hole so that 1.5 meters of the landscape post will remain above ground once it is set. (Or to put it another way, all but 1.5 meters of the post will be buried.)
3. Mount gauge. Mount the rain gauge to the post so that the top of the gauge will remain about 5cm above the top of the post.



4. Set post. Set post securely in ground. Pack soil around post.
5. Set gauge. Place a known amount of vegetable oil (1/10th of an inch will work fine) in the rain gauge and record that amount in log book. The oil is placed in the gauge to limit loss of water to evaporation.
6. Repeat. Repeat process (steps 2-5) for rain gauge to be placed in open area.

Part C. Temperature Loggers

1. Locate logger sites. Three data loggers are deployed at each Ah site. One goes 2 meters high on the north side of a tree under dense canopy. The other two loggers are both buried under 2 cm of soil. One will be under dense canopy and the other is buried in an open area. To make it easier to find them, the buried loggers should be placed one meter from a secure and visible object (rain gauge post, tree, piece of rebar, etc.).
2. Mark case and logger. With a permanent marker record on the outside and inside of the case "UNM Bosque Biology 277-3411." Do the same on the outside of the logger itself.
3. Launch logger. Using the laptop computer, follow the directions and launch the data logger for 1 hour intervals using a Celsius scale. Title each logger as appropriate:

"your site name, canopy 2m high"

"your site name, canopy subsurface"

"your site name, cover subsurface"

4. 10. Place loggers. Place loggers within their protective cases and then in their proper locations. Carefully record where the loggers are, especially the buried ones.