

4.3 Water Supply Infrastructure

4.3.1 Reticulated

The basic water supply infrastructure consists of:

Water System

- 1007 km mains (approx.)
- 75 reservoirs and tanks
- 2 active dams (not reticulated)
- 34 pump stations
- 65,338 domestic connections
- 3,726 commercial and industrial connections
- 20 flow control stations (PRV)
- flow & level monitoring equipment
- 10,484 sluice valves, gate valves, air valves, non-return valves, scour valves and butterfly valves
- 7,921 hydrants
- 3,851 water meters. (3,076 commercial 755 residential)

Water is delivered from GWRC's (who charge Council a bulk water levy to cover costs) 4 treatment plants; Gear Island, Te Marua, Wainuiomata and Waterloo into the Council storage and distribution (reticulation) system at 19 separate supply points. There are two main supply pipeline arteries. One from Te Marua (Upper Hutt) to Wellington, the second from Wainuiomata to Wellington. Under normal conditions, water treated at Te Marua is piped to Wellington suburbs, including Tawa and Johnsonville. Water from the Wainuiomata treatment plant is also piped to Wellington and its suburbs (90% of Wainuiomata head works output). Waterloo and Gear Island Treatment Works also supply into the Wainuiomata- Wellington pipeline. Appendix 1 highlights each community's water source.

There are 77 water reservoirs and tanks in Wellington; Council owns 75 of these. The Richmond Hill residents own the two reservoirs at Richmond Hill, and the pipeline serving them.

4.3.2 Non-reticulated systems

There is no mains water supply to Makara, Ohariu, Horokiwi, South Karori Road communities and some Glenside residents. Instead, domestic dwellings and commercial premises use water collected from roofs and stored in tanks. In a minority of cases, water is drawn from private bores or streams. Makara Beach community is supplemented in summer by tanker-delivered water which is drawn from the town supply. No additional monitoring or testing is carried out on this water.

A small diameter pipe feeds into a supply tank at Makara cemetery from the Council system. This pipe also supplies the community centre, the school and 5 Council houses in Makara village. Spring water tanks also supply the model school in Makara.

All water for the Meridian Village is collected from a stream, pumped to holdings tanks, chlorinated and distributed to the houses.

4.4 Issues

4.4.1 Reticulated

Asset Stewardship

The supply of water to reticulated communities can be split into distinct supply zones based on the point of supply. The majority of these zones are supplied from local reservoirs owned and operated by Council, but some are supplied directly from the bulk water system. As a result there can be variations in the available flow rate or pressure supplied by Council. Those areas supplied from the bulk water system cannot easily be isolated during emergencies or for programmed or reactive maintenance. This is especially true for the Central Business District (CBD).

Several supply zones in the city lack sufficient storage capacity to continue delivering water after a significant natural disaster. The recommended storage requirement is 300 litres per person per day under emergency conditions (600 litres per person per day in normal conditions). To alleviate this issue Council have a forward works programme linked to new reservoir construction in critical areas.