

## 8. CITY WATER SUPPLY: SITUATION REPORT

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The purpose of this report is to provide an update on the Christchurch City water supply in the light of the current drought.

### BACKGROUND

Rainfall over the past 12-months for Christchurch City and environs has been 33% below normal and as a result groundwater levels were below normal at the beginning of summer. With the continuing hot weather and public watering their gardens etc, water supply extraction rates have been at record levels, with consecutive days at times almost up to 300m litres/day. Over the past two or three months water levels in the 170 artesian wells that the City water supply is pumped from have dropped to record lows.

The low well levels and high extraction rates have created some water supply difficulties, in particular:

- Low water pressure in parts of the city, eg Avonhead, New Brighton, Sumner and hillside areas.
- Difficulty keeping water levels in reservoirs up to minimum requirements for fire fighting.

### CONCERN AND MITIGATION

The following table lists concerns and mitigation action that the City Water and Waste Unit is taking or will take if the situation worsens.

<b>Concern</b>	<b>Mitigation Action</b>
1. Cannot pump enough water so that pressures drop and difficulty experienced filling reservoirs.	Public education campaign January/February/March 2004 urging public to conserve water with tips on how to do it. Advertisements in newspapers and radio.  Letters targeted to large industrial water consumers encouraging water conservation.  Top 20% campaign targeting high domestic water consumers is scheduled for February 2004 in the Waimairi, Papanui, Burwood and Kainga areas. (Analysis of previous campaign indicates a trend of reduced consumption).  If problem worsens introduce water restrictions, eg garden watering on alternate days only.
2. Cannot keep reservoirs up to minimum fire fighting requirements.	Water restrictions, trigger for this will involve evaluation of a combination of factors including level of water in artesian wells, short and medium term weather outlook, issues concerning maintaining water pressure and water level in reservoirs.
3. Long term adequacy of City's artesian supply reservoir.	City Water and Waste will continue discussions with Environment Canterbury concerning the Natural Resources Regional Plan (Water Supply Chapter).  City Water and Waste Unit to increase activity on new wellfield planning including other options - see next section.
4. Coordination of fire fighting emergency planning.	City Water and Waste Unit have held urgent coordination meetings, between Council Units (CWW and PWW), Fire, Police and Environment Canterbury etc.

### LONG TERM ADEQUACY OF SUPPLY

Water supply asset management planning work indicates that peak demand over the next 25 years is expected to remain almost constant despite growth in population. This is due to a growth in conservation measures such as leak detection and mitigation, low use fittings, education and so on.

Nevertheless the possibility of new city supply wellfields in the Selwyn district has been investigated and will be pursued if demand appears to be increasing beyond current predictions (eg from unexpected climate changes).

Discussions with Environment Canterbury will also be initiated in relation to their Natural Resources Regional Plan (Water Supply Chapter) to ensure they are fully protecting the City's needs on into the future.

#### **LEGAL CONSIDERATIONS**

Clause 19 of the Christchurch City Water Related Services Bylaw 2001 authorises the Council to impose restrictions on the use of water in the case of drought or where the supply of water is, for any other reason, insufficient to allow the unrestricted consumption of water. The Council has delegated this power to the City Water and Waste Manager. Consequently any such restriction may be imposed quite quickly should the need arise.

Any person who breaches any such restriction commits an offence and would be liable to a fine of up to \$20,000. It is anticipated, however, that peer pressure would result in most people complying with such restrictions and this is the approach that the Council would adopt at least in the initial stages.

#### **SUMMARY**

Low water levels in extraction wells due to the drought, combined with very high extraction rates caused by the long spell of hot weather are causing lowered water pressure and fire fighting concerns. It is hoped that the ramped up 'WaterWise' public water education and conservation programme will improve the situation. If it does not and the situation worsens then water restrictions will be introduced (eg watering garden in alternate days only). Long-term adequacy of supply will continue to be investigated.

#### **Staff**

**Recommendation:** That the Council note the water supply issues outlined in this report and that if the situation worsens that the City Water and Waste Manager will introduce water restriction under the Water Related Services Bylaw (drought conditions).

#### **Chairman's**

**Recommendation:** That the information be received.