

I hereby certify that this amendment has been prepared in accordance with the Urban and Rural Planning Act.

M.C.L.P. signature and seal

Mayor _____

City Clerk _____

Council Adoption _____ Provincial Registration _____

CITY OF ST. JOHN'S MAP N DEVELOPMENT REGULATIONS

SNOW VOLUME MAP

 Snow Volume Areas



ST. JOHN'S



1:10,000

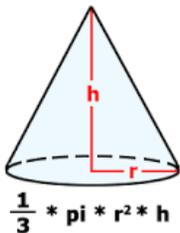
SNOW STORAGE CALCULATION JUNE 2015

Premise:

Lots identified on Map N, “Snow Volume Map”, are considered heavy snow volume areas. All Lots approved in these areas should have a snow storage volume equivalent to the standard lot (15m) in the Residential Low Density (R1) Zone for City snow blowing operations, to avoid additional snow clearing costs related to snow removal.

Assumptions:

- A R1 lot has a minimum frontage of 15metres.
- Development Regulations require 50% landscaping of the front yard, which leaves an additional area of up to 50% for a driveway (example: 15 metre lot width = 7.5m landscaping and 7.5m driveway width).
- Snow blowing operations produce a conical pile of snow situated in the centre of the lawn.
- The cone is based on a 1:1 slope (r = h; where r = half the lawn width (radius) and h = height of cone).
- The snow in front of a lot will be blown into that cone on the lawn.
- Once the cone is at capacity, additional snow will have to be trucked away at an additional cost.



<p>Snow Volume Calculation for a R1 lot:</p> <p><i>L = lot width = 15 metres</i> <i>D = driveway width = 7.5 metres</i> <i>r = half the lawn width = 3.75 metres</i> <i>h = height of the cone = 3.75 metres</i></p> <p>$V = \frac{1}{3} * \pi * r^2 * h$</p> <p>$V = \frac{1}{3} * 3.14 * 3.75^2 * 3.75 = 55.2^3$</p> <p>$\frac{V}{L} = \frac{55.2 \text{ metres}^3}{15 \text{ metres}} = 3.7 \text{ metres}^3 / \text{per metre}$</p>	<p>Snow Volume Calculation for a smaller lot with equivalent snow storage:</p> <p><i>L = lot width = 10 metres</i> <i>D = driveway width = 3.4 metres</i> <i>r = half the lawn width = 3.3 metres</i> <i>h = height of the cone = 3.3 metres</i></p> <p>$V = \frac{1}{3} * \pi * r^2 * h$</p> <p>$V = \frac{1}{3} * 3.14 * 3.3^2 * 3.3 = 37.6^3$</p> <p>$\frac{V}{L} = \frac{37.6 \text{ metres}^3}{10 \text{ metres}} = 3.7 \text{ metres}^3 / \text{per metre}$</p>
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Notes:

- Lot configurations other than standard single detached dwellings with a 15metre frontage may also provide equivalent snow storage.
- The calculation of cone volume divided by lot width is the determining factor.
- Driveway width must be restricted and enforced as driveway creep reduces snow storage volume.
- Additional front yard setback may help in achieving adequate snow storage, but adds no value to City's storage requirements once the front yard setback exceeds the lot width.

Snow Storage Plan:

The following illustration identifies available snow storage for a Single Detached Dwelling with a 15 metre frontage.

