

Appendix 2 – Assessment of Water and Sanitary Services 2005 - Summary

1.0 Council Administered Water Supplies

On a practical level all of Council's water supplies are providing a sound basic level of service in that they are meeting normal demand for water and the water supplied has not been associated with, or suspected as having been associated with any outbreak of water related disease over the last 15 years.

All of the supplies are however believed to be incapable of complying with the current or forthcoming version of the New Zealand Drinking Water Standards (NZDWS), and significant upgrading of water treatment plants is likely to be required if such compliance is to be achieved.

The most significant public health risk amongst the supplies is considered to be the absence of disinfection on the Taupaki Rural Water Scheme. This could be easily remedied, but the water is used predominantly for stock, and the relatively small numbers of persons connected to the scheme have indicated that they have a preference for no disinfection.

The Ranginui Rural Water Scheme has some water quality issues because of low residual disinfectant levels that are associated with the extensive reticulation of the scheme, and this may be difficult to address on an affordable basis. The scheme does however serve a small number of persons and other options exist to manage this issue.

The Otorohanga, Kawhia and Arohena (Kahorekau) supplies all have limited ability to accommodate possible future increases in demand for water. Of these supply issues it is that of Kawhia that will be the most difficult to remedy because of affordability issues associated with development of a new water source.

Though there are some issues in respect of the existing supplies it is considered that continuation of the existing services is preferable to

withdrawing these services and requiring currently connected properties to develop their own individual water supply arrangements.

Work has been conducted to evaluate requirements for achieving compliance with NZDWS (2005) for each supply, including evaluation of water sources. Monitoring of water consumption and associated factors in Otorohanga and Kawhia will continue to better define demand trends.

Resource consent non-compliance on the Arohena (Kahorekau) scheme has been resolved through investigation and resultant revision of consent conditions.

2.0 Council Administered Wastewater System

The only Council administered wastewater system is that which serves Otorohanga. This system is meeting all of the current needs of the community, with only very minor adverse environmental effects.

The existing system has limited ability to accommodate additional demand, but it is not expected that the capacity of the system will be exceeded in the near future, and it is believed that potential exists for affordable upgrading.

Much consideration has been given to the potential for providing a Council administered wastewater service to the Kawhia Community.

Whilst financial assistance towards the cost of constructing such a system is likely to be available from central government through the Sanitary Works Subsidy Scheme, it is believed that the residual capital cost and on-going operating expenses would still be too high to make such development viable. Issues related to obtaining a suitable site for effluent disposal are also unresolved, creating a further barrier to progress.

Action has been taken to improve knowledge of the condition of sewers in Otorohanga, and this has indicated that only limited sewer

renewals are likely to be required in the short or medium term. Action has also been taken to restrict the most significant abnormal discharges to sewer in Otorohanga, in particular from truck washing facilities.

3.0 Council Administered Stormwater Systems

The services provided in Otorohanga and Kawhia are operating well and generally meeting the needs of the communities without any significant adverse effect. Minor localised issues of poor drainage are being progressively addressed through extensions and upgrading of the existing reticulation.

The only proposed action in respect of these systems is continued to response to existing local drainage problems where appropriate, and improve technical aspects of Resource Consent compliance.

4.0 Public Toilets

Council owned public toilets provide adequate levels of service now that the inadequate facilities at Puti Bridge and Lake Waipapa have been de-commissioned, and a new toilet facility has been constructed on Jervis Street in Kawhia.

No additional public toilets are currently planned.

5.0 Cemeteries

The public cemeteries in Otorohanga and Kawhia are well maintained and have adequate capacity to meet all current and likely future needs of the District.

No adverse environmental or public health effects are known, and as such there are no significant proposed actions at this time.

6.0 Solid Waste

The refuse, recycling and re-use services provided by Council are effective, well tailored to the needs of many people and are

instrumental in assisting progress towards Council's 'Zero Waste' objectives.

It is intended to maintain or extend these services if this is affordable.

The proposed review of Council's Solid Waste Management plan and associated increased promotion of waste reduction concepts has been deferred until the implications of the Waste Minimisation (Solids) Act are fully understood.

7.0 Privately Owned Water Supplies

Dwellings in Aotea and Te Kawa generally have adequate supplies in terms of both quality and quantity, sourced from rainwater or bores. However the maintenance of such systems is often neglected. New owners who only have experience of reticulated systems often lack advice in system management.

Dwellings in the rural sector are more likely than others to be supplied with non-potable water, both as a result of an insecure source, exposure to risk of contamination by livestock or wildlife, and also by being connected to a farm reticulation exposed to backflow and cross-connection hazards. The latter is an increasing problem with the use of stock water to disseminate animal remedies, minerals, bloat aid etc. Several actual incidents have occurred in the District where consumer health has been compromised.

Institutions within the District with private water supplies present a low risk to health.






All schools are required to meet the Drinking Water Standards for New Zealand and are monitored for compliance with that standard, for micro-organisms and chemical determinant.

Marae, and other institutions with private water supplies often have both bore and rainwater supplies. Management advice should be available to ensure water quality.

The development of modern water treatment has made the supply of safe potable water to individual premises very achievable. Indeed it

could be more cost effective to treat water for microbiological hazards in individual supplies than in the high volume community systems with insecure surface catchments. This is particularly so in the case of protozoa. Cartridge filters and UV disinfection are cost effective and proven, provided that they are maintained correctly. Naturally the preferred option is the use of a secure source.

Proposed actions in respect of privately owned water supplies are as follows:

-  Continue to provide information and advice to owners and occupants of dwellings with private water supplies. Sanitary survey, sampling and testing of waters at cost, for microbiological quality and the common chemical determinants is offered;
-  Develop and disseminate promotional literature and handouts on water system maintenance particularly for new owners;
-  Develop promotional literature on modern treatment equipment and choices available;
-  Develop promotional literature for rural residents on water quality and backflow / cross -connection hazards; and
-  Take legal action, where appropriate, pursuant to the Health Act 1956 and Building Act 2004, to ensure that all dwellings and institutions have an adequate supply of potable water.

8.0 Privately Owned Wastewater Systems

With the exception of the residents of Otorohanga Township, all residents of the District rely upon on-site sewage disposal. For the purposes of this assessment the premises were divided into groups: rural dwellings, institutions, and residential communities – Aotea, Kawhia and Te Kawa.

The soils of the District with isolated exceptions are ideal for effluent renovation in correctly designed systems. Constraints presented in some localised areas by virtue of high groundwater table, fine-grained silts or clays, steep topography etc, can be addressed using wastewater reduction and a variety of modern treatment systems, some of which are complex mechanical methods and others not so.

Sites in the rural area and those of institutions rarely present problems, as large areas are available for disposal of effluent. There are normally a variety of alternative solutions available. However, care is required to avoid discharge in proximity to water supply bores.

Monitoring of conditions in Kawhia in the early 1990s demonstrated adverse effects of septic tank systems, and reticulated sewerage was considered. Since that time a comprehensive program was implemented to identify all existing systems, secure remedial works on defective systems and the elimination of point-source contamination of watercourses.

The use of a wide range of options, plus ongoing improvement through the adoption of standards exceeding the Regional Rules for all new systems and those becoming defective has removed risk to public health, and enabled the sustainable use of onsite sewage disposal.

The benefits of reticulated sewerage in facilitating higher density development are not sought by those in the community who demand no change to the character of the community. In the case of on-site sewage disposal, the costs of providing high quality treatment fall on the developer and are not shared by those already incumbent and on limited income. Adverse effects on health, using the WHO definition of health can be created when the costs of services are beyond the means of recipients.






Sites in Te Kawa Township present little risk to public health by virtue of the low density of occupation.

Sites in Aotea Township present little risk to public health at this time. The township is in transition with the trend to construction of larger

dwellings, extended occupation etc that increase the demands on the subsoil for remediation. However, compliance by new systems with the Regional Rules ensures that the effect of effluent disposal will not be significant.

Whilst control of effluent quality and system design through the Building Act and Regional Rules etc is available at Building Consent stage and during the subdivision process, there is no mechanism available to enable ongoing maintenance of the complex modern treatment systems and indeed the monitoring of performance, to be required.

Proposed actions in respect of privately owned waste water systems are as follows:

-  Advice will continue to be given on options available in the selection and design of appropriate sewage systems;
-  Promotional literature will be developed to advise on sewage system maintenance;
-  Effects of onsite sewage systems will continue to be monitored at Kawhia and Aotea;
-  Formal action will continue to be taken where necessary to secure remedial works to any defective or inadequate on-site systems;
and
-  The adoption of a Bylaw or other method of requiring maintenance and monitoring of modern sewage treatment systems will be investigated.