

Procedures when visiting GSMRGN rain gauge

Before leaving UNCA, don't forget...

- [1] field laptop & computer bag (with maps and digital camera)
- [2] Garmin GPS locator (with fresh batteries & extra batteries)
- [3] verify that the field laptop time is the same as the GPS locator time
- [4] field journal notebook (and pen)
- [5] tool bag with
 - hex wrench** for removing gauge cover
 - brush for cleaning mesh filter
 - towels/cloths for cleaning gauge funnel
 - bounce fabric softener
 - duct tape
 - saw
- [6] water bottles for rinsing gauge funnel

Procedures

Upon reaching a rain gauge...

Note (in journal notebook and **with photographs**) the general state of the gauge before starting the maintenance procedures

- [a] what (if anything) is clogging the funnel and/or mesh filter
- [b] has the gauge and/or funnel been knocked askew, noticeable damage?
- [c] is the gauge being covered overhead by leaves or branches

Take off the gauge cover

- [a] note if the gauge is level or not (look for bubble inside of rings of circular level)

Connect the gauge laptop to the data logger (careful, data logger might be loose!)

- [a] connect cable to USB port and to data logger (password = BOMM)
- [b] start WinComLog software
- [c] download logger data in two formats; "Raw" and "CSV-1" using a unique date/time file naming convention (double-check that the file contents are not empty)
- [d] check that data logger time is correct using the "ST" command... the standard is Eastern **Daylight** Time (EDT, the time that we have during the summer) update if time is off by more than +/- **two minutes** {if you update the time, do it after a "Raw" data file has been opened so that the change in time can be recorded in the text output file}
- [e] dump the rain gauge observations recorded on the data logger using the "DUR" command and click the "stop capture" button when all of the data has been downloaded (double-check that the file contents are not empty)
- [f] if you need to clear data from the data logger, use the "CLR" command and make sure that the data logger date hasn't been re-set to the wrong date (check with the "ST" command)

Clean the gauge funnel

- [a] unscrew the black nozzle on the underside of the gauge funnel to remove the mesh filter for cleaning (be careful NOT to lose or drop the black “O” ring, in some gauges the “O” ring is missing)
- [b] clean mesh filter with brush and water
- [c] clean inside of black nozzle with brush, water, and cloth
- [d] clean top of gauge funnel, clearing it of bird poop and other debris
- [e] replace mesh filter and black nozzle (with “O” ring) on gauge funnel by hand-tightening the nozzle (be careful not to over-tighten the nozzle)

Replace old Bounce fabric softener sheet with new (be VERY careful that sheet does NOT obstruct openings to tipping bucket)

Re-level gauge (if necessary)

Check that the drainage ports underneath tipping buckets are NOT clogged (clean if necessary with small brush)

Clear vegetation and/or branches that may be blocking rain from getting into gauge funnel- a four foot radius (minimum) of cleared vegetation is desired

Describe everything that you did at the gauge site during this particular visit in the field journal notebook { we won't get paid until every gauge site visit has been documented in the field journal notebook }

Log in field journal notebook; local time & date of gauge visit, weather/sky conditions, details; bounce sheet? Re-level? Time and/or date adjustment? Insect/animal problems? Debris in funnel or drainage ports? Vegetation cleared? Water left in bucket? Other (e.g., batteries changed, calibration)?

----- return to UNCA -----

Note!!!!!!!!!! Upon your return to campus...make sure gas tank in UNCA vehicle has been filled (using state credit card)

Return:

- [1] field laptop & computer bag (with maps)
- [2] Garmin GPS locator (with fresh batteries & extra batteries)
- [3] field journal notebook (and pen)
- [4] tool bag with
 - hex wrench for removing gauge cover
 - test tube brush for cleaning mesh filter
 - towels/cloths for cleaning gauge funnel
 - bounce fabric softener
 - duct tape
 - hack saw
- [5] water bottles for rinsing gauge funnel

to RRO 237 (formerly RBH 237, small research room next to Meteorology Lab).