

SUMMARY OF INFORMATION IN THE STATEMENT OF PROPOSAL

DRAFT LIQUID WASTE MANAGEMENT PLAN 2005

Part 1 – Introduction

Liquid wastes are those that are generated in, or converted to, a liquid form for disposal. For the Wellington City Council, this relates to sewage and stormwater.

1.1 Purpose of the Liquid Waste Management Plan

Under the **Local Government Act 2002**, Council is required to complete a waste management plan based on provisions set out in the Local Government Act 1974. In 2003 the solid waste part of the plan was agreed to by Council and this document is the second and final part.

Section 539 of the Local Government Act 1974 states the primary objective of a waste plan is waste reduction, followed by (in order of importance) waste reuse, recycling, recovery, treatment and disposal. Section 538 of the Act also requires that every territorial authority to promote effective and efficient waste management and:-

- a. have regard to environmental and economic costs and benefits for the district and
- b. ensure that the management of waste does not cause a nuisance or be injurious to health.

The **New Zealand Waste Strategy 2002** covers solid, liquid and gaseous waste, and recognises that moving *towards zero waste and a sustainable New Zealand* is a long-term challenge. It does not specifically deal with stormwater.

The city also faces several **challenges over the next 10-15 years** as new legislative requirements come into place, as Council seeks to continually improve its management of assets and as the community's expectations about the environment and sustainability change. Such challenges that need to be addressed and include determining:

- the desirable stormwater quality standards for the natural waters in the city (that is, Wellington harbour, south coast and streams)
- the acceptable frequency and extent of sewage overflows into natural waters
- how sewage sludge will be disposed of in the future
- the most effective and efficient way to manage trade waste.

1.2 Objectives

Given the nature of liquid waste, the concept of ‘zero liquid waste’ is not a realistic expectation in the foreseeable future and thus liquid waste cannot be regarded the same way as solid waste. This means that Council will have a secondary, complementary, objective to those set out under the Local Government Act and the NZ Waste Strategy and that is to ensure that we **manage liquid waste in an environmentally, economically, socially and culturally sustainable manner**. This policy document that sets out the framework from which we can ensure that waste recovered, treated and disposed of, not only meets environmental standards but also considers the views of the community.

This plan will have a five year focus but will need to set a longer term philosophy for future actions, at least 10-20 years, whilst not losing sight of what is practically achievable.

1.3 Guiding principles for the management of liquid waste

The principles underlying the Liquid Waste Management Plan and subsequent actions are:

1. *Sustainable development* - future decisions will consider environmental, economic, social and cultural impacts.
2. *Liquid waste is a resource* – recognise the beneficial reuse opportunities for both sewage and stormwater and possibly waste to energy possibilities. The reuse (or recycling) of sewage and stormwater for the purposes of water conservation is not considered as part of this Plan.
3. *Integrated solutions* - potential solutions will take into account systems that, if possible are sustainable, planned in conjunction with other infrastructural developments, flexible and fit with community plans and views.
4. *Maori and iwi values are incorporated* - recognise and provide for the kaitiakitanga or guardianship role of local Iwi as defined in the 1991 Resource Management Act,
5. *Partnerships* - will also be sought with other regional territorial authorities, the Greater Wellington Regional Council, local Iwi and community groups if they are appropriate.
6. *Polluter pays* - this reflects the concept that those who produce waste are responsible for its disposal (or otherwise). In practice, this will only be relevant for trade waste at this stage as it is not possible to accurately measure sewage or determine the individual sources of stormwater pollution sources at this stage.

Part 2 – Sewage:

Where we are now and required actions

Sewage is produced by residential, commercial and industrial properties in the city. In the reticulated area of the City it is collected and treated at the Moa Point, Western, and Porirua City Treatment Plants. In the non reticulated areas, septic tanks are used for sewage disposal.

2.1 Sewage Treatment

Objective

To comply with the Resource Management Act 1991 for the treatment of all sewage.

Current Situation

While the Local Government Act sets a target for reducing waste volumes, this is not applicable to sewage as the biological load is population based. Reducing peak flows in terms of volume and having a greater base flow may lead to better efficiency in treatment and lower energy costs, however such a decrease would only be minor. This is because under the existing management contract for the treatment plants, the cost of treatment is based on a calculation that considers both the flow and the biological load.

Strategic Actions

- Continue to treat all sewage to best international practice and in accordance with the Resource Management Act 1991
- Undertake preparatory works to ensure new resource consents will be attained when the existing consents expire in 2006 (Western Plant) and 2008 (Moa Point). This includes an investigation into options to decrease the current inflow and infiltration rates (see also 3.3 Sewage Overflows)
- Review treatment options for the Moa Point and Western Treatment Plants in approximately 2015 to ensure an appropriate treatment and disposal method is in place for when the current management contract expires in 2019
- Renegotiate the existing Porirua Treatment Plant contract with Porirua City Council by end of 2005. Seek to increase the Wellington city allocation of capacity and establish an agreement for the disposal of sewage sludge
- Implement the outcome of the Assessment of Water and Sanitary Services for septic tank management as detailed in that document when completed.

2.2 Trade Waste

Objectives

To reduce the quantity of trade waste, its pollutant load and to ensure disposal methods are safe.

Current Situation

Trade waste comes from industry, businesses and public institutions. Trade wastes are discharged to the wastewater system and conveyed to the treatment plants. Some trade wastes receive pre treatment before discharge to sewer. At the Moa Point Treatment Plant trade waste comprises 10-12% of the total flow.

Trade waste can potentially include materials that strip the oxygen out of the sewage, (measured as biochemical oxygen demand (BOD)¹, produce obnoxious and acidic gases, suspended solids that clog up the system, metals, pesticides, insecticides, solvents, grease, oil and fat. These all influence the biological treatment process at the treatment plants, present health risks for sewage workers, can damage the pipe network and can create potential problems with sludge disposal. Therefore there are incentives to minimise trade wastes entering the sewerage system.

Strategic Actions

- Determine appropriate fees and charges for the discharge of trade wastes and implementation of polluter-pays charging policy issues (2005)
- Continue to minimise the impact on the treatment process, disposals, pipe network and workers through the Trade Waste Bylaw
- Ensure the review of the Collection and Transportation of Waste Bylaw promotes safe disposal practices (2005)
- Ensure that trade waste consent holders having high volume, fast flow or complex trade waste discharges have a waste management and minimisation programme in place by December 2005 and ensure their effective implementation
- Evaluate the benefits, costs and practicality of small and medium sized trade waste consent holders to have a waste minimisation programme in place by December 2007.

2.3 Biosolids

Objective

To ensure that sustainable, long term and beneficial reuse methods for the disposal of biosolids are adopted.

Current Situation

Council currently contracts Living Earth Limited to beneficially reuse sewage sludge. The sludge is mixed with green waste and made into compost, mulch and gardening mix and is available for sale. This reduces the amount of waste disposed of at landfills thereby extending their life.

Council has invested significantly into biosolids/green waste composting, however the future economic and sustainable options for sludge disposal must be reassessed and decided upon because, amongst other things, the 10 year contract with Living Earth Limited expires in December 2008, Living Earth Limited are having some difficulty in finding a receptive market for this type of compost, sludge disposal from the wider area should be considered as a whole and because the process that produces the bio solids produces negative downstream effects.

Strategic Action

- Review the current biosolid disposal process in 2005, evaluate alternative options and establish the timeframe to implement the agreed preferred option.

¹ Biochemical oxygen demand – the quantity of oxygen used in the oxidation of organic matter.

Part 3 – Stormwater:

Where we are now and required actions

All stormwater ultimately discharges to the sea via pipes and streams (and occasionally overland). Stormwater issues relate to either:

- Quantity – an excess of which causes flooding
- Quality – the pollution in the stormwater causes environmental damage. This pollution comes from a number of sources including:
 - Sewage entering the stormwater system
 - Heavy metals and hydrocarbons mainly associated with car use and combustion
 - Sediment and silt from erosion and developments
 - Litter

Objective

To manage the effects of flooding by meeting Council’s agreed levels of service for flooding as articulated in the Stormwater Asset Management Plan. (see table below)

Level of Service for the Flooding of Property	
Land Use	Level of protection provided by New Design
Arterial roads, major community facilities related to essential services	1 in 100 years
Houses, commercial and industrial buildings, internal flooding	1 in 50 years (as per the Building Act)
Garages, sheds and unoccupied basements – internal flooding	1 in 10 years
Roads, active recreational area, access to property – safe use denied, damage to roads	1 in 5 years
Gardens, yards, passive recreation areas, flooding >150mm deep over more than 20 square meters	1 in 2 years

Current Situation

Parts of the city experience flooding at times of high rainfall. Council’s Stormwater Asset Management Plan sets out a process that systematically prepares Catchment Management Plans for at risk catchments taking into consideration flooding risk, ecological risk, health and safety and projected population growth. Population growth and the associated increase in hard surfaces through increased housing development and landscaping also influences stormwater runoff quantities.

Strategic Actions

- Continue with the flood protection programme as outlined in the Stormwater Asset Management Plan
- Investigate the adoption of planning methods to limit or decrease the use of hard surfaces by either development or landscaping that influence stormwater runoff in conjunction with the Code of Practice for Urban Development review (by 2007).

3.1 Water Quality: General

Objective

To increase or preserve the amenity of the city and ensure public health standards are met by complying with all legislative requirements associated with the quality of stormwater runoff.

Current Situation

Receiving waters standards

The current Ministry for the Environment and Ministry of Health standards used to monitor the quality of receiving waters are structured around public health issues and are not specifically designed to protect environmental or ecological values. There is also an issue about current resource consents conditions being set on a discharge by discharge basis

Stream ecology

The ecology of streams is recognised as being imperative to the health of the stream. Therefore given that stormwater is discharged into streams, the quality of the discharges needs to be monitored and controlled.

Strategic Actions

- Assist with the current Greater Wellington Regional Council initiative to determine standards and monitoring regimes for receiving waters, taking into account public health, environmental and ecological factors
- Investigate the advantages of applying for catchment based stormwater consents as existing consents expire
- Consider including practices that do not degrade the city's waterways in the Code of Practice for Land Development review (by 2007).

3.2 Water Quality: Sewage overflows

Objective

To increase or preserve the amenity of the city and ensure public health standards are met, by managing overflows of sewage to comply with the quality standards determined under the Resource Management Act 1991.

Current Situation

On occasions the volume of sewage being transported in the sewer pipes exceeds the capacity of the system. This normally occurs during wet weather but can also occur as a result of pipe or pump failure. As a consequence sewage escapes and overflows into the stormwater network, ultimately discharging to the natural waters - streams, the harbour or the coast.

Strategic Actions

- Evaluate options and costs to reduce the environmental effects of overflows, including the preparation of an Inflow/Infiltration Management Plan, from the sewage system in 2005.

3.3 Water Quality: Pollution from roads and paved areas

Objective

To manage the polluted runoff from roads and paved areas to ensure that water quality standards are not breached.

Current Situation

Vehicles travelling on roads leave residue from the wear of tyres and brake linings and the leaking of oil products. These get washed off in rain causing a build up of heavy metals and hydrocarbons in the stormwater system and natural waters. This runoff is now widely recognised as one of the major stormwater polluters.

Strategic Actions

- Continue to monitor the effects on the environment of runoff from roads and paved areas
- Monitor and contribute to the research and mitigation work currently being carried out by central government and local authorities
- Investigate solutions to control/reduce the effects of the run off taking into consideration a wide range of receiving environments, the community wishes and their ability and willingness to pay.

3.4 Water Quality: Sediment and Silt

Objective

To decrease the quantity of sediment and silt that reaches the City waterways to a level acceptable to Greater Wellington Regional Council.

Current Situation

According to the Greater Wellington Regional Council, excessive sediment in watercourses is becoming one of the most significant water pollution issues in the Region having significant adverse effects on natural waters and aquatic ecosystems. The presence of sediment and silt in fresh and marine waters smothers the organisms that dwell in that water and changes the overall characteristics of it. This impacts on the water quality of natural waters and the fragile ecosystems they support more than previously thought. By volume, sediment is the biggest single water pollutant worldwide.

Strategic Actions

- Continue to work closely with Greater Wellington officers to ensure that best practice sediment controls are identified and implemented
- Ensure the review of the Wellington City Earthworks Bylaw addresses methods to achieve best practice for the management of sediment and silt (2005)
- Review the Code of Practice for Land Development to take into account ways to better cover the management of sediment by 2007.

For further information, the full Statement of Proposal is available for inspection at the Wellington City Council 101 Wakefield Street, Wellington Public Libraries and on the Council website www.wcc.govt.nz. Copies are also available by calling 499-4444.