Rainfall Intensity SOP – New Installations

This SOP summarizes the information in the '*National Environmental Monitoring Standard - Rainfall Recording*' document in relation to the installation of new rainfall recording sites

In order for data to be compared and have valuable relationships established over time, it is important that recording sites are set up and maintained in a consistent manner.

Key criteria for establishing new recording sites are:

- Topography
- Exposure
- Height of gauges
- Obstructions
- Resolution
- Evaporation prevention
- Recording resolution

Installation

Trees and other objects shall generally be between 2 and 4 times their height away from the gauges for objects within a 100m radius, and on generally flat land with a slope no greater than 34 degrees within the surrounding 200m radius. Installing a new rain gauge site, the fenced enclosure should be at least 4.8mx4.8m* square (using 4.8m length timber rails gives 4.85 external length, 4.75m internal). This assumes the fence is 0.9m high, and will provide enough clearance around the rain gauges and primary reference gauge if laid out as per the Generic Rain Gauge Enclosure Layout template and installed to NEMS height.

Tipping Bucket

Tipping bucket rain gauges should be installed with the orifice between **285 mm** and **600 mm** above ground level or at ground level where an anti-splash grid is installed unless site characteristics such as snow depth require a higher setting. Backup tipping bucket rain gauges should be installed **+/- 20mm** of the primary bucket gauge.

The resolution of the intensity gauge must be 0.5mm or better, and must come with a factory calibration. Before deployment, the gauge must be validated to ensure it is operating within the tolerances of its calibration.

For a generic rain gauge enclosure layout, see appendix 1: Generic Rain Gauge Enclosure Layout