MEMO

GREAT LAKE TAUPŌ
Taupō District Council

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FROM:	Michael Cordell - Wastewater Asset Manager Tom Swindells - Water Asset Manager
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SUBJECT:	Kinloch Water and Wastewater Capacity

The table below shows the current number of connected properties, and the number of rating units connected to TDC water and wastewater services in Kinloch.

A property with a rating factor of 0.5 indicated a connection is available at the property but no dwelling is yet connected. A property with a rating factor of 2 indicated there are two rating units (dwellings within the same property). Properties with water meters have a rating factor of 1 and are charged by the meter regardless of the number of dwellings within the property.

Wastewater

		Properties Connected		Sum of Factor	
Rates Factor	Count	Current	Current + Available	Current	Current + Available
0.5	225		225		225
1	1161	1161	1161	1161	1161
2	19	19	19	38	38
4	1	1	1	4	4
26	1	1	1	26	26
Total	**1426**	**1182**	**1407**	**1229**	**1454**

Water

		Properties Connected		Sum of Factor	
Rates Factor	Count	Current	Current + Available	Current	Current + Available
0.5	221		221		221
1	1186	1186	1186	1186	1186
2	19	19	19	38	38
Total	**1426**	**1205**	**1426**	**1224**	**1445**

The table below takes the current connected properties (rates factor) and adds the connections expected from already consented developments and identified future developments.

		Wastewater	Water
Current connected + available	Rates Factor	**1454**	**1445**
Granted Consents (remaining connections)		**172**	**240**
Potential Future Development		**110**	**140**
Seven Oaks - Balance Land	*RM# 240389*	*83*	*83*
Infill potential		*24*	*24*
Hunt Club			*30*
190 Kinloch Road (workshop)		*3*	*3*
TOTAL		**1736**	**1825**

Wastewater

The total number of wastewaters connected lots expected at full development is 1,736, within the design capacity and the consented capacity of the Kinloch WWTP (1,810). The treatment plant has also been conservatively sized assuming there could be a change in occupancy in Kinloch overtime i.e. more permanent occupancy.

A capacity upgrade to the Kinloch WWTP is scheduled for 2025/26 and 2026/27 with a budget of $1,725,000. The treated wastewater disposal system is a combination of drip irrigation within the golf course and treatment plant surrounds, and a rapid infiltration system adjacent to the treatment plant. There are no expansions of the disposal systems planned as the capacity currently provided is expected to meet future requirements.

Water

The total number of water connections in Kinloch is expected to be 1,825. In additional to Kinloch there are 76 properties on the Whakaroa rural water scheme that is supplied from Kinloch. The maximum potential water take from the Whakaroa area is 500 m^3/day. There is no water supply growth planned in the Whakaroa area.

The Kinloch water system (network and plant) is being designed to deliver 5,000m3/day of treated water and there is more than this volume consented to take from the source if needed. Removing the maximum potential volume supplied to the Whakaroa scheme leaves 4,500m3/day for use in Kinloch. This equates to approximately 2.5m3/day of water use per property. To put this usage level in context, our target water per property across the district is 1.5m3/day. It is also worth noting that many of the remaining development areas in Kinloch are rural and will have restricted connections which allow a maximum flow of 1.7m3/day. The Kinloch water system upgrades have been conservatively sized.

There is currently 2,450m3 of storage between the Locheagles and Whakaroa Low (Boojum Dell) reservoirs. A new 2,000m3 reservoir is planned which will bring total storage to 4,450m3. This will provide the community with approximately 24 hours of storage during very high demand periods. There is additional storage on the Whakaroa scheme.

The volume of water required for firefighting in residential areas (FW2 classification) is 45m3 and for small commercial areas is 180m3 (FW3 classification). These requirements are clearly met by both the current and future planned reservoir storage volumes.