

Waste Measurement Toolkit

Assumptions

The following assumptions are applicable to the **Waste Measurement Toolkit**.

1. The person(s) conducting the assessment (assessor) is knowledgeable of the building operations or will collect data from the appropriate people (ie. custodial staff, operations staff). These people provide information based on their best knowledge at the time.
2. The material assessment is conducted on a date that is representative of typical operations.
3. Sample material assessed typically represents a 24 hour period.
4. Assessors through experience or training can estimate and classify waste and recyclables that reflect the material type and are consistent among assessments.
5. Bins are picked-up when they are full. The baseline calculation assumes a 90% filled bin.
6. Compactor bins have a multiplication factor to all annual weights. The front load bin factor is 2.5 and a roll off bin factor is 3.5. It is assumed that compactors function properly to optimal compaction rates and are removed/emptied when 100% full.
7. The base bulk density chosen was pounds per cubic yard (lbs/y³). All references were converted to lbs/y³ to allow for comparison. Industrial or commercial bulk densities were used when possible in the calculations as it represents the conditions of the material being assessed.
8. The bulk density values were averaged from a range of references. The average of a range of values was the single number used in the formulae. Terminology of material types were different among the references and were grouped for the Toolkit where relevant.
9. The bulk density value for any and all glass types is the same. (i.e. glass plus tinting, shatter proofing, frosted, coated).
10. The bulk density value for produce organic waste and kitchen organic waste is the same.
11. Garbage bulk density for washroom, desk and lunchroom waste was calculated from Clean Calgary waste assessments and Waste Management data.
12. Bag volume was determined by the following formula: $\text{Volume} = \pi * r^2 * h$. To determine the radius the bag was filled and the perimeter measured using the formula: $\text{Perimeter} = 2 * \pi * r$. The height was measured minus 6-inches to compensate for tying the bag, this accommodated for in the formula.
13. Calculations in Date 1,2,3,&4 that require converting a week to a month would use 4 as the multiplier (assume 4 weeks in a month).
14. Baseline Summary reflects a complete year (52 weeks or 12 months).