

# WATER SUPPLY

## 1 COMMUNITY OUTCOMES

The Water Supply group of activities primarily contributes to the following community outcome

### ESSENTIAL SERVICES

High-quality and secure infrastructure and services meet our everyday needs. These are developed and maintained to support the sustainable growth of the region now and in the future

by collecting, treating and delivering water to the following cities – Lower Hutt, Upper Hutt, Porirua and Wellington. This requires Greater Wellington to maintain infrastructure and plan to meet future demand. We also promote the careful use of water and build resilience in the system to cope with emergencies.

This group of activities also contributes to the following outcomes:

**Healthy Community** by ensuring that drinking water standards set by the Ministry of Health are met

**Prepared Community** by planning the reinstatement of water supply following an emergency event

**Healthy Environment** by encouraging people to use water wisely so that the environmental impacts of water supply operations are reduced

## 2 WHAT WE WANT TO ACHIEVE

The table opposite sets out our objectives and long-term targets, along with some baseline information. It also shows the corresponding community outcome measures. Additional measures are also included for assessing other aspects of our performance.

## 3 WHAT WE DO AND WHY

### 3.1 Water collection, treatment and delivery

Greater Wellington collects, treats and delivers water to the Wellington metropolitan area (Lower Hutt, Upper Hutt, Porirua and Wellington). The Wellington Regional Water Board Act 1972 is Greater Wellington's mandate for providing these services. There is a network of three main treatment plants (Te Marua, Waterloo and Wainuiomata) and a standby plant at Gear Island. Water is taken from the Hutt, Wainuiomata/Orongorongo catchments and the Waiwhetu aquifer. There is water storage at the Stuart Macaskill lakes at Te Marua. The network is integrated, thus allowing economies of scale and reducing risk. Water supplied is treated to comply with the Drinking Water Standards for New Zealand and the Health (Drinking Water) Amendment Act 2007.

Greater Wellington supplies water to the four cities in the region on a wholesale basis. These cities distribute the water to the end users. Greater Wellington charges the cities for this service through a wholesale water levy.

### 3.2 Water supply infrastructure

Water supply is an essential service and so it is imperative that infrastructure is developed to keep pace with demand and changing technologies. Greater Wellington continually invests in infrastructure upgrades to meet increasing demand and changing technologies.

### 3.3 Planning for future water demand and supply

We need to ensure that we can supply water now and in the future. We plan for future needs by projecting population growth and consumption for each city. Good planning is important as the commissioning of additional water sources requires a long lead-in time. Water is essential for health and, indeed, life and we cannot afford to undersupply.



## WHAT WE WANT TO ACHIEVE

OBJECTIVES	HOW WE MEASURE PROGRESS WITH COMMUNITY OUTCOMES	ADDITIONAL MEASURES	LONG-TERM TARGETS	BASELINE
Provide high-quality drinking water	Compliance with the biological and chemical sections of the Drinking Water Standards for NZ 2005 (Revised 2008) <b>ESSENTIAL SERVICES</b>	<ul style="list-style-type: none"> <li>Compliance with ISO 9001:2000 for water quality management</li> <li>Quality of water supplied</li> </ul>	<p>All water supplied will meet the Drinking Water Standards for NZ</p> <p>The gradings of the following treatment plants and the distribution system will be maintained or improved:</p> <ul style="list-style-type: none"> <li>Te Marua – A1</li> <li>Wainuiomata – A1</li> <li>Waterloo – A1</li> <li>Gear Island – A1</li> <li>Distribution system – a1</li> </ul>	<p>Compliance achieved in 2007 (confirmation not yet available for 2008)</p> <p>The target represents current gradings with the exception of Waterloo, which currently has a B grading and Gear Island which is ungraded</p>
Ensure there is a secure water supply	Security of the water supply system <b>ESSENTIAL SERVICES</b>		Supply security will meet a 2% probability of shortfall (one in 50-year drought standard)	December 2008 – 3.9% (1 in 26 years)
Minimise the environmental effects of water supply operations		Compliance with certification standards	The ISO 14001:2004 standard for environmental management will be maintained	Achieved to date
Ensure that the water supply network is as resilient as possible	Plans in place for improving speed and ease of reinstating water supply following natural disasters <b>PREPARED COMMUNITY</b>		Improvements to the resilience of the system will be carried out annually to the satisfaction of Council	Annual improvements have been carried for the 10 years, eg, in 2007/08 emergency connection points were installed across the fault line at Te Marua
Reduce water use	Per capita gross water consumption <b>ESSENTIAL SERVICES</b>		Per capita gross consumption of water will decrease at a rate of at least 10% over 10 years	2007/08 – 399 litres per person per day gross consumption

### 3.4 Water conservation programmes

Greater Wellington promotes the wise use of water through advertising and education programmes and other promotional activities.

The less water we use means less impact on the environment – less water being abstracted from rivers and aquifers, less infrastructure being constructed and less electricity generated for pumping. Supplying less water reduces Greater Wellington's carbon footprint. It also means less or delays in expenditure on new infrastructure, eg, dams. Further, reduced water usage means less waste water for the city councils to treat.

## 4 FURTHER INFORMATION

### Legislation and regulations

Drinking-Water Standards for New Zealand 2005 (Revised 2008 with effect from 31 December 2008)

Health ( Drinking Water) Amendment Act 2007

### Greater Wellington Policies, Strategies and Plans

Asset Management Plan (Water Supply) 2004 and 2008 addendum

Asset Management Plan Surface Water Collection areas 2004

Public Health Risk Management Plans (in preparation)

Wellington Metropolitan Water Supply Development plan

Regional Water Strategy (in preparation)

## 5 ASSUMPTIONS AND RISKS

The following assumptions were made for the development of this plan. Risks to the plan will occur if these assumptions are not borne out.

- The population of the four city councils will continue to grow at a rate midway between the high and medium-growth forecasts of Statistics New Zealand and will reach approximately 418,000 by the end of the period
- The water consumption per person gross will continue to trend slightly downwards, as has occurred over the past 10 years. In 1999 consumption was 430 litres/head/day but by 2008 this had reduced to 399. However, this planning approach is conservative as we hope that our water conservation work will further reduce the rate of consumption

- Greater Wellington will continue to set as its supply standard of a 2% probability of a shortfall event (1 in 50-year drought). An "event" is defined as a year that contains at least one shortfall day
- There will be no requirement for major capital works arising from the Ministry of Health's ongoing reviews of Drinking Water Standards
- The review of the Regional Freshwater Plan in 2010 will not impact significantly on the allocation of water for public water supply purposes
- The water levy will be adjusted to meet the impact of any significant changes to interest rates. At present, the water supply debt is approximately \$40 million

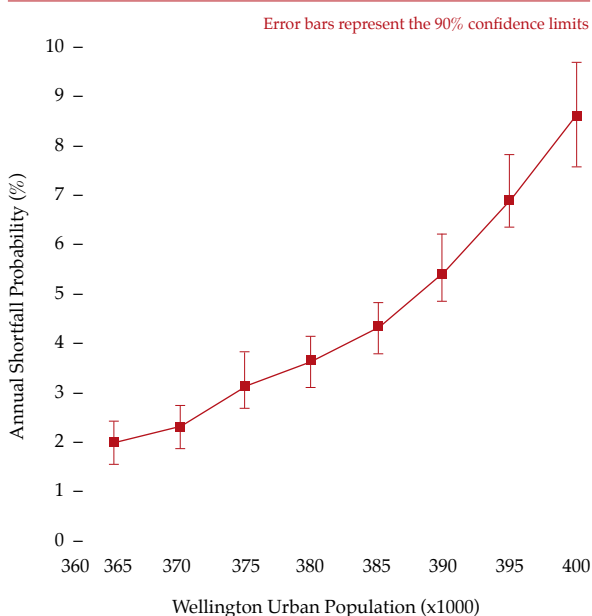
## 6 THE ISSUES WE ARE FACING

### SECURITY OF SUPPLY

For a number of reasons, the population in the four cities has grown much more quickly than was projected a few years ago by Statistics New Zealand.

Currently, Greater Wellington is unable to meet its 2% probability of shortfall standard, even though planning for new infrastructure started a few years ago when population projections were revised upwards.

The graph below shows how the shortfall probability with current water supply capacity relates to population growth. Current population and demand creates the situation where there is a 3.9% probability of shortfall (1 in 25-year event).



Once the security standard drops below about 7% probability of shortfall (1 in 15 years), it is difficult to operate the Wellington water supply system without severe constraints on discretionary water use over the summer period.

Unless more water sources are developed and/or new infrastructure built or demand reduced, the situation will get worse.

A number of capital projects are proposed to allow a return to the 2% probability of shortfall within three years and provide for future growth. Capital projects for future growth will proceed as required to maintain the 2% probability shortfall. The timing of these projects will depend on population growth and per capita demand.

**WATER CONSERVATION VERSUS NEW SUPPLY SOURCES**

A Regional Water Strategy is being developed to ensure that we take a considered and integrated approach to the management of water in the region.

The Regional Water Strategy is likely to have many implications for the Water Supply group of activities. It aims to reduce per capita demand progressively. If this can be achieved, then capital expenditure on major new infrastructure can be deferred. Because of population growth, the overall demand for water is probably going to increase. Therefore, Greater Wellington has identified five projects (three short-term and two medium to long-term) to both reinstate and maintain security of supply within the 2% annual shortfall target. These are greater intake from Kaitoke weir, increased storage at Stuart Macaskill Lakes, a reservoir in central Wellington, development of the Upper Hutt aquifer and a dam at Whakatikei in the Akatarawa Forest, with associated treatment plant. The need for some or all of these depends on how successful we are with reducing per capita demand. Some of these projects could be deferred if consumption reduces. This 10-Year Plan assumes, however, that the rate of reduction of consumption will remain unchanged.

**WATER QUALITY STANDARDS**

There is an ongoing challenge to continue to achieve the highest level of Ministry of Health gradings for water infrastructure. Greater Wellington has continually invested in water-treatment processes and delivery systems to achieve current gradings. The Te Marua and Wainuiomata water-treatment plants are graded A1 and the water distribution system is graded a1.

These are the highest of the Ministry of Health’s gradings. Waterloo water treatment plant is graded B because of Hutt City’s requirements for non-chlorinated water. A standby plant at Gear Island is currently ungraded although work is in progress to achieve an A1 grading.

**ELECTRICAL ENERGY**

Approximately 75% of Greater Wellington’s carbon footprint is from energy used in water treatment and distribution, and electrical energy is an ever-increasing percentage of the operating costs for water supply. Both the cost and environmental issues need to be addressed. For this reason, a number of mini hydro-generation projects, that were previously uneconomic, are now being reviewed. It is possible that about 20% self generation may be possible from these sources. Other renewable sources will be investigated for part of the remaining power needs.

**CONTROLLING COSTS AND THE WATER LEVY**

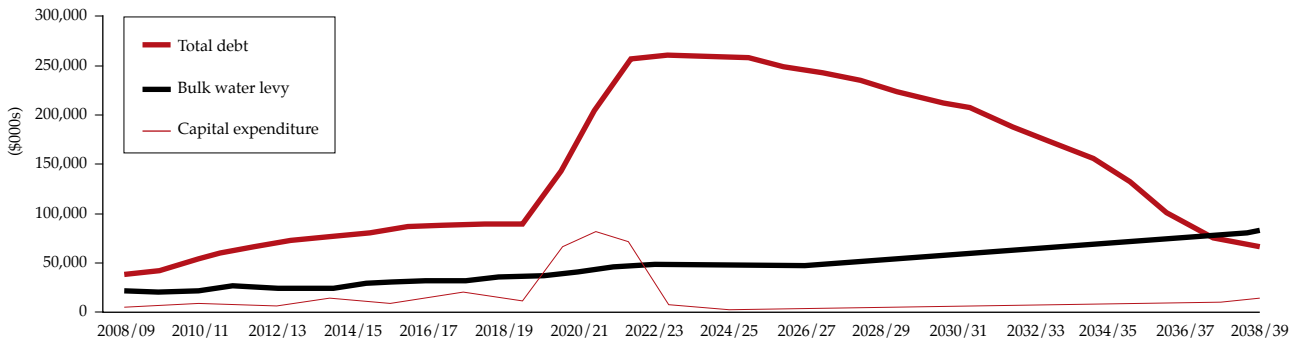
Continuing to find ways to reduce costs and prevent a rise in the wholesale water levy is challenging. The levy has decreased twice and increased once in the past 10 years. For 2009/10, the levy will be the same as for 2008/09, less than it was in 1994/95. Efficiency gains and reduced debt servicing have contributed to this situation.

Proposed changes in levies over the life of this 10-Year Plan are as follows:

YEAR	\$m (GST EXCLUSIVE)	CHANGE (%)
2009/10	23.460	nil
2010/11	24.234	3.3
2011/12	24.791	2.3
2012/13	26.401	6.5
2013/14	28.034	6.2
2014/15	29.797	6.3
2015/16	31.702	6.4
2016/17	33.729	6.4
2017/18	35.919	6.5
2018/19	38.290	6.6

The levy increases proposed are largely due to the need for new infrastructure. The increases can be moderated substantially if the various initiatives to reduce per capita demand are accepted and supported by the community. If the required demand reduction does not occur and the Whakatikei dam is needed by 2022 to ensure supply, a 60% increase will be required in 2008 dollar terms.

The graph below shows the levy and debt projections if the Whakatikei dam is completed in 2022



### PLANNING FOR EMERGENCIES

With several water-treatment plants and more than 180km of pipelines, as well as other infrastructure, the system is susceptible to a range of incidents. For site-specific events, standby systems should enable a rapid return to partial or full service. A major seismic event, particularly one involving a movement on the Wellington fault, will lead to considerable disruption to the water supply system. It is expected it would take weeks to undertake repairs to restore part supply.

For some years, mitigation work has taken place to prepare for a range of events and provision is made in the 10-year capital works for this work to continue.

It is worth noting that new water sources, particularly on the western side of the Wellington faultline, would increase the potential for quick recovery after a major earthquake.

## 7 WHO WE WILL WORK WITH

Hutt City Council  
 Porirua City Council  
 Upper Hutt City Council  
 Wellington City Council  
 Tangata whenua  
 Ministry of Health  
 Public Health Service

## 8 WHAT WE ARE GOING TO DO

### ACTIVITY 1

### Water collection, treatment and delivery

For a description of this activity see 3.1.

#### OUR SERVICES

- Supply water to the four cities in the region that meets or exceeds national quality standards and meets reasonable daily demand
- Ensure security of supply is not less than a 2% possibility of shortfall.

#### HOW WE MEASURE OUR PERFORMANCE

- Compliance with drinking water standards for biological, chemical, and aesthetic determinands
- Grading of treatment plants
- Reservoir levels
- Breaches of security of supply standard
- Level of deferred maintenance

#### WHERE WE ARE NOW

Greater Wellington has consistently met the requirements of the Drinking-Water Standards for biological, chemical and aesthetic determinands.

Two treatment plants have achieved the highest Ministry of Health gradings. A third at Waterloo is graded B because of the Hutt City Council’s request for un-chlorinated water from this plant. A standby plant at Gear Island is currently ungraded (U). Work is in progress to achieve an A1 grading. The whole water supply distribution system is graded a1, the highest possible.

Maintaining customer reservoirs within the limits is a challenge, particularly over the summer period. It was nearly achieved in 2006/7. A summer drought in 2007/8 meant the standard was not achieved for the full year.

Currently the security standard is a 3.9% probability of shortfall (1 in 25-year drought) instead of the desired 2% probability.

Adequate funding has been allocated for many years to ensure there is no deferred maintenance.

## WHAT WE PLAN TO DO AND BUDGETS

### 2009/10 – BY 30 JUNE 2010

TARGET	BUDGET
Water will be supplied to the four cities in the region that meets or exceeds national quality standards and meets reasonable daily demand.	\$21,679,000
Treatment plant gradings will be maintained or improved	
Security of supply will be 3% probability of shortfall (1 in 33-year drought)	
There will be no deferred maintenance in the system	
The current Hansen asset-management system will be replaced by the SAP asset-management system integrated directly with SAP financial system	\$445,000

### 2010/11 – BY 30 JUNE 2011

TARGET	BUDGET
Water will be supplied to the four cities in the region that meets or exceeds national quality standards and meets reasonable daily demand	\$23,679,000
Treatment plant gradings will be maintained or improved	
Security of supply will be at a 2.5% probability of shortfall (1 in 40-year drought)	
There will be no deferred maintenance in the system	

### 2011/12 – BY 30 JUNE 2012

TARGET	BUDGET
Water will be supplied to the four cities in the region that meets or exceeds national quality standards and meets reasonable daily demand	\$24,558,000
Treatment plant gradings will be maintained or improved	
Security of supply will be no less than 2.0% probability of shortfall (1 in 50-year drought)	
There will be no deferred maintenance in the system	

### 2012 – 2019

Continue to deliver the services specified in the level of service. Greater Wellington will continue to supply the four cities with water that meets or exceeds the Drinking-Water Standards for New Zealand and meets reasonable daily demand

## ACTIVITY 2

**Water supply infrastructure**

For a description of this activity see 3.2.

**OUR SERVICES**

Ensure that water supply assets are maintained and their performance is continually improved so that Greater Wellington has a reliable water supply system. This will be achieved through an asset-management plan that reflects international best practice for infrastructure asset management.

**HOW WE MEASURE OUR PERFORMANCE**

- Implementation of asset-management plans
- Capital expenditure projects for new infrastructure are built on time and within budget

**WHERE WE ARE NOW**

Capital expenditure has varied between \$3.5 million per annum (2002/03) and \$6.5 million per annum (2005/06), and has been adequate to ensure the water supply system functions to a high degree of reliability.

**WHAT WE PLAN TO DO AND BUDGETS****2009/10 – 30 JUNE 2010**

TARGET	BUDGET
Assets will be replaced or enhanced in accordance with the asset-management plan	\$893,000

**2010/11 – BY 30 JUNE 2011**

TARGET	BUDGET
Assets will be replaced or enhanced in accordance with the asset-management plan	\$917,000

**2011/12 – 30 JUNE 2012**

TARGET	BUDGET
Assets will be replaced or enhanced in accordance with the asset-management plan	\$943,000
Asset management plans will be maintained in accordance with best practice (eg, International Infrastructure Management Manual or (BS/PAS 55:2003))	\$244,000

**2012 – 2019**

Continue to replace and enhance assets in accordance with the asset-management plan, and in particular, replace the cast-iron water main through Wainuiomata at a cost of \$6.9 million

ACTIVITY 3

**Planning for future water demand and supply**

For a description of this activity see 3.3.

**OUR SERVICES**

Ensure that plans are in place for Greater Wellington to supply enough water to meet the reasonable needs of the present and future populations of the four cities, taking into account environmental, social, cultural and economic needs.

**HOW WE MEASURE OUR PERFORMANCE**

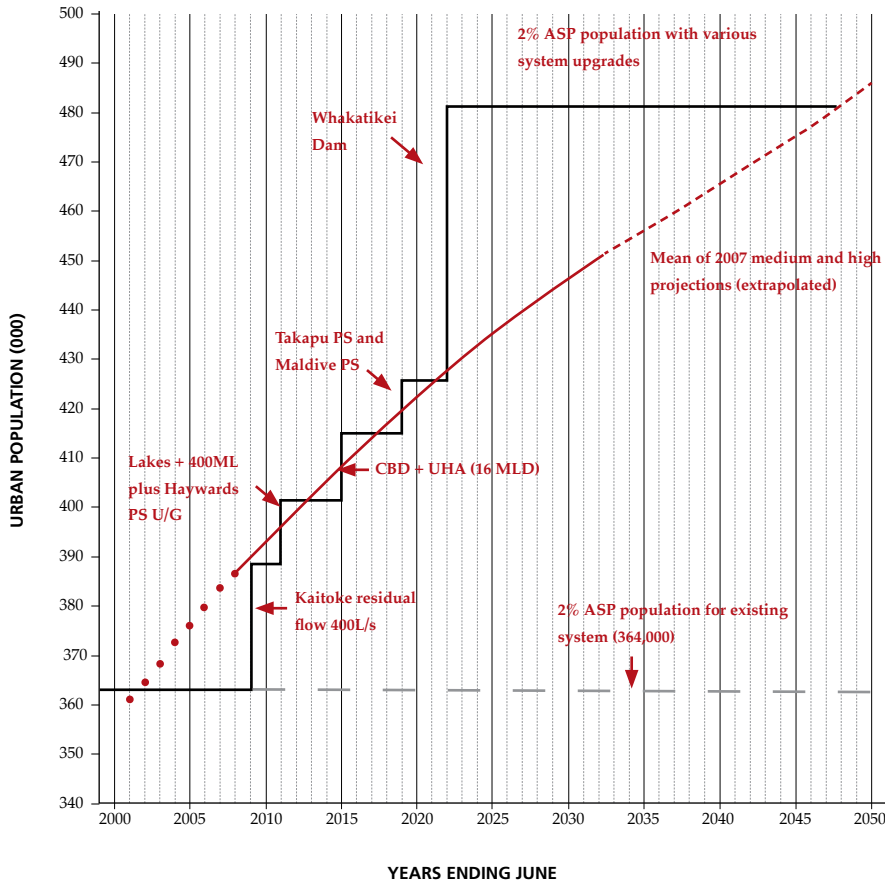
Scenarios are in place to achieve security of supply based on sound modelling methodology, and including both demand reduction and increase in supply.

**WHERE WE ARE NOW**

A Wellington Metropolitan Water Supply Development plan was completed in 2007/08. This is a supply-side response to meet the needs of a growing population and to restore the security of supply to a 2% probability of shortfall.

The graph below shows the most conservative timing for projects to meet future demand assuming there is no significant reduction in per capita water demand. Actual timing is dependent on the rate of population growth and any changes in per capita water consumption. There is an expectation that the Regional Water Strategy will result in acceptance of various initiatives leading to reduce demand. For metropolitan Wellington, this will potentially enable development of the Upper Hutt aquifer and/or the Whakatikei Dam to be deferred some years.

**TIMING OF UPGRADE ELEMENTS**



Note: ASP = Annual shortfall probability  
 PS = Pumping station  
 UHA = Upper Hutt aquifer  
 • Population



## WHAT WE PLAN TO DO AND BUDGETS

### 2009/10 – BY 30 JUNE 2010

TARGET	BUDGET
Major infrastructural developments will be undertaken in accordance with the Wellington Water Supply Development Plan	\$3,600,000
<ul style="list-style-type: none"> <li>Design will be completed and construction will commence for raising levels of the Stuart Macaskill Lakes</li> </ul>	\$1,800,000
<ul style="list-style-type: none"> <li>Investigations for upgrade of Haywards pumping station will be completed</li> </ul>	\$100,000
<ul style="list-style-type: none"> <li>Investigations for development of Upper Hutt aquifer and the application for resource consent will be completed</li> </ul>	\$100,000
<ul style="list-style-type: none"> <li>The Wainuiomata water treatment plant mini hydro-generator will be constructed</li> </ul>	\$1,600,000

### 2010/11 – BY 30 JUNE 2011

TARGET	BUDGET
Major infrastructural developments will be undertaken in accordance with the Wellington Water Supply Development Plan	\$6,858,000
<ul style="list-style-type: none"> <li>Construction for raising water levels at the Stuart Macaskill Lakes will be completed</li> </ul>	\$3,615,000
<ul style="list-style-type: none"> <li>Design will be completed and construction will begin for upgrade of Haywards pumping station</li> </ul>	\$1,962,000
<ul style="list-style-type: none"> <li>Construction will be completed and the Wainuiomata mini hydro-generator will be commissioned</li> </ul>	\$248,000
<ul style="list-style-type: none"> <li>Design will be investigated, and construction commenced of the Te Marua pumping station mini hydro-generator</li> </ul>	\$1,033,000

### 2011/12 – BY 30 JUNE 2012

TARGET	BUDGET
Major infrastructural developments will be undertaken in accordance with the Wellington Water Supply Development Plan	\$2,853,000
<ul style="list-style-type: none"> <li>Raising of water level of Stuart Macaskill Lakes will be completed</li> </ul>	\$211,000
<ul style="list-style-type: none"> <li>Haywards pumping station upgrade will be completed</li> </ul>	\$1,585,000
<ul style="list-style-type: none"> <li>Network valves will be upgraded</li> </ul>	\$317,000
<ul style="list-style-type: none"> <li>Preliminary design and planning for the CBD reservoir will be carried out</li> </ul>	\$212,000
<ul style="list-style-type: none"> <li>Design of Upper Hutt aquifer will be carried out</li> </ul>	\$528,000
<ul style="list-style-type: none"> <li>Design of Upper Hutt aquifer will be carried out</li> </ul>	\$528,000

### 2012 – 2019

The Wellington Metropolitan Water Supply Development Plan will continue to be implemented as follows:

- Complete construction of the Upper Hutt aquifer wells, treatment plant and pumping station
- Complete the Wellington CBD reservoir
- Construct pumping stations at Takapu Road and Maldive Street
- Complete the design of the Whakatikei Dam and start construction, if required

The four projects above are expected to cost \$34 million in the seven-year period

## ACTIVITY 4

**Water conservation programmes**

For a description of this activity see 3.4.

**OUR SERVICES**

Promote the responsible use of water by consumers and encourage people to reduce their demand for water.

**HOW WE MEASURE OUR PERFORMANCE**

- Per capita consumption of water (in the four cities)
- Total consumption of water

**WHERE ARE WE ARE NOW**

Per capita consumption of water has decreased from a high point of 433 litres/head/day in 2001 to 399 litres /head/day in 2008. A range of factors other than water conservation programmes will have helped achieve this reduction, such as an increase in the number of apartments in Wellington city with a lesser daily water usage, leak-detection work by city councils, as well as voluntary water savings arising from a greater general awareness of the need to use water wisely.

**WHAT WE PLAN TO DO AND BUDGETS****2009/10 – BY 30 JUNE 2010**

TARGET	BUDGET
Increases in total consumption will be held to levels consistent with population change and targets for per head consumption	\$420,000

**2010/11 – BY 30 JUNE 2011**

TARGET	BUDGET
Increases in total consumption will be held to levels consistent with population change and targets for per head consumption	\$432,000

**2011/12 – BY 30 JUNE 2012**

TARGET	BUDGET
Increases in total consumption will be held to levels consistent with population change and targets for per head consumption	\$443,000

**2012 – 2019**

Carry out the following water conservation programmes:

- A spring campaign promoting measures to reduce the need for garden watering over summer
- A summer campaign focusing on why we need to take care with watering in summer and what people can do to minimise water use yet still keep a healthy garden
- An autumn/winter campaign to reduce all-year “base” demand. This will help keep water conservation “top of mind” year-round, raising awareness that water is a finite resource, and more careful use of it makes economic and environmental sense. We will also look for ways to build cross-sector relationships and make appropriate technology, eg, water-efficient showers and dual flush toilets more accessible for regional residents

## 9 KEY PROJECT FOR 2009/10

- Start construction for raising the Stuart Macaskill Lakes
- Complete investigations required for the upgrade of Haywards Pumping Station
- Complete an application for a resource consent to take water from the Upper Hutt aquifer
- Construct a mini hydro-generator at Wainuiomata water treatment plant

## 10 ASSETS

### ASSETS

The depreciated value of regional water supply infrastructure assets, including buildings at 1 July 2008 was \$320.6 million, made up as follows:

Two storage lakes, three reservoirs and associated equipment	\$46.9 million
Three treatment plants and one standby plant, intake structures	\$139.6 million
Pipelines, 182km approx, 10 tunnels and control systems	\$122.8 million
14 pumping stations	\$11.3 million
	<b>\$320.6 million</b>

### ASSET-MANAGEMENT PRINCIPLES

Key asset-management principles include:

- Service levels are set in accordance with
  - The Drinking-Water Standards for New Zealand 2005 (Revised 2008)
  - Greater Wellington's policy of meeting demand with no shortfall except for drought conditions that can be expected on average once every 50 years
- Demand is carefully monitored
- Greater Wellington undertakes ongoing modelling of the adequacy of the water treatment and water distribution assets to meet demand and standards
- New assets are developed to meet needs of increased population while still maintaining the 2% security of supply policy
- New assets are debt funded up to 35 years with the cost of debt recovered through the water levy
- A comprehensive asset-management plan is in place for the wholesale supply infrastructure to guide the maintenance, renewal and replacement programme
- Assets are insured through a mix of external insurance and a self-insurance investment fund
- An amount of capital expenditure is budgeted each year to improve the seismic performance of the water supply system

### CAPITAL UPGRADE PROGRAMME

This 2009-19 LTCCP provides for a total of \$101.7 million (inflated dollars) of capital upgrade work for the full 10-year period, including \$6.9 million for 2009/10.

WHAT	2009/10 (\$m)	2009-19 (\$m)
Water services and water treatment	0.79	9.63
Pipelines	0.92	15.36
Pump stations	0.12	1.12
Reservoirs, monitoring and control equipment	0.56	3.34
Minor works	0.81	7.98
Water supply – major development	2.07	59.16
Renewable energy (hydro generation)	1.60	5.11
<b>Total</b>	<b>6.87</b>	<b>101.7</b>

### MAINTENANCE AND MONITORING

Assets will be monitored through the SAP asset-management system and maintained in accordance with the asset-management plan in such a way that there is no substantive deferred maintenance in the system. Maintenance is funded by the water levy.

## 11 NEGATIVE EFFECTS ON WELL-BEINGS

The Water Supply group of activities has a positive effect on social and economic well-beings when standards are met, and the required volume of water is made available. However, risks are attached to this group of activities with respect to environmental well-being. These risks involve chemical spillages and discharges. These risks are reduced by complying with the Environmental Management System (ISO 14001:2004).

## 12 FINANCIAL INFORMATION

### WATER SUPPLY

#### PROSPECTIVE FUNDING IMPACT STATEMENT

	2009/10 \$000s	2010/11 \$000s	2011/12 \$000s
<b>FUNDING STATEMENT</b>			
General rate	-	-	-
Targeted rate	-	-	-
Water supply levy	23,460	24,234	24,791
Government subsidies	-	-	-
Interest and dividends	916	1,019	1,276
Other operating revenue	963	991	1,019
<b>Operating revenue</b>	<b>25,339</b>	<b>26,244</b>	<b>27,086</b>
Direct operating expenditure	15,642	17,336	17,677
Finance costs	3,109	3,413	3,815
Depreciation	7,389	7,493	7,703
<b>Operating expenditure</b>	<b>26,140</b>	<b>28,242</b>	<b>29,195</b>
<b>Operating surplus/(deficit)</b>	<b>(801)</b>	<b>(1,998)</b>	<b>(2,109)</b>
<b>Less/(add):</b>			
Capital expenditure	7,165	10,218	8,582
Proceeds from asset sales	(52)	(75)	(61)
Loan funding	(6,871)	(9,835)	(8,262)
<b>Levy-funded capital expenditure</b>	<b>242</b>	<b>308</b>	<b>259</b>
Debt repayment	4,680	3,394	3,267
Investment additions	1,666	1,794	2,068
Operational reserve movements	-	-	-
Working capital movements	-	-	-
Non-cash items <sup>1</sup>	(7,389)	(7,493)	(7,703)
<b>Net funding required</b>	<b>-</b>	<b>-</b>	<b>-</b>

	2009/10 \$000s	2010/11 \$000s	2011/12 \$000s
<b>OPERATING REVENUE</b>			
Plan, collect, treat and deliver water	24,919	25,812	26,643
Water conservation programmes	420	432	443
<b>Total operating revenue</b>	<b>25,339</b>	<b>26,244</b>	<b>27,086</b>
<b>OPERATING EXPENDITURE</b>			
Collect, treat and deliver water	25,720	27,810	28,752
Water conservation programmes	420	432	443
<b>Total operating expenditure</b>	<b>26,410</b>	<b>28,242</b>	<b>29,195</b>
<b>CAPITAL EXPENDITURE</b>			
Water sources	1,970	4,854	2,885
Water treatment plants	970	899	814
Pipelines	920	382	1,395
Pump stations	140	2,324	1,585
Reservoirs	-	-	74
Monitoring and control	670	305	454
Seismic protection	200	207	211
Energy	1,600	248	-
Other	400	617	844
<b>Capital project expenditure</b>	<b>6,870</b>	<b>9,835</b>	<b>8,262</b>
Land and buildings	-	-	-
Plant and equipment	81	84	85
Vehicles	214	299	235
<b>Total capital expenditure</b>	<b>7,165</b>	<b>10,218</b>	<b>8,582</b>

<sup>1</sup> Non-cash items includes depreciation

For more information on the revenue and financing mechanisms applicable to this group of activities, please refer to the Revenue and Financing Policy in the *Policies Document*, p35

Please note that all figures on this page exclude GST.

## WATER SUPPLY

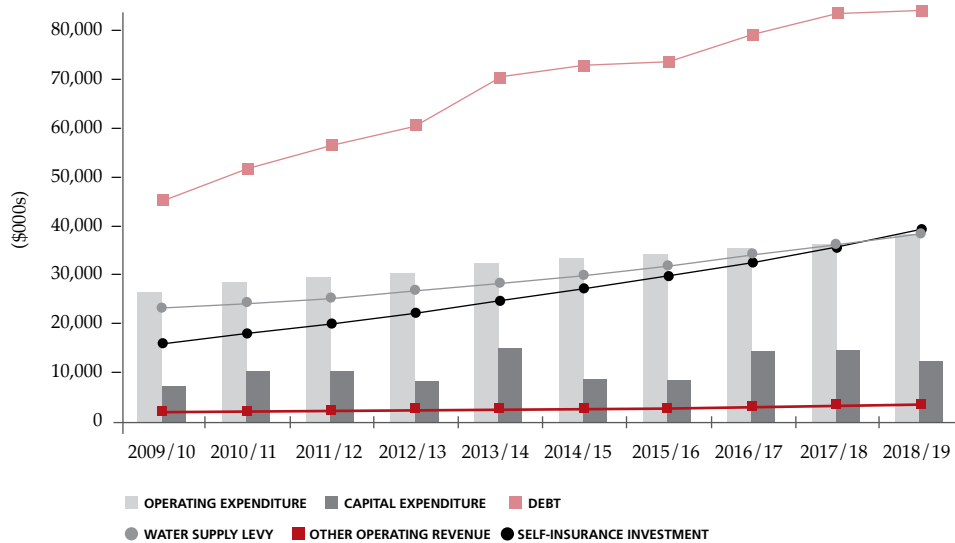
### 10-YEAR FINANCIAL FORECAST

This graph places the prospective funding impact statement for the next year in the context of the 10-year planning horizon.

Key points to note are:

- The water supply levy is forecast to increase over the 10-year period due to higher costs and to fund the forecast new water supply development from 2012/13 onwards
- The requirement for a new water source in 2012/13 is based on current population growth assumptions and no change to the average water consumption per person
- As a result of the increasing capital expenditure, debt is forecast to peak at \$83.3 million in 2018/19
- The water supply self-insurance investment rises steadily over the 10-year period, with no planned drawdowns from the fund

Please note that these figures exclude GST.



(\$000s)	2009/10	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Operating expenditure	26,140	28,242	29,195	30,173	32,129	33,284	33,965	34,975	36,034	37,974
Capital expenditure	7,165	10,218	8,582	8,269	14,781	8,405	8,002	13,923	14,243	12,002
Debt	45,154	51,595	56,590	60,411	70,127	72,575	73,218	78,588	82,847	83,252
Water supply levy	23,460	24,234	24,791	26,402	28,034	29,797	31,702	33,729	35,919	38,291
Other operating revenue	1,879	2,010	2,295	2,562	2,646	2,772	2,827	3,014	3,369	3,601
Self-insurance investment	16,081	17,875	19,943	22,274	24,679	27,203	29,774	32,518	35,608	38,919