

Pell Grove Weather Network - Station Maintenance Note

Current sampling and alert behavior

Pell Grove Weather Network is a fictional volunteer network serving orchard demonstration sites. Note 7 governs the shared data log from 9 June 2026 onward. A station is a numbered mast with a wind sensor, a rain collector, and a shaded air sensor. The orchard name identifies a site, not a sensor model. A volunteer visiting a site should check the station number on the mast before writing a maintenance entry.

The air sensor records one sample every 45 seconds while a station is in ordinary logging mode. A daily summary is computed from those samples after midnight UTC. The summary interval does not alter the sampling interval. A maintenance laptop may display a rolling average for convenience, but that screen value must not be copied into a raw-sample cell. Volunteers add a note if a station was intentionally paused during a visit.

A wind alert is raised when speed stays above 12 meters per second for 90 consecutive seconds. An isolated reading above the threshold does not meet the duration condition. A reading equal to 12 meters per second does not meet the strict speed condition. The logger keeps the raw samples around an alert so that the coordinator can inspect the event later. A volunteer may report a fallen branch separately even when no wind alert was recorded.

Station PG-4 applies a temperature correction of minus 0.6 degrees Celsius to its raw air reading before displaying the corrected reading. The correction is negative, not an uncertainty band. Other stations have individual calibration entries and must not copy PG-4's value. The correction entry is dated and retained with the calibration note. A replacement sensor receives a new check before the old correction is reused.

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Battery work and site records

The maintenance route is planned by station number. A volunteer can visit an orchard with several masts and service only the listed mast. The route sheet records arrival and departure in local time. A copied photograph of a mast is helpful for locating it, but the number on the actual mast controls the record. If the plate is unreadable, the volunteer stops the scheduled work and contacts the coordinator before attaching a new label.

A battery pack is replaced when its resting voltage is below 11.7 volts after a 20-minute disconnected rest. The voltage threshold and the rest period both belong to this rule. A loaded voltage observed while the logger is transmitting cannot be used as the resting voltage. The technician writes the observed resting value before removing the pack. A value equal to 11.7 volts does not trigger replacement under this rule.

Rain collectors are emptied after a manual comparison reading. The comparison sheet carries the station number and the end time of the collection period. Emptying a collector is recorded as an event so an analyst will not interpret the next short interval as a full day. Leaves are removed with the soft brush from the site kit. Metal tools are not placed into the funnel because they can scratch the surface.

The coordinator keeps each site's access directions separate from its observations. A change to a farm gate code is not a weather event and is never entered in the public data log. Public volunteers see only the access information needed for their route. A site owner can change an arrival arrangement without changing the station's sampling procedure. Any revised directions are checked before the next maintenance visit is assigned.

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Earlier threshold and training guidance

Under Note 6, a wind alert used a speed above 10 meters per second for 60 consecutive seconds. Note 7 replaced both values. The network does not retroactively relabel past alerts using the new threshold. A comparison chart should mark the change in rule rather than suggest that the number of storms alone changed. Archived files retain the note number that was active when each alert was created.

The old PG-4 calibration sheet carried a positive 0.2 degrees Celsius correction. It was withdrawn after the sensor was rechecked. A scanned copy remains attached to the maintenance history with a SUPERSEDED stamp. Current displays use the correction on the present calibration entry. Staff must not average the old and new correction values. They describe the sequence of calibrations as separate events.

The workshop exercise asks trainees to distinguish zero rain from a missing rain reading. A written 0.0 millimeters is a measured zero. An empty rain cell is an absent entry. A trace note is a qualitative observation and must not be silently converted to a numeric zero. These distinctions help analysts decide which days can be included in a cumulative chart without inserting invented quantities.

Purchasing papers, mast assembly drawings, and warranty correspondence are maintained outside this note. A serial number in the field log links to those records, but the field log does not reproduce their contractual terms. The maintenance coordinator can request them when a repair query requires more detail. The procedures here define when volunteers collect observations and replace service parts; they are not a complete description of every component installed at a site.