

## Overview

The Water Supply activity concerns the provision of a safe, reliable and potable supply of water for domestic, business and fire fighting purposes to urban Upper Hutt and part of the rural area.

Bulk water is purchased from the Greater Wellington Regional Council and stored in the City Council's reservoirs prior to distribution to householders and businesses within the supply area.

The water supply system has consistently achieved an Aa grading from the Ministry of Health over a number of years. This is the highest possible standard, and means that there is the lowest possible risk of contamination to the water supply and distribution systems. In terms of the most recent assessment our network was rated "a". The water treatment and distribution have not yet been assessed.

Part of the regional water supply system is located in Upper Hutt, including the water catchment areas, treatment station, bulk water mains and bulk water storage lakes at Kaitoke. These are not part of the City Council's responsibility.

The Council owns 15 reservoirs, 8 pump stations, 269km of water mains, 13,671 service connections, 1,392 hydrants and 2,391 valves with a total replacement value of \$72.9 million. For more information refer to the Water Supply Asset Management Plan 2005, the Telemetry Asset Management Plan 2005 and the Water Supply Disaster Recovery Plan 2001.

The Assessment of Water and Sanitary Services 2005 discusses the provision of water supply services in Upper Hutt City. The key focus of the Assessment is the protection of public health in the City.

## Key Council Contributions to Community Outcomes

WELLBEING	OUTCOME	COUNCIL ROLE
ECONOMY ENVIRONMENT	<b>3 Robust Innovative &amp; Growing Economy</b>	PROVIDE an efficient, reliable water supply service
ECONOMY ENVIRONMENT	<b>4 Green &amp; Attractive Living Environment</b>	PROVIDE a quality water supply service EDUCATE to reduce water use and waste PLAN for sustainable development
ECONOMY ENVIRONMENT SOCIAL	<b>5 Safe, Healthy &amp; Strong Community</b>	PROVIDE a safe, reliable and potable water supply service PROVIDE infrastructure that will not be unduly disrupted by disaster PROVIDE a reliable water supply suitable for fire fighting requirements

## Key Issues and Responses by Council

### 1. Providing a Safe, Reliable Water Supply

The water supply system is generally adequate.

Council's telemetry system monitors water flows at reservoirs and pump stations around the city. Under normal circumstances, the flow of water throughout the network operates automatically under gravity and in response to demand.

Water supply within a defined area may be shut down when an abnormal event occurs, such as pump failure or low water storage in reservoirs. The system is linked to a central computer system and provides 24-hour surveillance.

There are a range of different risks of water supply failure within Upper Hutt, including:

- Loss of bulk supply from the Regional Council
- Loss of efficiency e.g. minor water leakages
- Structural failure e.g. major water main breakages
- External events e.g. earthquake, flood, wind and sabotage leading to either a loss of physical supply or contaminated water being supplied

Risk management involves balancing the possible effects of failure on the environment, together with the effect on water users, social implications, business closure, contamination and public health issues.

- **Asset Management Plan**

To address these risks, Council has prepared an Asset Management Plan to guide decisions around how best to maintain, renew and replace the water supply infrastructure, as well as a Disaster Recovery Plan to reinstate the water supply as quickly as possible after a disaster. Key works involved are described below.

- **Planned Maintenance and Renewals Programme**

In 1994 Council committed to a long term programme of progressively renewing its infrastructure of aging water, wastewater and stormwater pipes. Expenditure will peak in the 2006/07 year, with planned expenditure of \$2.3 million across the three water services.

The Water Supply Asset Management Plan sets out the planned work programme for replacement and renewals over the next 20 years. Council has an ongoing programme to survey the condition of its pipes. This information, together with the past history for each section of pipe, including feedback from contractors and customers, and the level of service standards are used for modelling the water supply system and developing the works programme. Work to minimise the risk of failure from natural hazard events are also considered when priorities are considered for the renewal programmes.

Pipes which are due for repair or replacement are re-surveyed prior to finalising the work programme each year, and work is prioritised accordingly. Should an unexpected breakage occur, the annual work programme will again be re-prioritised to ensure that the most effective and efficient use is made of funding.

- **Emergency Generator**

A new mobile generator is proposed to ensure that the City's water supply, stormwater and wastewater systems are protected in case of power failure in a disaster. The generator will be able to be used at multiple sites as required.

- **Reservoir Upgrades**

Reservoir upgrades are needed to maximise their life and ensure they are capable of withstanding earthquakes and are able to be kept at least 70% full to ensure adequate reserves of water in the event of a major disaster.

The upgrade programme commenced in 1996. To complete the programme upgrades are planned for:

- Cruickshank No's 1 and 2
- Trentham No 2
- Timberlea

- **Potable Water**

Water is treated to a potable standard by the Greater Wellington Regional Council, and delivered into the Council reservoirs. Council pays Greater Wellington Regional Council an annual bulk water levy for the supply of this water. Council also has a programme for testing its reticulation in compliance with the NZ Drinking Water Standards.

## **2. Managing the Demand for Water**

Water consumption monitoring has shown that the average residential consumption for Upper Hutt is 268 cubic metres per year. Analyses of consumption patterns of a cross section of residential properties in Upper Hutt, as well as literature studies carried out regarding residential consumption, have indicated that this average consumption can be considered excessive. Upper Hutt City Council sets its benchmark for residential consumption at 220 cubic metres per property per year. Leak detection and water conservation education programmes are aimed at achieving this benchmark before the end of 2008/09.

A number of factors may be associated with the higher water use, including:

- Changing patterns of domestic water use e.g. more private swimming pools, more water - using appliances, the style of gardens in Upper Hutt, including more garden irrigation systems.
- Water leakage from aging pipes, either within Council's reticulated system of pipelines, or on private properties.
- Changes in lifestyle, in particular changes regarding leisure activities.
- An increasing number of households within the reticulated area.

Bulk water is purchased from the Greater Wellington Regional Council, with the cost each year being apportioned between the participating local authorities based on the quantity of water used. For the 2005/06 year, bulk water charges were set at \$2.175 million, half of the annual budget for Water Supply.

By actively conserving water, Upper Hutt will be able to reduce its share of the cost of the regional water system. It will also help delay substantial investment in the regional water supply system needed to meet the demands of a growing regional population.

Council is taking a number of actions to manage and minimise the demand for water, as follows:

- **Telemetry**

Council's telemetry system has progressively been improved in recent years, and as water flows are continuously monitored at different points around the city, abnormal flows of water may be detected quickly. This in turn means that leaks and breakages may be identified and repaired much more quickly.

- **Leak Detection Programme**

Council systematically checks pipes throughout the city for leakages. This includes monitoring water use on private properties. Where there is a leak on private property, the property owner will be informed and requested to fix the problem.

- **Garden Watering Restrictions**

Council now places year round restrictions on garden watering as a means of conserving water. This affects garden watering systems, soaker hoses and use of unattended hoses.

- **Water Conservation Education**

Council undertakes a basic water conservation and education campaign, advertising in the local newspaper, preparing pamphlets on water conservation for householders and aligning with the Greater Wellington Regional Council's water education campaigns.

- **Water Conservation [Alternative Methods]**

Council is investigating a range of alternative opportunities for water conservation, including:

- Voluntary use of water meters
- Metering of heavy users and those who fail to repair leaks
- More community education
- Water conservation campaign

### 3. Water for Future Growth

When Council receives a proposal for subdivision, it analyses the likely effect on the capacity and capability of the water supply system on. The subdivider is required to pay for any required extensions to the infrastructure, including pipes, pumps and reservoirs. These assets are then vested with Council at no cost.

- **Upper Hutt Growth Strategy**

As part of the Upper Hutt Growth Strategy work is being undertaken to:

- Identify potential growth areas [within existing urban areas as well as potential development areas];
- Use the model of the existing water supply system to determine how much spare capacity remains; and
- Identify the infrastructure required to service future areas of development.

As a result of this work, Council will review its development contributions policy to ensure that appropriate contributions are made by the developer towards upgrading the water supply system.

### Significant Negative Effects

This activity does not have any significant negative effects on the social, economic, environmental or cultural wellbeing of the local Community when the asset is properly maintained.

### Level of Service Objectives and Performance Measures

Indicator	Performance Measure	Target 2006/07	Targets for Future Years
<b>Objective:</b>	<b>Council will maintain a high quality water supply with minimal interruptions.</b>		
<b>1 QUALITY</b>	NZ Drinking Water Standard	Aa grading <sup>17</sup>	Aa grading <sup>17</sup>
<b>2 SATISFACTION</b>	Community satisfaction with the reticulated water supply service	95% of survey respondents are satisfied or very satisfied <sup>1</sup>	95% of survey respondents are satisfied or very satisfied <sup>1</sup>
<b>3 CONTINUITY OF SUPPLY</b>	Interruptions to the water supply	95% of individual consumers who experience water disruptions have the service restored within two hours <sup>18</sup>	95% of individual consumers who experience water disruptions have the service restored within two hours <sup>18</sup>
<b>4 SYSTEM INTEGRITY</b>	Monitor minimum night flow between 1:00am and 4:30am	Flow not to exceed 75 litres per second <sup>20</sup>	Flow not to exceed 75 litres per second <sup>20</sup>

Water and Waste  
**Water Supply**

Indicator	Performance Measure	Target 2006/07	Targets for Future Years
<b>Objective:</b>	<b>Council will provide a water supply that meets the requirements for firefighting.</b>		
<b>5 FIRE STANDARDS</b>	Meet firefighting requirements for water supply	95% of fire hydrants tested by the NZ Fire Service meet pressure and flow requirements specified in the Code of Practice for Fighting Water Supplies <sup>19</sup>	95% of fire hydrants tested by the NZ Fire Service meet pressure and flow requirements specified in the Code of Practice for Fighting Water Supplies <sup>19</sup>
<b>Objective:</b>	<b>Council will undertake capital &amp; asset management works in a cost effective manner.</b>		
<b>6 WORKS</b>	Completion of Capital Works	Works completed within budget (Refer to Work Programme)	Works completed within budget (Refer to Work Programme)

<sup>1</sup> Annual Community Survey

<sup>17</sup> Ministry of Health Rating

<sup>18</sup> In-house monitoring of maintenance contract

<sup>19</sup> Monitoring of data supplied by NZFS

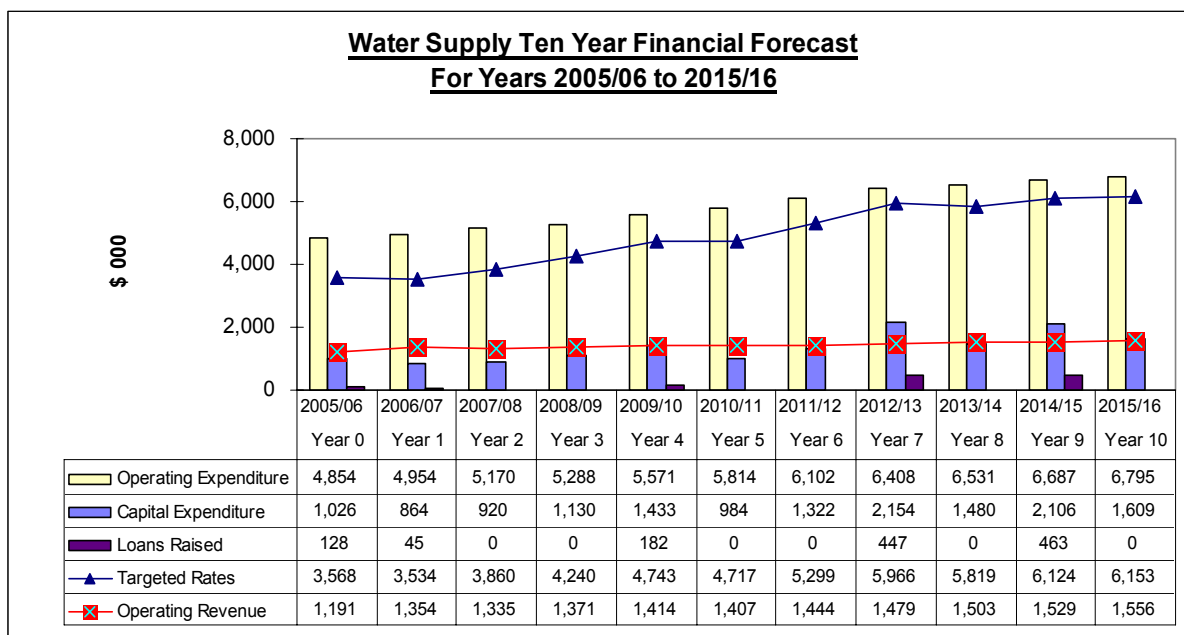
<sup>20</sup> In-house monitoring using bulk and area meters

Work Programme	Forecast LTCCP Year 1 2006/07 (\$ 000)	Forecast LTCCP Year 2 2007/08 (\$ 000)	Forecast LTCCP Year 3 2008/09 (\$ 000)	Forecast LTCCP Years 4-10 (\$ 000)	Source Of Funding 2006/2007
<b>ASSET MANAGEMENT</b>					
Pipeline Renewal	772	835	1,072	9,799	Targeted Rates
Reservoir Upgrade	20	0	0	1,092	Loans
Miscellaneous Works	27	28	58	197	Targeted Rates
Reservoir	45	0	0	0	Loans
<b>CAPITAL WORKS</b>					
Emergency Generator	0	57	0	0	
<b>Total</b>	<b>864</b>	<b>920</b>	<b>1,130</b>		

# Water and Waste Water Supply

Cost of Service Statement	Forecast	Forecast	Forecast	Forecast
	Annual Plan Year 0 2005/06 (\$ 000)	LTCCP Year 1 2006/07 (\$ 000)	LTCCP Year 2 2007/08 (\$ 000)	LTCCP Year 3 2008/09 (\$ 000)
Operating Costs	3,754	3,929	4,117	4,320
Interest	83	87	80	75
Depreciation	1,017	938	973	893
Operating Income	(1,191)	(1,354)	(1,335)	(1,371)
<b>NET OPERATING COST</b>	<b>3,663</b>	<b>3,600</b>	<b>3,835</b>	<b>3,917</b>
Capital Expenditure	1,026	864	920	1,130
Loan Repayments	83	258	92	92
Transfers to Funds	0	0	0	0
Less Depreciation and Other Unfunded Items	(870)	(785)	(814)	(726)
<b>TOTAL FUNDING REQUIRED</b>	<b>3,902</b>	<b>3,937</b>	<b>4,033</b>	<b>4,413</b>
<b>Funded by :</b>				
Targeted Rates	3,568	3,534	3,860	4,240
Loans Raised	128	45	0	0
Transfers from Funds	206	358	173	173
<b>TOTAL FUNDING</b>	<b>3,902</b>	<b>3,937</b>	<b>4,033</b>	<b>4,413</b>

## 10 Year Financial Forecast



## Overview

The wastewater system concerns the provision of a safe, reliable and cost effective reticulated system for urban and some rural residential areas of Upper Hutt, including household and business users.

The local system discharges to the Hutt Valley Trunk Wastewater System. Waste is treated at Seaview and disposed of from the Pencarrow outfall. The Hutt Valley Drainage Act 1967 sets out the terms of this relationship, and the Hutt Valley Service Committee provides oversight, with membership from both Upper Hutt and Hutt City Councils.

The Council owns wastewater facilities as follows: 222km of sewer mains, 11 pump stations, 4,374 wastewater manholes and 1 overflow chamber with a total replacement value of \$77.4 million. This summary excludes the Hutt Valley Truck Wastewater System assets, of which Upper Hutt City holds a 28.6% share.

For more information refer to the Wastewater Asset Management Plan 2005, the Telemetry Asset Management Plan 2005 and the Wastewater Disaster Recovery Plan 2003.

The Assessment of Water and Sanitary Services 2005 discusses the provision of wastewater services in Upper Hutt City. The key focus of the Assessment is the protection of public health in the City.

## Key Council Contributions to Community Outcomes

WELLBEING	OUTCOME	COUNCIL ROLE
ECONOMY ENVIRONMENT	<b>3 Robust Innovative &amp; Growing Economy</b>	PROVIDE an efficient, reliable service that will meet urban business needs
ENVIRONMENT ECONOMY	<b>4 Green &amp; Attractive Living Environment</b>	PROVIDE a quality wastewater disposal service PLAN for sustainable development
ECONOMY ENVIRONMENT SOCIAL	<b>5 Safe, Healthy &amp; Strong Community</b>	PROVIDE infrastructure that will not risk public health or create a public nuisance PROVIDE infrastructure that will not be unduly disrupted by disaster

## Key Issues and Responses by Council

### 1. Maintaining a Quality Wastewater System

The wastewater system comprises a range of different types of pipes, and pumps to transport wastewater to the Hutt Valley Trunk Wastewater system. The telemetry system monitors flows at the pump stations. It alerts Council to any system failure and allows intervention to minimise the risk.

The major risk facing the reticulated wastewater system concerns system failure. Failure may result from a number of factors, including:

- Loss of efficiency, such as from asbestos cement pipes weakening, leaking and ultimately failing.
- Significant faults causing blockages.
- Stormwater infiltration, such as in heavy rain events, causing surcharge in some locations.

Risk management involves balancing the possible effects of failure on public health, together with the effect on the environment, social and cultural implications, business activity and likely costs to remove the risk.

- **Asset Management Plan**

To address these risks, Council has prepared an Asset Management Plan to guide decisions around how best to maintain, renew and replace the wastewater infrastructure, as well as a Disaster Recovery Plan to reinstate the wastewater system as quickly as possible after a disaster.

Key works involved are described below.

- **Planned Renewals and Replacement Programme**

In 1994 Council committed to a long term programme of progressively renewing and replacing its infrastructure of aging pipes. Expenditure has increased every year and will peak in the 2007/08 year, with planned expenditure of \$2.3 million across the three water services.

This works programme is set out in the Wastewater Asset Management Plan, and is based on the current state of knowledge of the system. This is updated with new information on the condition and capacity of pipes arising from regular monitoring and ongoing repair work.

Wastewater system performance is analysed by system modelling. The model indicates probable system performance for various rain events and weak points in the system such as system bottle neck and under capacity pipes.

The system is upgraded in accordance with requirements indicated by modelling and condition and prioritised in the renewal/replacement programme. The work plan also includes taking into account minimising risks from natural disaster. Pipes which are due for repair or replacement are re-surveyed prior to finalising the work programme each year, and work is re-prioritised accordingly. Should an unexpected failure occur, the annual work programme is re-prioritised to ensure that the most effective and efficient use is made of funding.

- **Monitoring the Condition of the System**

Systematic condition surveys by closed circuit television, together with flow monitoring and modelling, reveal useful information about the quality of pipes and flows throughout the network, as well as about the level of infiltration occurring in the system. All pump stations are progressively being linked to the telemetry system to provide 24 hour monitoring of wastewater flows.

Flow monitoring and infiltration studies are carried out across the city. Household drains in areas of high inflow and infiltration are being inspected using closed circuit television. Owners are required to repair any faults located.

- **Project Pencarrow**

Subject to demand, a new booster pumping station on the main sewer outfall may be required in the 2012/13 financial year.

The Pencarrow discharge consent renewal application is being prepared by Greater Wellington Regional Council for forwarding the application to the Minister of Conservation for his approval. Although the current consent does not expire until 2011, there is a potential requirement for significant new capital works within the next ten years. Council considers it prudent to clarify future consent requirements now, so that it may better forecast and manage any financial implications.

## 2. Wastewater for Future Growth

When Council receives a proposal for subdivision, it analyses the likely effect on the capacity and capability of the wastewater system. The subdivider is required to pay for any required extensions to the infrastructure, including pipes, pumps and reservoirs. These assets are then vested with Council at no cost.

- **Upper Hutt Growth Strategy**

As part of the Upper Hutt Growth Strategy work is being undertaken to:

- Identify potential growth areas [within existing urban areas as well as new development areas];
- Use the model of the wastewater system to determine how much spare capacity remains; and
- Identify new capital works required to service future areas of development.

As a result of this work, Council will review its development contributions policy to ensure that appropriate contributions are made by the developer towards upgrading the wastewater system.

### Significant Negative Effects

This activity does not have any significant negative effects on the social, economic, environmental or cultural wellbeing of the local Community when the asset is properly maintained.

### Level of Service Objectives and Performance Measures

Indicator	Performance Measure	Target 2006/07	Targets for Future Years
<b>Objective:</b>	<b>Council will operate and maintain a safe wastewater system.</b>		
<b>1 PUBLIC HEALTH</b>	Operate and maintain the wastewater system so that there is no public health risk	No sickness reported due to failure of the wastewater system <sup>2</sup>	No sickness reported due to failure of the wastewater system <sup>2</sup>
<b>2 USE OF SYSTEM</b>	Minimise interruptions to the ability to use the wastewater system	95% of properties connected to the wastewater system who are unable to dispose of wastewater will have their service restored within six hours <sup>3</sup>	95% of properties connected to the wastewater system who are unable to dispose of wastewater will have their service restored within six hours <sup>3</sup>
<b>3 SATISFACTION</b>	Community satisfaction with the reticulated wastewater disposal service	90% of respondents satisfied or very satisfied <sup>1</sup>	90% of respondents satisfied or very satisfied <sup>1</sup>
<b>Objective:</b>	<b>Council will undertake capital &amp; asset management works in a cost effective manner.</b>		
<b>4 WORKS</b>	Completion of capital works	Works completed within budget (Refer to Work Programme)	Works completed within budget (Refer to Work Programme)

<sup>1</sup> Annual Community Survey

<sup>2</sup> In-house monitoring

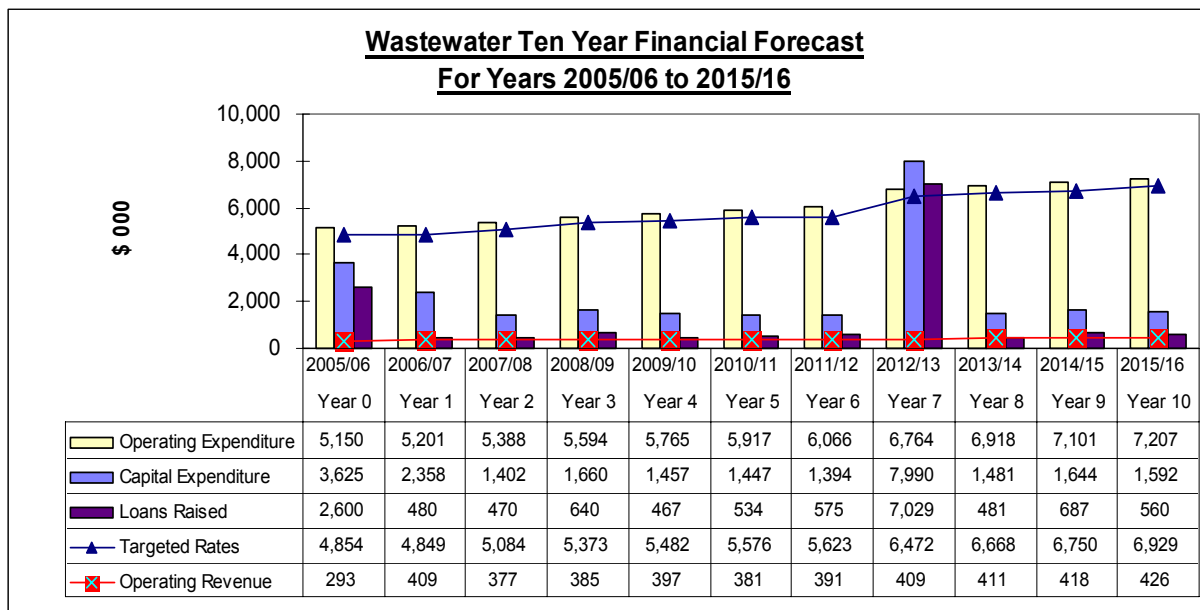
<sup>3</sup> In-house monitoring of UTCE contract

Water and Waste  
**Wastewater**

Work Programme	Forecast LTCCP Year 1 2006/07 (\$ 000)	Forecast LTCCP Year 2 2007/08 (\$ 000)	Forecast LTCCP Year 3 2008/09 (\$ 000)	Forecast LTCCP Years 4-10 years (\$ 000)	Source Of Funding 2006/2007
<b>ASSET MANAGEMENT</b>					
Pipeline Renewal Upgrade	1,237	929	1,004	6,569	Targeted Rates/ Accumulated Funds
Miscellaneous Works	29	3	16	103	Targeted Rates
<b>CAPITAL WORKS</b>					
Wastewater Project Capital	1,092	470	640	10,333	Loans
<b>Total</b>	<b>2,358</b>	<b>1,402</b>	<b>1,660</b>		

Cost of Service Statement	Forecast Annual Plan Year 0 2005/06 (\$ 000)	Forecast LTCCP Year 1 2006/07 (\$ 000)	Forecast LTCCP Year 2 2007/08 (\$ 000)	Forecast LTCCP Year 3 2008/09 (\$ 000)
Operating Costs	3,160	3,188	3,312	3,429
Interest	884	967	1,003	1,081
Depreciation	1,106	1,046	1,073	1,084
Operating Income	(293)	(409)	(377)	(385)
<b>NET OPERATING COST</b>	<b>4,857</b>	<b>4,792</b>	<b>5,011</b>	<b>5,209</b>
Capital Expenditure	3,625	2,358	1,402	1,660
Loan Repayments	173	94	97	105
Transfers to Funds	0	0	0	0
Less				
Depreciation and Other Unfunded Items	(1,001)	(936)	(956)	(961)
<b>TOTAL FUNDING REQUIRED</b>	<b>7,654</b>	<b>6,308</b>	<b>5,554</b>	<b>6,013</b>
<b>Funded by :</b>				
Targeted Rates	4,854	4,849	5,084	5,373
Loans Raised	2,600	480	470	640
Transfers from Funds	0	657	0	0
Accumulated Funds	200	322	0	0
<b>TOTAL FUNDING</b>	<b>7,654</b>	<b>6,308</b>	<b>5,554</b>	<b>6,013</b>

**10 Year Financial Forecast**



## Overview

The Stormwater activity concerns the management and disposal of stormwater from within the urban areas of the city by a combination of reticulated pipes, pumps, soak pits, open drains, overland secondary flowpaths and ponding areas [often on roadways], and detention systems prior to entering major watercourses such as the Hutt River.

It does not include those parts of the river drainage system that are managed by the Greater Wellington Regional Council. These include parts of the Pinehaven and Collins Streams, Hulls Creek, and the Mangaroa, Akatarawa and Hutt Rivers. Nor does it include private drains, being those drains on private property for which Council has not accepted responsibility. These are the responsibility of the property owner.

The Council owns 129km of stormwater mains, 5 pump stations, 2,694 stormwater manholes, 1 dam and 11.5km of open drains, with a total replacement value of \$73.8 million.

For more information refer to the Stormwater Asset Management Plan 2005, the Telemetry Asset Management Plan 2005 and the Stormwater Disaster Recovery Plan 2003.

The Assessment of Water and Sanitary Services 2005 discusses the provision of stormwater services in Upper Hutt City. The key focus of the Assessment is the protection of public health in the City.

## Key Council Contributions to Community Outcomes

WELLBEING	OUTCOME	COUNCIL ROLE
ECONOMY ENVIRONMENT	<b>3 Robust Innovative &amp; Growing Economy</b>	PROVIDE an efficient, reliable stormwater system
ENVIRONMENT	<b>4 Green &amp; Attractive Living Environment</b>	PROVIDE a quality stormwater system PLAN for sustainable development
SOCIAL ECONOMY ENVIRONMENT	<b>5 Safe, Healthy &amp; Strong Community</b>	PROVIDE infrastructure that will be safe and healthy for people and minimise risks to property PROVIDE infrastructure that will not be unduly disrupted by disaster

## Key Issues and Responses by Council

### 1. Maintaining a Quality Stormwater System

The stormwater system was constructed during the period of fast growth in Upper Hutt, spanning the 1950s through to the 1970s. As with the two other water services, the telemetry system allows continuous 24 hour monitoring of all stormwater pumps through a centralised control system.

The major risk facing the Stormwater system concerns system failure. Pollution is a further risk. Failure may result from a number of factors, including:

- Lack of capacity, such as from undersize pipes
- Loss of efficiency, such as from unreinforced concrete pipes weakening, cracking and ultimately failing
- Significant faults causing blockages

Risk management involves balancing the possible effects of failure on the ability to use the stormwater system, together with the effect on public health, private property, the environment, social and cultural implications, business activity and likely costs to remove the risk.

- **Asset Management Plan**

To address these risks, Council has prepared an Asset Management Plan to guide decisions around how best to maintain, renew and replace the stormwater infrastructure, as well as a Disaster Recovery Plan to reinstate the stormwater system as quickly as possible after a disaster.

Key works involved are described below.

- **Planned Renewals and Replacements Programme**

Much of the existing reticulation has insufficient capacity or the materials are inappropriate in terms of modern urban stormwater design standards.

Council has completed a closed circuit television inspection of the stormwater reticulation, and, together with knowledge of the system from service requests and work by contractors, has a good understanding of the condition of the system.

Stormwater system performance is analysed for various rainfall return periods by modelling. The modelling results plus asset condition indicate the requirements for upgrading and individual catchments.

Consideration of the renewals and replacement programme also takes into account minimising risks for natural hazards.

## **2. Flooding**

A Floodplain Management study commenced in 1995. It is an ongoing programme for improving system performance and minimising the risks caused by natural disasters. Each individual stormwater catchment is modelled. Model simulation and system analysis of how the system is likely to perform under a range of various rainfall events is being implemented. Flood hazard maps are being produced for 25 and 100 year rainfall events.

- **Pinehaven Stream Study**

It is planned to undertake a study of the Pinehaven stream where there is a history of flooding due to the under-capacity of stream channel and culverts. Council will work with the Greater Wellington Regional Council for the study. This study will deliver the possible options to mitigate the flood risks from the Pinehaven Stream.

- **Planned Renewals and Replacements Programme**

The Works Programme is currently driven by the need to improve the condition of the stormwater system. As the condition issues are resolved, a large number of system capacity faults will also be resolved. The stormwater system of some areas in Upper Hutt is currently under capacity. Upgrading the current system capacity would improve the system performance and minimise the flood risks. Planning is also taken into account to minimise risks from natural hazards.

- **Sunbrae Drive Culvert**

The Sunbrae Drive road culvert [Pinehaven Stream] has sufficient capacity for a storm event that is likely to happen about once every two years. This is considerably less than required by Council's Code of Practice for Civil Engineering Works. There are 32 properties directly or indirectly at risk of flood damage. A new, larger culvert is proposed to remedy this situation.

- **Hutt River Floodplain Management Plan**

The Greater Wellington Regional Council, with Hutt City and Upper City Councils, prepared a Floodplain Management Plan for the Hutt River in 2001. This Plan identifies a number of works to upgrade a number of embankments within Upper Hutt, as well as land use and other techniques to mitigate the effects of any flood, to improve river ecology and to enhance recreation opportunities.

The Whirinaki Crescent Stop Bank is to be upgraded as a part of the Hutt River Floodplain Management Plan which is administered by the Regional Council.

The City Council has completed a set of flood hazard maps for 25 and 100 year rainfall events and a set of flood hazard maps for 450 year rainfall events is in progress. Council will continue to work closely with the Regional Council and any other agencies to create a safer living environment.

### **3. Stormwater for Future Growth**

Alternative solutions to extending the physical infrastructure may need to be found in order to maintain the level of service.

- **Alternative Techniques for Stormwater Management**

Examples of alternatives include:

- Detention dams, which help to detain the flood peak and reduce the peak flow through the stormwater system
- Ponding areas, on the fringe of the urban area, temporarily storing excess water
- Onsite tank storage, with water being gathered from impervious surfaces and used for activities such as gardening
- Natural soakage.

### **4. Environmental Standards**

The Greater Wellington Regional Council is responsible for setting and monitoring the standard for the quality of stormwater discharges into the Hutt River and its tributaries. Currently, no specific treatment is required to ensure the quality of water being discharged from Council's stormwater infrastructure.

- **Education**

Each year, Council undertakes a publicity and education programme aimed at reducing the contamination of waterways that receive stormwater.

## **Significant Negative Effects**

This activity does not have any significant negative effects on the social, economic, environmental or cultural wellbeing of the local Community when the asset is properly maintained.

**Level of Service Objectives and Performance Measures**

Indicator	Performance Measure	Target 2006/07	Targets for Future Years
<b>Objective:</b> Council will preserve public safety and health & minimise the risk of damage to public and private property through effective stormwater management.			
<b>1 SATISFACTION</b>	Community satisfaction with the urban stormwater disposal service	87.5% of respondents satisfied or very satisfied <sup>1</sup>	87.5% of respondents satisfied or very satisfied <sup>1</sup>
<b>2 QUALITY</b>	Compliance with resource consent requirements	Compliance with relevant resource consent <sup>2</sup>	Compliance with relevant resource consent <sup>2</sup>
<b>Objective:</b> To undertake capital & asset management works in a cost effective manner.			
<b>3 WORKS</b>	Completion of capital works	Works completed within budget (Refer to Work Programme)	Works completed within budget (Refer to work programme)

<sup>1</sup> Annual Community Survey

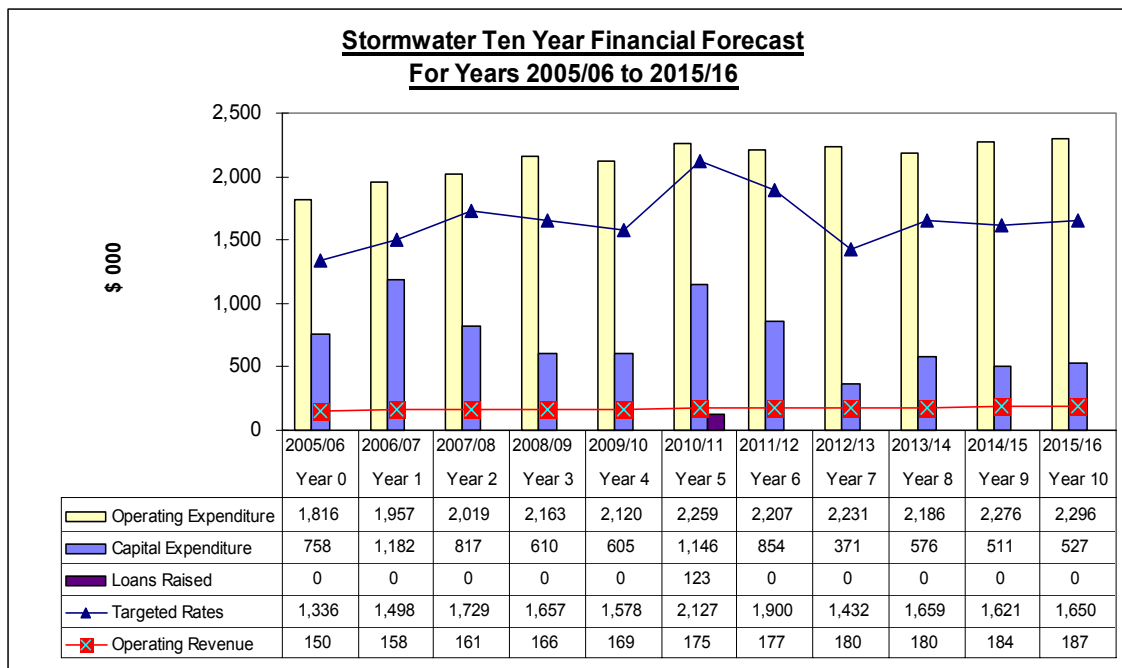
<sup>2</sup> Greater Wellington Regional Council

Work Programme	Forecast LTCCP	Forecast LTCCP	Forecast LTCCP	Forecast LTCCP	Source Of Funding 2006/2007
	Year 1 2006/07 (\$ 000)	Year 2 2007/08 (\$ 000)	Year 3 2008/09 (\$ 000)	Years 4-10 (\$ 000)	
<b>PROJECTS</b>					
Pinehaven Stream Study	0	0	96	90	
<b>ASSET MANAGEMENT</b>					
Pipeline Renewal	1,178	812	608	4,428	Targeted Rates
Miscellaneous Works	4	5	2	162	Targeted Rates
<b>Total</b>	<b>1,182</b>	<b>817</b>	<b>706</b>		

# Water and Waste Stormwater

Cost of Service Statement	Forecast	Forecast	Forecast	Forecast
	Annual Plan Year 0 2005/06 (\$ 000)	LTCCP Year 1 2006/07 (\$ 000)	LTCCP Year 2 2007/08 (\$ 000)	LTCCP Year 3 2008/09 (\$ 000)
Operating Costs	735	927	960	1,095
Interest	0	0	0	0
Depreciation	1,081	1,030	1,059	1,068
Operating Income	(150)	(158)	(161)	(166)
<b>NET OPERATING COST</b>	<b>1,666</b>	<b>1,799</b>	<b>1,858</b>	<b>1,997</b>
Capital Expenditure	758	1,182	817	610
Loan Repayments	0	0	0	0
Transfers to Funds	0	0	0	0
Less				
Depreciation and Other Unfunded Items	(973)	(922)	(946)	(950)
<b>TOTAL FUNDING REQUIRED</b>	<b>1,451</b>	<b>2,059</b>	<b>1,729</b>	<b>1,657</b>
<b>Funded by :</b>				
Targeted Rates	1,336	1,498	1,729	1,657
Loans Raised	0	0	0	0
Transfers from Funds	115	111	0	0
Accumulated Funds	0	450	0	0
<b>TOTAL FUNDING</b>	<b>1,451</b>	<b>2,059</b>	<b>1,729</b>	<b>1,657</b>

## 10 Year Financial Forecast



## Overview

The Solid Waste division is responsible for the management of solid waste within Upper Hutt to ensure waste is minimised and disposed of appropriately. This includes:

- Administration of contracts for collection services
- Planning for the future
- Education on waste matters.

Urban household and central city waste and recycling collection services are carried out by contract. Local people and businesses are able to use the Silverstream Landfill, which is owned by the Hutt City Council. Services are paid for by the user, either through purchase of refuse bags or through landfill fees.

The Hutt Valley Waste and Management Plan outlines the high level strategy for the future, by which the Hutt City Council and the Upper Hutt City Council will jointly manage waste. The Hutt Valley Waste and Management Plan has been prepared using the new policy framework established by the *New Zealand Waste Strategy – Towards zero waste and a sustainable New Zealand*). At this stage the waste strategy is not legally binding on territorial local authorities provided positive progress is made to meet targets.

The City's interest in Silverstream landfill is identified in a 1972 deed with the Hutt City Council. No assets are owned by the Upper Hutt City Council.

For more information refer to the Solid Waste Management Plan 2004.

The Assessment of Water and Sanitary Services 2005 discusses the provision of solid waste services in Upper Hutt City. The key focus of the Assessment is the protection of public health in the City.

## Key Council Contributions to Community Outcomes

WELLBEING	OUTCOME	COUNCIL ROLE
ECONOMY ENVIRONMENT SOCIAL	<b>2 Vibrant City Heart</b>	ENSURE the waste collection keeps the central city looking good
ECONOMY ENVIRONMENT	<b>3 Robust Innovative &amp; Growing Economy</b>	ENSURE efficient waste collection services are available MANAGE waste materials well
ENVIRONMENT	<b>4 Green &amp; Attractive Living Environment</b>	MANAGE waste materials well EDUCATE to minimise waste PLAN for sustainable development
SOCIAL ENVIRONMENT ECONOMY	<b>5 Safe, Healthy &amp; Strong Community</b>	ENSURE a safe, reliable and affordable waste and recycling collection is available

## Key Issues and Responses by Council

### 1. Management of Waste

The New Zealand Waste Strategy, released in 2002, places a strong emphasis on minimising and better managing waste, from the point of generation through to the final point of disposal. It repeats the strategies that have guided waste management for some years:

- Reducing waste at the points of product generation and consumption
- Re-using materials when possible
- Recycling materials
- Recovering materials from waste products
- Treating waste to minimise any adverse effects
- Disposing of waste in environmentally sound ways.

Upper Hutt City Council, in conjunction with Hutt City Council, has adopted a Waste Management Plan that has its own targets based on the New Zealand Waste Strategy.

Council has made a number of responses to these challenges, in association with the Hutt City Council.

- **Recycling**  
Currently, about 91% of Upper Hutt householders are covered by the weekly household recycling service. It is Council's aim to reach the target of 95% in the New Zealand Waste Strategy. Recyclable material is also collected from informal pick up points at the entry to the Akatarawa Valley and on the Main Road North adjacent to the Plateau Road intersection.
- **Green Waste**  
Green waste is currently landfilled. When it decomposes it produces methane gas which is collected and used to generate electricity. This, in turn is fed into the national grid. Currently there is no alternative economically feasible option for diversion. Both Councils will continue to monitor options.
- **Hazardous [Special] Waste**  
The Hazmobile is contracted to visit Upper Hutt once a year to enable local people to drop off small quantities of household hazardous goods for disposal.
- **Construction & Demolition Waste**  
While the New Zealand Waste Strategy proposes targets for reduction of construction and demolition wastes, there is no known local market for this material. Should such a market develop, then Council will review how best to use it.
- **Waste Disposal**  
The two Councils already achieve full cost recovery from users of the Silverstream Landfill. Upper Hutt's share of revenue from landfill charges is used to cover costs of this activity, and also the cost of the recycling service.
- **Monitoring and Waste Targets**  
A programme for measuring the types and quantities of various classes of waste products is in place.
- **Education**  
Council will prepare information for households on waste minimisation, waste reduction and recycling.

**Significant Negative Effects**

This activity does not have any significant negative effects on the social, economic, environmental or cultural wellbeing of the local Community when the asset is properly maintained.

**Level of Service Objectives and Performance Measures**

Indicator	Performance Measure	Target 2006/07	Targets for Future Years
<b>Objective:</b>		<b>Council will ensure that there is a weekly collection for urban household waste and recyclable material.</b>	
<b>1</b>	<b>SATISFACTION</b>		
1a	Household Refuse Collection	Community satisfaction with Household Refuse Collection	95% of respondents satisfied or very satisfied <sup>1</sup>
1b	Recycling	Community satisfaction with kerbside recycling collection	95% of respondents using the service are satisfied or very satisfied with the way the kerbside collection programme meets their aspirations to recycle <sup>1</sup>
<b>Objective:</b>		<b>Council will encourage waste minimisation through reduction, re-use, recycling and treatment.</b>	
<b>2</b>	<b>QUANTITY OF WASTE</b>		
2a	Quantity of Household Refuse Collection	Reduce the annual tonnage of refuse collected	Reduce by 2.5% compared to previous year <sup>2</sup>
2b	Quantity of Recycling	Increase the weight of recycling	Increase to 100kg per household per year <sup>3</sup>

<sup>1</sup> Annual Community Survey

<sup>2</sup> Council data

<sup>3</sup> In-house report using contractor's data

## Water and Waste **Solid Waste**

<b>Cost of Service Statement</b>	Forecast Annual Plan Year 0 2005/06 (\$ 000)	Forecast LTCCP Year 1 2006/07 (\$ 000)	Forecast LTCCP Year 2 2007/08 (\$ 000)	Forecast LTCCP Year 3 2008/09 (\$ 000)
Operating Costs	214	231	237	259
Interest	0	0	0	0
Depreciation	0	0	0	0
Operating Income	(343)	(433)	(447)	(461)
<b>NET OPERATING COST</b>	<b>(129)</b>	<b>(202)</b>	<b>(210)</b>	<b>(202)</b>
Capital Expenditure	0	0	0	0
Loan Repayments	0	0	0	0
Transfers to Funds	0	0	0	0
Less				
Depreciation and Other Unfunded Items	(2)	(1)	(1)	(1)
<b>TOTAL FUNDING REQUIRED</b>	<b>(131)</b>	<b>(203)</b>	<b>(211)</b>	<b>(203)</b>
<b>Funded by :</b>				
General Rates	(131)	(203)	(211)	(203)
Loans Raised	0	0	0	0
Transfers from Funds	0	0	0	0
<b>TOTAL FUNDING</b>	<b>(131)</b>	<b>(203)</b>	<b>(211)</b>	<b>(203)</b>

### 10 Year Financial Forecast

