

# Wanganui Water Softening and Bulk Water Supply Fact Sheet

A major milestone has been reached in the investigation and search for soft water plus bulk water supply. By mixing soft water sources with the existing City hard water sources the overall City can be provided with a significantly softer water supply.

Council has also gained a significant technical and engineering understanding of underground water sources within our District.

## Wanganui Water Supply

Wanganui City is provided with water from underground bores which tap into a source which flows under the District called the Nukumaruan aquifer. Many other aquifers exist but are not generally suitable for drinking water purposes. The Nukumaruan aquifer is shallow to the north and deepens towards the City. The water quality varies substantially.

### City Water Demand

- Average winter 25 million litres per day
- Average summer 30 million litres per day

### City Water Sources and Storage

- Storage ( 3 reservoirs) – 70 million litres
- Kaiwi ( hard water source provided since 1960's) – 34 million litres per day
- Aramoho bore and treatment plant built early 2000 – 3 million litres per day
- New Water Source No.1 (soft) 7 million litres per day -
- New Water Source No.2 (soft) 4 million litres per day

The new sources will provide on average 35% of the volume of water to the City on a daily basis. This mixes with existing hard sources to substantially soften the supply.

## The Investigation Program (background)

- The drilling investigation and drilling programme was highly technical and challenging.
- The investigation required innovative modelling and predictive tools to narrow the potentially vast drilling areas.
- The variable water quality posed investigation challenges.
- Significant depth of bore construction was engineeringly difficult
- Wanganui Well Drillers are the project drillers
- 

Attachment A – Primary Bores from Kaiwi, and City

Attachment B – Investigation programme

## Bulk Water Supply

- Bulk water supply volume can now be substantially added to

- Risk reduction by having multiple water sources
- Water supply bulk supply control operations can be completely overhauled to provide greater operational flexibility whilst optimising water supply operational costs and also reducing costs.

## **Current Soft Water Construction Programme and costs**

- Investigation Programme for Bulk Water and Soft Water Supply  
2007/08 \$1.4M  
2008/09 \$500k
- To construct Production Bores (2) and connect to the City System  
2008/09 Estimated \$3.8M
- Components
  - Consents
  - Easements
  - Design
  - 2 major production bores
  - Pumping and treatment facilities
  - Pipelines
  - Major control systems including integration of City control network

Subject to consents timeframes, major change to City water is programmed for 1 July 2009, followed by substantial commissioning.