

System Name: Arran-Elderslie Drinking Water System in Chesley
Municipality: Municipality of Arran-Elderslie
Drinking Water System Category: Large Municipal Residential

The Municipality of Arran-Elderslie is located in central Bruce County along the eastern boundary separating Grey and Bruce Counties. It is included in two Source Protection Areas (SPA): Grey Sauble SPA and Saugeen Valley SPA. In 2011, the population was 6810, which was an increase of 0.9% from 2006 (Census, 2011). Arran-Elderslie is located in the heart of Bruce County, close to many major tourist destinations. The Municipality contains three main towns: Chesley (population 2,015), Tara (population 1,037) and Paisley (population 1,003). Smaller villages include Dobbinton, Invermay, Arkwright, and Burgoyne.

“Chesley is one of Bruce County’s charming small riverbank communities referred to by locals as ‘The Nicest Town Around.’ Developing around mills built on the North Saugeen River in the 1850s, the community grew rapidly when the Grand Trunk Railway built steel rails through the village in 1881.” Source: <http://www.explorethebruce.com/chesley.php>. In 2012, Chesley had 994 water connections and Paisley had 528 water connections.

Water towers or “standpipes”

Chesley Standpipe – 2,725 m³ capacity concrete water storage tank with an operating capacity of 1,360 m³

Paisley Standpipe – operating capacity of 2,300 m³

Trunk Watermain – 15.7 kilometers of 300 millimeter pipe connecting the Chesley water distribution system to the Paisley standpipe

The amount of water treated in 2012 for the Arran-Elderslie distribution system for Chesley and Paisley was 372,039 m³. Paisley’s portion of this total was 105,207 m³. The average daily demand was 1,016 m³/day and the maximum daily demand was 1,939 m³/day.

The three wells that make up the Chesley Drinking Water System are located near the Water Treatment Plant next to the Community Centre in the town of Chesley. The water tower is located at the north end of Chesley.

| Name of Well | Diameter | Depth | Pump Rating (L/s) | Aquifer |
|----------------------------|----------|---------|-----------------------------|---------------------------------|
| Community Park Well (CPW1) | 340mm | 20m | 20.82 L/s at TDH* of 80.96m | Saline/Guelph Formation bedrock |
| CPW2 | 324mm | 24.38 m | 24.61 L/s at TDH of 80.12m | Saline/Guelph Formation bedrock |
| CPW3 | 254mm | 38.1m | 34.07 L/s at TDH of 96.43m | Guelph Formation bedrock |

*Total Dynamic Head (TDH) is the work done by the pump per unit weight, per unit volume of fluid. This figure is used on Permit to Take Water documents.



CPW1, installed 1948



CPW2, installed 2001



CPW3, installed 2002



Community Centre with CPW1 (left) and CPW2 (right)



Standpipe in rear, Big Bruce in foreground