



July 7, 2025

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Humber Station DC1
Humber Station Road
Caledon, Ontario
Required Fire Flow Calculation

The following report contains the required fire flows for firefighting based on the Ontario Building Code Section A-3.2.5.7 Water Supply (Reference NFPA #13 - 2013).

For sprinklered buildings, water supply additional to that required by the sprinkler system should be provided for firefighting using fire hoses in accordance with the hose stream demands and water supply durations for different hazard classifications as specified in NFPA #13 "Installation of Sprinkler Systems".

We are basing our calculations on the following information:

- No high hazardous materials such as aerosols, flammable or combustible liquids will be stored at this location.
- The most hazardous storage commodity will be Cartoned nonexpanded plastics, stored to a maximum height of 40'-0" in a 45'-0" building with no solid shelves or open top containers.

Based on Table 17.3.3.1 of NFPA#13 (2013) the minimum water supply is as follows:

Sprinkler Design: Twelve (12) K=25.2 sprinklers flowing at 40 psi with 250 USGPM for Hose Streams.

Total Water: $Q = K\sqrt{P}$
 $Q = 25.2\sqrt{40}$
 $Q = 159.4 \text{ USGPM} \times 12 = 1912.8 \text{ USGPM}$
 10% for system balancing 191.2 USGPM
 250 USGPM for hose streams 250.0 USGPM

Total required firefighting water 2354 USGPM (8911 Litres/min.)

Based on the Ontario Building Code, a total of 2354 USGPM (8911 L/min.) is required for firefighting.

Please note that based on NFPA #13, Table 12.8.6.1 (Hose Stream Allowance and Water Supply Duration) the above water supply must be available from the municipal water system for a duration of 60 min. (no monitoring).

If Stored Water is to be provided, a total of 141,240 USGPM (534,651 L) of usable water must be available



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A new water flow test was conducted on April 4th, 2024, and yielded the following results:

Static: 67 psi
Flowing 1250 USGPM @ 61 psi
Flowing 1880 USGPM @ 58 psi
Flowing 2440 USGPM @ 54 psi
Flowing 3010 USGPM @ 50 psi

Flow at 20 psi is 5213 USGPM (19733 Litres/min)

Based on this water test, there is sufficient water from the municipal supply to satisfy the Fire Fight Flows required by the Ontario Building Code.

If any additional information is required, please do not hesitate to contact us.

Should you require any further assistance in this matter, please contact the undersigned at your earliest convenience.

Yours Truly,

Tyson Chaykowsky
Sales / Contracts Manager

