

METRICATION OF MANUAL SNOW SAMPLING EQUIPMENT

Western Snow Conference Metrication Committee:

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The Western Snow Conference Metrication Committee, after four years of field testing, has completed its final report on the design and implementation of metric snow sampling equipment.

The WSC snow sampler for the deeper western snowpacks has 10.6 cm² cutter area and is similar to the Federal snow sampler. The ESC 30 sampler for shallower snowpacks (less than 1 m depth) has approximately 30 cm² cutter area and clear tubing material.

The data obtained by the metrication committee includes extensive field measurements over a four-year period using controlled sampling procedures in the snowpacks of eastern Canada, western Canada, the Sierra Mountains in California and the Rocky Mountains in Montana. Snow profiles were documented at each field test in addition to measurements of water equivalents, depths and snow density. Procedures and equipment used are described as well as measurements used for ground truth. All of the data collected by the committee as well as data obtained in previous tests was analyzed to obtain comparisons between ground truth, the federal snow sampler, the metric snow sampler and other snow samplers. The committee has prepared drawings and specifications for the new metric snow samplers. Methods are described for adjusting back records collected using the present samplers so they will be compatible with data from the new metric samplers. Modifications that can be used to convert the Federal snow sampler into a metric sampler are described.