

Town of Renfrew

Hydraulic Capacity Reserve Calculations - Sanitary Sewer

December 31, 2024

Cu: Uncommitted hydraulic reserve capacity (m3/d)

Cr: Hydraulic reserve capacity (m3/d) = design capacity less actual existing average day flow (3 year average)

L: Number of unconnected approved lots

P: Existing connected population

H: Number of households or residential connections (convert commercial/industrial lots for load requirements)

F (sewer): Average day flow per capita (m3/capita/d)

Sewer $Cu = Cr - ([L \times F \times P] / H)$

Design capacity =	9,500 m3/d (Per ECA)
Average day flows:	From OCWA Annual reports
2024	4941.32 m3/d
2023	5531.1 m3/d
2022	5118.41 m3/d
3-year average flow =	<u>5196.94 m3/d</u>
Cr =	4,303.06 m3/d
L =	1294 approved but unconnected units & infill
F =	0.77 m3/capita/d
P =	6742 connected people (number of connections (H) * Average population per household (per Census data))
H =	3371 Services (# meters from billing data)

Cu = 2308.146 m3/d
(Cu/F/(P/H)) = 1497 units

units Description

24	Hunter Gate Subdivision Ph. 4 (remaining occupancy)
53	Hunter Gate Subdivision Ph. 5
40	Hunter Gate Subdivision Ph. 6
204	Pinnacle View Subdivision
19	Mayhew Subdivision - Phase 4
22	210 Lochiel - Mutli-Res/low rise
180	Lepine - Buildings C,D,F
25	Lapointe Infill Subdivision
29	Stewart east
698	<u>Projected infill and intensification</u>

L= 1294

**Town of Renfrew
Hydraulic Capacity Reserve - Drinking Water
December 31, 2024**

Cu: Uncommitted hydraulic reserve capacity (m3/d)

Cr: Hydraulic reserve capacity (m3/d) = design capacity less actual existing average day flow (3 year average)

L: Number of unconnected approved lots

P: Existing connected population

H: Number of households or residential connections (convert commercial/industiral lots for load requirements)

F (water): Maximum daily flow per capita (m3/capita/d)

Water Cu = Cr - ([L x F x P] / H)

Max Allowable Flow = 18,184 m3/d (per Permit to Take Water)

Max flow: From OCWA Annual reports

2024 7527.00 m3/d

2023 5748.00 m3/d

2022 6099.00 m3/d

3-year average max flow = 6458.00 m3/d

Cr = 11,726.00 m3/d

L = 1294 approved but unconnected units & infill

F = 0.95 m3/capita/d

P = 6832 connected people (number of connections (H) * Average population per household (per Census data))

H = 3416 Services (# meters from billing data)

Cu = 9279.673 m3/d

(Cu/F/(P/H)) = 4909 units

units Description

24 Hunter Gate Subdivision Ph. 4 (remaining occupancy)

53 Hunter Gate Subdivision Ph. 5

40 Hunter Gate Subdivision Ph. 6

204 Pinnacle View Subdivision

19 Mayhew Subdivision - Phase 4

22 210 Lochiel - Mutli-Res/low rise

180 Lepine - Buildings C,D,F

25 Lapointe Infill Subdivision

29 Stewart east

698 Projected infill and intensification

L= 1294