24. 1998/99 SUMMER WATER SUPPLY ISSUES RR 10412

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Corporate Plan Output: Supply of Water	

The purpose of this report is to inform Councillors of the work that is being undertaken as a consequence of the experience gained from the dry 1998/99 summer. The intention of the work is that the Water Supply System will be more robust than in the past, and thus better able to cope with periods of high water demand and/or low groundwater levels in the future. The Water Supply advertising and publicity programme is also being refocused as a result.

BACKGROUND

The 1998 /99 summer was characterised by sustained periods of higher than average temperatures and very little rain. As a consequence of this a lot of focus was placed on the ability of the underground water sources to continue to safely yield sufficient quantities of water, and for the Water Supply Infrastructure to continue to distribute the water as required. These concerns resulted in statements being issued last summer to "The Media" that hosing restrictions may have to be applied. This followed a similar situation in the 1997/98 summer when restrictions were in fact imposed.

WATER SOURCES (AQUIFERS)

The concerns in respect the underground aquifers ability to safely yield the required volumes have largely been answered by recent assurances from the Canterbury Regional Council. These assurances state that any problems presently being experienced are very localised and that water availability for the Christchurch community will not be stressed for a number of years yet. The formulation of the NRRP (Natural Resources Regional Plan), by the Canterbury Regional Council, over the next year will address the issue long term. Regional Council staff have indicated that the Issues and Options discussion Paper for the Water Chapter of the NRRP will be released in about two months' time. This is a significant step towards the preparation of the actual Document.

WATER SUPPLY INFRASTRUCTURE

An analysis of the performance of the water Supply Infrastructure System and how it performed over last summer has been undertaken. While direct operational staff were kept busy attending to faults, trouble spots etc, overall the system performed very well and few, if any customers were in danger of their supplies failing. Indeed most supply zones had surplus capacity even at the times of highest demand. However a number of less robust areas have been identified, and as a consequence actions have been carried out, initiated, or identified. The mains ones include:

Trafalgar St Pump Station. This St Albans pump station is a well located base load station with strong reticulation to supply the central city as well as the local district. It is supplied from wells drilled in 1950. Water yield from the wells, over the last 2 summers, has been barely adequate and levels in the suction tank, at times, have been just above the minimum required to enable the station to continue to operate. To overcome this, a replacement well planned for 2002/03 has been brought forward and work is about to commence. This has been funded by adjustments to the capital works budget (refer report RR 9966 to June City Services Committee).

Westmorland. The water level in the reservoir supplying this hill suburb at times fell to the minimum level required for adequate fire fighting ability. This situation is being overcome by the replacement of a small section of watermain to remove a flow restriction, and with the construction of a second booster pump station to supply the reservoir. The provision of the pump station is a requirement of a subdivision development of part of the Westmorland area and should be completed for the 1999/00 summer.

Worsley Spur. A limited supply system to the rural properties on this hill Spur was engineered, constructed, and operated by residents in the 1980's and after a few years taken over by the then Heathcote County Council. It was always the intention that the supply would be for domestic household use only and not designed for irrigation of the (10 acre blocks) land surrounding the dwellings. It was also designed with the intention that each property connected to the supply would install its own storage tank to ensure a more even loading on the supply system, and to act as a save guard if the supply became over loaded. Unfortunately, some of the property owners have not installed their tanks, and many now irrigate extensive portions of their land from the public supply. As a result it is not uncommon for the reservoir to completely empty and for properties at the top of the hill run out of water. In the past letters have been distributed explaining the situation and requesting restraint. Also each connection has had a flow limiter installed to achieve a more equitable distribution between the top and bottom of the hill. While these actions have helped, the problem has not been overcome. The cost of upgrading the supply is in the order of $300,000 (or ~$12,000 per property). Thus upgrading the supply at present cannot be justified. In the coming two months it is intended to check that each flow limiter is working correctly, and to distribute a letter explaining the situation, requesting restraint, and recommending, if not already done, the installation of on-site storage.

Maffeys Spur. The reservoir supplying this area is at the same height as a reservoir on Mt Pleasant, and is filled by a pipeline between the two, rather than by being directly pumped to. This generally works satisfactorily except during periods of very high demand, when draw off from the linking pipeline results in the reservoir not being replenished. While there is long term plans that will overcome the problem, as an interim measure, pipework has been modified at the reservoir so that it can be replenished, if need be on high demand days, from a reservoir further up the hill.

There are a number of smaller projects underway to various parts of the system to enable it to cope better during periods of high demand.

PUBLICITY AND PROMOTION

In past years, on the understanding that the underground water resource beneath Christchurch was nearing its limit of safe sustainable abstraction, much of the Water Supply Education Programme effort has been targeted at Conserving water usage so as to avoid the need (and cost) of having to utilise alternative water sources for the public supply, or causing long term undesirable environmental effects. However last summer this theme, when combined with the Regional Council's public assurances that the aquifer resource was not near its sustainable limit, gave rise to confusion in the public arena. Suspicion arose that the real reason for our conservation programme was that the Water Supply Infrastructure was unable to cope.

For these reasons a revaluation of the Publicity and Promotion programme has been undertaken, and it is considered that while efficient use of water will still be one of the objectives of Council publicity we will be careful to frame the problem as a long-term one. For example, the very successful *treat it with respect today or treat it with chemicals tomorrow* is a little too immediate in its message.

To use this thought the Council would need to be clear that the chemical scenario was still some tens of years away. It is intended that to ensure that the Regional and City Councils are of the same mind on the nature of the conservation message an officer report will be presented to the joint Christchurch City Council/Canterbury Regional Council committee in October.

The Unit recommends that alongside this message a number of other water-related issues should be targeted. For example the message that water is naturally of high quality, too precious to spoil, can be used to raise awareness on pollution/contamination issues with the Backflow Prevention Programme picking up on this theme. The Council would also benefit from improved public understanding of the extraordinarily good value it gets from water rates - high quality at low cost.

Recommendation:

1. That the information be received.

2. That the themes for 1999/2000 year Publicity and Promotion on water-related issues as outlined above be endorsed.

Deputy Chairman's Recommendation: That the above recommendation be adopted.