

THE CHARTS PROVIDED BELOW ARE FOR GUIDANCE PURPOSES ONLY
You should refer to the Ontario Building Code for current Regulations

TOTAL DAILY DESIGN FLOW RATES FOR RESIDENTIAL OCCUPANCY "Q" (Litres/Day)		Example of how to determine daily design flow rate:
Dwellings under 200 m ² (2150 ft ²)	L/Day	Using a 4 bedroom, 235 m ² home with 22 fixture units. From Chart on left: 4 bedroom home > 200 m ² <u>or</u> > 20 fixture units = 2,000 L/day additional 35 m ² = 400 L/day OR additional 2 fixture units = 100 L/day "Q" (total daily design flow rate) = 2,400 litres/day
(a) 1 bedroom-----	750	
(b) 2 bedrooms-----	1,100	
(c) 3 bedrooms-----	1,600	
(d) 4 bedrooms-----	2,000	
(e) 5 bedrooms-----	2,500	
(f) Additional flow for		
(i) Each Bedroom over 5-----	500	
(ii) (a) Each 10 m ² (or part thereof) over 200 m ² up to 400 m ² (3)	100	
(b) Each 10 m ² (or part thereof) over 400 m ² up to 600 m ² (3)	75	
(c) Each 10 m ² (or part thereof) over 600m ² (3), or	50	
(iii) Each fixture unit over 20 fixture units -----	50	

NOTES FOR TABLE 8.2.1.3.A.:

1. The occupant load shall be calculated using subsection 3.1.16.
2. Where multiple calculations of sewage volume is permitted the calculation resulting the highest flow shall be used in determining the design daily sanitary sewage flow.
3. Total finished area, excluding the area of the finished basement.

APPROXIMATE SOIL PERCOLATION RATE "T"
The following are estimated typical ranges of "T" times. Actual "T" times may vary significantly due to on-site soil conditions.

Soil Type ☞	Clean Med – Coarse Sand	Silty Gravelly Sands	Silty Sands Sandy Silts	Sandy Silty Clays	Silty Clays	Clay
"T" (min/cm) ☞	1 3	6	8 10 16	20 25 29	33 38	44 50+

LEGEND: < (LESS THAN) > (MORE THAN)

SIZING FORMULAS FOR COMPONENTS OF SEPTIC SYSTEMS BASED ON TOTAL DAILY DESIGN FLOW RATES		
Class 4 Filter Bed (surface area of filter medium in square metres)	If daily flow rate is < 3,000 L/day ÷ 75 If daily flow rate is > 3,000 L/day ÷ 50 Min. area of filter medium = 10 m ² Max. area of filter medium = 50 m ² (Over 50 m ² , requires 2 or more beds)	Example using the total flow rate from above: Flow rate = 2,400 L/day (which is <3,000 L/day) / A (area of bed) = 2,400 ÷ 75 = 32 m ²
Class 4 Trench Bed (total length of dist. pipe in metres)	Formula for conventional beds without secondary treatment units: L = QT ÷ 200 where: L is total length of pipe Q is total daily design flow rate T is soil percolation rate Minimum length of tile = 40 metres	Example using the total flow rate from above: Q = 2,400 L/day (flow rate from above) T = 6 min/cm (if using "typical" med – coarse sand) L (total length of distribution pipe) = QT ÷ 200 / L = (2,400 X 6 ÷ 200) = 72 metres
Septic Tank (litres)	Tank(s) must have a <u>minimum</u> working capacity of twice the daily design flow rate for residential occupancies. Minimum tank size – 3,600 litres	Example using the total flow rate from above of 2,400 litres per day then the minimum tank size would be: / Total Working Capacity 2 x 2,400 = 4,800 litres

CLEARANCE DISTANCES FOR COMPONENTS OF SEWAGE SYSTEMS (metres)

☞ If the bed is raised, add 2 metres for every 1 metre of rise	Wells (with 6 m of casing)	Wells (with no casing)	Springs Potable	Springs Not Potable	Surface Water (lake, river, etc.)	Property Lines	Dwellings/ Structures
Class 4 Distribution Pipe	15	30	15	15	15	3	5.0
Class 4 Septic Tank	15	15	15	15	15	3	1.5
Class 5 Holding Tank	15	15	15	15	15	3	1.5
Class 1 Privy	15	30	30	30	15	3	
Class 2 Grey – Water Pit	15	30	30	15	15	3	