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**Report 02.588**

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Report to Rural Services and Wairarapa Committee  
from Helen Marr, Resource Advisor, Policy and Planning

## **Proposed Moratorium on Groundwater Takes from the Kahutara Aquifer**

### **1. Purpose**

To seek the Committee's endorsement and approval to impose a moratorium on new and increased takes from the Kahutara sub area of the Lower Valley Groundwater Zone (aquifers 2 and 3).

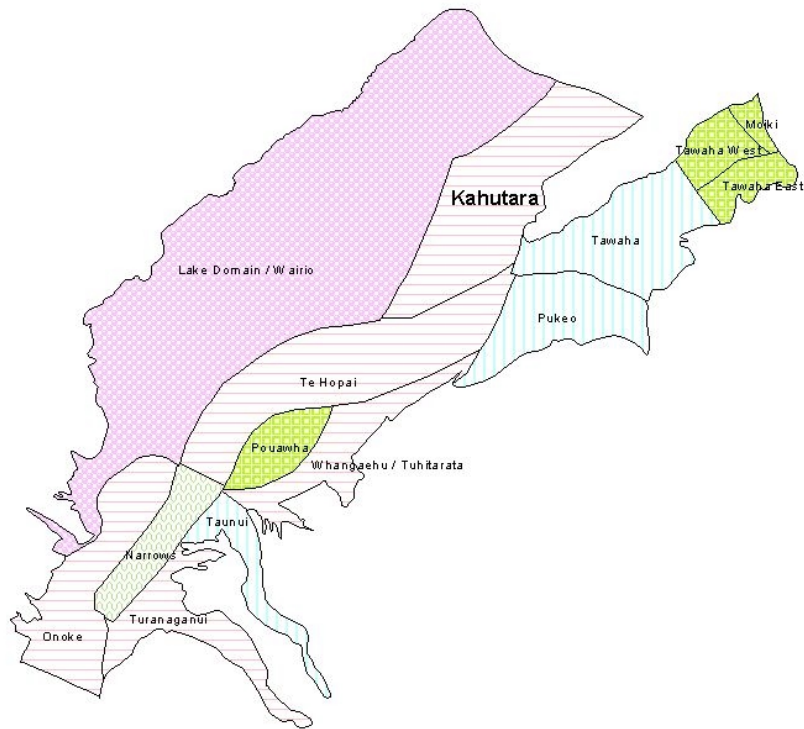
### **2. Background**

A review of ground and surface water takes in 2001 identified a number of ground and surface water zones that are under stress and, in some cases, have allocated amounts of water which exceed the sustainable limits for those water resources. In response to this the Committee approved moratoriums and endorsed the requirement for water meters on all groundwater takes in these zones.

Since then it has become apparent that a moratorium is required for aquifers 2 and 3 of the Kahutara sub area of the Lower Valley groundwater zone.

### **3. Kahutara sub area**

The Regional Freshwater Plan identifies that aquifers 2 and 3 of the Lower Valley groundwater zone are to be managed under a single 'safe yield'. However, the Lower Valley consists of a number of sub-areas that may or may not be interconnected, the figure below shows the various sub-areas identified to date. Pump test analyses carried out over the last 2 years for resource consent applications has further strengthened previous assumptions that there may be separate sub areas within aquifers 2 and 3. Details of these analyses are contained in various consent application reports e.g. Bargh, Green, Loe and Hedley.



As individual safe yields for each of these sub areas are not identified in the Freshwater Plan, applications for water takes in the Lower Valley have been assessed against the combined safe yield for the entire Lower Valley. The majority of groundwater takes in the Lower Valley zone are within the Kahutara sub area. Therefore, while the safe yield for the Lower Valley as a whole has not been exceeded, the estimated recharge rate for the Kahutara sub area has been exceeded. The table below shows the amount allocated to takes in relation to the estimated recharge.

	Consent holder	Volume (m <sup>3</sup> /yr)	Total allocated (m <sup>3</sup> /yr)	Estimated recharge (m <sup>3</sup> /yr)	% of estimated recharge allocated
<b>Aquifer 2</b>	Bidwill, AJC	544320	3503129	2100000	<b>167%</b>
	Burt & Co.	580608			
	Diversion Partnership	453600			
	Johnson M S & G	698544			
	Osborne A L	228137			
	Roto Farm Trust (RF & VL Green)	544320			
	Caldwell Trust	453600			
<b>Aquifer 3</b>	Barton S	765072	2337500	1900000	<b>123%</b>
	Caldwell Trust	520244			
	Simmonds J	108864			
	Thurston A W	399000			
	Osborne A L	544320			

Table 1: Takes and Recharge Rate for Kahutara Groundwater Sub-area

Whether or not the exceedance of the estimated recharge has had an effect on the aquifers is not known. A significant trend of declining water levels in Kahutara aquifer 3 has been identified, indicating that over abstraction may be occurring. Water levels in Kahutara aquifer 2 have only been monitored this year, therefore no data is available to determine whether or not water levels are declining.

A moratorium on new and increased water take applications is proposed. This will prevent further over-allocation of the Kahutara groundwater resource while further work on a more robust water allocation framework is completed.

#### **4. Further work required**

- Monitoring of water levels and comparison with irrigation records to determine the cause of the observed water level decline in Kahutara aquifer 3
- Development of a conceptual model for the Lower Valley which will assist in identifying the recharge to the Kahutara and linkages with other aquifers
- Calculation of safe yields for the various sub areas of the Lower Valley, including Kahutara aquifers 2 and 3, following the development of the conceptual model.

#### **5. Communications**

The following communications are planned:

- Copies of this report will be distributed to key stakeholders including Federated Farmers, local well drillers and local iwi.
- Public awareness of the moratoriums on stressed groundwater zones/aquifer will be increased through interaction with the appropriate media.

#### **6. Recommendation**

1. *That the report be received.*
2. *That the Committee approves that a moratorium be placed on the consenting of new or increased groundwater takes from aquifers 2 and 3 of the Kahutara sub area of the Lower Valley groundwater zone.*

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