Wellington Regional Council

The Water Group

Risk Policy

1. Introduction

The Water Group is charged under the Wellington Regional Water Board Act 7972 with supplying water to the four cities within the Wellington metropolitan area, namely Porirua City, Lower Hut-t City, Upper Hutt City and Wellington City.

The primary objective of The Water Group is to provide a quality, cost effective water supply for the benefit of the people of the region. This should be without any unacceptable environmental impacts.

2. Purpose of the Risk Policy

There is often a trade off between the amount spent in averting the consequences of a risk event and the amount spent on remedial work after an event. Striking this balance is difficult when events are of low probability and occurrence, such as a major earthquake, but the cost of repairing the damage can be high.

Water supply is vital to the well being of the community. Alternatives such as bottled water, collected rainwater and a limited quantity home delivery service can only offer a partial solution.

For this reason the water supply system must be constructed and operated on a conservative basis. At the same time it has to meet the objective of being cost effective. This policy document sets out how this risk cost trade off can be achieved so the outcome is acceptable to the stakeholders in the Wellington metropolitan area.

1 See definitions in section 7
2 This objective assumes that changes to the MOH Grading rules will allow assignment of an Al grading to the Waterloo WTP without the need chlorinate the water

3. Principal Areas of Risk

3.1 Quality

A key Water Group objective is to supply water complying with the Drinking Water Standards for New Zealand at all times, except during and immediately following an extreme emergency'.

Risks to water quality will be minimised by:

- Obtaining an AI grading for all WTP's (except Gear Island, which is a standby plant)[2].
- Maintaining certification for quality control under ISO 9002.
- Safeguarding source water from the risk of contamination as far as practicable and ensuring it is of a high quality.
- Maintaining emergency management procedures to deal with quality shortcomings should they occur.

3.2 Quantity

The Water Group will:

- Meet all reasonable community aspirations for water to supply domestic, recreational, industrial and safety needs under conditions of normal supply'. Under these conditions, customer owned emergency storage would be maintained. Minor supply restrictions may occur should source drought conditions exceed those experienced, on average, once every fifty years.
- During abnormal operation' conditions, supply sufficient water to meet reasonable domestic and industrial needs, but not maintain customers' owned emergency storage.
- During emergency conditions' supply a "base" flow sufficient to meet the public health needs of customers.
- During, and immediately following, an extreme emergency' commit all available resources to providing emergency water supplies and to restoring a "base" level of supply (but not necessarily treated) as soon as practicable.

Risks of shortfalls in the amount of water available will be minimised by:

- Extending ISO 9001 certification coverage to include quantity issues.
- Providing duplication of critical assets where this can be done at acceptable cost.
- Ensuring a high level of reliability of treatment plants and control and alarm systems, through regular testing, maintenance and upgrading.

1 See definitions in section 7

- Using modern asset management techniques to maintain the desired level of service in the system.
- Safeguarding source water from the risk of contamination as far as practicable.
- Investing in the development of new sources when required to match increased demand.
- Conducting an on going campaign promoting water conservation and a reduction in losses.
- Maintaining emergency management procedures to deal with quantity shortcomings should they occur.

3.3 Environmental

The Water Group will minimise risks to the environment from its activities by:

- Adopting a formal Environmental Management System (EMS) certified under ISO 14001. (Note: The EMS contains the inherent assumption that minimum environmental standards acceptable to the community have been set by others using appropriate mechanisms).
- Conducting long range planning so that sufficient time is available for thorough investigation of, and public consultation about, the development of new sources.
- Conducting an ongoing campaign promoting water conservation and a reduction in losses.

4. Acceptable Risks

The following are regarded as acceptable risks:

- Supply interruption within the capability of the customer's storage facilitates to meet normal consumer demand.
- A reduction in supply flows during and following an Emergency' provided a "Base Flow"' is maintained.
- Cessation of supply during and immediately following an Extreme Emergency'.
- Supply of untreated water immediately following an Extreme Emergency, provided customers and consumers are fully informed of the standard of the water being supplied and the procedures to be adopted to make it safe to drink.

5. Risk Transfer

1 See definitions in section 7

- The risk of damage to treatment, pumping and storage facilities (except the Te Marua Lakes, tunnels and pipelines) will be transferred via suitable insurance, above an appropriate level of excess.
- The risk of damage to third party property will be transferred by way of insurance up to a level of $75M. This sum will be formally reviewed from time to time.

6. Self Insurance

The Te Marua Storage Lakes, pipelines and tunnels will be self-insured. To fund this a self-insurance reserve of $10M will be established at the rate of $500,000 per annum. A line of credit has been established for the deficit until the $1 OM is reached.

7. Responsibility

Responsibility for managing risk within the Water Group shall be as follows:

- The Divisional Manager, Utility Services shall be responsible for the establishment and implementation of a Risk Management Policy and for managing financial risk. The Manager shall also be responsible for ensuring the resources are available to adequately address risk matters.

- The Group Manager, Operations shall be responsible for monitoring and managing operational risk including the establishment of emergency management plans.

- The Manager Strategy and Assets shall be responsible for maintaining the Quality and Environmental Management Systems, for long term planning and water conservation initiatives. The position shall also be responsible for maintaining appropriate insurance coverage.

a. Definitions

Normal Operating Conditions

All plant and equipment available for use. No limitations at sources caused by poor water quality or low river flows.

Abnormal Operating Conditions

I See definitions in section 7

At least one critical element out of commission because of planned or unplanned maintenance requirements or poor source water quality.

Emergency Conditions

At least one major element affected by a natural disaster, or other incident such as contamination, over which the Water Group has no control.

Extreme Emergency

Natural disaster of national significance which causes major damage to a number of infrastructure elements. "The big one". [Define as per lifelines study]

Base Flow

Sufficient water to meet the public health needs of consumers, estimated to be 3 15 L/head/day. (based on committee report 98.490, which suggests a reasonable minimum supply rate under emergency conditions at 1 10 MLD).

Prepared June 2000

1 See definitions in section 7