



# Water supply annual report

For the year ended 30 June 2005

Quality for Life



greater WELLINGTON  
REGIONAL COUNCIL

Water



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## Cover

In the foreground, Old Haywards Road can be seen at the northern boundary of Transpower's Haywards sub-station, running from Haywards Hill Road (at right) most of the way to State Highway 2. This route approximates the alignment of our Te Marua to Wellington water main. Roughly a third of the region's reticulated water supply flows through the main at this point, which is relatively vulnerable to movement on the Wellington Fault. Plans to 'toughen' this section of the pipeline were finalised in June 2005. Construction of the new section, which will skirt the southern boundary of the substation, is under way.

Credit: the Photo Library at GNS Science

# Introduction

## Reporting scope

This report covers the main achievements and challenges for Greater Wellington Regional Council's bulk water supply activity (Greater Wellington Water), for the 12 months to 30 June 2005.

The regional council's statutory reporting requirements are fulfilled by its annual report. This report is supplementary to the annual report and is intended to provide our territorial authority water supply customers and other stakeholders with a more detailed account of our bulk water supply operation.

The commentary on pages 3-10 reflects our long-term performance indicators and is referenced to objectives and targets from our management systems. It includes Social and Environmental sections in addition to financial reporting, consistent with a triple bottom line approach, but is limited to the scope of our performance indicators and management systems.

## Our purpose

We aim to provide enough high-quality water each day to meet the reasonable needs of the people of greater Wellington, in a cost-effective and environmentally responsible way.

## What we do

We collect, treat and distribute high-quality potable water to four city councils – Hutt, Porirua, Upper Hutt and Wellington – for their supply to consumers. This involves:

- operating four water treatment plants, 15 pumping stations and 183 km of pipeline
- supplying, on average, around 150 million litres of water daily – 1,730 litres every second – to meet the needs of about 367,000 people
- targeting at least an 'A' grade standard for our water treatment plants and distribution system, where consistent with customer requirements
- forecasting future water needs and planning to ensure they can be met
- being committed to environmentally responsible working practices
- managing water supply infrastructure assets valued at \$286 million<sup>1</sup>.

Every week we supply enough water to completely fill Wellington's Westpac stadium.

## Governance and organisation structure

Greater Wellington's water supply role is defined by the Wellington Regional Water Board Act (1972). Regional councillors are responsible for setting water supply policy; the regional council's Utility Services Committee oversees the work programmes that we carry out. Greater Wellington Water has five main functional areas: Operations (production and distribution); Laboratory; Engineering Consultancy (project design and management); Strategy and Asset (system planning, asset management, reporting and communications) and Support (financial, administrative and secretarial services).

## Performance indicators

Greater Wellington Water has six long-term performance indicators (PIs): water quality, security of supply, environmental management, customer service, business efficiency and health and safety. Each PI has related objectives and targets. Objectives for each PI and performance against short-term targets for 2004/05 start on page 23. Greater Wellington's long-term council community plan – Towards a Sustainable Region 2003-2013 – includes targets for each PI to 30 June 2006. Towards a Sustainable Region 2003-2013 and the 2005/06 Annual Plan are available on Greater Wellington's web site or by contacting us (see outside back cover for contact details).

## Management systems

Greater Wellington Water operates a quality management system (QMS), and an environmental management system (EMS), certified to international standards ISO 9001:2000 and ISO 14001:1996 respectively. Our laboratory holds International Accreditation New Zealand (IANZ) accreditation to ISO 17025, a dedicated quality management standard for laboratories.

Our management systems are based on a process of continuous review and improvement. The objectives and targets for both management systems appear in full from page 34. These management systems are independently audited annually.

<sup>1</sup> At 30 June 2004, following the most recent independent valuation

## Financial performance

- Water levy held despite higher operating costs
- Debt reduced by \$2.1 million
- Operating surplus of \$0.9 million

**Total operating costs increased by 2.6 percent (\$0.6 million) compared to 2003/04.** This was mainly due to increased contractor and consultants costs (up 21 percent on 2003/04). Net financing costs continue to fall as the ongoing debt level reduces and our self-insurance fund for the distribution network and the Stuart Macaskill lakes grows.

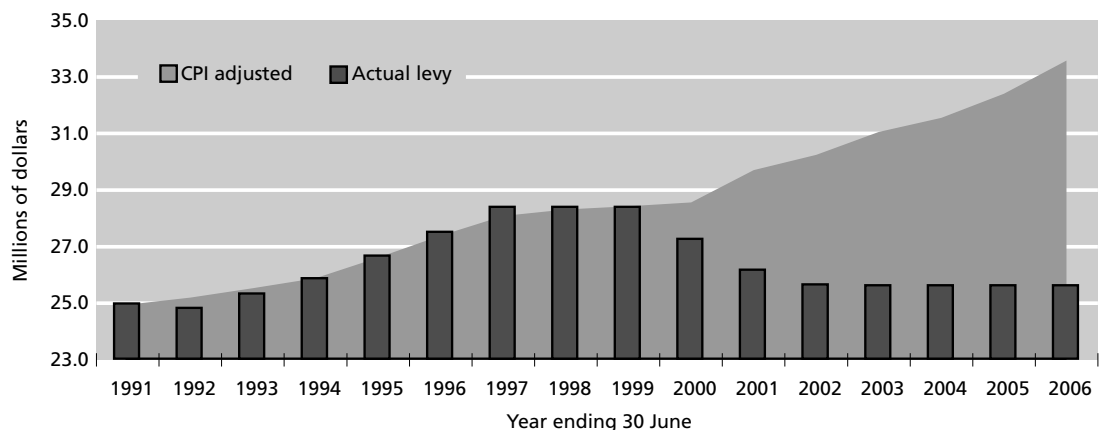
**An operating surplus of \$0.9 million was achieved.** The surplus was \$1.3 million ahead of budget. (QMS target 4.2.3, page 37)

**Debt was reduced by \$2.1 million during the year.** Our debt now stands at \$43.6 million; it has been cut by \$28.9 million since 30 June 1997<sup>2</sup>. Capital expenditure of \$31.3 million has been funded over the same period. Greater Wellington's treasury management policy specifies that debt should not exceed 220 percent of the water levy: it is currently 190 percent, \$6.6 million less than our target maximum. (QMS target 4.2.1, page 37)

**The bulk water levy was held at \$25.6 million (including GST).** The levy for 2005/06 has been set at the same level as for 2004/05 and the three previous years. Greater Wellington has held or cut the water levy for nine years in succession. In actual dollars the levy is as low now as it has been at any time since 1992/93. (QMS objective 4.2, page 37)

**Comparison with Watercare Services shows that our total supply costs remain competitive.** Watercare Services is the wholesale water supplier for greater Auckland. (See page 27, also QMS target 4.2.9, page 37)

## Water levy and inflation



The water levy for the year to 30 June 2006 has been set at \$25.6 million, just \$0.6 million more than the levy for the year to 30 June 1991. This represents a net increase in the levy of only 2.4 percent over 15 years.

<sup>2</sup> Prior to restructuring of Greater Wellington's water supply division.

## Environmental performance

- Water take essentially within consented limits
- Production efficiency maintained
- Energy use efficiency improved while chemical use efficiency was maintained
- Discharges essentially within consented limits
- EMS certification maintained to ISO 14001:1996

We are committed to operating in an environmentally responsible manner, consistent with the Resource Management Act 1991 (RMA) and the provision of water at a reasonable price. The main impacts of our operations on natural and physical resources relate to water take, energy and chemical use, discharge, and the disposal of waste. We operate an environmental management system to instill focus and discipline around these activities.

**EMS certification was maintained.** Our EMS passed its annual surveillance audit in September 2004, with no major issues raised by the auditor. Our EMS is certified to ISO 14001:1996. (QMS objective 7.1, page 38).

## Water take (see also PIs, page 24)

### Consent conditions were substantially met.

Full compliance was achieved for all but two consents. We exceeded the consented maximum instantaneous abstraction rate at Kaitoke weir on a single occasion after a lightning strike caused automated control equipment to fail. The consent manager noted conditions beyond our control and prompt remedial action in giving a 'mainly complying' assessment. The maximum abstraction rate from the Orongorongo water collection area was also exceeded. In that instance we received a 'partially complying' assessment in consideration of the extreme difficulty in obtaining accurate flow data from what is a very dynamic river system. (EMS target 1.3.1, page 40)

**Our total water take was 60,715 million litres, 4.2 percent more than during 2003/04.** Refilling the larger of the Stuart Macaskill lakes accounted for three percent of the total water take (1,830 million litres). The lake was emptied for cleaning in May 2004, to improve the quality of our untreated water reserve. Higher public demand for water during summer also contributed to the year-on-year increase in our requirement for source water (see page 27 and EMS target 4.1.1, page 41).

**Production efficiency was 94.3 percent.** Production efficiency represents the proportion of our metered water take that is either treated for supply to our customers or used to increase or refresh the reserve of untreated water held in the Stuart Macaskill lakes<sup>3</sup>.

The unaccounted-for water take was 5.7 percent of the total take, compared with 4.2 percent during 2003/04. A contributory factor was the failure of our abstraction meter at Kaitoke, which was identified in December 2004 as being accurate to within five percent only. Our abstraction consent requires the meter to have an accuracy of +/- two percent. A replacement meter could not be delivered before May when the faulty meter was replaced. A leak in the tunnel between the Kaitoke strainer house and Te Marua was also repaired in May; we expect this will help to reduce transmission losses. (EMS target 4.1.1, page 41)

**Discharge from the Stuart Macaskill lakes was reduced.** Discharge of untreated water from the lakes back to the Hutt River was 495 million litres, compared with 2,743 million litres during 2003/04<sup>4</sup>. This much reduced discharge was substantially due to one of the lakes having been emptied for cleaning during the last financial year. Some turnover of stored water is desirable to maintain the quality of water in the lakes. The discharge is a permitted activity under the regional freshwater plan. (EMS target 4.1.1, page 41)

## Resource use

**Electricity use averaged 336 kilowatt-hours per million litres of water treated – 6.4 percent less than for 2003/04.** This improvement was due largely to a return to more typical operating conditions (see below and EMS target 4.2.1, page 42).

Electricity for treating and distributing water to Wellington's four cities is equivalent to that used by 2,500 average households and represents about eight percent of total operating costs. Roughly two-thirds of power use occurs at three sites: Waterloo water treatment plant (about 40 percent of total kilowatt-hours) Waterloo wellfield (11 percent) and Te Marua pumping station (16 percent).

Power use efficiency – kilowatt hours per million litres treated (kWh/million litres) – is therefore influenced largely by the share of total production from Waterloo and how much of the raw water treated at Te Marua must be pumped to the treatment plant from the Stuart Macaskill lakes.

For the year in review, production from Waterloo was slightly less than during 2003/04 (41.9 percent of total production, compared to 43.2 percent). In addition, lake pumping decreased by 10 percent; from 12.6 percent of total production volume in 2003/04 to 11.3 percent in 2004/05. This resulted in part from higher-than-usual use of the lakes in the first quarter of 2003/04, during a possum control operation, when the Kaitoke intake was closed.

From an environmental perspective, the merits of production from aquifers relative to rivers cannot be easily quantified. Aquifer water has a much higher direct power demand, for pumping. However, treating river water has a much higher chemical demand, with associated impacts from chemical production and transportation. Treating river water also generates solid waste, which must be transported and put in a landfill. Given this uncertainty, our approach is to produce water at minimum marginal cost, subject to meeting our obligations under the Resource Management Act and taking a conservative approach to security of supply.

**Power sub-metering is being introduced at Te Marua pumping station.** Work to separate metered power use for the lake pumps and distribution boost pumps is nearing completion. This upgrade will allow us to monitor power use for the different pumps separately. Minor software changes are still needed to incorporate this data into our reporting systems. This development will help us manage our power use at the pumping station, to minimise costs while maintaining agreed levels of service. (EMS objective 4.2, page 42)

**Chemical use averaged 77 kilograms per million litres of water treated – the same as for 2003/04.**

While our use of surface water increased last year (from 56.8 percent of total production in 2003/04 to 58.1 percent in 2004/05), this factor was offset by the combination of a general improvement in the condition of source water from rivers and a reduction in use of lake water.

**We are investigating how to reduce our use of lime for water treatment at Waterloo.** Water from the Waiwhetu aquifer is safe to drink in its natural state, but contains dissolved carbon dioxide when it comes out of the ground, which makes the water mildly acidic. Until recently, lime has been used exclusively to reduce this acidity, to minimise the possibility of the water corroding pipes and fittings.

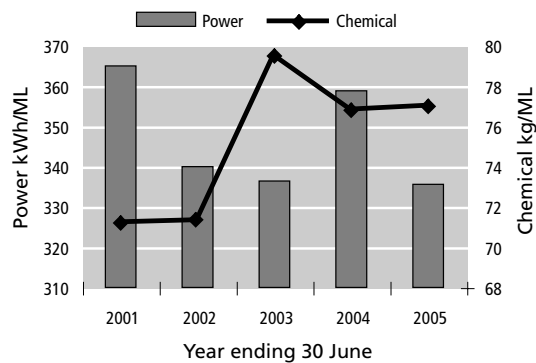
<sup>3</sup> Refilling one of the Stuart Macaskill lakes is included as a productive use of our water take.

<sup>4</sup> The overflow total was unusually high during 2003/04 due to one lake being emptied. We do not have separate lake overflow data prior to 2003/04.

However, lime supplies contain insoluble material – mainly silica (sand). This has resulted in sand appearing in the water supply in central Lower Hutt, which receives water directly from our Waterloo treatment plant rather than via a service reservoir. Hutt City Council has asked that we tackle this matter.

Following successful trials, aeration of raw water has been introduced to one of the two production streams at Waterloo. This has resulted in a 25 percent reduction in lime use (and insoluble material from the lime) entering the distribution system, and a cost saving of around \$100 per day. We are investigating reconfiguring the plant to run both streams simultaneously in this mode. If this proves possible, the dollar saving and reduction in lime solids could be doubled. Further studies are planned during 2005/06 to look at ways of eliminating the insoluble material in lime before it enters the distribution system. (Customer Service PI, page 25 and QMS objective 2.2, page 36)

#### Power and chemical demand



#### Emissions and waste

**Full compliance was achieved with all but one of our discharge consents.** Discharge from the Wainuiomata treatment plant to the Wainuiomata River was assessed as mainly complying, due to higher-than-permitted instantaneous discharge caused by a control system fault. (EMS target 3.2.2, page 41)

**Solid treatment waste (sludge) by volume of river water treated was slightly more (1.3 percent) than during 2003/04.** Sludge represents about three-quarters of the total waste (by weight) from our water treatment plants. Sludge by volume of production from river sources tends to increase when source water contains more organic solids – after rainfall in the water catchments for instance. A total of 1,801 tonnes of de-watered waste sludge was sent to a consented landfill at Silverstream, 56 kilograms per million litres of river water treated. As for chemical use, sludge weight by volume of treated water was higher during the second half of the year, when more production was sourced from rivers. (EMS target 3.2.3, page 41)

#### Land use and biodiversity

(EMS objective 5.1, page 42)

Greater Wellington manages 16,500 hectares of active water catchment land in the Rimutaka and Tararua ranges, to ensure that it continues to yield high-quality raw water and to enhance biodiversity within the catchments. Several indicators of forest health are monitored on our behalf, including bird densities, pest animal numbers and vegetation density. Professional hunters are routinely employed to keep down the numbers of large pest animals, while possum control is undertaken when needed.

#### Possum control work is planned in the Wainuiomata – Orongorongo water collection area.

Survey work during May 2004 found that possum numbers had reached a level that required attention. Preparations have been made for a helicopter drop of pellets containing 1080 from July 2005, as soon as weather conditions allow. Production will cease at the Wainuiomata treatment plant before the operation begins and the plant will remain off until a testing programme agreed with the Medical Officer of Health shows it is safe to resume water supply. The catchments are closed to the public and a range of additional measures have been put in place to minimise the risk of people or domestic animals coming into contact with the poison. Possum control was last undertaken in the Wainuiomata – Orongorongo water collection area in 1999. (QMS objective 5.1, page 38)

#### Fencing the boundaries of the Wainuiomata water collection area was largely completed.

The northern boundary was fenced in two stages, between July 2001 and June 2003. Fencing the western boundary ridge above Moores Valley was started last year and is due to be completed during the 2005/06 financial year. The fence is designed to protect vegetation and therefore improve raw water quality, by preventing stock as well as wild deer, goats and pigs from infiltrating the water catchment from adjoining private land. (QMS objective 5.2, page 39, EMS target 5.1.4, page 42)

#### Wainuiomata wetland preparations delayed.

Last year we reported our intention to carry out modifications to the original water supply dam at Wainuiomata, for safety reasons and to support the option of Greater Wellington's Landcare Division creating a wetland behind it. The dam, which is no longer in use, is in the Wainuiomata recreation area.

The modification work was to have been carried out during 2004/05. However, the recent buoyancy of the construction sector resulted in tender prices for the work being well above budget, so we have deferred this project until 2006/07, in expectation of a better tender price. (EMS target 5.1.6, page 43)

## Social performance

- New water source strategy being developed
- Further conservation measures are being investigated with our customers
- All public demand for water was met
- 97 percent achievement of tougher targets for reservoir levels
- Distribution efficiency effectively 100 percent
- Water supply quality target achieved
- Full compliance with drinking water standards

Our commitment to operating in a sustainable way requires that we recognise our potential to meet social needs within the region. Supporting public health via a reliable, high-quality water supply at a reasonable cost is our main contribution to meeting social needs, but we also contribute through effective health and safety practices, risk mitigation and recovery planning, providing educational and recreational opportunities and supporting the professional development of our staff.

**Our supply system is approaching its design capacity.** In November 2004, Statistics New Zealand released resident population estimates for 30 June 2004. The number of people within the four cities we supply was 367,600. This continues the recent trend of annual population increases at close to 'high-growth' forecast rates.

Our supply population is now close to the modelled design population for our current infrastructure: 377,000. Some additional supply capacity will be needed in two to three years' time if our 1-in-50-year security standard is to be maintained. Funding for a modest increase in supply capacity from the Hutt River has been built into our capital works programme (2006 – 10), and two alternatives to achieve this outcome are currently being considered. (QMS targets 1.1.1 and 1.1.2, page 35)

**We have carried out preliminary investigation of long-term options to increase available water supply.** Over the last year, the region's territorial authorities have collectively been developing a long-term growth plan: the Wellington Regional Strategy. Planning for regional growth called for us to consider how to cater for a water supply population of up to 450,000 people.

These circumstances have led to our reviewing options for growth in supply capacity that would ensure that our customers could enjoy the same level of security of water supply well into the future.

The short-term developments we are planning will allow us to supply up to 390,000 residents. The problem we face in sourcing water for a larger population increase is essentially one of meeting summer demand. The aquifer and rivers that water is currently abstracted from have considerable spare capacity to provide water for about nine months of the year, but not during hot summer periods, when heavy reliance is placed on the Stuart Macaskill lakes.

On a simplistic basis, an increase of 60,000 people (i.e., 390,000 to 450,000) each using 550 litres per day over a 90-day summer period would require about 3,000 million litres more water in total. This is the same volume as the usable storage capacity of the Stuart Macaskill lakes.

We have carried out preliminary investigations into a wide range of supply augmentation options, including a possible new aquifer source and several storage dam sites. A short-list for detailed investigation was due to be considered by Greater Wellington's Utility Services Committee in September 2005.

While the timing for the next large-scale increase in water supply capacity is conservatively modelled to be at least six years away (2011), such projects usually take some years for investigation, consultation and planning before they can be built, so we believe it is necessary to identify a preferred water supply growth strategy now. This work will continue in the coming year. (QMS targets 1.1.1 and 1.1.2, page 34)

**A co-ordinated demand management plan is being investigated jointly with our water supply customers.** In parallel with our investigations of new source options, we are developing a co-ordinated water management plan with our customers. A water management plan was recently adopted by Auckland's water suppliers and we have been given permission to draw extensively on their work. Consistent with the Auckland model, Wellington's plan is likely to include a shared water saving target. It will also discuss a hierarchy of conservation measures, with projected savings and implementation costs for each. The Wellington plan is expected to be ready for consideration by the elected representatives for Greater Wellington Regional Council and the Hutt, Porirua, Upper Hutt and Wellington city councils by June 2006. If adopted, each council would implement measures appropriate to their local circumstances in order to meet the agreed water saving target. If our communities are prepared to limit their peak-summer water use to the current levels as the population grows, the capital expenditure earmarked for the next major increase in supply capacity could be deferred. (QMS objective 4.2, page 37. EMS objective 2.2, page 40)

**Our security of supply standard was achieved during 2004/05; all customer demand for water was met.** (QMS objective 1.1, page 34)

**Targets for maintaining levels in customer reservoirs were achieved in at least 97 percent of cases.** Maintaining high water levels in customer reservoirs provides communities with the maximum available buffer to cope with peaks in water use – for fire fighting for instance – and short-term loss of supply to the reservoirs. Our targets for how often customer reservoirs were near-full<sup>5</sup> were met on all but a handful of occasions. These targets are self-imposed while we continue to investigate a service level agreement with our customers. (QMS target 1.2.1, page 35)

**The total volume of water treated was 55,385 million litres: 0.8 percent more than in 2003/04.** The total metered supply to customer reservoirs was 1.1 percent more year-on-year, at 55,552 million litres. Annual water supply volumes show a gradually increasing trend over the last decade, in line with population growth.

**Distribution efficiency was effectively 100 percent.** The difference between the metered volumes of water treated and water supplied was 0.2 percent of the treated volume. This is less than the margin of error for our meters (+/- 1.0 percent) and indicates that transmission losses continue to be negligible. (EMS target 4.1.1, page 41)

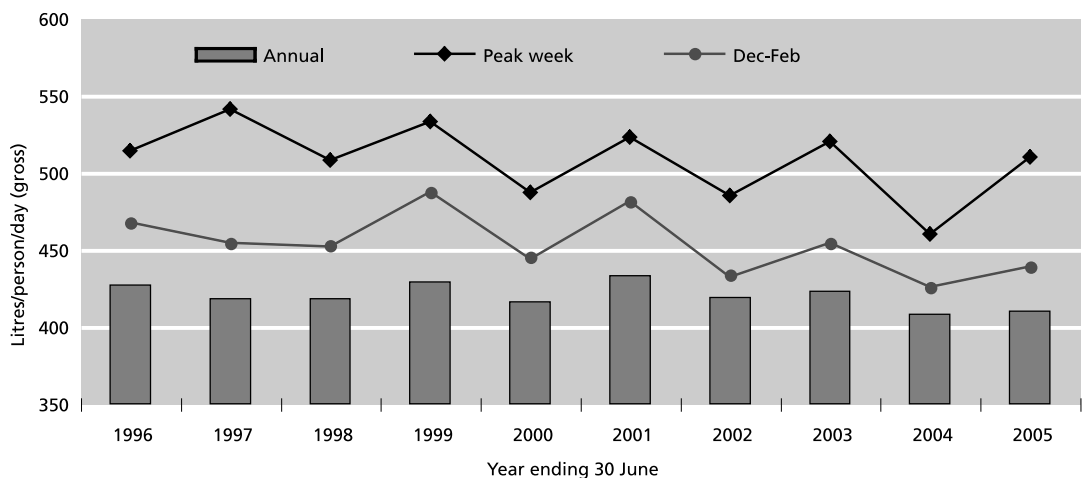
**Our maximum day supply was 203 million litres, 34 percent higher than the average day of 152 million litres.** The maximum day supply during the last decade was 211 million litres (11 February 1999).

**Climatic conditions during summer were fairly average overall, but we experienced something of a summer of two halves.** A fairly wet December and early January was followed by seven weeks of relatively low rainfall. Between 9 and 31 January only five millimetres of rain fell in Wellington. The dry spell continued into February, with only 43 millimetres of rain at Kelburn, 60 percent of the long-term February average.

Our surface water catchments also saw little rainfall during February, with half the average level at Kaitoke and well below half the average level at Wainuiomata (38 percent) and Orongorongo Valley (27 percent). In late February the Wainuiomata treatment plant had to be turned off for a few days as there wasn't enough source water to keep the plant running, while the Stuart Macaskill lakes were used to supplement flows from the Hutt River. However, the shortfall of water available from the rivers lasted only a few days.

**Summer water use lower than anticipated.** Figures published by Statistics New Zealand show that the estimated usually-resident population for our supply area has increased markedly in recent years. The total and peak per-capita water use during the summer of 2004/05 were a little lower than we expected given the mid-summer weather pattern. If we view summer water supply (December – February) relative to the resident population served, 2004/05 had the third lowest total during the past 10 years, while the peak week was the fourth lowest over the same period. Both sets of data show downward trends over the last 10 years<sup>6</sup>. This outcome suggests that our ongoing summer water conservation campaign is having a positive effect.

Water supply per resident



Water supply per resident shows a gradually decreasing trend during the last decade.

<sup>5</sup> 60 percent full at least 98 percent of the time. 70 percent full at least 90 percent of the time

<sup>6</sup> It should be noted that in modelling future demand for water, a more conservative approach is taken and demand and climatic parameters are modelled over a longer period.



**We started using a new 90-day climate-forecast model to quantify the risk of summer water shortages.** The regional bulk water supply system has relatively little storage capacity. It relies heavily on today's river flows being sufficient to meet today's demand for water. Regular rainfall is needed throughout the year to meet demand for water, which makes the system vulnerable to low river flows arising from a summer drought.

In December 2004 we made first use of a new early warning system for possible shortfalls of water. The Karaka Model, developed with the National Institute of Water and Atmosphere (NIWA), translates climate forecasts into a probability-based 90-day prediction of whether our rivers and storage will be enough to meet demand.

In early January 2005, the predicted level of storage in the Stuart Macaskill lakes until the end of March did not fall below 50 percent, even in the event of a 1-in-100-year drought. Predictions for the Waiwhetu aquifer level were also healthy, although the accuracy of this aspect of the model is more limited at present. The model is thought to be a first for water supply in New Zealand and it is hoped predictions for the aquifer can be improved using more sophisticated techniques in future.

While it is not possible to predict climatic conditions over three months with a high degree of accuracy, the Karaka Model gives a scientifically-based approach to quantifying the risk of shortages. (QMS objectives 1.1-1.3, page 34-35)

**A second large flood event in two years has led us to review flood hazard design standards.** A storm in late March 2005 caused extensive damage to infrastructure in the Orongorongo water collection area.

Heavy rainfall saw river levels rise rapidly, with gravel slips causing river bed levels to lift by up to three metres in places. Large sections of river bank were scoured away, exposing and breaking a section of the pipeline from Orongorongo weir to the Wainuiomata treatment plant. The railway line used to transport staff and equipment into the Orongorongo Valley was also damaged.

Work to reinstate embankments and tracks and repair the broken pipeline proved challenging, due to the difficult terrain. Water supply from the Orongorongo Valley was finally reinstated on 4 July 2005.

As recently as February 2004 a similar event caused significant damage to our supply pipeline from the Wainuiomata water collection area.

These incidents have focused our attention more keenly on the exposure of our system to flood damage.

A review of the likelihood of similar events occurring has been carried out. We have identified that hazard mitigation standards have not always been applied consistently to previous design and construction work. A hierarchy of return-period design standards has since been adopted, with reference to the security standards of other local infrastructure managers. This hierarchy ranges from 1-in-200-year security for major buildings to 1-in-50-year security for major access routes. The water supply infrastructure will be progressively reviewed against these standards. Any areas requiring attention will be investigated in detail and carried forward into our capital works programme. (QMS objectives 1.2 and 1.3, page 35)

**We made steady progress towards improving the security of the supply system against hazards.**

In line with the region's *Emergency Water Supply Mitigation and Preparedness Strategy and Action Plan* (2003), we have continued to develop physical mitigation and response measures, to reduce repair time for the bulk water supply in the event of a large-scale natural disaster, such as a movement of the Wellington Fault.

In June 2005 construction work started on a new pumping station to serve the 19,000 residents of Karori, Kelburn and Northland. It is due to come into service in May 2006 and will replace a 50-year-old pumping station, next to the Karori Wildlife Sanctuary, which does not meet modern earthquake resistance standards.

Preparations were finalised to realign a section of the Te Marua to Wellington pipeline, near State Highway 2 at Haywards. The deviation will shift the pipe away from a hillside that is relatively inaccessible and prone to slips, due to its proximity to the Wellington Fault. The new pipe route is expected to reduce the probability of damage to the pipes for any given earthquake magnitude and make it easier to carry out damage repairs quickly.

Preparations continued for a new pumping station at Seaview to service the Eastbourne Bays area. This facility will replace an existing pumping station at Randwick, which is susceptible to flooding. Obtaining a suitable site and the necessary resource consents has taken longer than anticipated. We expect to start building this facility by December 2005.

Our proposal to share the cost and use of a new reservoir – to be built near Wellington Hospital – with Wellington City Council and Capital and Coast District Health Board has made fairly slow progress. It recently gained the support of the health board, subject to the project being approved for financial assistance by central government.

A site that meets the necessary technical requirements has been identified and a joint agreement is expected to be ready to sign by the end of 2005. The reservoir would provide the hospital with more emergency water storage, while giving increased operating storage and system yield for both Wellington City Council and Greater Wellington. (QMS objectives 1.1-1.3, page 34-35)

### Water quality

**We achieved compliance with the drinking water standards.** We complied with the microbiological and chemical requirements of the *Drinking-Water Standards for New Zealand 2000*, for water leaving our treatment plants and in the bulk distribution system. (QMS targets 2.1.1, 2.1.2, 2.2.1 and 2.2.2, page 35-36)

**We maintained certification for our quality management system.** A surveillance audit by BVQI in September 2004 resulted in no significant issues being raised by the auditor. A full report of performance against our quality system targets appears from page 34.

**The 2005 drinking water register has the potential to cause public uncertainty.** Each year the Ministry of Health publishes its *Register of Community Drinking-Water Supplies in New Zealand*, to provide the general public with easily accessible information about the health risk status of community water supplies.

The 2005 edition of the register has introduced the potential for uncertainty about the state of water supplies in many parts of the country, by classifying all treatment plants and distribution zones that have not been assessed by health authorities since 1 January 1998 as 'ungraded' ('U'). Those assessed since January 1998 under the 1993 grading rules – rather than the current (2003) rules – have an asterisk after their grade. These water supplies have until 31 December 2005 to be re-graded. If that does not occur, they will become 'ungraded' from January 2006.

Conducting grading assessments is the responsibility of public health authorities. In our view it is unfortunate that the 2005 register has introduced a lack of clarity about the health risk status of many water supplies, particularly when 'ungraded' assessments have arisen from a lack of action by health authorities rather than water suppliers. We hope health authorities will rectify this situation quickly.

**Ministry of Health gradings for three of our treatment plants are in the process of being reviewed.** The 2005 *Register of Community Drinking-Water Supplies in New Zealand* shows Wainuiomata graded 'A1', Te Marua 'A\*' and Waterloo and Gear Island 'U' (both previously 'B').

We anticipate Te Marua, Waterloo and Gear Island will be assessed by health authorities before 31 December 2005 and that gradings will be at least equal to those applied prior to publication of the 2005 register. (QMS objectives 5.1-5.4, page 38)

The risk and quality grading for the Wainuiomata treatment plant was re-assessed as 'A1' by Regional Public Health in April 2005. The grading assessment was the first undertaken by the Hutt Valley District Health Board's Drinking Water Assessment Unit following its IANZ accreditation. Both of these achievements were recognised in May at a ceremony attended by Associate Minister of Health, the Hon. Pete Hodgson.

The 'A1' grade awarded is the highest possible under the Ministry of Health's six-point grading system for the source and treatment of water supplies and is an endorsement of our risk and quality management systems. (QMS target 5.2.1, page 38)

**The Drinking Water Standards for New Zealand 2005 are due for release shortly.** Over the last year, our Asset and Quality Manager has been closely involved in providing feedback – via the water industry's 'experts' committee – to the Ministry of Health, on proposed changes to the drinking water standards.

In our last annual report we expressed reservations about the changes being proposed at that time. New microbiological compliance rules for introduction on 1 January 2005 had been flagged with the last update of the standards in 2001. We felt the latest round of changes represented a significant shift in methodology from the compliance standards we had been working towards, and would not give sufficient recognition to our quality assurance methods.

We are now satisfied that the system of log removal credits, which will be introduced from 31 December 2005, will fairly reflect the high level of quality management we have in place. Compliance with the new standards should be achievable with only fairly minor changes to our operations. Some changes to reporting systems will be necessary after 31 December 2005 and we are now preparing for that.

**A service level agreement with our customers remains under consideration.** At present we have no formal service level agreement with the four city councils we supply with potable water. Last year we reported that talks about the detail of an agreement had started and that we hoped these could be concluded by 30 June 2005. Progress has been slower than we anticipated and considerable work is still needed if an agreement is to be achieved.

In the meantime, our asset management continues to be based on assured levels of service, principally compliance with the drinking water standards, an agreed 1-in-50-year security of supply standard and maintaining customer reservoirs near full. (QMS objectives 1.1-2.2 with related targets, pages 34-36)

**We are now providing water treatment management services to Masterton under contract.** In March 2005 we agreed a contract with Masterton District Council to manage the Kaituna water treatment plant and the associated river intake on their behalf. A management contract had been under discussion for some time, following the detection of *Cryptosporidium* at the Kaituna treatment plant in August 2003 and an increasing central government focus on introducing more comprehensive risk and quality management practices in water supply. Since March 2005, consolidating Masterton's treatment chemical purchasing with our own has resulted in an annual \$20,000 saving to Masterton District Council.

## Education and recreation

**We hosted 860 visitors on educational tours of our facilities last year.** Raising public awareness about the region's water supply system is necessary to foster more sustainable use of water resources: a goal at the heart of Greater Wellington's long-term plans. We welcome student and community groups to our treatment plants to demonstrate how water treatment and supply are managed and to raise awareness about the value of water. While feedback from visiting groups was largely positive, the number of visitors was lower than for each of the last two years. The reduction in visitor numbers is due mainly to fewer school visits. We aim to reverse this situation in the coming year with the launch and promotion of a curriculum-focused teaching resource that includes visiting one of our water treatment plants.

**For a fifth year we supported limited recreational hunting on water catchment land.** In each of the last five years a ballot system was used to allocate 40 hunting permits for the Wainuiomata – Orongorongo water collection area during the autumn 'Roar'. The ballot hunt is offered primarily to accommodate demand from recreational hunters, but also makes a modest contribution to our pest management activity within the catchments. As in previous years, the 2005 ballot was oversubscribed, reflecting the popularity of this initiative. (QMS objective 5.2, page 38)

## Health, safety and training

(Health and safety PI, page 25)

We see health and safety management as a crucial component of good business practice. Our health and safety plan details our commitment – through leadership, training and the allocation of resources – to effective planning, implementation, measurement, evaluation and review. To support the principle of continual improvement a major review of procedures is carried out at least every two years.

Trends in accident and injury rates over time provide one measure of effectiveness of safety management systems.

	Year to 30 June			
	2005	2004	2003	2002
Accident and injury rates				
Staff numbers (year end)	56	58	56	56
Incidents (per 100 employees)	22.0	40.7	36.3	25.3
Frequency (incidents per 10,000 hours worked)	1.3	2.2	2.1	1.3
Severity (days lost per 10,000 hours worked)	3.8	1.2	5.2	0.9

We have collected data in this form for five years. While the incident and frequency rates are low relative to our historic record, the severity rate has been better in two of the five years for which we have data. The majority of lost days (78 percent) related to stress leave for a single staff member. Most incidents were fairly minor and related to cuts, bruises, strains and sprains that required little if any time off work.

The number of hours dedicated to staff training courses was 2,524 or 43 hours per full-time employee. The equivalent figures for the past two years were 44 hours (2003/04) and 32 hours (2002/03).

Direct expenditure on training and professional development for 2004/05 was 2.0 percent of total personnel costs, compared with a budget allowance of 2.6 percent. (EMS targets 7.1.1 and 7.2.1, page 43)



# Detailed financial and water supply performance

## Financial overview

The financial results for the reporting period ended 30 June 2005 are indicative of another successful year's operating performance for Greater Wellington Water. An operating surplus of \$0.9 million has been achieved for the financial year, \$1.3 million ahead of that budgeted. All cash surpluses generated during the course of operational activities were applied to accelerating the ongoing rate of debt principle repayment, as in previous years.

These results incorporate the decision taken in June 2004 to maintain the wholesale water levy at \$22.8 million (net) for the 2004/05 financial year, in spite of the continued upward pressure on our key direct operating costs, such as power and chemicals.

This decision ensured that the water levy has either remained unchanged or been reduced for eight successive years since 1996/97. In the meantime, our debt level – \$43.6 million at 30 June 2005 – has fallen by a further \$2.1 million since June 2004, and in total by \$28.9 million since June 1997. In addition, our self-insurance fund balance reached \$8.1 million at financial year-end.

Total operating expenditure for the year increased by 2.6 percent, from \$22.8 million to \$23.4 million, compared to a 3.7 percent increase in 2003/04. This was due mainly to total contractor and consultant costs increasing by 21.0 percent in 2004/05 compared to the previous year. However, net financial costs continue to fall as the ongoing debt level diminishes and the self-insurance fund grows, being 15.6 percent lower than for the corresponding reporting period last year.

While supplying potable water tends to be a pretty routine and usually uneventful activity, it is the quality of the staff and the systems we have in place that make the difference. This continues to be the case. The supply system again proved its reliability, comfortably meeting a slightly higher annual level of demand, driven by a spell of fine weather in late summer. This translated into a 1.1 percent increase in water supplied, (55,522 million litres), compared with 2003/04, (54,935 million litres).

Finalised expenditure on the capital works programme amounted to \$4.1 million. This was \$1.2 million lower than budgeted, due primarily to the deferral of six projects into the 2005/06 financial year. The major projects upon which expenditure was incurred during the year included commencing the construction of a new pumping station to serve Karori, Kelburn and Northland and the relocation of a section of the Kaitoke water main between State Highway 2 and State Highway 58. Both these projects will enhance the seismic security of our distribution network. Otherwise, expenditure was incurred on a wide range of projects, which although of lesser financial significance, contribute to maintaining the security and quality of water supply to the region's urban population in an environmentally sustainable manner.

The information contained in the following eight pages detail the financial results for Greater Wellington Water. Audit New Zealand has reviewed the financial information of Greater Wellington Water, an operating unit of the Greater Wellington Regional Council. Audit New Zealand can provide assurance that the financial information has been correctly extracted from the financial systems of the Greater Wellington Regional Council and provides a true and fair representation of the activities of Greater Wellington Water for the year ended 30 June 2005.

The table below summarises financial performance since 2001.

### Financial summary

	June 2001	June 2002	June 2003	June 2004	June 2005
	Actual \$000	Actual \$000	Actual \$000	Actual \$000	Actual \$000
<b>Operating revenue</b>	25,252	24,437	24,003	23,844	24,274
Depreciation	5,117	5,320	5,347	5,352	6,563
Financial costs	4,943	4,497	3,794	3,674	3,295
All other operating expenditure	12,251	11,481	12,861	13,785	13,543
Surplus before abnormal items	2,941	3,139	2,001	1,033	873
<b>Abnormal items</b>					
Distribution stock write up	132	-	-	-	-
Petone de-fluoridation	205	-	-	-	-
Wainui pipeline easement revenue	-	500	-	-	-
Infrastructure asset w/o – 1999/2002	-	(307)	-	-	-
<b>Operating surplus</b>	<b>3,278</b>	<b>3,332</b>	<b>2,001</b>	<b>1,033</b>	<b>873</b>

## Financial statements

### Statement of financial performance

For the year ended 30 June

	Notes	2005	2005	2004
		Actual \$000	Budget \$000	Actual \$000
<b>Operating revenue</b>				
Water supply levies		22,776	22,776	22,776
Internal revenue		257	205	264
Other revenue (interest and external)		1,241	799	804
<b>Total operating revenue</b>		<b>24,274</b>	<b>23,780</b>	<b>23,844</b>
<b>Operating expenditure</b>				
Personnel costs		3,820	3,697	3,499
Contractor and consultant costs		1,256	1,371	1,038
Internal consultant costs	2	582	564	529
Interest costs		3,295	3,567	3,674
Depreciation		6,563	6,331	5,352
Loss / (gain) on sale		155	64	1,016
Movement in doubtful debt provision		(1)	-	(1)
GWRC overhead charge		878	878	892
Operating expenditure	3	6,853	7,700	6,812
<b>Total operating expenditure</b>		<b>23,401</b>	<b>24,172</b>	<b>22,811</b>
<b>Net surplus for the year</b>		<b>873</b>	<b>(392)</b>	<b>1,033</b>

### Statement of movements in equity

For the year ended 30 June

	2005	2005	2004
	Actual \$000	Budget \$000	Actual \$000
<b>Equity as at 1 July</b>	256,842	256,842	204,088
Net surplus for the year	873	(392)	1,033
<b>Total recognised revenues and expenses for the year</b>	<b>873</b>	<b>(392)</b>	<b>1,033</b>
Revaluation reserve movement	-	-	51,721
Other reserve and equity movements	-	-	-
<b>Equity as at 30 June</b>	<b>257,715</b>	<b>256,450</b>	<b>256,842</b>

The accompanying notes and accounting policies should be read in conjunction with these financial statements

## Statement of financial position

As at 30 June

		2005	2005	2004
	Notes	Actual \$000	Budget \$000	Actual \$000
<b>Equity</b>				
Accumulated funds, including appropriations	4	70,911	69,630	70,038
Asset revaluation reserve		186,804	186,804	186,804
Departmental reserve	6	-	-	-
<b>Total equity</b>		<b>257,715</b>	<b>256,434</b>	<b>256,842</b>
Represented by:				
<b>Non-current liabilities</b>				
Public debt	7	43,647	47,192	45,759
Total non-current liabilities		43,647	47,192	45,759
<b>Current liabilities</b>				
Accounts payable		1,871	3,407	1,812
Employee entitlements		502	653	502
Treasury payables	5	1,631	-	1,748
Total current liabilities		4,004	4,060	4,062
<b>Total liabilities</b>		<b>47,651</b>	<b>51,252</b>	<b>49,821</b>
<b>Non-current assets</b>				
Fixed assets	8	293,253	295,608	295,743
Investments	9	8,109	8,018	6,856
Total non-current assets		301,362	303,626	302,599
<b>Current assets</b>				
Accounts receivable		2,466	2,616	2,525
Stocks	10	1,494	1,432	1,505
Accrued revenue		44	12	34
Total current assets		4,004	4,060	4,064
<b>Total assets</b>		<b>305,366</b>	<b>307,686</b>	<b>306,663</b>
<b>Total net assets</b>		<b>257,715</b>	<b>256,434</b>	<b>256,842</b>

The accompanying notes and accounting policies should be read in conjunction with these financial statements



## Statement of funds

For the year ended 30 June

		2005	2005	2004
	Notes	Actual \$'000	Budget \$'000	Actual \$'000
<b>Funds from operating activities</b>				
Funds were provided from:				
Levies received		22,776	22,776	22,776
Interest received		508	471	372
Other revenue		990	533	696
		24,274	23,780	23,844
Funds were applied to:				
Payments to suppliers and employees		13,388	14,210	12,769
Interest paid on public debt		3,295	3,567	3,674
		16,683	17,777	16,443
<b>Net funds from operating activities</b>	<b>11</b>	<b>7,591</b>	<b>6,003</b>	<b>7,401</b>
<b>Funds from investing activities</b>				
Funds were provided from:				
Proceeds from sale of fixed assets		39	100	20
		39	100	20
Funds were applied to:				
Purchase of fixed assets		163	462	144
Capital projects		4,102	5,312	3,902
		4,265	5,774	4,046
<b>Net funds from investing activities</b>		<b>(4,226)</b>	<b>(5,674)</b>	<b>(4,026)</b>
<b>Funds from financing activities</b>				
Funds were provided from:				
Appropriations / new loans		4,102	5,312	3,902
Transfer from reserves		-	-	690
		4,102	5,312	4,592
Funds were applied to:				
Repayment of public debt		6,214	4,420	6,249
Transfer to reserves		-	-	-
Investment additions		1,253	1,221	1,718
		7,467	5,641	7,967
<b>Net funds from financing activities</b>		<b>(3,365)</b>	<b>(329)</b>	<b>(3,375)</b>
Net increase in funds held		-	-	-
Add opening funds brought forward		-	-	-
<b>Ending funds carried forward</b>		<b>-</b>	<b>-</b>	<b>-</b>

The accompanying notes and accounting policies should be read in conjunction with these financial statements

# Notes to the financial statements

For the year ended 30 June

## 1. Statement of accounting policies

### A Reporting entity

Greater Wellington (GW) Water operates within the Utility Services Division of Greater Wellington Regional Council. Its activities include collection, treatment and distribution of potable water to four territorial authority customers.

These financial statements exclude balances in respect of the forest investments managed by the Utility Services Division.

### B Measurement basis

The financial statements have been prepared on a historical cost basis, modified by the revaluation of certain fixed assets.

### C Particular accounting policies

The following particular accounting policies, which materially affect the measurement of results and financial position, have been applied:

#### **Water supply levies**

Levies represent charges to the territorial authorities for the collection, treatment and distribution of potable water. Levies are recognised in the period to which they relate.

#### **Fixed assets**

Fixed assets consist of:

Operational assets – these include land, buildings, improvements, plant and equipment and motor vehicles.

Infrastructure assets – these relate to the region's water supply system. Each asset type includes all items that are required for the system to function.

#### **Valuation**

All assets are valued at historical cost, except for the following:

- a. infrastructure assets have been valued at depreciated replacement cost at 30 June 2004
- b. operational land has been valued at 2004 market rates.

#### **Work in progress**

Work in progress is not depreciated. The total cost of the project is transferred to the relevant asset on completion and then depreciated.

#### **Stocks**

Chemical stocks and spares used for maintenance and construction purposes are valued at the lower of cost and net realisable value. This valuation includes allowances for slow-moving and obsolete stocks.

### **Depreciation**

Depreciation is provided on a straight-line basis on all fixed assets other than land, at rates that will write off the cost (or valuation) of the fixed assets to their estimated residual value over their useful lives. The useful lives have been estimated as follows:

Buildings	10 to 100 years
Pipelines, reservoirs, dams	50 to 150 years
Plant, vehicles, equipment	3 to 20 years

### **Accounts receivable**

Accounts receivable are stated at estimated realisable value after providing against debts where collection is doubtful.

### **Goods and services tax**

All items in the financial statements are stated net of GST, with the exception of receivables and payables, which are stated as GST inclusive.

### **Statement of funds**

The following are the definitions of the terms used in the statement of funds:

- a. For the purpose of the financial statements, cash is deemed to be the movement in Treasury payables and receivables, being the cash equivalent for GW Water.
- b. Investing activities are those activities relating to the acquisition, holding and disposal of non-current assets.
- c. Financing activities are those activities that result in changes in the size and composition of the capital structure of GW Water.
- d. Operating activities include all transactions and other events that are not investing or finance activities.

### **Changes in accounting policies**

There have been no material changes to the accounting policies and all policies have been applied on a consistent basis.

## **2. Internal consultant costs and revenue**

Charges between departments of GW Water have been eliminated. These charges were \$2.7 million and \$2.6 million in 2004/2005 and 2003/2004 respectively. The reported internal consultant costs and revenue refers to charges to and from other Greater Wellington divisions and the plantation forestry department of the Utility Services Division.

## **3. Operating expenditure**

Operating expenditure is made up of payments for transportation costs plus materials and supplies, such as chemicals and power.

#### 4. Accumulated surplus, including appropriations

	2005	2004
	Actual \$000	Actual \$000
<b>Balance at 1 July</b>	70,038	68,315
Surplus for the year	873	1,033
Transfers to and from departmental reserves	-	690
<b>Balance at 30 June</b>	<b>70,911</b>	<b>70,038</b>

#### 5. Balance sheet – presentation of working capital

GW Water does not have its own bank account. All transactions are processed through the Greater Wellington Regional Council accounts. The net balance of these transactions is represented by the Treasury payables figure within the accounts as at 30 June.

#### 6. Departmental reserve

	2005	2004
	Actual \$000	Actual \$000
<b>Balance at 1 July</b>	-	690
Transfer to reserves	-	-
Transfer from reserves	-	(690)
<b>Balance at 30 June</b>	<b>-</b>	<b>-</b>

The total departmental reserve at 30 June 2003 was made up of a chemical contingency reserve and a general reserve, both of which were wound up in 2003/04.

#### 7. Long-term public debt

	2005	2004
	Actual \$000	Actual \$000
<b>Balance at 1 July</b>	45,759	48,106
New loans	4,102	3,902
Operating cash surplus applied to debt repayment	(6,214)	(6,249)
<b>Balance at 30 June</b>	<b>43,647</b>	<b>45,759</b>

All public debt obligations are fully secured against the rateable property of Greater Wellington Regional Council. The interest rate paid for the year ended 30 June 2005 was 7.45% (7.55% to 30 June 2004). All operating cash surpluses are applied to the accelerated repayment of debt.

## 8. Fixed assets

2005	Deemed cost \$000	Revaluation reserve \$000	Accumulated depreciation \$000	Net book value \$000
Land	2,871	4,979	-	7,850
Water supply infrastructure	106,347	181,825	6,316	281,856
Office equipment	252	-	101	151
Plant and equipment	1,619	-	1,082	537
Motor vehicles	1,032	-	750	282
Work in progress	2,577	-	-	2,577
	<b>114,698</b>	<b>186,804</b>	<b>8,249</b>	<b>293,253</b>

2004	Deemed cost \$000	Revaluation reserve \$000	Accumulated depreciation \$000	Net book value \$000
Land	2,871	4,979	-	7,850
Water supply infrastructure	103,905	181,825	-	285,730
Office equipment	192	-	76	116
Plant and equipment	1,594	-	1,040	554
Motor vehicles	1,009	-	725	284
Work in progress	1,209	-	-	1,209
	<b>110,780</b>	<b>186,804</b>	<b>1,841</b>	<b>295,743</b>

The last valuation of land, buildings and water supply infrastructure assets was performed in 2004, by the appointed registered valuers, Knight Frank Ltd. These valuations were stated at either the 2004 market values (land), or the depreciated replacement cost as at 30 June 2004 (infrastructure). The next asset revaluation will be carried out by June 2009 at the latest and thereafter will occur on a regular cyclical basis. Those assets that contribute directly to the supply and distribution of water are classified as water supply infrastructure and valued at component level. Detailed valuation information is held in GW Water's asset information system.

## 9. Investments

	2005	2004
	Actual \$000	Actual \$000
Insurance investment	8,109	6,856
	<b>8,109</b>	<b>6,856</b>

As at 30 June 2005, this investment attracted an interest rate of 7.01%, after the effect of derivatives (6.72% as at 30 June 2004).

## 10. Stocks

	2005	2004
	Actual \$000	Actual \$000
Chemicals	125	109
Capital spares	1,369	1,396
	1,494	1,505

## 11. Reconciliation of funds from operations to operating surplus

	2005	2004
	Actual \$000	Actual \$000
Reported surplus	873	1,033
Add / (less) non-cash items:		
Depreciation	6,563	5,352
Loss / (gain) on sale	155	1,016
Total non-cash items	6,718	6,368
Net cash flow from operating activities	7,591	7,401

## 12. Financial instruments

### Currency risk

GW Water is not exposed to foreign currency risk.

### Credit risk

Financial instruments that expose GW Water to credit risk are principally bank balances, receivables and investments.

A provision for doubtful receivables is maintained and monitored on a regular basis. Bank balances are held with New Zealand registered banks in accordance with GW Water's policy.

### Concentration of credit risk

GW Water derives the majority of its income from the regional water supply levy. Regional water supply levies are collected from the four territorial authority water supply customers.

### Interest rate risk

Greater Wellington Regional Council's Internal Treasury unit manages GW Water's debt. A fixed rate of interest is charged by the unit, which minimises the exposure of GW Water to interest rate fluctuations.

### Fair values

The estimated fair values of all of the financial instruments of GW Water are the book value of those investments.

### **13. Related parties**

GW Water contracts other divisions of Greater Wellington Regional Council for some operational services. All such transactions are carried out on normal commercial terms.

### **14. Contingencies**

GW Water had a single contingent liability of \$160,186 as at 30 June 2005 (91,080 at 30 June 2004).

### **15. Commitments**

GW Water leases Level 4 of the Regional Council Centre from Greater Wellington Regional Council on an arms-length basis. As at 30 June 2005, GW Water had a variety of short-term capital works programme-related contractual commitments valued at \$854,853, in addition to the office lease (nil at 30 June 2004).

## Performance indicators

Performance indicators that applied during the 2004/05 operating year are shown in standard text. Results for 2004/05 in relation to the performance indicators are shown in italic text.

### Quality: long term

The quality of water supplied will continually meet the Ministry of Health's *Drinking-Water Standards for New Zealand* (DWSNZ). The related water supply infrastructure will be maintained and improved to meet the standards specified in the Regional Water Supply Asset Management Plan.

The water supplied from the water treatment plants will meet the DWSNZ 2000 including the turbidity compliance changes that were signalled for introduction in 2005. These standards are higher than the DWSNZ 2000 introduced in January 2001. However, a new edition of the standard (DWSNZ 2005), which replaces DWSNZ 2000, may be finalised in 2004.

*At 30 June 2005, the DWSNZ 2005 remained in draft form and the DWSNZ 2000 were still in effect. All water that GW Water treats meets the current standards. A new edition of the standards (2005) is due to take effect from 1 January 2006. We expect to be able to meet the requirements that it contains.*

*GW Water holds certification to ISO 9001:2000 for its wholesale water supply operations. This promotes the consistent achievement of our quality standards.*

### Quality: short term

By 30 June 2005:

The collection, treatment and delivery of water will be managed to ensure the quality of water supplied continually complies with the Ministry of Health's DWSNZ 2000.

*The Hutt Valley District Health Board has certified that compliance with the DWSNZ 2000 was achieved during 2004 and informal confirmation has been received for the first two quarters of 2005.*

Water testing will be carried out by an International Accreditation New Zealand (IANZ) registered laboratory at sampling points defined by the Quality Assurance section of GW Water, not less than five days out of every seven. Expenditure will not exceed the budget of \$541,000.

*A comprehensive monitoring and testing programme complying with the requirements of the DWSNZ has been undertaken. The quality of the water leaving the treatment plants has been continuously monitored, with results reported every minute. The quality of the water in the bulk distribution system has been sampled as required and tested by an IANZ-accredited laboratory. The cost of routine laboratory testing was \$618,500, which exceeded the budget as a consequence of a revised pricing regime arising from an internal Laboratory business unit operation review and some additional testing requirements.*

The grading of each of the water treatment plants at 1 July 2004 will be maintained.

*At 30 June 2005, the Wainuiomata treatment plant was graded 'A1' and Te Marua was graded 'A'. Waterloo and Gear Island were both listed with 'B' gradings in the Ministry of Health's Register of Community Drinking-Water Supplies in New Zealand (2004). However, in the 2005 edition, released in mid-June 2005, both plants are listed as ungraded ('U'), due to the Ministry of Health choosing to discard all grading undertaken prior to 1 January 1998. Regional Public Health last graded Waterloo and Gear Island prior to 1998. We anticipate both plants will be re-assessed in the coming year and that the 'B' grading previously assigned to both, or better, will be attained.*

Vegetation management measures will be carried out in Greater Wellington's water supply catchments, in accordance with its forestry management plan and within a budget of \$160,000, so that the treatment plants receive good-quality water.

*Regional Park Operations provided an agreed level of service. Expenditure for the year was \$157,652.*

Provided legislation is passed by 30 June 2004, five public health risk management plans will be prepared.

*Drinking-water legislation has not progressed and no further risk management plans have been produced.*

A ranger service for Greater Wellington's Wainuiomata/Orongorongo water collection area will be obtained from the Landcare Division at a cost not exceeding \$118,000.

*Regional Park Operations provided an agreed level of service. Expenditure for the year was \$103,992.*



## Security of supply: long term

Sufficient water will be available on a daily basis to meet the 1-in-50-year return period drought situation. The related water supply infrastructure will be maintained and improved to meet the standards specified in the Regional Water Supply Asset Management Plan.

Appropriate contingency plans will be in place to guide our response to a major emergency.

*Projections using a computer-based sustainable yield model show that Greater Wellington Regional Council's water supply infrastructure is sufficient to meet a 1-in-50-year return-period event until about 2007, at current growth rates. A 1-in-50-year drought strategy has been adopted after consultation with our customers. This is less than Auckland's 1-in-200-year strategy, although their system is less dynamic in its raw water supply.*

*GW Water manages water supply assets in accordance with a planned programme of maintenance. It has a policy that there is no deferred maintenance. The asset management plan was prepared in accordance with the national asset management steering group guidelines.*

*GW Water has an 'n-1' policy for security of water supply. This means that either Te Marua or Waterloo water treatment plants could be out of commission and the daily base water requirement of 145 million litres still met.*

## Security of supply: short term

By 30 June 2005:

Rebuilding the Karori pumping station will be started at an estimated total project cost of \$1,837,000. It is due for completion in 2005/06.

*Rebuilding of the Karori pumping station started in June 2005. Project expenditure of \$431,390 has been incurred to date against a budget of \$870,000 for the financial year.*

Seismic repair stocks will be purchased at a cost not exceeding \$200,000.

*Seismic repair stocks were not purchased, with this expenditure now deferred until 2005/06.*

## Environmental management: long term

All water supply activities will be undertaken in an environmentally sympathetic manner, according to the principles of the Resource Management Act 1991.

GW Water acquires and seeks to comply with all appropriate resource consents. Abstraction consents govern the quantity of water that can be drawn from each source and how much must remain. Consents are also sought for any discharges from the treatment plants. Most by-products from the plants are processed through wastewater recovery plants and removed off-site.

GW Water holds certification to ISO 14001 (the International Standard Organisation's environmental management benchmark) for its wholesale water supply activities.

## Environmental management: short term

By 30 June 2005:

All appropriate resource consent conditions will be complied with, within a monitoring budget of \$65,000.

*Full compliance with all but three consents was certified by Greater Wellington's Environment Division. A partially complying certificate was issued for water abstraction from the Orongorongo River, because on six days during the year the residual flow in the river was less than the required minimum for short periods. Changes to procedures and equipment renewal will prevent a recurrence of this problem. A mainly complying certificate was issued for water abstraction from the Hutt River, due to lightning strike, resulting in the maximum instantaneous abstraction rate being exceeded on two occasions. The discharge consent for the Wainuiomata treatment plant received a mainly complying certificate due to higher than permitted instantaneous discharge caused by a control system fault. The total cost of consent fees incurred during the financial year was \$55,630.*

Resource consent compliance will be demonstrated to an auditable standard and a report on compliance for 2003/04 will be prepared by 30 November 2004.

*A report was published by 30 November 2004.*

The Lower Wainuiomata dam, constructed in the late 1800s, is no longer in use and will have to be decommissioned. As part of this process it may be practical to create a wetland. This project, though, is subject to council approval in 2004/05 once the investigations are complete.

*Tenders were called for decommissioning the dam to create a wetland. However, the tender prices were much higher than expected and the work has been deferred until 2006/07. Project design work was completed at a cost of \$20,950 during the financial year.*

### **Health and safety: long term**

The manner in which we carry out our operations will comply with the Health and Safety in Employment Act 1992 (as amended in 2002), Health and Safety Regulations 1995, relevant Codes of Practice and current legislation.

A hazard identification programme will be undertaken at all work locations in order to eliminate, isolate or minimise the effect of risk to all GW Water staff and contractors working at those locations. These hazards will be entered on a hazard register, which will be continually updated.

*A hazard identification programme has been undertaken for all operational sites and hazard registers have been updated and are maintained on an ongoing basis.*

### **Health and safety: short term**

By 30 June 2005:

The hazard register will be reviewed on a six-monthly basis. We will assess the effectiveness of the measures taken to eliminate, isolate or minimise risk to all GW Water employees and contractors.

The health and safety plans of all contractors employed by GW Water will be reviewed prior to their employment. Their activities should comply with the Health and Safety in Employment Act 1992 (as amended in 2002), the Health and Safety Regulations 1995, relevant codes of practice and current legislation, and meet or exceed the methods of operation as determined within the Utility Services (Water) Division's health and safety plan. Their activities will be monitored on a regular basis, to ensure that any risk to their employees, employees of subcontractors, staff or the general public is eliminated, isolated or minimised.

*The hazard registers have recently been reviewed and no issues relating to their effectiveness have been identified. Contractor health and safety plans continue to be reviewed prior to engagement.*

### **Customer service: long term**

GW Water will continue to demonstrate it has a high standard of customer service. It will provide customers with up-to-date and relevant information, as well as listening and responding to their needs.

*GW Water maintains regular communication with customer organisations at various levels of seniority.*

## Customer service: short term

By 30 June 2005:

Customers will be provided with a business report by 30 November 2004, which will include the following information:

- Financial results for the preceding financial year ended 30 June
- Actual quality compared with targeted performance
- A list of incidents where supply has been interrupted, together with the time taken to respond and repair
- A report of compliance with resource consent requirements
- Status of ongoing service level agreements.

*The business report was published in November 2004. It included content on all of the above subjects.*

## Business efficiency: long term

GW Water has improved its business efficiency over the last eight years following various restructuring initiatives, whilst maintaining its service quality levels. Total operating expenditure, excluding depreciation, is not expected to increase in real dollars. Thus the water levy has been held at the 2004/05 dollar level across the planning period to 30 June 2013. However, asset values are expected to increase significantly across the planning period to 2013, which will in turn increase the depreciation expense.

*The annual costs of running GW Water, excluding changes in depreciation rates, has reduced by \$5.7million or 25 percent between 1997 and 2005, whilst service levels have been maintained throughout this period.*

## Business efficiency: short term

By 30 June 2005:

Total operating expenditure, excluding depreciation, will not exceed \$20,422,000.

*Year-to-date expenditure of \$19,533,000 was incurred during the financial year (excluding depreciation but including charges between departments of GW Water. See also Note 2 to the financial statements). Activities were carried out according to requirements.*

The revenue from the water levy will not exceed \$22,777,000.

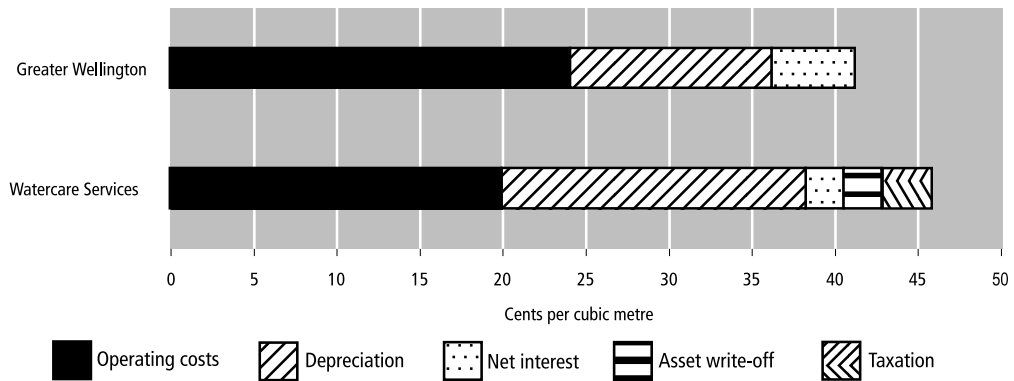
*Revenue of \$22,776,473 was received during the financial year.*

## Benchmarking of costs

GW Water's performance has been compared with that of Watercare Services Limited (Auckland), the only other water supplier in New Zealand that sells water to territorial authorities or their agents for on-sale, rather than selling to consumers directly. Although the two organisations work under substantially different conditions, Watercare provides the most meaningful performance comparison currently available. Please note that the costs shown for GW Water result in an accounting deficit relative to the bulk water levy paid by our four city council customers of 0.2 cents per cubic metre of water supplied. A surplus of 1.6 cents per cubic metre was posted after other revenue was taken into account. Watercare posted a net deficit equivalent to 2.8 cents per cubic metre of water supplied.

### Potable water supply costs

For the year ended 30 June 2005



## Water sources

### Water abstraction (millions of litres)

For the year ended 30 June

Source	Annual					Maximum week			Maximum day		
	Total		Percent	Average day		Date	Average day		Date	Day	
	2005	2004		2005	2004		2005	2004		2005	2004
	2005	2004	2005	2005	2004	2005	2005	2004	2005	2005	2004
<b>River and stream abstraction</b>											
Kaitoke/Te Marua	28,641	26,018	47.2%	78.5	71.1	19/1/05	128.6	124.4	3/4/05	144.1	143.5
Wainuiomata	5,616	5,709	9.2%	15.4	15.6	22/6/05	27.9	27.4	11/1/05	35.4	37.9
Orongorongo	869	909	1.4%	2.4	2.5	2/2/05	20.6	11.5	2/2/05	24.4	18.4
George Creek	1,741	1,120	2.9%	4.8	3.1	8/12/04	13.2	8.6	4/12/04	22.1	15.4
Big Huia Creek	653	742	1.1%	1.8	2.0	28/7/04	6.9	5.7	29/10/04	9.3	7.9
<b>Total – rivers</b>	<b>37,520</b>	<b>34,497</b>	<b>61.8%</b>	<b>102.8</b>	<b>94.3</b>	<b>19/1/05</b>	<b>166.3</b>	<b>153.3</b>	<b>12/1/05</b>	<b>175.6</b>	<b>174.6</b>
<b>Public artesian abstraction</b>											
Waterloo	23,034	23,508	37.9%	63.1	64.2	23/2/05	88.5	81.6	22/2/05	98.7	94.9
Gear Island	161	234	0.3%	0.4	0.6	20/4/05	7.5	4.4	19/4/05	22.0	22.3
<b>Total – artesian</b>	<b>23,195</b>	<b>23,742</b>	<b>38.2%</b>	<b>63.5</b>	<b>64.9</b>	<b>23/2/05</b>	<b>91.1</b>	<b>81.6</b>	<b>20/2/05</b>	<b>108.2</b>	<b>103.2</b>
<b>Total public abstraction</b>	<b>60,715</b>	<b>58,239</b>	<b>100.0%</b>	<b>166.3</b>	<b>159.1</b>	<b>19/1/05</b>	<b>224.4</b>	<b>212.6</b>	<b>16/1/05</b>	<b>238.9</b>	<b>233.4</b>

Totals may not add exactly due to rounding

## Rainfall levels (millimetres)

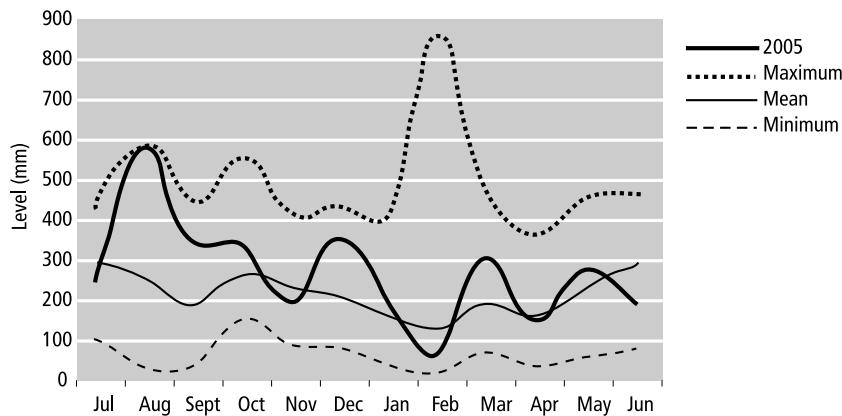
For the year ended 30 June

	Kaitoke <sup>1</sup>	Karori <sup>2</sup>	Orongorongo <sup>3</sup>	Wainuiomata <sup>4</sup>
2005	2,501	1,324	3,166	2,218
2004	2,759	1,532	3,911	2,318
Mean of data record	2,225	1,241	2,490	1,935
2005: Mean	112%	107%	127%	115%

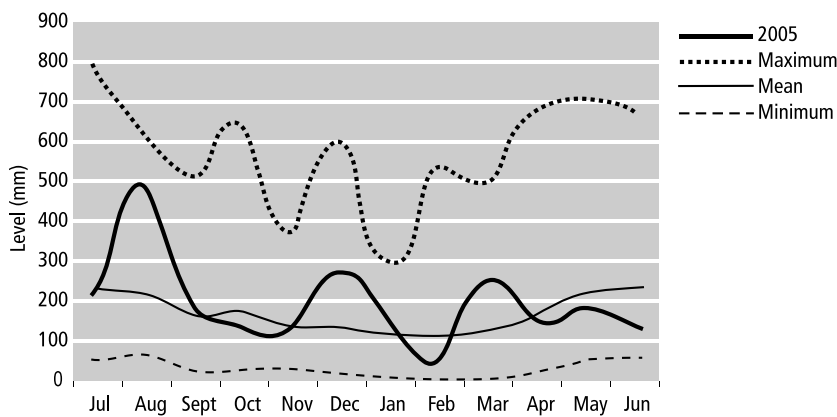
<sup>1</sup>: Kaitoke Headworks rain gauge. <sup>2</sup>: Karori Sanctuary rain gauge. <sup>3</sup>: Orongorongo Swamp rain gauge. <sup>4</sup>: Wainuiomata Reservoir rain gauge.

The following graphs show average rainfall per month in our surface water catchments compared with the maximum, minimum and mean of the data record for each site.

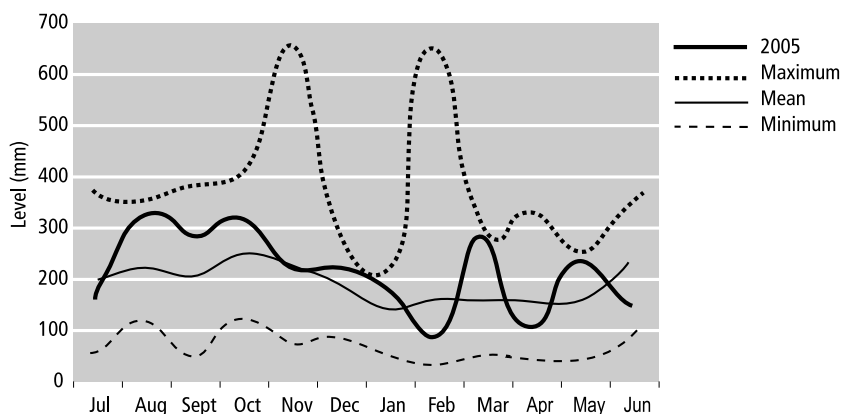
### Orongorongo catchment rainfall (Orongorongo Swamp record 1980 – 2005)



### Wainuiomata catchment rainfall (Wainuiomata Reservoir record 1890 – 2005)



### Hutt catchment rainfall (Kaitoke Headworks record 1991 – 2005)

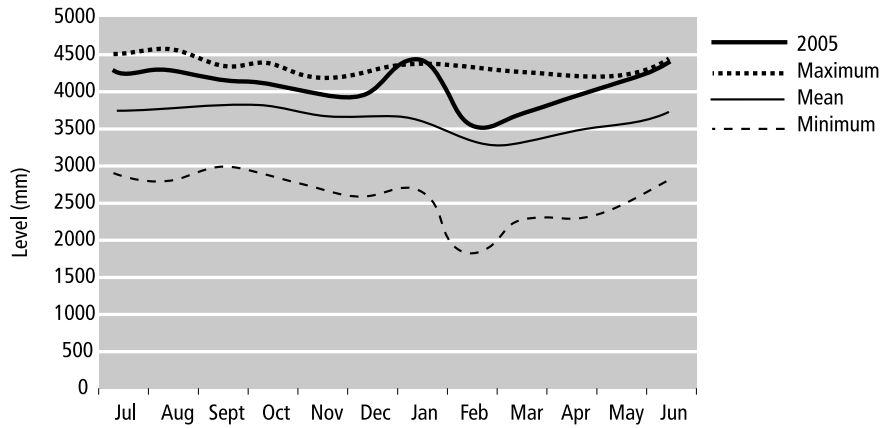


### Levels and flows from water sources

The following three graphs show the historical high, low and average data from the main water sources used to supply the Wellington metropolitan area, compared with data for the 12 months to 30 June 2005.

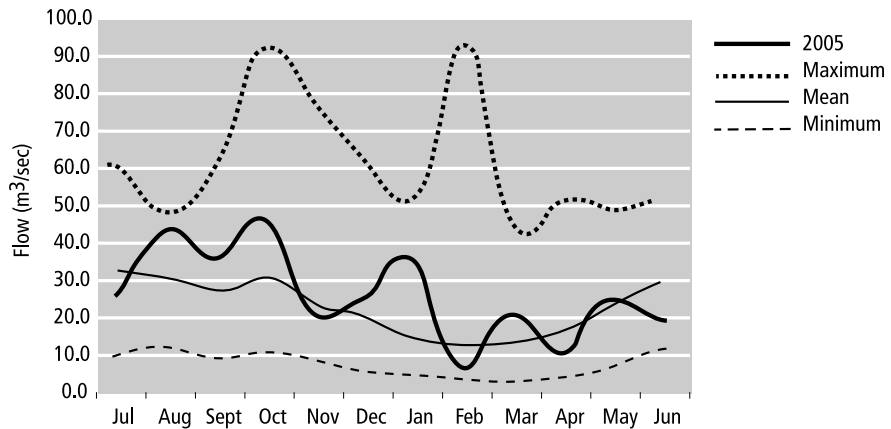
#### Waiwhetu aquifer (McEwan Park record 1971 – 2005)

Average monthly level for the year ended 30 June



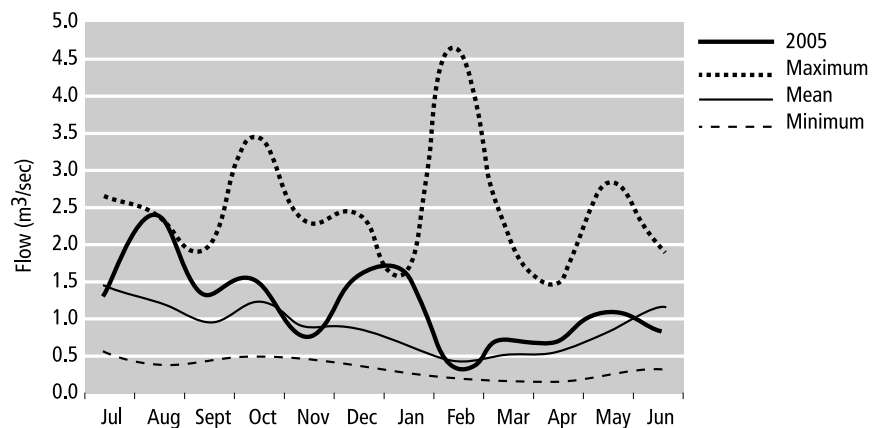
#### Hutt River (Birchville record 1970 – 2005)

Average monthly flow rate for the year ended 30 June



#### Wainuiomata River (Manuka Track record 1982 – 2005)

Average monthly flow rate for the year ended 30 June



## Resource consents

Resource consents held as at 30 June 2005

Water-take	Land use	Discharge	Total
11	43	20	74

For the year to 30 June, compliance was achieved for all but two water-take consents. We exceeded the consented maximum instantaneous abstraction rate at Kaitoke weir on a single occasion after a lightning strike caused automated control equipment to fail. The consent manager noted conditions beyond our control and prompt remedial action in giving a 'mainly complying' assessment. The maximum abstraction rate from the Orongorongo water collection area was exceeded on six days. In that instance we received a 'partially complying' assessment in consideration of the extreme difficulty in obtaining accurate flow data from what is a very dynamic river system. Changes to procedures and equipment renewal will prevent a recurrence of this problem.

The resource consent for discharge from Wainuiomata treatment plant to the Wainuiomata River was assessed as 'mainly complying' due to higher-than-permitted instantaneous discharge caused by a control system fault.

## Distribution shutdowns

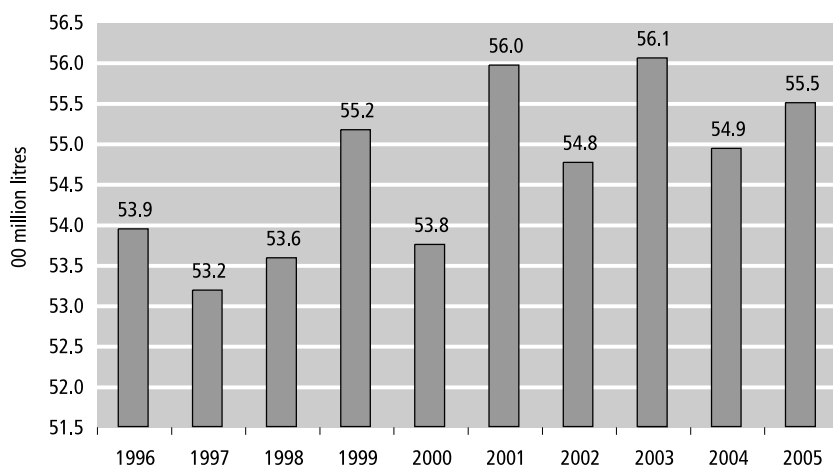
In the year ended 30 June 2005 there were 66 shutdowns (2004 = 64) on GW Water's regional water supply mains. No loss of pressure or supply to customers resulted.

Thirteen shutdowns were unscheduled, for the repair of leaking or burst mains or to repack leaking valves, compared with 19, 21, 16, 17 and 33 in the previous five financial years (2004, 2003, 2002, 2001 and 2000 respectively). All of the shutdowns during the year ended 30 June 2005 were completed and the water supply reinstated within eight hours.

The remaining 53 shutdowns were scheduled (2004 = 45). This work was required to install new or refurbished pipes and valves (28), remove redundant distribution assets (3), to mitigate the risk to third parties working in close proximity to our high-pressure mains (2) and for planned maintenance (20). All but four of the scheduled shutdowns were completed and the supply reinstated in less than eight hours. The remaining four were completed in between three and 10 days, but in each case an alternative water main was available for supply and there was no loss of pressure or supply to our customers.

## Water supplied to customers

Water supply figures are recorded weekly at the supply points to our customers. The annual totals have been calculated to represent 365/366-day years, so as to make the data more directly comparable between years and consistent with abstraction and production figures, which are recorded daily. The years ended 30 June 1996, 2000 and 2004 are 366 days.



### Water supplied (millions of litres)

For the year ended 30 June

	Hutt City		Porirua City		Upper Hutt City		Wellington City		Total supply	
	Total	Avg. day	Total	Avg. day	Total	Avg. day	Total	Avg. day	Total	Avg. day
2005	13,938	38.2	6,022	16.5	5,319	14.6	30,244	82.9	55,522	152.1
2004	13,956	38.1	5,907	16.1	5,296	14.5	29,776	81.4	54,935	150.1
% Change	-0.1%		1.9%		0.4%		1.6%		1.1%	
2003	14,714	40.3	6,135	16.8	5,303	14.5	29,899	81.9	56,050	153.6
2002	14,177	38.8	5,908	16.2	5,774	15.8	28,902	79.2	54,760	150.0
2001	14,441	39.6	5,987	16.4	5,807	15.9	29,729	81.4	55,962	153.3
2000	13,989	38.2	5,536	15.1	5,496	15.1	28,729	78.5	53,750	146.9
1999	14,986	41.1	5,777	15.8	5,741	15.7	28,661	78.5	55,165	151.1
1998	14,679	40.2	5,499	15.1	5,111	14.0	28,296	77.5	53,585	146.8
1997	14,310	39.2	5,138	14.1	5,167	14.2	28,571	78.3	53,186	145.7
1996	14,398	39.3	5,096	13.9	5,064	13.8	29,383	80.3	53,941	147.4

### Average daily supply (litres)

For the year ended 30 June 2005

	Hutt City	Porirua City	Upper Hutt City	Wellington City	Total
Population <sup>1</sup>	100,100	50,400	35,700	183,900	370,000
Households <sup>2</sup>	34,659	14,925	13,236	62,733	125,553
Gross litres/head/day	381	327	408	451	411
Gross litres/household/day	1,102	1,105	1,101	1,321	1,212

<sup>1</sup>: Usually resident population – Statistics New Zealand estimate for 30 June 2005 based on 2001 Census. <sup>2</sup>: Occupied dwellings – 2001 Census

### Supply – maximum week (millions of litres)

For the year ended 30 June

	Hutt City	Porirua City	Upper Hutt City	Wellington City	Total
Maximum week 2005	9/2/05	9/2/05	9/2/05	9/2/05	9/2/05
Total of max. week					
2005	347.3	153.9	141.3	680.9	1,323.3
2004	302.9	134.3	125.2	630.9	1,184.1
% Change	14.7%	14.6%	12.9%	7.9%	11.8%
Avg. day of max. week					
2005	49.6	22.0	20.2	97.3	189.0
2004	43.3	19.2	17.9	90.1	169.2



# Water quality

## Chemical monitoring of the wholesale water supply

The health risk due to toxic chemicals in drinking water differs to that caused by microbiological contaminants. It is unlikely that any one substance could result in an acute health problem except under exceptional circumstances, such as significant contamination of the supply. Moreover, experience has shown that the water usually becomes undesirable after such incidents for obvious reasons such as taste, odour and appearance. The problems associated with chemical constituents arise primarily from their ability to cause adverse effects after prolonged periods of exposure. Standards for chemical compliance are set out in the DWSNZ 2000.

### Mean values of chemical analysis at treatment plants

For the year ended 30 June 2005

DWS NZ 2000		Te Marua		Wainuiomata		Waterloo		Gear Island	
Parameter	GV or MAV <sup>(A)</sup>	No. of samples	Value	No. of samples	Value	No. of samples	Value	No. of samples	Value
Alkalinity (total), mg/L CaCO <sub>3</sub>	-	250	46	50	47	53	64	16	72
Aluminium (acid soluble), mg/L	0.15	12	<0.02	12	0.04	-	-	-	-
Arsenic (total), mg/L	0.01	2	<0.001	2	<0.001	4	<0.001	4	<0.001
Boron, mg/L	1.4	2	0.012	2	0.017	4	0.025	4	0.026
Cadmium (total), mg/L	0.003	2	<0.00005	2	<0.00005	4	<0.00005	4	<0.00005
Calcium (total), mg/L	(B)	4	13	4	20	4	22	4	9.3
Chloride, mg/L	250	4	8.0	4	23	4	14	3	15
Chromium (total), mg/L	0.05	2	<0.0005	2	<0.0005	4	<0.0005	4	<0.0005
Colour (true), PtCo units	10	51	<5	50	<5	-	-	-	-
Conductivity, µS/cm @ 25°C	-	12	137	12	188	12	202	11	209
Copper (total), mg/L	1	12	0.13	12	<0.02	11	<0.02	10	<0.02
Cyanide (total), mg/L	0.08	2	<0.008	2	<0.008	4	<0.008	4	<0.008
Fluoride, mg/L	1.5 <sup>(C)</sup>	249	0.83	247	0.84	493	0.83	258	0.80
Hardness (total), mg/L CaCO <sub>3</sub>	200	12	36	12	57	12	69	11	40
Iron (total), mg/L	0.2	12	<0.05	12	<0.05	12	0.09	11	0.10
Langelier saturation index	≥0	12	-1.0	12	-1.1	12	-0.6	11	-1.1
Lead (total), mg/L	0.01	2	0.0002	2	<0.0001	4	<0.0001	4	<0.0001
Magnesium (total), mg/L	(B)	2	1.2	2	2.0	4	2.8	4	3.9
Manganese (total), mg/L	0.5	12	<0.05	12	<0.05	11	<0.05	10	<0.05
Mercury (total), mg/L	0.002	2	<0.00008	2	<0.00008	4	<0.00008	4	<0.00008
Nickel (total), mg/L	0.02	2	<0.0005	2	0.0005	4	<0.0005	4	<0.0005
Nitrate, mg/L –N	50	2	<0.03	2	0.06	4	0.77	3	1.2
pH	7.0-8.5	248	8.0	49	7.6	52	7.9	16	7.7
Selenium (total), mg/L	0.01	2	<0.001	2	<0.001	4	<0.001	4	<0.001
Silica (molybdate-reactive), mg/L	-	2	8.8	2	12	4	16	4	17
Sodium (total), mg/L	200	4	13	4	12	4	11	4	28
Solids (total dissolved), mg/L	1000	12	89	12	120	12	130	11	130
Sulphate, mg/L	250	4	8.1	4	5.6	4	6.0	3	6.9
Turbidity, NTU	2.5	50	0.20	50	0.35	52	0.76	-	-
Zinc (total), mg/L	3	12	0.05	12	<0.05	11	<0.05	10	<0.05

Notes: (A) Drinking-Water Standards for New Zealand 2000, guideline values (GV) or maximum allowable values (MAV). A dash in the 'GV or MAV' column indicates that there is no applicable guideline or maximum allowable value. (B) See Hardness. (C) The fluoride content recommended for drinking water by the Ministry of Health for oral health is 0.7 to 1.0 mg/L.

## Microbiological monitoring of the wholesale water supply

A public water supply that is free from microbiological contamination is an important factor in achieving high standards of public health. Microbiological monitoring of potable water is carried out in order to ensure that waterborne disease is not transmitted. *Escherichia (E.) coli*, which usually comes from faecal material, is used as an indicator of bacteriological contamination. Low numbers of protozoa (*Cryptosporidium*) are demonstrated by ensuring that the turbidity of the water following treatment is kept very low. Direct testing for protozoa is not practical or required by the Ministry of Health.

### Production

At our surface water treatment plants (Te Marua and Wainuiomata), compliance with the *E.coli* criteria of the DWSNZ 2000 is demonstrated by continuously monitoring free available chlorine (FAC) and pH in drinking water leaving the treatment plants. The FAC concentration must not fall below a concentration equivalent to a minimum of 0.2 mg/L of FAC at pH 8.0 while the turbidity does not exceed 0.5 NTU. Turbidity is continuously monitored on each filter to ensure that *Cryptosporidium* oocysts or *Giardia* cysts do not pass through the treatment plants. Turbidity should not exceed 0.5 NTU for more than five percent of any 24-hour period, or ever increase by more than 0.2 NTU in any 10-minute period.

The Waiwhetu aquifer is a secure water source and by definition free from microbiological contamination. Nonetheless, water leaving our aquifer source water treatment plants (Waterloo and Gear Island) is tested to demonstrate compliance with the *E.coli* criteria of the DWSNZ. No *E.coli* was detected in daily testing of water leaving Waterloo water treatment plant, or in water leaving Gear Island water treatment plant.

The Hutt Valley District Health Board, as agent for the Ministry of Health, assesses microbiological compliance to the DWSNZ annually, on a calendar year basis. Te Marua, Wainuiomata, Waterloo and Gear Island water treatment plants received microbiological compliance for the year to 31 December 2004. In addition, we have been advised informally that compliance has been achieved for the first half of the 2005 compliance year.

### Distribution

Although not presently required under the DWSNZ, Greater Wellington's Laboratory monitors the microbiological quality of water in our distribution system after treatment. *E.coli* sampling is used, in accordance with the requirements of the drinking water standards, for sampling urban reticulation systems.

Our distribution system is listed in the *Register of Community Drinking-Water Supplies in New Zealand*. The system is split into three distinct zones, each having its own sampling requirements based on population served. Samples must be taken on different days of the week and from sites that represent the full range of conditions that exist within a distribution zone. The three zones are (1) Central Hutt/Petone (unchlorinated supply from Waterloo water treatment plant), (2) Wainuiomata/South Wellington (supply from Wainuiomata water treatment plant) and (3) Upper Hutt/Porirua/North Wellington (supply from Te Marua water treatment plant). Samples are drawn from 16 sampling sites within the three zones.

A summary of results for the twelve months from 1 July 2004 to 30 June 2005 is given below.

### *E.coli* results – summary of samples collected

For the year ended 30 June 2005

Distribution zone	DWSNZ MAV <sup>(D)</sup>	No. of samples	No. of positive results
Central Hutt/Petone	<1	333	0
Wainuiomata/South Wellington	<1	356	0
Upper Hutt/Porirua/North Wellington	<1	355	0

(D) Drinking-Water Standards for New Zealand 2000, Maximum Allowable Value (MAV).

## Quality management system

### Quality management system objectives, targets and performance

The text in the two columns to the right of each target gives (1) a summary of performance against the target for the 2004/05 financial year and (2) additional background information where needed.

	Targets	Achievement 2004/05	Comment
Objective 1.1	Provide sufficient water to meet the unrestricted (other than routine hosing restrictions) demand in all but a drought situation that has a severity equal to or greater than a 1-in-50-year drought		
Target 1.1.1	Develop new sources, as required, to ensure that sufficient water is available to meet the unrestricted (other than routine hosing restrictions) demand in all but a drought situation that has a severity equal to or greater than a 1-in-50-year drought	All demand met without restrictions  New long-term water source options being investigated	GW Water uses a complex supply and demand model (sustainable yield model) to assist with strategic planning. This SYM indicates that there is sufficient water available to service a population of 377,000 to a 1-in-50-year reliability standard. Statistics New Zealand's current population projections indicate that this level of population could be reached as soon as 2007, rather than by 2020 as previously reported. Growth in the base level (winter) demand is small (less than 1%) but the margin of water reserve is also relatively small. A combination of unfavourable circumstances could lead to a shortage of water. The Hutt River has been identified as the best option for the next supply augmentation step. We have made progress with two options: planning for a river intake adjacent to the Stuart Macaskill lakes at Te Marua and preparing to seek a reduction to the minimum residual flow requirement of our water-take consent for the Hutt River at Kaitoke weir. In the longer term, new water source options that could supply population growth to 450,000 (as modelled for the Wellington Regional Strategy study) were presented to a Utility Services workshop in June 2005. A recommended shortlist of options for further investigation will be presented in September 2005.
Target 1.1.2	Develop and extend the water supply infrastructure as required to ensure that sufficient water is available to meet the unrestricted (other than by routine hosing restrictions) demand in all but a drought situation that has a severity equal to or greater than a 1-in-50-year drought.  (Note: In a drought situation it may be necessary to impose restrictions as a precautionary measure, even though the drought may, at its conclusion, turn out to be of lesser severity than 1-in-50 years)	Customers consulted re capital work. All demand met without restrictions	Customers are consulted annually about their requirement for new supply points to meet population movement within their boundaries. The supply infrastructure was not extended, but various seismic strength improvement projects were progressed. Planning for new supply points at Whitby and Grenada is proceeding.

	Targets	Achievement 2004/05	Comment
Objective 1.2	Maintain the customers' service reservoirs above agreed minimum levels		
Target 1.2.1	<p>Meet the following criteria for each customer service reservoir supplied directly by GW Water:</p> <ul style="list-style-type: none"> <li>• Maintain at least 70% full for 90% of the time</li> <li>• Maintain at least 60% full for 98% of the time</li> </ul> <p>(Note: Compliance with this target will be assessed by interrogating reservoir level data recorded at 15 minute intervals.)</p>	<p>60% full target met for 532 of 540 reservoir-months (98.5%)</p> <p>70% full target met for 522 of 540 reservoir-months (96.7%)</p>	<p>The 60% target was not reached for 19 reservoir-months in total. However, 11 of these events were due to reservoir levels being lowered or emptied so the customer could carry out maintenance or improvement work. Of the remaining eight events, four were due to lightening strike causing loss of the level signal, two to pump failure at Waterloo and two to other equipment failures.</p> <p>The 70% target was not reached for 29 reservoir-months in total. However, 11 of these events were due to reservoir levels being lowered or emptied so the customer could carry out maintenance or improvement work. Of the remaining 18 events, three were due to high demand, four to allow better system control, two to improve water quality, five to loss of set point control, two to lightening strike and two to other equipment failure.</p>
Objective 1.3	Maintain system pressure above agreed minimum levels		
Target 1.3.1	<p>Maintain the wholesale water supply pressure into the Thorndon zone above 80m and below 100m for 98% of the time and above 85m for 90% of the time.</p> <p>(Note: Compliance with this target will be assessed by interrogating pressure data recorded at 15 minute intervals.)</p>	<p>Above 80m and below 100m pressure target met</p> <p>Above 85m pressure target met for 7 of 12 months</p>	<p>Thorndon zone pressure above 80m and below 100m for at least 99.9% of the time for each month (range = 99.9% to 100.0%)</p> <p>Thorndon zone pressure above 85m for at least 85.4% of the time for each month (range = 85.4% to 98.8%)</p>
Objective 2.1	Comply with the microbiological, chemical and aesthetic requirements of the <i>Drinking-Water Standards for New Zealand</i> (DWSNZ) 2000, for water leaving the treatment plants		
Target 2.1.1	Comply with the microbiological requirements of DWSNZ 2000 for water leaving the treatment plants 100% of the time	Fully complying	Formal compliance is assessed on a calendar-year basis. Microbiological compliance was certified by Hutt Valley District Health Board's (HVDHB) regional public health section for 2004 for our four water treatment plants. Data for January – June 2005 shows full compliance and we have interim confirmation of this from HVDHB.
Target 2.1.2	Comply with the chemical (P2) requirements of the DWSNZ 2000 for water leaving the treatment plants 95% of the time	Fully complying	Compliance is assessed on a calendar-year basis. Chemical (P2) compliance was certified by HVDHB for 2004 for our four water treatment plants. Data for January – June 2005 shows full compliance and we have interim confirmation of this from HVDHB.
Target 2.1.3	Comply with the aesthetic requirements of the DWSNZ 2000 for water leaving the treatment plants 90% of the time	Fully complying	Compliance is assessed on a calendar-year basis. Aesthetic compliance with DWSNZ 2000 and the Public Health Grading of Community Drinking Water Supplies 2003 was certified by HVDHB for 2004 for our four water treatment plants. Aesthetic compliance for January – June 2005 has not yet been assessed by HVDHB.

	Targets	Achievement 2004/05	Comment
Objective 2.2	Comply with the microbiological, chemical and aesthetic requirements of the DWSNZ 2000, for water in the distribution system		
Target 2.2.1	Comply with the microbiological requirements of DWSNZ 2000 for water in the distribution system 100% of the time	Fully complying	Compliance is assessed on a calendar-year basis. Microbiological compliance with DWSNZ 2000 was certified by HVDHB for 2004. Data for January – June 2005 shows full compliance and we have interim confirmation of this from HVDHB.
Target 2.2.2	Comply with the chemical requirements of DWSNZ 2000 for water in the distribution system 95% of the time	Fully complying	Chemical compliance testing is carried out at the water treatment plants (see target 2.1.2 above).
Target 2.2.3	Comply with the aesthetic requirements of DWSNZ 2000 for water in the distribution system 90% of the time	Not yet achieved	We believe that our bulk distribution zones will be assessed as complying, but that had not been confirmed by regional public health (HVDHB) at 30 June 2005.
Objective 3.1	Unless the customer specifically requests that unfluoridated water be supplied and it is practicable to do so, add fluoride to the treated water in accordance with Ministry of Health recommendations in the DWSNZ 2000		
Target 3.1.1	In fluoridated supplies, comply with Ministry of Health recommendations for the addition of fluoride 85% of the time	Mostly achieved	Compliance by treatment plant: Te Marua 98%, Wainuiomata 85%, Waterloo 91%, Gear Island 84%
Objective 4.1	Manage assets wisely		
Target 4.1.1	Keep asset information up-to-date by updating information about newly created or refurbished assets by 31 August following the end of the financial year	Achieved	All new and refurbished asset data entered on GW Water's asset management system by 10 August 2005
Target 4.1.2	Carry out condition assessment of assets that have reached 90% of their economic life within one year of that event (that is, the life recorded in the Hansen Asset Management System primarily for the purpose of calculating loss of service potential)	Not achieved	List of assets within two years of their recorded life expectancy prepared by 30 June 2003. Condition assessment of these assets was to be completed by 30 June 2004. This work was still in progress at 30 June 2005, due to other projects being given priority.
Target 4.1.3	Replace or refurbish assets before failure reduces levels of service	Mainly achieved	Service levels almost always achieved as per targets 1.2.1 and 1.3.1. Premature failure of two motors and two electronic drives at Waterloo caused particular concern. A strongly worded complaint was sent to the supplier of this equipment. A response had not been received by 30 June 2005.

	Targets	Achievement 2004/05	Comment
Objective 4.2	Practice prudent financial management		
Target 4.2.1	Net debt-to-levy ratio does not exceed target level of 220%	Achieved	Debt to levy ratio 190% at 30 June 2005
Target 4.2.2	Ensure that the asset value recorded in the financial statements is materially correct by capitalising completed capital projects each financial year and conducting regular re-valuations, as per New Zealand Infrastructure Asset Valuation and Depreciation Guide	Achieved	Assets last re-valued at 30 June 2004, as per the requirements of NZ Infrastructure Asset Valuation and Depreciation Guide. New assets relating to the 2004/05 financial year have been added to the asset register at cost, while assets that were replaced have been written off.
Target 4.2.3	Ensure that the annual actual direct operating costs do not exceed the budgeted value	Achieved	Operating surplus of \$0.9M achieved
Target 4.2.4	Consult with the customer territorial authorities regarding the content of each annual capital works programme by 30 June 2005	Not achieved	Proposed capital works programme for 2005/06 presented to customers on 5 July 2005
Target 4.2.5	Ensure that the annual capital works programme is completed within budget	Achieved	Budget \$5.3M. Actual expenditure \$4.1M. (See Financial Overview, page 13)
Target 4.2.6	Ensure that 90% of the major capital works projects nominated in the annual operating plan do not exceed the budgeted funding	Not achieved	Of the 15 projects in the operating plan completed during 2004/05, 40 percent were completed within budget. However, the overall capital works expenditure for the year (\$4.1M) was well within the total budget (\$5.3M). The strategy for financial management of projects and the performance target are to be reviewed.
Target 4.2.7	Maintain and actively manage insurance policies or reserve funds, so that the financial impact of any natural disaster is minimised	Achieved	GW Water has a self-insurance reserve fund in relation to the Stuart Macaskill lakes (Te Marua) and its distribution network. All other significant assets are covered by insurance policies. The insurance reserve fund stood at \$8.11M at 30 June 2005.
Target 4.2.8	Consult with the customer territorial authorities regarding the content of each proposed annual plan and on long-term council community plans (LTCCPs) by 30 June 2005	Achieved	The proposed Annual Plan for 2005/06 and annual projections to 2012/13 were presented to Wellington, Porirua and Upper Hutt city councils. Their views have been noted. Hutt City Council declined the offer of a presentation.
Target 4.2.9	Achieve unit costs (both total and operating) per million litres of water produced that are comparable with other bulk suppliers operating under similar conditions. This is to be reported annually	Achieved	Costs benchmarked with Watercare Services (Auckland). See page 27

	Targets	Achievement 2004/05	Comment
Objective 5.1	The Te Marua and Wainuiomata water treatment plants will maintain at least an 'A' grading		
Target 5.1.1	The Te Marua and Wainuiomata water treatment plants will meet all the requirements for an 'A' grading and will report quarterly	Achieved	'A' grading maintained for Te Marua 'A1' grading renewed for Wainuiomata  See the short-term performance indicator for water quality (page 23) for further detail.
Objective 5.2	The Te Marua and Wainuiomata water treatment plants will obtain an 'A1' grading		
Target 5.2.1	The Te Marua and Wainuiomata water treatment plants will meet all the requirements for an 'A1' grading by 31 December 2005	Progressed	'A1' grading was renewed for Wainuiomata in May 2005. A re-grading of Te Marua was being carried out by HVDHB at year end. We are confident an 'A1' grade will result from that process.
Objective 5.3	The Waterloo water treatment plant will retain its 'B' grading, unless Hutt City Council changes its policy of supplying unchlorinated water to central Lower Hutt, Petone and Eastbourne.		
Target 5.3.1	The Waterloo water treatment plant will meet all requirements for a 'B' grading and report quarterly	Not achieved	Waterloo was graded 'B' until June 2005, when the grading was changed to 'ungraded' ('U'). See the short-term performance indicator for water quality (page 23) for further detail.
Objective 5.4	The Gear Island water treatment plant will obtain an 'A' grading		
Target 5.4.1	Install all necessary compliance monitoring instrumentation and software by 31 December 2005	Achieved	Monitoring equipment is in place.
Target 5.4.2	Monitor compliance and report and review monthly	Achieved	Monitoring results show that meeting the requirements for an 'A' grading will be difficult because of the impact of insoluble particles in lime on turbidity. We are considering how this problem can be overcome.
Objective 6.1	The Upper Hutt/North Wellington and Central Hutt/Petone zones will receive an 'a' grading by 31 March 2006 (subject to clarification of the aggressiveness rule and test procedure)	Progressed	A sampling programme consistent with achieving an 'a' grading under the new grading rules was agreed with regional public health in November 2002. Prior to the 2003 grading rules, bulk distribution systems were not covered. Gradings using the 2003 rules have only recently been instigated. We expect to submit information to HVDHB by November 2005 and receive a grading assessment by 31 March 2006.
Objective 6.2	The Wainuiomata/South Wellington zone will receive an 'a' grading by 31 March 2007, provided that the cost of doing so is acceptable to GW Water and its customers (subject to clarification of the aggressiveness rule and test procedure)	Progressed	A sampling programme consistent with achieving an 'a' grading under the new grading rules was agreed with regional public health in November 2002. Prior to the 2003 grading rules, bulk distribution systems were not covered. Gradings using the 2003 rules have only recently been instigated. We expect to submit information to HVDHB by November 2005 and receive a grading assessment by 31 March 2006.
Objective 7.1	An environmental management system certified under the terms of ISO 14001:1996 – environmental management systems – Specification with guidance for use - will be maintained	Achieved	A surveillance audit of the EMS is conducted annually, with a comprehensive re-certification audit required every three years. The latest re-certification audit, in August 2003, resulted in certification to ISO 14001 being maintained.

## Environmental management system

### Environmental management system objectives, targets and performance

The text in the two columns to the right of each target gives (1) a summary of performance against the target for the 2004/05 financial year and (2) additional background information where needed.

	Targets	Achievement 2004/05	Comment
Objective 1.1	Be aware of all legislation, regulations, bylaws and standards that are relevant to the environmental performance of GW Water		
Target 1.1.1	Maintain a file of all resource consents issued to GW Water	Achieved	
Target 1.1.2	Identify all permitted activity rules that apply to GW Water activities, and confirm compliance with those rules by 30 June 2005	Achieved	These relate mainly to discharges from the distribution system. Discharges are recorded and comply with permitted use rules.
Objective 1.2	Comply with all legislation, regulations, bylaws and standards that are relevant to the environmental performance of GW Water		
Target 1.2.1	Obtain all necessary resource consents and building permits for new work or changes to the operation of the system	Achieved	Records held by the management systems co-ordinator
Target 1.2.2	Obtain and keep up-to-date all necessary trade waste permits by their respective expiry dates	Achieved	Trade waste permits are held for Te Marua and Waterloo water treatment plants and for Greater Wellington's Laboratory.
Target 1.2.3	Obtain and keep up-to-date all necessary dangerous goods licences by their respective expiry dates	Achieved	Current until March 2006. Dangerous goods requirements are to come under the revised Hazardous Substances and New Organisms (HSNO) Act (see target 1.2.5)
Target 1.2.4	Keep all building warrants of fitness up to date by their respective expiry dates	Achieved	
Target 1.2.5	Review and implement the new hazardous substance component of the HSNO Act by 30 June 2005	Partially achieved	All chemicals other than chlorine are still managed under the provisions of the Dangerous Goods Act, pending transfer to management under the revised HSNO Act. Dangerous goods licences are current until 31 March 2006. Hazardous substances location test certificates for chlorine were in place at all sites where chlorine is used, by 15 December 2004.



	Targets	Achievement 2004/05	Comment
Objective 1.3	Demonstrate compliance with all legislation, regulations, bylaws and standards that are relevant to the environmental performance of GW Water		
Target 1.3.1	Demonstrate compliance with all resource consents	Achieved	Compliance demonstrated for all resource consents. Water-take consent for Kaitoke assessed as 'mainly complying' due to lightning strike resulting in maximum instantaneous abstraction rate being exceeded on two occasions. Water-take consent for the Orongorongo River, Big Huia Creek and Little Huia Creek was assessed as 'partially complying' due to an IT failure and recalibration of a flow gauge that was subsequently used to retrospectively assess abstraction rates. A discharge consent from Wainuiomata treatment plant to the Wainuiomata River was assessed as 'mainly complying' due to higher than permitted instantaneous discharge caused by a control system fault.
Target 1.3.2	Carry out and report all monitoring required by resource consents annually, or to timeframes required by consent conditions	Achieved	All necessary reporting was provided to the consent manager within the required timeframes.
Target 1.3.3	Determine and report all monitoring required by hazardous substance legislation, where matters are not covered by resource consents	Achieved	See also targets 1.2.3 and 1.2.5
Objective 2.1	Identify all activities with environmental impacts and assess the significance of these impacts		
Target 2.1.1	Review the procedure for identifying activities that have environmental impacts and establish the relative significance for each by 31 March 2005	Achieved	A revised procedure was introduced in September 2004. The success of this change is scheduled to be reviewed by 31 December 2005.
Objective 2.2	For all new projects or activities, consider environmental aspects when choosing between alternatives		
Target 2.2.1	Options reports, feasibility reports and design reports for all capital projects initiated shall include consideration of environmental effects, including their avoidance or mitigation	Achieved	All reports include an assessment of environmental impact. In most cases the impacts are minor or insignificant.

	Targets	Achievement 2004/05	Comment
Objective 3.1	Adopt all practicable means to prevent pollution of the environment		
Target 3.1.1	Monitor and report on potential accidental discharges of substances with the possibility of harming the environment at all treatment plants by 31 December 2005	Achieved	<p>Comprehensive spillage control measures, including bunding and managed sumps, are in place at all GW Water's treatment plants.</p> <p>Three minor chemical spillages occurred. These were contained by bunding, with no environmental harm resulting.</p> <p>All supply lines between chemical storage and dosing points at our four water treatment plants were assessed during 2004/05 to identify the potential effects of breaks in these lines. Some remedial work has been carried out, with the remainder to be completed during 2005/06.</p>
Objective 3.2	Treat and dispose of wastes in an environmentally safe manner		
Target 3.2.1	Comply with trade waste permit conditions for the tenure of each permit	Achieved	Trade waste licences are held for Te Marua and Waterloo water treatment plants and the Laboratory. Hutt City Council's Trade Waste section carries out an annual compliance audit. No matters of concern were raised.
Target 3.2.2	Comply with the requirements of all discharge consents	Mainly achieved	The consent for discharge from Wainuiomata treatment plant to the Wainuiomata River was assessed as 'mainly complying' due to higher than permitted instantaneous discharge caused by a control system fault.
Target 3.2.3	Dispose of sludge and other solid waste to a properly consented landfill or in some other environmentally safe manner	Achieved	Sludge and solid waste is sent to a properly consented landfill at Silverstream.
Target 3.2.4	Dispose of liquid waste in an environmentally safe manner	Achieved	Trade waste contractors manage the treatment and disposal of our liquid waste in accordance with the conditions of their trade waste licences, issued by their local territorial authority.
Target 3.2.5	Carry out a feasibility study of a centrate sewer main from Wainuiomata water treatment plant by 30 June 2005	Achieved	Study completed. Cost identified as circa \$100,000. This work is scheduled for the 2006/07 capital expenditure programme.
Objective 3.3	Adopt policies, procedures and practices that will reduce waste		
Target 3.3.1	Review the options for disposing of sludge by 30 June 2005	Achieved	The current practice of disposal of sludge to consented landfill has been identified as the best option available at present and will be continued. A review of our waste water treatment plants has been started, to try to increase the dry solids content of sludge and so reduce the cost of disposal.
Objective 4.1	Recognise the natural limits of regional water resources		
Target 4.1.1	Accurately monitor and investigate adverse trends in losses between abstraction, production and supply. Any losses are to be reported annually	Achieved	No adverse trends evident from production efficiency performance (see page 4) or distribution efficiency performance (see page 7).

	Targets	Achievement 2004/05	Comment
Objective 4.2	Minimise energy use		
Target 4.2.1	Each month monitor the power usage at those sites with half-hour power meters to check for discrepancies	Achieved	Monitoring has identified low power factors at four sites. Projects to install power factor correction equipment at these sites have been started.
Target 4.2.2	Every three years review the efficiency of the boost and treatment pumps at Te Marua pumping station, the Wellington, Gracefield and Naenae pumps at Waterloo, and the pumps at Ngauranga pumping station. Review the efficiency of the pumps at satellite pumping stations, including Thorndon and Haywards, every five years	n/a	No testing this financial year
Target 4.2.3	Adopt the use of energy-efficient products and equipment, where practicable and economic	Achieved	Major items of electrical equipment are assessed on a whole-life cost basis. Our electric drive motors are already close to 100% efficient and the pumps we purchase are over 80% efficient, the best currently available.  High-efficiency pumps were purchased for new pumping stations at Karori and Point Howard.
Objective 5.1	Prevent damage to significant habitats and ecosystems		
Target 5.1.1	Recognise the need to maintain appropriate minimum river flows and, as far as practicable, natural flow variation in watercourses below points of abstraction	Achieved	Minimum flows and flow sharing arrangements are written into resource consents for water-take and the control logic for operating software systems. Consented minimum downstream flows were generally maintained (see EMS target 1.3.1).
Target 5.1.2	Avoid damage to significant ecosystems by new capital works or, if this is unavoidable, mitigate the damage by establishing, if practicable, equivalent replacement ecosystems	Achieved	No new capital works that impacted on significant ecosystems
Target 5.1.3	No target currently exists for this number. A former target 5.1.3 was achieved on 31 December 2003, but the number was not reassigned		
Target 5.1.4	Complete stage 3 of the Wainuiomata fencing project by 30 June 2005	Achieved	
Target 5.1.5	Assist with the development of a protocol for whole effluent toxicity testing for native fish by 30 June 2005	Deferred	Planned development of a wetland behind the lower Wainuiomata dam would almost certainly change the characteristics of that stretch of the river for fish. Given the substantial cost associated with developing a testing protocol, we do not think it is worthwhile to proceed until the impacts of the wetland proposal are better understood. (see also target 5.1.6).

	Targets	Achievement 2004/05	Comment
Target 5.1.6	Investigate the possibility of a wetland behind the lower Wainuiomata dam by 30 June 2005	Achieved	Feasibility and dam safety reports completed. In December 2004 we reached agreement with GW Landcare Division to modify the original water supply dam at Wainuiomata, to make the structure safe and support the option of a wetland being developed behind the dam by GW at some future time. The dam modification work was scheduled for 2004/05, but deferred due to high tender prices. This work has now been reprogrammed for 2006/07.
Objective 6.1	All recommendations made by the Utility Services Committee involving investment or the use of natural resources shall include consideration of environmental impacts		
Target 6.1.1	All reports to the Utility Services Committee or the divisional manager, Utility Services proposing investment or use of physical resources shall address the environmental aspects of the proposal, including any practicable alternative courses of action	Achieved	Consistent with GW policy, assessment of environmental impacts is included in all reporting.
Objective 7.1	Achieve environmental awareness in all GW Water staff		
Target 7.1.1	Provide initial training for all new GW Water staff in environmental awareness and the environmental management system within three months of starting employment	Not achieved	Two staff members did not receive the appropriate training within the target timeframe.
Objective 7.2	Ensure that all staff whose actions have potential environmental impacts, understand that potential		
Target 7.2.1	Provide specific training to staff whose actions have potential environmental impacts, to ensure they understand those potential impacts and their significance, and are equipped to eliminate or mitigate any impact	Achieved	Three levels of environmental awareness training have been identified, depending on the duties of employees. Specific training is given and the details are recorded in a training database against individual employees.
Objective 8.1	Ensure that third parties engaged by GW Water are aware of environmental matters or concerns associated with the work they are engaged to do		
Target 8.1.1	All formally documented works and supply contracts shall include any applicable environmental requirements	Achieved	All works and sealed contracts included clauses covering environmental matters, including requirements to prevent or minimise adverse impacts.
Objective 8.2	Where practicable, the environmental performance of a contractor or suppliers shall be taken into account in the assessment of tenders		
Target 8.2.1	Include environmental performance as an attribute when assessing tenders for major works or supply contracts by the weighted attribute method	Achieved	The weighted attribute assessment method, including environmental performance, is used to assess all tenders for major works.
Objective 9.1	Report annually on resource consent compliance		
Target 9.1.1	Facilitate the preparation of the Consents Investigations Department's annual compliance report	Achieved	

	Targets	Achievement 2004/05	Comment
Objective 9.2	Report annually on the environmental performance of GW Water		
Target 9.2.1	Prepare an annual report for the year ending 30 June on the environmental performance of GW Water by 30 November each year	Achieved	Publication of GW Water's water supply annual report 2004/05 by 30 November 2005 meets this target.

## Utility Services Committee members

The following councillors were members of the Utility Services Committee at 30 June 2005. Please note that membership of the Utility Services Committee changed following local body elections in October 2004.

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Chairman

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Deputy Chairman

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### Ian Buchanan

Council Chairman (ex-officio)<sup>1</sup>

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<sup>1</sup> Membership of the committee includes the council chairperson *ex officio*, but excludes the council chairperson when the committee is considering Wellington bulk water supply matters relating to resource consents.