



2013

GRI REPORT





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## ABOUT THIS REPORT

This GRI Report provides information about Watercare Services Limited's (Watercare's) sustainability performance. It should be read in conjunction with the content included under each focus area in the annual report and expands on particular matters which Watercare considers material in terms of their impact on stakeholders or on the business.

### GLOBAL REPORTING INITIATIVE

Watercare uses the Global Reporting Initiative (GRI) G3.1 guidelines to ensure the reporting of Watercare's sustainability performance aligns with international good practice. The GRI is an internationally recognised framework which encourages transparent reporting on sustainability performance and includes an established set of performance indicators. Watercare has reported against the requirements of a GRI A Application Level. A list of the indicators Watercare has reported and their relevant location is included in the index at the end of this report.

### REPORTING SCOPE

The scope of this report covers all operations managed by Watercare. The vast majority of the company's operations and people are located in Auckland, New Zealand – it also has two smaller laboratories in the South Island.

Throughout this report, Watercare has indicated the sources of information used to compile the indicators and any significant assumptions or estimates applied. There have been no changes made to the scope of this report when it is compared to that of the prior reporting period.

### REPORT STRUCTURE

In the current year, Watercare has revised the structure of its reporting. The previous *Supplementary Material* that used to provide figures and tables has been turned into a GRI report in order to:

- Provide a more meaningful connection to the content in the annual report
- Focus attention and disclosures on those issues Watercare has identified as being most material to the business or to stakeholders
- Streamline the content, removing excessive or unnecessary disclosures and including more context and metrics relevant to material matters
- Enhance the readability and flow of the content in the report including organising the content under logical sections and headings relevant to the material themes.

The GRI Report is structured into the following sections:

Section	Heading	Material themes
1	People	Safety at work Developing and engaging staff
2	Environment	Biodiversity of Watercare’s sites Operations’ inputs and outputs Climate change impacts Corporate sustainability
3	Customer	Service delivery Water quality and demand management
4	Community	Effective partnerships Community well-being
5	Economy	Financial returns Asset funding and performance

In each section, the report provides context to the material themes and key activities, and provides relevant performance information.

**MATERIALITY**

Material matters are those Watercare has assessed as having a significant impact on stakeholders or on the business model or strategy. The company has chosen the additional disclosures included in this GRI Report to illustrate response and performance in relation to these matters.

**ASSURANCE**

Watercare has engaged independent consultancy firm ERM to provide assurance over the content in this report and the GRI assertion. The assurance statement can be found in the annual report.

# 01

## PEOPLE

### THEMES:

Safety at work

Developing and engaging staff

### MATERIAL MATTERS:

Health and safety

Staff engagement and retention

Appropriate remuneration

Staff training and capability

Organisational culture and diversity

## WATERCARE'S APPROACH

Watercare has a diverse workforce which, as at 30 June 2013, comprised 731 permanent employees and a small number of staff on fixed-term, casual or temporary contracts.

Ensuring the safety and well-being of staff is a business priority and one of Watercare's core focus areas. The company has a formal health and safety committee structure which includes 12 health and safety committees representing the various work activities within the business. The health and safety committees meet on a monthly basis. They review initiatives and statistics including incidents and accidents occurring within those monthly periods. Formal committee minutes are kept for all meetings. There is a total of 96 committee members which represents approximately 13 per cent of Watercare's permanent workforce.

Watercare's workforce is highly skilled. The company needs to continue to invest in the capability and skills of staff to deliver against its vision of delivering "outstanding and affordable water services for all the people of Auckland". Watercare does this by providing on-the-job training as well as supporting staff members through internal and external training courses relevant to their roles.

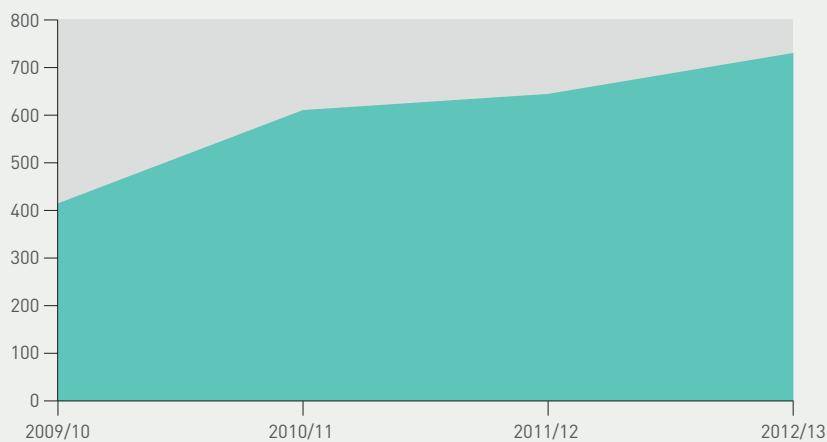
Being able to attract and retain talented and motivated people is essential to long-term sustainability. This means remunerating staff appropriately and providing a collaborative and high-performance culture.

## ABOUT WATERCARE'S PEOPLE

Watercare's permanent workforce increased as a result of the integration of Auckland's water and wastewater organisations into Watercare in November 2010, when the company took on the functions applicable to a retail organisation. The subsequent increases in staffing levels in 2012/13 relate in the main to the insourcing of operational plants and network maintenance work that had previously been contracted out.

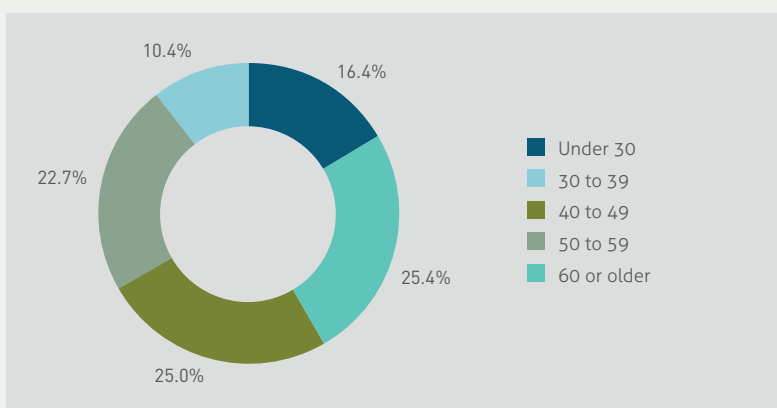
The figure below highlights the actual number of permanent staff members on 30 June 2013, which was 731.

**People 1: Number of permanent staff members on 30 June of each financial year**



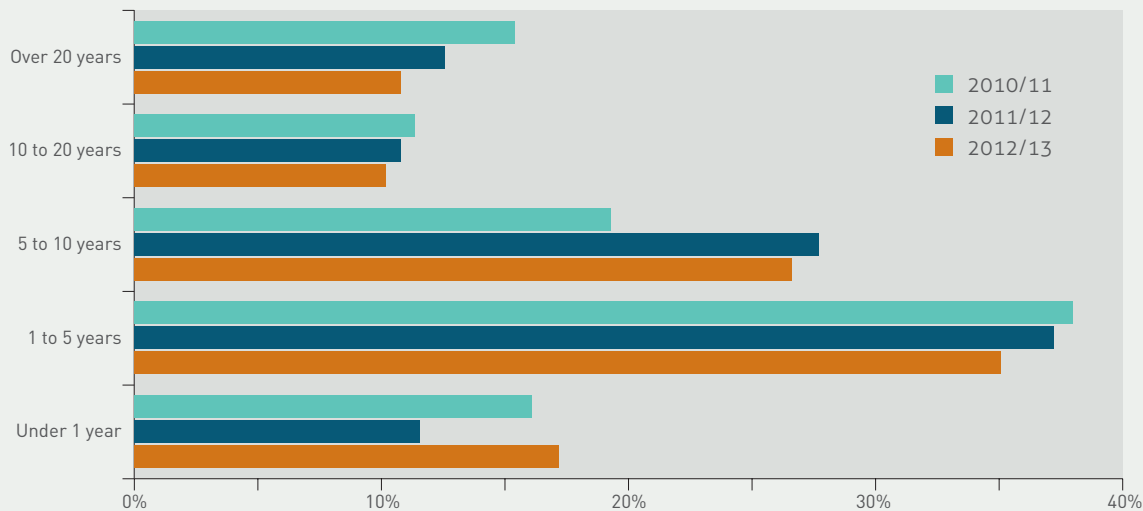
Although staff numbers have increased, the age profile of the company has remained relatively consistent over the years. Watercare continues to refresh its workforce while ensuring that it retains the applicable skills and experience of its older employees.

**People 2: Permanent employee age profile (by percentage)**



Permanent staff is mostly made up of employees who have been at Watercare for between one and 10 years, as shown on the next page.

### People 3: Employee length of service



The high percentage of employees with a length of service of under a year reflects the number of new hires.

The breakdown of new hires by gender and age group is provided below. Male numbers include the insourcing of the operational plants and network maintenance work that had previously been contracted out. That work was predominantly undertaken by male employees. A noticeable trend has been the increasing number of females employed in technical, engineering, management and supervisory positions.

### People 4: New hires by gender and by age group

The Watercare team represents a diverse range of ethnicities – with over 42 nationalities represented within the company. Over the past year, a number of women have been appointed to management and supervisory roles that had previously been undertaken by men. In addition, there have been significant improvements in the development opportunities for women within the company during that time, with women now representing one-third of the total workforce.

Gender	2012/13
Male	104
Female	72
<b>Total</b>	<b>176</b>

Age group	2012/13
Under 30	60
30–39	62
40–49	26
50–59	23
60 or older	5
<b>Total</b>	<b>176</b>

Of Watercare's permanent staff members, as at 30 June 2013, 76 per cent are on full-time individual employment agreements and 16 per cent are on collective agreements, with the remainder on part-time/casual or fixed-term employment agreements.

Breakdown of total workforce is as follows:

### People 5: Workforce by employment type

Employment type	2010/11	2011/12	2012/13
Individual Employment Agreements (IEA)	512	541.0	590
Collective Employment agreements (CEA)	96	104.0	126
Part-time FTEs	3	2.5	15
<b>Subtotal</b>	<b>611</b>	<b>647.5</b>	<b>731</b>
Fixed-term Individual Agreements (IEA) > one year	5	4.0	2
Fixed-term Individual Agreements (IEA) < one year	17	14.0	18
Casual FTEs	2	2.8	21
<b>Total head count on payroll</b>	<b>635</b>	<b>668.3</b>	<b>772</b>



## SAFETY AT WORK

### WHAT WATERCARE IS DOING

Keeping staff safe and healthy is a business priority and Watercare codifies this commitment in contractual arrangements with employees. The company performs a large number of activities in order to ensure safety at work. These activities can broadly be categorised as:

- Compliance
- Education and prevention
- Monitoring and reporting.

Watercare complies with all required regulation including the Health and Safety in Employment Act 1992. As part of its commitment to injury prevention, the company has been audited by ACC as being compliant with their workplace safety management practice requirements at a tertiary level. This is the highest level obtainable and reflects that Watercare's practices and policies are in accordance with good-practice expectations.

Health and safety is embedded into Watercare's working philosophy. All new employees and contractors receive an initial site-specific and generic safety induction onto company sites and are then required to attend regular refresher training. Employees receive ongoing health and safety training appropriate to their roles. Training may include: first aid, confined space, working at heights, working on the road, fork hoist operation, defensive driving and chemical handling.

A company-wide occupational safety and health manual is maintained on the intranet to provide health and safety guidance, policy details and reporting processes.

The company has engaged medical professionals – Medinex – to oversee and provide medical expertise regarding work-related health issues. All employees in key or high-risk roles undergo annual medical assessments. In addition, all employees required to work in wastewater environments are immunised against hepatitis A and B, polio, tetanus and typhoid at company cost. Regardless of their roles, all employees are offered free influenza immunisation on an annual basis.

Unfortunately, the risk of incidents or accidents cannot be completely eliminated. If a serious incident does occur, Watercare operates a comprehensive employee assistance programme providing all employees with access to a wide range of confidential counselling services. The service is not used for accidents only. This is available to staff on a company referral or self-referral basis. Also, the service is used in any incident requiring crisis intervention. Watercare makes these services available to staff and their families. The company engages an occupational nurse and operates clinics at its various sites for staff in relation to workplace health-related issues.

To support staff members to return to full health, Watercare works closely with ACC providing comprehensive rehabilitation and return-to-work programmes for work-related and non-work-related injuries.

Accurate tracking of incidents and injuries is important for monitoring performance and identifying areas which should be improved. Formal reporting requirements include: near-miss injury, first-aid injury, medical-treatment injury, lost-time injury and significant injury. An incident database is maintained to manage all reported incidents and determine root causes. All injury metrics are reported in accordance with the recognised workplace injury and disease-recording standard (AS 1885.1). To check in with progress and performance, the company undertakes safety inspections each year. Inspections are undertaken by staff. Specialist consultants are used in some instances.

Union representatives and members participate in the various health and safety committees. All the company collective agreements have commitments to the health and safety of employees and include provisions relating to drug and alcohol testing, alternative duties/rehabilitation, medical examinations, accident and near-miss reporting, inoculation and biological monitoring (where applicable). Employees and elected union representatives are involved in the selection and trialling of personal protective equipment.

The right to refuse unsafe work is recognised as part of the health and safety management system and is a legal requirement. Complaints are noted by means of a hazard report process.

## HOW WATERCARE HAS PERFORMED

For further information, refer to the following rulers in the annual report:

3A – Lost-time-injury frequency rate

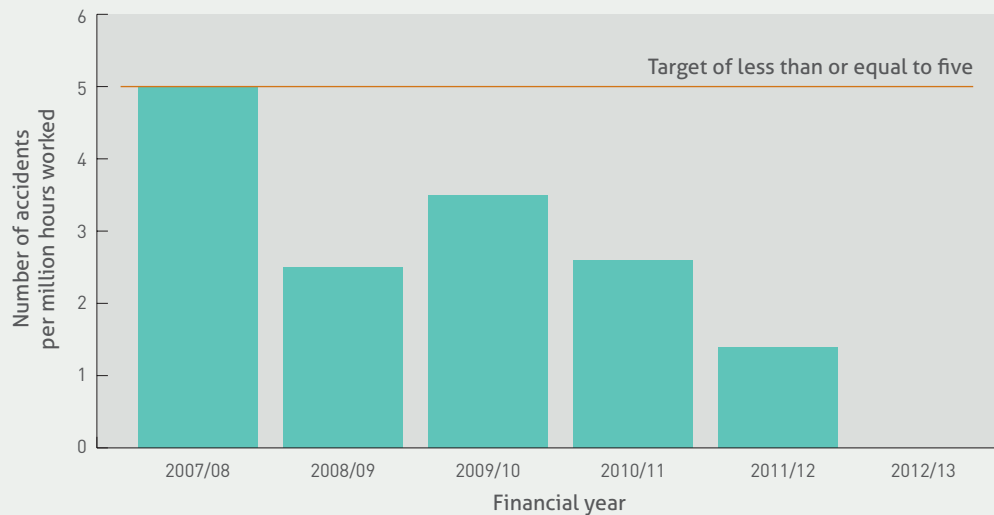
3B – Lost-time severity rate

3C – ACC workplace management practices accreditation

3D – Staff wellness

There were no fatalities or occupational diseases as a result of activities recorded over the past year. Watercare's lost-time-injury frequency rate – a recognised indicator of health and safety performance – has been trending down over the last five years and in 2012/13 was zero, well below the company's target of less than or equal to five.

### People 6: Lost-time-injury frequency rate



Another measure of staff wellness monitored by Watercare is the percentage of available hours that are lost to employee illness. In 2012/13, 2.0 per cent of total available hours were lost for this reason. This was within the annual target of less than 2.5 per cent lost time due to employee illness.

### People 7: Unscheduled absences through staff illness



## DEVELOPING AND ENGAGING STAFF

### WHAT WATERCARE IS DOING

Watercare remains focused on recruiting, developing and retaining highly skilled people in all aspects of the company's activities. Our recruitment policy is to recruit the best candidate in the market for any given position. Wherever possible, we look to internal candidates.

In order to ensure staff members can be at their best, Watercare aims to provide a positive environment where the support and training is available to keep them engaged and productive. A key element of staff development is training. Watercare actively encourages employees to undertake training and further study, and to obtain professional status qualifications wherever possible. An example is Watercare's engineering graduate support programme which has 30 graduates working towards chartered status.

Every permanent staff member who is on an individual employment agreement undertakes an annual performance and development review regardless of role or gender. The review identifies the employee's performance over the year and assists to identify both short-term training requirements and longer-term development opportunities for the employee. Currently, this process is not applicable to staff who are employed on unionised collective agreements.

An important element of the company's retention policy is to provide the appropriate market-based remuneration. Watercare applies a total remuneration policy and provides company-funded life and disability insurances to its entire staff subject to the normal insurer-specified terms. In the 2012/13 financial year, there were no permanent employees who were paid less than 29.4 per cent above the legal minimum wage. The legal minimum wage, as at 30 June 2013, was set at \$13.75 per hour.

### HOW WATERCARE HAS PERFORMED

For further information, refer to the following rulers in the annual report:

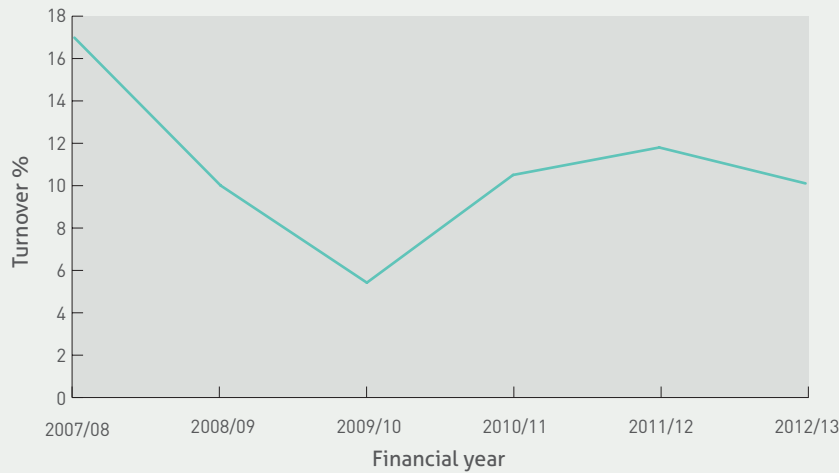
3E – Staff turnover

3F – Staff training

3G – Employment equity and diversity

The company carried out a staff survey during the financial year in order to identify how well the organisation was performing from a staff perspective and to identify those areas where staff believed improvements would be beneficial to their work performance. The survey attracted responses from 75 per cent of staff. From 2012/13 onwards, staff surveys will be conducted as part of the Auckland Council-sponsored Kenexa staff engagement survey process. These surveys will enable the company to effectively monitor progress on improving our staff engagement.

Over the past year, voluntary staff turnover was 10.1 per cent which was within the SOI target of 'less than 12 per cent'. This level of staff turnover is generally recognised as a healthy staffing refreshment rate. Data reflects voluntary leavers only (i.e. those electing to leave Watercare to seek employment elsewhere); it does not include non-voluntary termination or retirements.

**People 8: Voluntary staff turnover (by percentage)**

The breakdown by gender and age group of voluntary turnover is as follows:

Gender	2012/13	Age group	2012/13
Male	47	Under 30	15
Female	26	30-39	26
<b>Total</b>	<b>73</b>	40-49	19
		50-59	10
		60 or older	3
		<b>Total</b>	<b>73</b>

The company retains open all roles for staff members who elect to take parental leave and recognises that, while the option to return to work remains open, an employee may elect, as a result of their own personal circumstances, to not return to work at the completion of their leave period. All four employees who took maternity leave during the year returned to work. A further four employees commenced maternity leave during the financial year and are still on extended parental leave.

Over the past year, our investment in external training for staff increased by 20 per cent when compared to the year before and was in excess of \$731,000. This represents over 16 hours of training per staff member. All professional staff members are supported in maintaining their applicable training requirements. Engineering staff members are encouraged to pursue and maintain chartered status and an engineering support group for graduates meets on a monthly basis to support them in gaining chartered status. Waged water and wastewater operational staff are encouraged and supported to achieve formal NZQA qualifications in water and wastewater treatment.

### People 9: Training per staff member

	2010/11	2011/12	2012/13
Average staff numbers over the year	533	618	704
Average hours of training per staff member	20.7	21.7	16.4
Average spend per staff member (\$)	939.96	977.35	1,038.35
<b>Total training spend (\$)</b>	<b>501,000</b>	<b>604,000</b>	<b>731,000</b>

In terms of gender breakdown, the following illustrates the category and salary ratio by gender:

### People 10: Gender breakdown and salary ratio

Position	Male	Female	Staff ratio	Salary ratio
Executive and senior management	23	2	8%	93%
Management	36	8	18%	101%
Technical	219	73	25%	97%
Operational and support	86	157	65%	97%

#### NOTE:

1. Salary ratio is calculated as the percentage pay for women compared to men relative to the grade mid-point.
2. Staff ratio is calculated as the percentage of women by position.
3. Data does not include the chief executive (only one role) or the 126 staff employed in operational roles under collective agreements which do not have applicable salary grades.



# 02

## ENVIRONMENT

### THEMES:

Biodiversity of Watercare's sites

Operations' inputs and outputs

Climate change impacts

Corporate sustainability

### MATERIAL MATTERS:

Quality of biodiversity around Watercare's sites  
Quality of treated wastewater discharges

Type and disposal of biosolids  
Materials and chemicals used  
Resource consent compliance

Climate change  
Carbon emissions  
Energy use

Recycling  
Zero Waste group

### WATERCARE'S APPROACH

More explicitly than is the case in many organisations, Watercare's business model relies on a healthy natural ecosystem to deliver its services. The scope and nature of its operations means Watercare is responsible for managing human needs that require significant ecosystem services: the need for drinking water and for wastewater treatment.

A lot could be written to exhaustively report on Watercare's environmental performance. In this first GRI supplement to the annual report, the company attempts to give a snapshot of its most material areas of impact and discloses an adequate amount of information.

Material topics include impacts on ecosystems. This is measured through the extent of biodiversity around Watercare's sites. Other areas of impact are chemical input to the processes and generation of by-products like biosolids in the wastewater treatment process, whose quality and quantity is strictly controlled. As part of managing its environmental impacts, the company holds a large number of resource consents in relation to its operations. Although every effort is made to avoid it, non-compliance with consent conditions does sometimes occur. Reporting and mitigation of non-compliances are described in more detail in this section.

Another large area of impact for Watercare is climate change. Operations of water and wastewater processes require energy and generate greenhouse gas emissions.

Watercare works on the sustainability of its workplaces and offices. Focus this year has been placed on improving waste management.

## BIODIVERSITY OF WATERCARE'S SITES

### WHAT WATERCARE IS DOING

Watercare's operations have potential impacts on the biodiversity around the company's sites. Most significant are the freshwater ecology impacts of the constructed dams and lakes that constitute Auckland's water catchments and impacts on the harbours as a result of Watercare's treated wastewater discharges.

Watercare does not have specific targets in relation to biodiversity. Impacts and objectives are assessed on a case-by-case basis and mitigation actions are determined depending on the situation (e.g. environmental flows at dams to provide passages for fish and water in the creeks, habitats in coastal areas, riparian planting and education). Watercare owns land around its sites and catchment areas. This land is often transferred to council for the beneficial use of the public.

In terms of treated wastewater discharge, Watercare performs regular testing to ensure that the discharge has an acceptable composition that will not damage harbour ecosystems. The marine and harbour ecosystems are also checked on a regular basis to ensure the amount and quality of biodiversity improves rather than degrades.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following rulers in the annual report:

2D – Dry weather overflows

6E – Species preservation

6F – Habitat improvement

Over the last 10 years, both the Mangere and Rosedale wastewater plants have been upgraded which has improved the quality of the discharge to the Manukau Harbour and the Hauraki Gulf.

At Mangere, the plant upgrade included the removal of 500 hectares of oxidation ponds and sludge lagoons. After this upgrade, the harbour is restoring itself and there is now an increasing number and biodiversity of organisms and species. Watercare installed and maintains bird roosts in Mangere's coastal areas and these are making a significant difference to local birdlife (see Ruler 6E).

Over the past year, birds were spotted nesting at Mangere. An example is what happened with Pond 2. Biosolids from the Mangere Wastewater Treatment Plant are placed at Pond 2, which is across the road from the main plant. The site is being filled with biosolids, then capped and landscaped, before being opened to the public as part of the coastal walkway. At the beginning of November 2012, an operations technician noticed several pairs of dotterels nesting on Pond 2. New Zealand dotterels are an endangered species and a great deal of effort goes into protecting their breeding areas at that time of the year. Watercare was about to commence construction of a road next to the area where the dotterels were nesting but decided to divert its road-building activities to other parts of the site when the nests were discovered, so as to leave the birds in peace. These efforts paid off as four chicks hatched on Pond 2 over the breeding season.

At the Rosedale Wastewater Treatment Plant, Watercare worked on improving the quality of effluent and installing a new outfall. This resulted in an enhanced marine environment adjacent to the outfall.

Environmental flows are released from dams to maintain the downstream minimum flow. Watercare undertakes modelling of downstream environments to monitor the quality and health of these environments. Ruler 6E explains the work accomplished to improve freshwater ecology in water catchments, including fish passes and fish transfers.

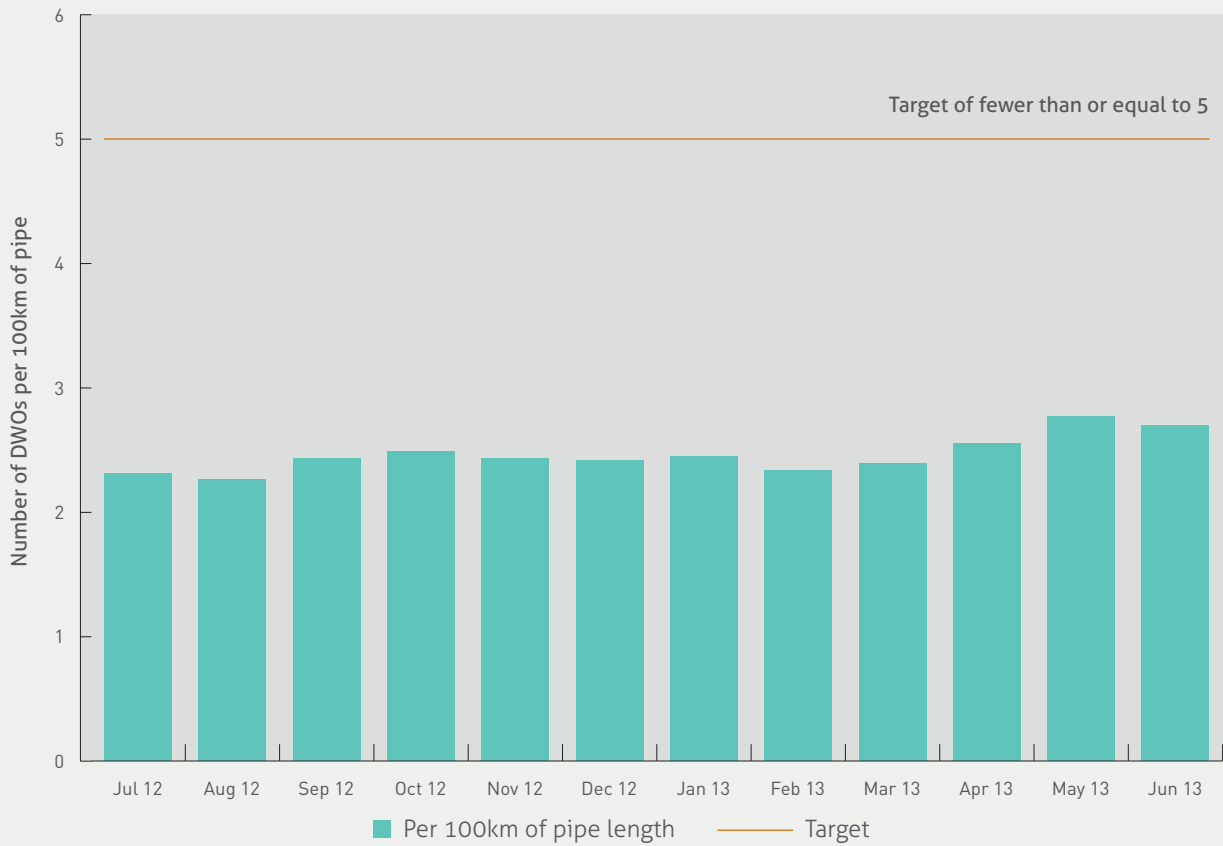
The company operates in a number of protected areas with high ecological value. The following table summarises the location of these sites and the activities and plans Watercare has in place to ensure they remain treasured and valuable resources:

#### Environment 1: Areas of high ecological value

Name	Location	Operation	Area	Ecological attributes	Future plans and strategies
<b>Bycroft Wetland, Onehunga</b>	In Onehunga where the aquifer naturally discharges.	Watercare provides a constant discharge to the wetland to maintain it.	Approximately one hectare.	Home of rare and endangered moss species, indigenous vegetation and wildlife.	Maintain a constant flow of water from Watercare facility.
<b>Hunua Ranges</b>	South of Auckland.	Contains the water supply catchments for four of Watercare's dams.	Approximately 10,500 hectares, mostly in native bush.	Native bush and wildlife habitat.	Allow for continuous water flow from dams to streams and implement fish trap and haul to allow fish movement.
<b>Waitakere Ranges</b>	North-west of Auckland.	Contains the water supply catchments for five of Watercare's dams.	Approximately 5,000 hectares in native bush.	Native bush and wildlife habitat.	Allow for continuous water flow from dams to streams and implement fish trap and haul to allow fish movement.
<b>Watercare Coastal Walkway</b>	Along the coast adjacent to the Mangere Wastewater Treatment Plant.	Coastal walkway and native plantings provided for and maintained by Watercare.	Approximately 13 kilometres of walkway and associated planting between 10 metres and 100 metres in width.	Provision of public walkways, bird roosts and native and marine habitats.	Maintain bird roosts and continue restoration of harbour environment.
<b>Oruarangi Creek</b>	Along the coast adjacent to the Mangere Wastewater Treatment Plant.	Estuary previously closed to the sea by the oxidation ponds restored to tidal influences. Four kilometres of esplanade reserve have been planted by Watercare this year.	Approximately 30 hectares.	Marine estuarine ecosystems being restored.	Continue restoration of the marine environment.
<b>Waikato RiverCare</b>	Along the banks of the Waikato River.	Watercare is a financial member of a trust that undertakes the planting.	120 kilometres of river bank with target of planting four kilometres per annum.	Riparian planting along the Waikato River to enhance river-water quality and create ecological diversity.	Continue to take an ongoing interest in the appropriate management of the Waikato River catchment.

Name	Location	Operation	Area	Ecological attributes	Future plans and strategies
<b>Auckland volcanic cones</b>	Watercare has water reservoirs on or in eight volcanic cones distributed around the Auckland urban area.	These reservoirs are an essential part of the water distribution system and most of them were built about 80 to 100 years ago. In many cases, their presence has prevented the quarrying of the cones, ensuring the preservation of the cones until protection was given to them by local authorities in more recent times.	Each volcanic cone is set in parkland, with the largest being approximately 120 hectares in area. The cones are typically 100 to 150 metres above the adjacent urban area.	The cones are parks and heritage areas and are defining features of Auckland; however, many of the cones not used for reservoirs have been quarried away for aggregate.	Work with stakeholders interested in the cones with a view to enhancing the values of the cones while protecting Watercare's water supply assets.
<b>Pukekohe Wastewater Treatment Plant</b>	Adjacent to Buckland Stream, which leads into the Waikato River.	The habitat is maintained by a flow of treated effluent.	Nine hectares of former oxidation ponds and cells used in the wastewater treatment processes prior to plant upgrade in 2009.	Home to birdlife as an extension of the adjacent wetland owned by Fish & Game New Zealand and with wildlife designation.	Prevent breeding ground for bacteria by draining and pumping unused ponds; further work planned for part of the former wetland to be rehabilitated; lost wildlife habitat to be provided.
<b>Puketutu Island</b>	Manukau Harbour adjacent to the Mangere Wastewater Treatment Plant.	Plan to rehabilitate the old quarry area and establish most of the island as public park.	110 hectares.	Historically used for pastoral agriculture and as a basalt quarry.	Rehabilitate former quarry on the island with biosolids and that way the island will be converted progressively to parkland.

Watercare reports on the number of wastewater overflows from its retail network during dry weather as a measure of the capability of the network to meet current demand. The result for the year was 2.7 overflows per 100km of wastewater mains, which meets the target of five or fewer.

**Environment 2: Dry weather overflows (DWOs)**



## OPERATIONS' INPUTS AND OUTPUTS

### WHAT WATERCARE IS DOING

To adequately treat water and wastewater to meet the required standards, Watercare's processes require materials and chemicals. Given the size of Auckland relative to the sizes of other cities, some of Watercare's plants are the largest users of certain chemicals in the country. The company works on its processes with the help of its suppliers to optimise the use of these products.

The output of the water treatment process is drinking water and a waste called sludge. The output of the wastewater treatment process is treated wastewater and by-products of the process, mainly treated biosolids. Biosolids constitute Watercare's largest discharge to land and can be safely and beneficially applied to land. Watercare is currently using biosolids from the Mangere Wastewater Treatment Plant to rehabilitate a 44-hectare area of former oxidation pond adjacent to the plant.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following rulers in the annual report:

2A, 2B, 2C – Compliance with consent conditions

6D – Waste management

6I – Compliance of trade waste customers

### Inputs in the treatment processes

Watercare uses a number of materials and chemicals in its water and wastewater operations. The following table summarises these, their purposes and the quantities used:

#### Environment 3: Materials and chemicals (in tonnes unless specified)

Water treatment	2010/11	2011/12	2012/13	Purpose	Fate
Alum (liquid)	5,225	4,956	4,595	To assist coagulation	Taken up in sludge
Lime (powder)	1,510	1,442	1,461	To control pH	Taken up in sludge
Fluoride (solution)	769	728	673	To help prevent dental cavities	In treated water
Salt (powder)	105	95	158	For chlorine production for water disinfection	In treated water
Caustic soda (solution)	105.00	100.00	124.72	pH buffering	In treated water
Chlorine (gas)	160.00	175.00	178.61	To disinfect water	In treated water
Poly aluminium chloride (solution)	58	47	71	To assist in clarification and coagulation	Taken up in sludge
Polyelectrolyte (powder)	21	22	21	To assist in clarification and coagulation	Taken up in sludge
Carbon dioxide (gas)	228	239	378	To control pH	Dissolved in raw water
Citric acid	26	29	38	To clean membranes	Neutralised and in discharged water
Sodium bisulphate	7	8	13	To de-chlorinate wasted water	In discharged water
Sodium hypochlorite	418	392	347	To disinfect	In treated water
Activated carbon		0	45	To remove organics in treatment	Taken to landfill as part of sludge

# 02

## ENVIRONMENT

Wastewater treatment	2010/11	2011/12	2012/13	Purpose	Fate
Methoprene	2.10	2.89	3.56	To control midges	Biodegrades in effluent
Naturalyte	5 litres	0	4 litres	To control midges	Biodegrades in effluent
Agnique spray	0	0	0	To control midges	Evaporates to atmosphere
Insecticide	203 litres	355 litres	380 litres	To control midges	Biodegrades in soil
Weed spray (estimated)	540 litres	500 litres	542 litres	To control weeds on sites	Biodegrades in soil
Lime	5,560	7,017	8,183	To stabilise and deodorise biosolids	Taken to landfill with the biosolids
Coagulating polymer	449.0	394.0	514.4	To promote solids dewatering	Taken to landfill with the biosolids
Sodium hypochlorite	307.0m <sup>3</sup>	342.0m <sup>3</sup>	582.5m <sup>3</sup>	To chlorinate recycled water for sprays and wash down	In effluent
Liquid nitrogen	6,300m <sup>3</sup>	13,931m <sup>3</sup>	7,700m <sup>3</sup>	To remove explosive gases from pipes before maintenance	To atmosphere
Ferric chloride	1,245	1,382	1,613	To promote solids capture	Taken to landfill with the biosolids
Caustic soda	50 litres	0	23m <sup>3</sup>	To assist digestion process	Taken to landfill with the biosolids
Caustic soda (solution)	184	0	327	For pH buffering	In treated water
Soda ash	0	0	15	To assist digestion process	Taken to landfill with the biosolids
Chlorine gas	37.70	56.84	69.39	To control bacteria in reactor clarifiers	In effluent
Iron sponge granules	68	46	87	To purify biogas before use in engines	Taken to landfill
Sulphuric acid	75m <sup>3</sup>	71m <sup>3</sup>	19m <sup>3</sup>	To strip ammonia from odour scrubber	In effluent
Lube oil	27.0m <sup>3</sup>	23.0m <sup>3</sup>	47.2m <sup>3</sup>	To lubricate generators	Taken to supplier's reclamation plant
Activated carbon	3	14	24	To purify biogas before use in engines	Taken to landfill
Alum (liquid)	46m <sup>3</sup>	67m <sup>3</sup>	110m <sup>3</sup>	To assist coagulation	Returned to plant pond
Methanol	32.0m <sup>3</sup>	26.0m <sup>3</sup>	30.4m <sup>3</sup>	To assist in the biological treatment of wastewater	Taken to landfill with the biosolids
Citric acid	0	0	50kg	To clean diffuser membranes and UV lamps	Neutralised and included in discharged water

The use of chemicals varies from year to year depending on volumes and circumstances. Over the past year, the digesters at the Mangere Wastewater Treatment Plant, and to a lesser extent at the Rosedale Wastewater Treatment Plant, used more caustic soda and coagulating polymer than they have done in recent years. This was because they had to treat a few waves of influent that were suspected to have had a strong toxic load, which caused a toxic shock. Digesters and clarifiers are ecosystems and, as such, take time to recover from a toxic shock. Regarding inputs in water supply, cyanobacteria in most western lakes during the summer generated an increased use of materials, including activated carbon.

### Outputs of the treatment processes

The following table illustrates the sludge, biosolids, grit and screenings that have been generated as a result of Watercare's water and wastewater treatment activities:

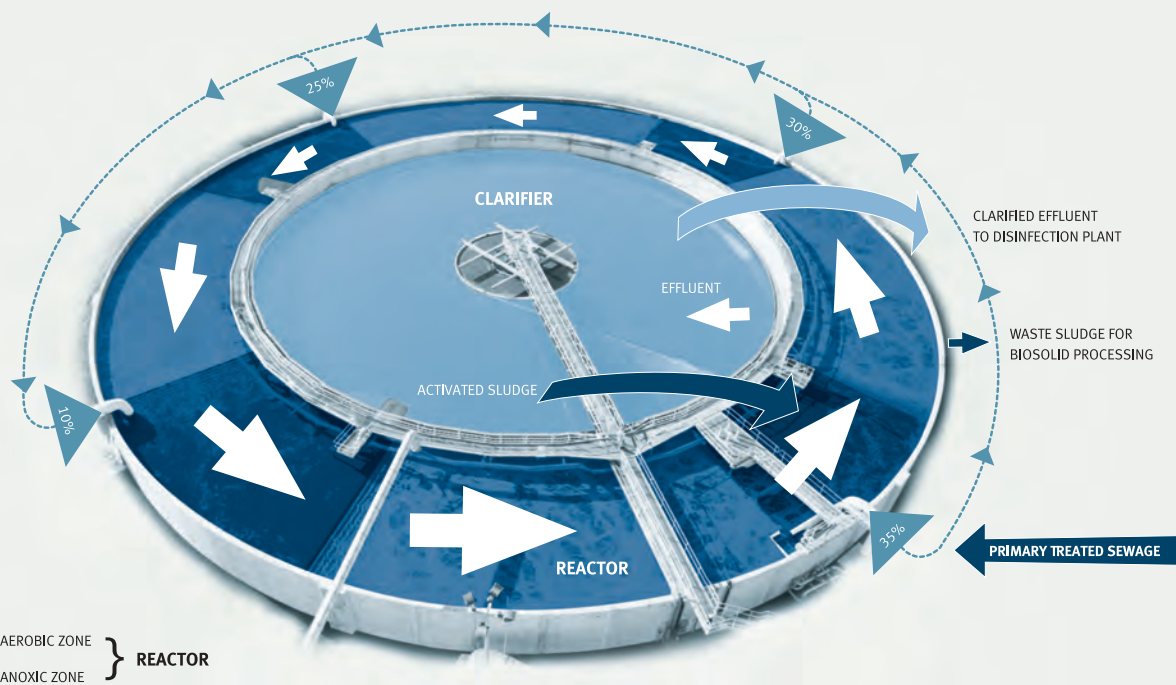
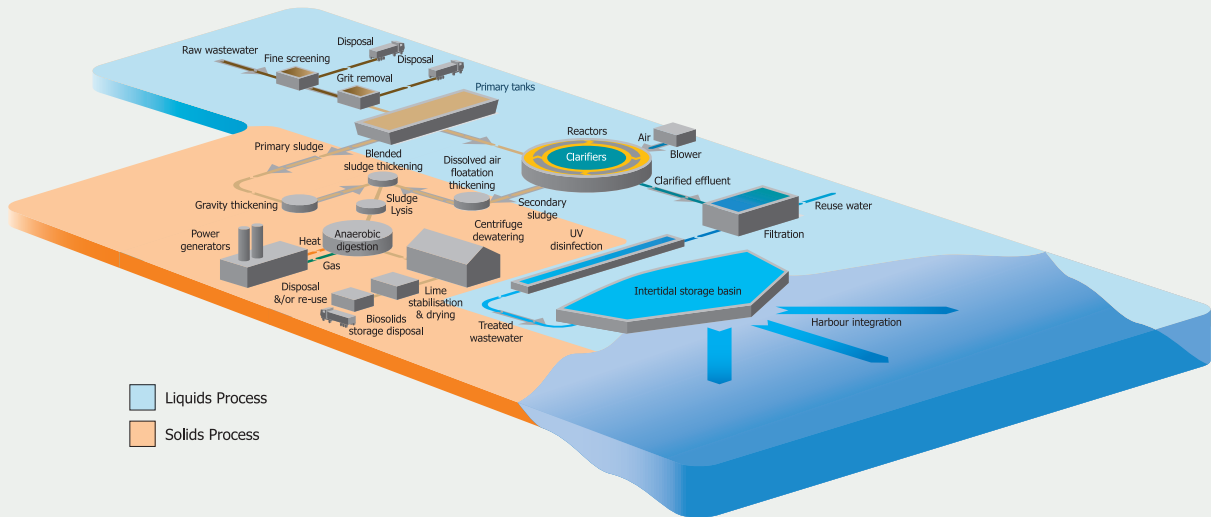
#### Environment 4: Solids disposal

Origin	Strategy	2010/11	2011/12	2012/13
<b>Water treatment sludge (m<sup>3</sup>)</b>				
Ardmore	On site	4,860	5,940	3,010
Huia	Parau landfill	4,150	4,710	3,550
Waitakere	On site	646	376	584
Waikato	Commercial landfill	1,575	1,196	2,152
<b>Total</b>		<b>11,231</b>	<b>12,222</b>	<b>9,296</b>
<b>Wastewater treatment plant (tonnes)</b>				
Mangere biosolids* (wet)	Pond 2 rehabilitation	100,001	115,628	114,424
Mangere grit and screenings	Commercial landfill	3,458	3,407	3,812
Rosedale biosolids (wet)	Commercial landfill	15,424	14,794	14,242
Rosedale grit and screenings	Commercial landfill	386.00	437.00	448.36
Pukekohe grit and screenings	Commercial landfill	100	44	50
Army Bay biosolids	Commercial landfill	3,701	4,382	3,668
Army Bay grit and screenings	Commercial landfill	0	76	60
Beachlands biosolids	Held on site	300	300	300
Beachlands grit and screenings	Commercial landfill	14	14	14
Warkworth biosolids	Commercial landfill	322	354	328
Warkworth screenings	Commercial landfill	21	8	12
<b>Total</b>		<b>123,727</b>	<b>139,444</b>	<b>137,358</b>

\* Assuming 28% solids content

The treatment of wastewater generates a much more significant quantity of by-products than does water treatment. As a result, the following section focuses on biosolids generated by wastewater treatment.

## Environment 5: Wastewater treatment overview



## Wastewater treatment

In simple terms, wastewater treatment means the separation and extraction of organic and inorganic solids from the liquid waste stream, the removal of chemical nutrients and the lowering of the biochemical oxygen demand (BOD). BOD is a measure of the strength or pollution potential of the wastewater.

The most modern of Watercare's wastewater treatment plants – including the plants at Mangere and Rosedale – use primary (mechanical), secondary (biological) and tertiary (filtration and ultraviolet radiation) methods to treat wastewater comprising domestic and industrial waste.

The average volume of wastewater treated at Mangere is 327,000 cubic metres per day – a flow greater than that of the Wairoa River in the Hunua Ranges – in effect making it Auckland's biggest 'river'.

The land-based wastewater treatment plant at Mangere is designed to manage the bulk of Auckland's wastewater treatment needs well into the 21st century. Watercare has 18 wastewater treatment plants within the Auckland region. These range from small community pond-based schemes to advanced tertiary treatment plants. The changes required to meet improved nutrient-removal standards in some of these plants will result in more-advanced treatment systems. This will increase operational costs due to higher energy and chemical consumption.

More information about the wastewater process, standards and impacts is available on Watercare's website.

A snapshot of Watercare's wastewater facilities and production for the current year is below.

### Environment 6: Wastewater facts and figures

	2011/12	2012/13
Length of sewers (km)	7,757	8,002
Number of pump stations	539	532
Number of trade waste customers	1,654	1,631
Number of metropolitan wastewater treatment plants	4	3
Number of rural wastewater treatment plants	15	15
Volume of wastewater treated annually (m <sup>3</sup> )	163,988,716	149,133,404
Biosolids produced annually (tonnes)*	119,747	133,022
Effluent reused annually in Mangere plant (m <sup>3</sup> )	21,272,529	21,947,004

\*Weight of wet biosolids

In some parts of Auckland, the wastewater and stormwater networks are combined, meaning that stormwater is also transported via the network to the wastewater treatment plants. The 2012/13 financial year was a drier year than was the year before, which resulted in less stormwater entering the wastewater system and less volume to be treated by wastewater treatment plants. Total volume of wastewater to be treated was 149 billion litres this year against 164 billion litres the year before. Approximately 133,000 tonnes of biosolids were produced at the Watercare wastewater treatment plants during the year – an 11 per cent increase on the prior year. This means that, despite a decrease in the volume entering the wastewater treatment plant, load has increased and resulted in increased biosolid generation. Over 96 per cent of this total was produced at Watercare's Mangere and Rosedale plants.



The table below displays the detail of outputs per wastewater treatment plant.

**Environment 7: Wastewater treatment plant discharge (volume)**

Wastewater Treatment Plant (WWTP)	Discharge Volume (m <sup>3</sup> /year)	Discharge Volume Consent Compliance*	Other volume Discharged Non-Compliant** (m <sup>3</sup> /year)	Biosolids Quantity (tonnes)	Screenings Quantity (tonnes)	Grit Quantity (tonnes)
<b>Metro WWTPs</b>						
Mangere	119,706,366	Yes	0***	114,424	1,564	2,248
Rosedale	20,215,267	Yes	0	14,242	250	198
Army Bay	3,843,960	Yes	68,401	3,668	20	39
<b>Total Metro WWTPs</b>	<b>143,765,593</b>		<b>68,401</b>	<b>132,334</b>	<b>1,834</b>	<b>2,486</b>
<b>Non Metro WWTPs</b>						
Pukekohe	2,416,042	No	566,285	0	24	28
Warkworth	300,754	Yes	0	328	11.9	–
Omaha	138,967	Yes	0	–	0.98	–
Helensville	425,504	No	425,504	–	2.6	–
Wellsford	270,546	No	234,018	–	–	–
Snells/Algies	307,246	No	16,620	–	–	–
Waiwera	60,309	Yes	0	–	–	–
Huapai/Kumeu	12,708	No	775	–	–	–
Matakana	15,399	Yes	0	–	–	–
Denehurst Drive	4,606	Yes	0	–	–	–
Beachlands	448,059	No	15,980	360	15	0
Owhanake	9,165	No	4,460	0	–	–
Clarks Beach	161,390	No	157,467	0	–	–
Waiuku	764,012	No	724,684	0	–	–
Kingseat	11,007	No	1,004	0	–	–
Bombay	1,080	Yes	0	0	–	–
Kawakawa Bay	21,017	Yes	0	0	2.7	1.8
<b>Total Non Metro WWTPs</b>	<b>5,367,812</b>		<b>2,146,797</b>	<b>688</b>	<b>57</b>	<b>30</b>

\* Annual average and maximum volume

\*\* Excludes minor or technical non-compliance

\*\*\* Consent limit for monthly maximum ammonia (four consecutive days) was not met during the year. This transgression was excluded from the calculation.

**Environment 8: 2012/13 Wastewater Treatment Plant discharge (concentration)**

Rosedale Wastewater Treatment Plant			
Plant load	Annual Median [monthly range]	Annual 95th Percentile [monthly range]	Consent Limit (monthly)
BOD (g/m <sup>3</sup> )	1.1 [0.50 – 2.6]	–	< 20
NFR (g/m <sup>3</sup> )	5.1 [1.3 – 9.0]	–	< 35
	–	13 [3.6 – 24]	< 75
Nutrients	Annual Median [monthly range]		Consent Limit (monthly)
Dissolved reactive phosphorus (g/m <sup>3</sup> )	4.6 [1.0 – 5.5]		< 10
Total nitrogen (g/m <sup>3</sup> )	12 [8.3 – 17]		< 30
Ammonia (g/m <sup>3</sup> )	0.84 [0.40 – 1.7]		< 10
Bacteriological	Annual Median [monthly range]	Annual 95th Percentile [monthly range]	Consent Limit (monthly)
Enterococci (cfu/100mL)	14 [1.6 – 81]	–	< 100
	–	125 [13 – 469]	< 1,000
Faecal Coliforms (cfu/100mL)	75 [3.3 – 315]	–	< 1,000
	–	622 [50 – 1077]	< 10,000
Volumes	Annual Maximum [monthly range]	Annual Total [monthly range]	Consent Limit (monthly)
Annual total (m <sup>3</sup> )	–	20,215,267	
Maximum daily discharge (m <sup>3</sup> /s)	2.4 [0.97 – 2.4]	–	6

Army Bay Wastewater Treatment Plant			
Plant load	Annual Median [monthly range]	Annual 92nd Percentile [monthly range]	Consent Limit (monthly)
BOD (g/m <sup>3</sup> )	2.2 [1.2 – 5.5]	–	< 20
	–	5.1 [1.3 – 9.0]	< 35
NFR (g/m <sup>3</sup> )	5.9 [1.2 – 9.1]	–	< 35
	–	10 [3.6 – 14]	< 75
Nutrients	Annual Median [monthly range]		Consent Limit (monthly)
Ammonia (g/m <sup>3</sup> )	1.7 [0.88 – 2.4]	–	< 15 <sup>o</sup>
Bacteriological	Annual Median [monthly range]	Annual 92nd Percentile [monthly range]	Consent Limit (monthly)
Enterococci (cfu/100mL)	1.6 [1.6 – 5.0]	–	< 100
	–	9.3 [1.6 – 6,530] *	< 1,000
Faecal Coliforms (cfu/100mL)	3.3 [1.6 – 24]	–	< 1,000
	–	85 [4.4 – 7481]	< 10,000
Volumes	Annual Maximum [monthly range]	Annual Total [monthly range]	Consent Limit (monthly)
Annual total (m <sup>3</sup> )	–	3,839,176	
Maximum daily discharge (m <sup>3</sup> /day)	20,367 [9,251 – 20,367]	–	32,147

\* a single exceedence occurred in July 2012.

Mangere Wastewater Treatment Plant						
Plant load	Annual Mean [monthly range]	95th Percentile [three monthly range]	Annual Maximum [monthly range]	Consent Limit (monthly)		
BOD (g/m <sup>3</sup> )	3.0 [1.3 – 4.3]	–	–	< 15		
	–	7.6 [2.6 – 11]	–	< 30		
	–	–	22 [2.3 – 22]	< 50		
NFR (g/m <sup>3</sup> )	6.9 [3.9 – 9.1]	–	–	< 15		
	–	14 [11 – 17]	–	< 30		
Total petroleum hydrocarbons (g/m <sup>3</sup> )	0.31 [0.30 – 0.33]	–	–	< 0.5		
pH	–	–	8.1 [7.3 – 8.1]	< 9		
Nutrients	Annual Mean [monthly range]	Winter **		Summer **		Consent Limit (monthly)
		Mean [monthly range]	Maximum [monthly range]	Mean [monthly range]	Maximum [monthly range]	
Reactive phosphorus (g/m <sup>3</sup> )	1.7 [0.36 – 2.9]	–	–	–	–	< 9
Total nitrogen (g/m <sup>3</sup> )	–	8.3 [7.4 – 9.5]	–	–	–	< 35
	–	–	–	6.8 [6.3 – 7.5]	–	< 9.5
Nitrogen in ammoniacal form (g/m <sup>3</sup> )	–	1.7 [0.94 – 3.3]	–	–	–	< 5
	–	–	12 [2.9 – 12]	–	–	< 15
	–	–	–	1.2 [0.55 – 2.6]	–	< 3
	–	–	–	–	10 [2.5 – 10]	< 6
Disinfection	Annual [monthly range]			Consent Limit (monthly)		
% duration receiving 35 mWs/cm <sup>2</sup>	99.8% [ 99.2% – 100%]			≥ 99%		
Volumes	Annual Mean [monthly range]	Annual Peak		Consent Limit (monthly)		
Mean daily (M m <sup>3</sup> )	316 [221 – 468]	–		390		
Maximum daily discharge (M m <sup>3</sup> )	–	930 [237 – 930]		1,209		

\*\* Winter represents the months from April to November; summer represents the months from December to March.

For further information, please refer to the wastewater annual quality report on the Watercare website.

There were exceedences in the discharge standards at a number of the local treatment plants. Watercare inherited these plants from the former district councils and is working to upgrade the plants as necessary to resolve non-compliance issues. All plants with non-compliant conditions are either programmed for an upgrade and/or are in the process of having their resource consents renewed.

Watercare's largest discharges to land are the biosolids generated as by-products of the wastewater treatment process. A significant proportion of metals and pathogens are removed with the solids. There are national guidelines for beneficial reuse of biosolids, which grade biosolids for unrestricted use (grade 'a') or restricted use (grade 'b') depending on their contamination loads. Biosolids generated in Watercare's processes are routinely tested for levels of chemicals and heavy metals to ensure they are within the allowable grading.

Watercare's objective is to minimise the volume of material being sent to commercial landfills from its water and wastewater treatment plants. To do this, the company is investigating beneficial uses for biosolids. Watercare has also been successfully using biosolids to rehabilitate a small part of the old oxidation ponds at the Mangere Wastewater Treatment Plant, achieving 83.5 per cent disposal this year.

In terms of the levels of compounds and pathogens included in Mangere Wastewater Treatment Plant's biosolids, the levels of arsenic, cadmium, chromium and zinc have been trending down over time.

Approximately 114,424 tonnes of biosolids were produced at the Mangere Wastewater Treatment Plant in the 2012/13 year. In January 2013, the national guidelines for the beneficial reuse of biosolids were revised. The Grade 'a' guideline limits for cadmium, copper, mercury and zinc were reduced. As a result, the biosolids produced at the Mangere plant no longer meet the 'a' grade for these metals. Instead, they fall within the Grade 'b' guidelines limit which means their use is restricted. Zinc levels are related to contaminants in stormwater entering the sewers as a result of the combined sewer system.

In general, there has been a decline in all metals over the past year compared to previous years. Across all Watercare's sites, arsenic, chromium, nickel and lead have remained within the Grade 'a' limit over the past year.

The disposed dry weight of the hazardous substances included in the wastewater biosolids is summarised below:

**Environment 9: Hazardous substances in waste (biosolids – dry weight)**

Substance	2010/11		2011/12		2012/13	
	Concentration (mg/kg)	Disposed weight (tonnes)	Concentration (mg/kg)	Disposed weight (tonnes)	Concentration (mg/kg)	Disposed weight (tonnes)
Arsenic	8.12	0.27	5.56	0.19	4.68	0.17
Cadmium	3.13	0.10	1.46	0.05	1.27	0.05
Chromium	321.54	10.72	265.70	9.06	100.71	3.63
Lead	62.23	2.08	39.42	1.34	33.08	1.19
Mercury	0.74	0.02	0.74	0.03	0.67	0.02
Total	NA	13.20	NA	10.67	NA	5.06

This year, the total dry weight of biosolids produced at the Mangere and Rosedale plants was 36,026 tonnes. The hazardous substances disclosed above make up 0.01 per cent of the weight of dry biosolids. The drop in hazardous waste disposed of this year is expected to be temporary as it is due to the major contributor to chromium waste having temporarily reduced production. Watercare manages this load in such a way to try to maintain Grade 'a' levels but not to put unjustified costs on these businesses.

Watercare holds 425 active resource consents. The company achieved an average of 97 per cent compliance with the active conditions associated with these consents as shown in the table below:

#### Environment 10a: 2012/13 Resource consent compliance

Condition Status	2012											
	July		Aug		Sep		Oct		Nov		Dec	
	#	%	#	%	#	%	#	%	#	%	#	%
Compliant	3,991	96%	3,810	96%	3,981	97%	3,973	97%	3,919	94%	4,067	95%
Non-compliant	158	4%	151	4%	129	3%	141	3%	235	6%	198	5%
<b>Total</b>	<b>4,149</b>		<b>3,961</b>		<b>4,110</b>		<b>4,114</b>		<b>4,154</b>		<b>4,265</b>	

Condition Status	2013												2012/13 Average
	Jan		Feb		Mar		Apr		May		Jun		
	#	%	#	%	#	%	#	%	#	%	#	%	
Compliant	4,123	96%	4,435	98%	4,505	99%	4,543	98%	4,654	98%	4,829	98%	96.97%
Non-compliant	169	4%	73	2%	66	1%	104	2%	85	2%	77	2%	3.03%
<b>Total</b>	<b>4,292</b>		<b>4,508</b>		<b>4,571</b>		<b>4,647</b>		<b>4,739</b>		<b>4,906</b>		

Watercare assigns a compliance risk rating (low, medium or high) to each condition of consent based on its potential to have an adverse effect on the environment. The table below reports on the number of non-compliant conditions by risk rating by month. Technical or minor breaches (e.g. report delivered late) are not included in these categories.

#### Environment 10b: 2012/13 Resource consent compliance

Non-compliant Risk Status	2012											
	July		Aug		Sep		Oct		Nov		Dec	
	#	%	#	%	#	%	#	%	#	%	#	%
High	35	0.84%	34	0.86%	33	0.80%	29	0.70%	45	1.08%	28	0.66%
Medium	34	0.82%	29	0.73%	41	1.00%	55	1.34%	124	2.99%	129	3.02%

Non-compliant Risk Status	2013												2012/13 Average
	Jan		Feb		Mar		Apr		May		Jun		
	#	%	#	%	#	%	#	%	#	%	#	%	
High	35	0.82%	22	0.49%	21	0.46%	26	0.56%	28	0.59%	21	0.43%	0.68%
Medium	92	2.14%	32	0.71%	26	0.57%	58	1.25%	43	0.91%	41	0.84%	1.34%

On average, 3 per cent of conditions of consent do not achieve compliance each month. However, only 0.7 per cent of them are considered to be high risk. Within water treatment and supply, there were the following instances of non-compliance with high risk ratings:

- Ground water sources in Franklin were over-extracted; however, this resulted in no adverse effects. Watercare has nearly completed a \$116-million project to connect Franklin to the metropolitan water supply which will overcome this issue in the future.
- Discharge standards associated with the processing of sludge at a water treatment plant were exceeded. There were no effects observed in the stream. This issue is being addressed through an upgrade of the sludge-processing facility.
- Issues related to monitoring. These had no adverse effects on the environment and are being resolved.

Within wastewater treatment, the instances of non-compliance with high risk ratings were related to the company exceeding the discharge standards. Watercare investigated each instance of non-compliance and is satisfied that there were no adverse effects on the environment.

## CLIMATE CHANGE IMPACTS

### WHAT WATERCARE IS DOING

Watercare monitors energy usage closely and has been accounting for its greenhouse gas emissions since 2004. Energy-efficiency projects have been implemented and major upgrades of wastewater treatment plants have reduced emissions to a fraction of what they were in the 1990 baseline year.

In terms of adaptation to climate change, the water supply team records rainfall and temperature changes in order to track changes in weather patterns. Security of supply standards apply to Watercare. These state that Watercare's water sources and water treatment capacities have to enable Auckland to live through a one-in-100-year drought and still have its dams 15 per cent full.

The treatment and distribution of water as well as the collection and treatment of wastewater require energy for pumping and treating.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following rulers in the annual report:

- 6A – Greenhouse gas emissions
- 6B – Internally sourced energy

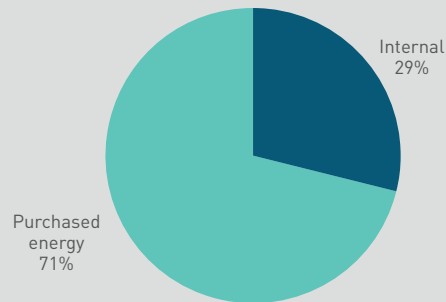
In recent years, Watercare has strived to reduce its energy use. Everyday decisions on which water source to use include minimising the use of pumped sources. Besides, energy-efficiency projects and energy generation were implemented at Watercare's facilities. Biogas sourced from the Mangere and Rosedale Wastewater Treatment Plants, as well as power generated by hydroelectric generators at five dams, enables Watercare to make best use of existing resources and reduce carbon emissions. Over the past year, Watercare sourced 29 per cent of its energy requirements internally.

Over the financial year, Watercare consumed 156,336 MWh of energy.

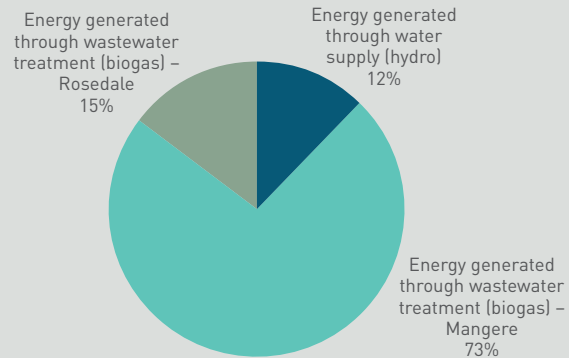
#### Environment 11: Energy consumption and internal generation

Energy summary	2011/12		2012/13	
	MWh	%	MWh	%
Energy generated through water supply (hydro)	5,976	4	5,591	3.58
Energy generated through wastewater treatment (biogas) – Mangere	32,178	22	33,486	21.42
Energy generated through wastewater treatment (biogas) – Rosedale	6,138	4	6,598	4.22
<b>Sub total internally sourced energy</b>	<b>44,292</b>	<b>31</b>	<b>45,675</b>	<b>29.22</b>
Purchased energy	99,999	69	110,661	70.78
<b>Total energy consumed</b>	<b>144,291</b>	<b>100</b>	<b>156,336</b>	<b>100.00</b>

Energy consumption



Sources of internal energy



Energy use increased by 8 per cent compared to last year. Most of this increase was due to engine failures at the Mangere and Rosedale plants. The engines have now been repaired or replaced. The increase was also due to the dry summer which necessitated greater use of the Waikato Water Treatment Plant. The Waikato plant requires the water to pass through a four-stage treatment process before being pumped to the reservoirs. By comparison, water extracted from the dams passes through only a three-stage treatment process before free-flowing to the reservoirs. The previous summer was wet, enabling Watercare to minimise the use of the more-energy-intensive Waikato plant.

Auckland's water sources by volume are listed below:

#### Environment 12: Water facts

Volume abstracted by source m <sup>3</sup>	2011/12 total	%	2012/13 total	%
Waitakere Dam	2,447,989	1.7	4,396,973	2.9
Upper Huia Dam	6,049,346	4.2	5,898,270	3.9
Upper Nihotupu Dam	6,269,675	4.4	5,305,407	3.5
Lower Huia Dam	16,501,033	11.5	11,834,036	7.9
Lower Nihotupu Dam	882,057	0.6	3,941,562	2.6
Cosseys Dam	13,825,051	9.7	14,941,247	10.0
Upper Mangatawhiri Dam	24,341,609	17.0	22,285,951	14.9
Wairoa Dam	10,589,963	7.4	9,514,876	6.4
Mangatangi Dam	41,803,834	29.2	38,498,665	25.7
Waikato River	11,976,425	8.4	22,913,826	15.3
Onehunga Aquifer	3,349,933	2.3	5,359,106	3.6
Rural North	1,410,605	1.0	1,281,515	0.9
Rural South	3,492,813	2.4	3,410,034	2.3
<b>Total</b>	<b>142,940,334</b>	<b>100.0</b>	<b>149,581,467</b>	<b>100.0</b>

For the coming year, Watercare's targeted energy use is 162,866 MWh.

Energy-related greenhouse gas emissions constitute 55 per cent of Watercare's 2012/13 carbon inventory total. A further 41 per cent is due to methane and nitrous oxide emissions from the wastewater networks and treatment plants. These two areas constitute the majority of the company's emissions; the remaining 4 per cent results from vehicle use, air travel and waste.

Watercare's emissions profile is as follows:

**Environment 13:** 2012/13 sources of greenhouse gases emissions



**Environment 14:** 2012/13 methane and nitrous oxide emissions by wastewater treatment plant





Total emissions for 2012/13 were 12.5 per cent higher than they were during the prior year and 72.0 per cent lower than during Watercare's 1990 baseline year. A summary of emissions for the financial year, the year before and the 1990 baseline year is included below:

**Environment 15: Watercare's greenhouse gas emissions (Units in tonne CO<sub>2</sub> equivalent)**

Units in tonnes CO <sub>2</sub> equivalent	1990	2011/12	2012/13
<b>Scope 1: Emissions directly attributable to business assets</b>			
<b>1.1 Methane and nitrous oxide gas emissions from wastewater networks and treatment plants</b>			
Mangere	105,790	9,873	9,740
Rosedale	24,465	673	728
Army Bay	678	779	797
Waiuku	376	454	506
Pukekohe/Tuakau	751	893	896
Orewa	588	0	0
Others	955	1,202	1,251
<b>1.2 CO<sub>2</sub> emissions from motor vehicles owned by Watercare</b>	<b>300</b>	<b>592</b>	<b>876</b>
<b>Subtotal for Scope 1</b>	<b>133,904</b>	<b>14,465</b>	<b>14,793</b>
<b>Scope 2: Energy imports and exports</b>			
Water	2,000	3,446	4,892
Wastewater	3,000	11,860	13,537
Business premises	400	304	359
<b>Subtotal for Scope 2</b>	<b>5,400</b>	<b>15,610</b>	<b>18,788</b>
<b>Scope 3: Other indirect emissions</b>			
Air travel	50	28	93
Motor vehicle use	10	41	250
Waste	0	12	17
Transmission and distribution line losses for purchased electricity	0	0	0
<b>Subtotal for Scope 3</b>	<b>60</b>	<b>81</b>	<b>359</b>
<b>Net total for Scopes 1, 2 and 3</b>	<b>139,363</b>	<b>30,156</b>	<b>33,940</b>

The increase in greenhouse gas emissions in 2012/13 was due to increased energy inputs in water supply and wastewater treatment. Motor-vehicle use and air-travel-related emissions have significantly increased as well. However, the reason for that is not that travel increased but that more travel data of this category has been taken into account than has been the case in previous years.

In the last 10 years, Watercare completed major upgrades of its two main wastewater treatment plants, Mangere and Rosedale. The oxidation ponds were decommissioned and sludge lagoons were removed. UV lights needing a high-energy input replaced natural sunlight in parts of the treatment process. However, emissions related to this additional energy input were more than offset by the upgrade as Watercare's emissions are now 28 per cent of what they were in 1990, despite Auckland's growth, the move towards a non-carbon neutral power supplier and the increased scope of Watercare's activities.

The following table summarises the key programmes that have resulted in emissions reductions and their estimated impact:

#### Environment 16: Emissions reductions

Initiative	t CO <sub>2</sub> -e
	Estimated reduction from 1990
Decommissioning of oxidation ponds	34,049
Construction of hydro generators	600
Use of hybrid cars in vehicle fleet	100
Reduction of nitrogen discharged at wastewater treatment plant	3,016
Minimisation of biosolids to rehabilitation site	21,237
Removal of sludge lagoons	59,791
<b>Total</b>	<b>118,793</b>

Watercare can minimise increases in carbon emissions by helping residents and businesses in Auckland to become more water efficient. This reduces the use of resources, including energy. Watercare is working to achieve a 15 per cent per-capita reduction in water demand by 2025 compared to 2004 levels. More about water demand and Watercare's programmes to achieve the target is described in the customer section of this report.

Over the past year, Watercare started assessing its use of ozone-depleting substances. Ozone-depleting substances are gases like CFCs, halons, carbon tetrachloride, methyl chloroform, n-propyl bromide and chlorobromomethane. They have been progressively banned by the Montreal Protocol signed in 1987. However, replacement gases have a high Global Warming Potential and they are currently not included in Watercare's greenhouse gas inventory. Watercare does not use or emit ozone-depleting substances in its processes, products and services. Air-conditioning units in cars as well as fridges have been progressively replaced by units using non-ozone-depleting refrigerants like R134a. However, there is still one ozone-depleting gas (R22) in some of the air-conditioning and heating units in Watercare's buildings. An assessment is under way to determine the ozone-depleting impact of these units.

## CORPORATE SUSTAINABILITY

### WHAT WATERCARE IS DOING

In the last 10 years, Watercare has commissioned waste audits at least once a year to track waste management in its main offices and plants. Waste in the offices, kitchens and bathrooms is audited. This monitoring was led by the Zero Waste group which implemented numerous initiatives like improved recycling, worm farming, the use of reusable cups and cutlery, the greening of the vehicle fleet and energy efficiency in offices.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following ruler in the annual report:

6C – Recycling

Given the strong focus on integration of the retail networks, fewer initiatives had been implemented by the Zero Waste group in the last three years. Over the past year, a new collection process was implemented at four sites for compostable waste. This enabled the overall weight of office, bathroom and kitchen waste to be reduced by 8.4 per cent.

Where possible, Watercare operates a four-bin system for general waste, paper, mixed recycling and organic material, which is either used to feed the worm farms or collected to be dealt with by a professional composting facility.

# 03

## CUSTOMER

### THEMES:

Service delivery

Water quality and demand management

### MATERIAL MATTERS:

Service levels and responsiveness

Water and wastewater retail price and affordability

Security of supply

Water-quality testing and results

Tracking changes in catchment refill

Managing demand for water

## WATERCARE'S APPROACH

Watercare provides a necessity of life to the people of Auckland. Residents and businesses have every right to expect that services will be delivered seamlessly and, when an issue does arise, for it to be addressed immediately.

Watercare wants to make it easy for customers to contact the company, provide feedback, understand the services they receive and pay their bills. The contact centre is often a customer's first point of contact with Watercare and responds to 2,000 phone calls, letters and emails from customers, on average, every day. Watercare also provides an online self-service account management and bill-payment facility.

Capturing and synthesising customer feedback is critical to assessing how well the company is performing and to identifying areas for improvement. Feedback is obtained from Watercare's customers who contact the contact centre as well as from those who receive call-out maintenance work. Customer complaints are analysed for trends or causal issues.

Watercare needs to ensure that the water supplied is of the highest quality possible and is maintained for the generations to come. This means being proactive about managing water demand and ensuring Watercare's infrastructure is able to meet future growth requirements.

# SERVICE DELIVERY

## WHAT WATERCARE IS DOING

There are many touch points for Watercare with customers. From billing to faults to infrastructure projects – all interactions need to be effective and to address the concerns raised. Over the past year, Watercare focused on expanding the tools for customers in order to improve their experiences such as customer self-service on the web and the ability to interact with the organisation. Also, focus was placed on providing staff with the tools to improve their ability to respond to customer concerns or issues. An example of this is the internal knowledge resource H2Know. It was redesigned to make it easier for customer service representatives to obtain information. All new tools and developments are intended to improve the customer experience.

## HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance rulers in the annual report:

- 1H – Number of unplanned water interruptions
- 1I – Unplanned water shutdowns restored within five hours
- 1K – Water quality complaints
- 2E – Wet weather overflows
- 2F – Unplanned sewer interruptions
- 2G – Response rate for urgent wastewater blockages
- 4A – Customer satisfaction with water and wastewater services
- 4B – Grade of service
- 4C – Resolved complaints
- 4D – Household affordability

In relation to Watercare’s response to customer faults, satisfaction is measured monthly, using TNS, an independent market research firm. The satisfaction scores are measured against a series of established indicators covering a range of areas such as staff knowledge, friendliness, timeliness and the extent to which the customer’s concern has been addressed (refer to table below).

As at 30 June 2013, the rolling 12-month average customer satisfaction score was 7.4 out of a possible 9.0.

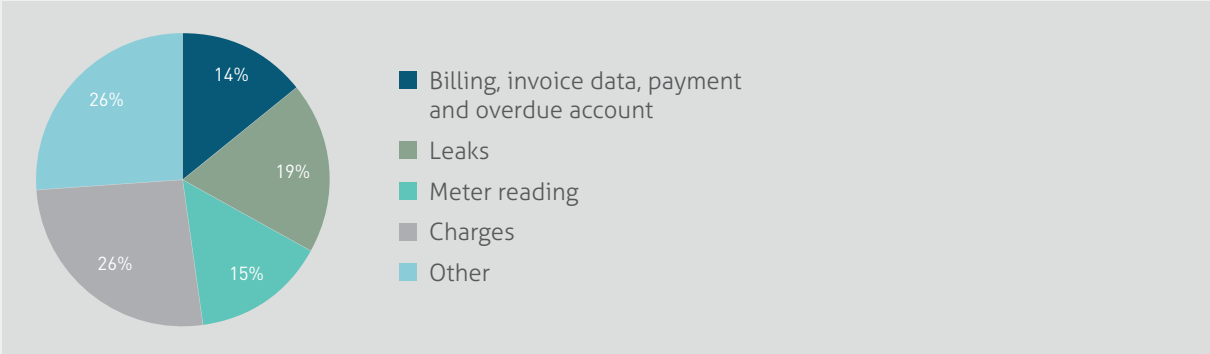
KEY:		
<p><b>Don't waste my time:</b></p> <ul style="list-style-type: none"> <li>Time to answer call</li> <li>Ease of getting in touch with the staff</li> <li>Knowledge of customer details</li> <li>Time to complete call</li> </ul>	<p><b>Communicate with me:</b></p> <ul style="list-style-type: none"> <li>Friendliness of the staff</li> <li>How well the staff listened</li> <li>Easy to understand</li> <li>Dealing in a respectful manner</li> </ul>	<p><b>Deliver to me:</b></p> <ul style="list-style-type: none"> <li>Recognising the importance of your inquiry</li> <li>Setting up reasonable expectations regarding timing</li> <li>Demonstrating their understanding</li> <li>Taking ownership of your inquiry</li> <li>Summarising your call to ensure understanding</li> </ul>

## Customer 1: 2012/13 Customer satisfaction

TNS – Maintenance CEM Scores				
Date	Don't waste my time	Communicate with me	Deliver to me	Overall
Jul 12	7.7	7.3	7.5	7.5
Aug 12	7.4	6.9	7.4	7.2
Sep 12	7.4	6.8	7.3	7.1
Oct 12	7.3	6.9	7.4	7.2
Nov 12	7.4	6.8	7.4	7.2
Dec 12	7.5	6.8	7.8	7.5
Jan 13	7.1	6.9	7.3	7.2
Feb 13	7.0	7.1	7.5	7.4
Mar 13	7.0	6.8	7.1	6.9
Apr 13	7.1	6.9	7.4	7.3
May 13	6.8	6.6	7.2	6.9
Jun 13	7.3	6.8	7.2	7.1
<b>Sub total</b>	<b>7.3</b>	<b>6.9</b>	<b>7.4</b>	<b>7.2</b>
<b>Percentage</b>	<b>80.7%</b>	<b>76.3%</b>	<b>81.9%</b>	<b>80.1%</b>
TNS – Call Centre CEM Scores				
Date	Don't waste my time	Communicate with me	Deliver to me	Overall
Jul 12	7.6	7.9	7.6	7.7
Aug 12	7.6	8.0	7.4	7.5
Sep 12	7.5	7.8	7.4	7.5
Oct 12	7.5	7.8	7.3	7.4
Nov 12	7.5	7.7	7.3	7.5
Dec 12	7.8	8.1	7.5	7.7
Jan 13	7.5	7.7	7.4	7.5
Feb 13	7.4	7.6	7.1	7.3
Mar 13	7.3	7.7	7.0	7.3
Apr 13	7.4	7.8	7.3	7.4
May 13	7.3	7.7	7.1	7.3
Jun 13	7.5	7.8	7.3	7.5
<b>Sub total</b>	<b>7.5</b>	<b>7.8</b>	<b>7.3</b>	<b>7.4</b>
<b>Percentage</b>	<b>83.3%</b>	<b>86.7%</b>	<b>81.3%</b>	<b>82.7%</b>
<b>Total</b>	<b>7.4</b>	<b>7.3</b>	<b>7.3</b>	<b>7.3</b>
<b>Percentage</b>	<b>82.0%</b>	<b>81.5%</b>	<b>81.6%</b>	<b>81.4%</b>

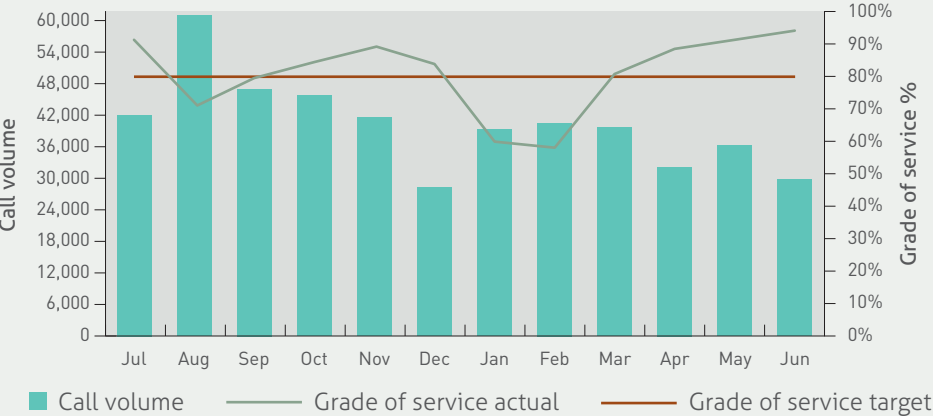
Complaints are an important source of intelligence about service delivery performance. Over 2012/13, Watercare received 1,524 complaints; 40 per cent of them needed escalation, which means that the complaint had to be handled a second time as the customer was not happy with the first answer and wanted to discuss their concern with a manager. Initial complaints and escalations together amount to a total of 2,142 and represent approximately 5 per cent of total enquiries. The majority of complaints relate to charges, billing or invoice information, and leaks. This is an increase compared with the previous year. However, this was expected as Watercare has significantly changed its operating model. Watercare moved from three-monthly or six-monthly billing in some parts of the region to monthly billing and bimonthly estimates. Volumetric wastewater charges were also introduced for residential customers. This has improved service considerably but increased customer interaction significantly.

**Customer 2: 2012/13 Complaints**



This high number of calls also resulted in the Grade of Service (number of calls answered within 20 seconds) being 79.7 per cent, which is lower than last year's 81.6 per cent.

**Customer 3: 2012/13 grade of service and call volume**



Watercare aims to resolve or close all complaints or queries within 10 days. During the reporting period, 97.2 per cent of all complaints were closed within 10 days and 99.3 per cent of all other queries were answered within that target timeframe.

In addition to service complaints, Watercare receives feedback and complaints in relation to water quality. Over the past year, Watercare received 1,891 water-quality complaints. This equates to an annualised target of 4.6 complaints per 1,000 customers which is below Watercare's target of 5.0.

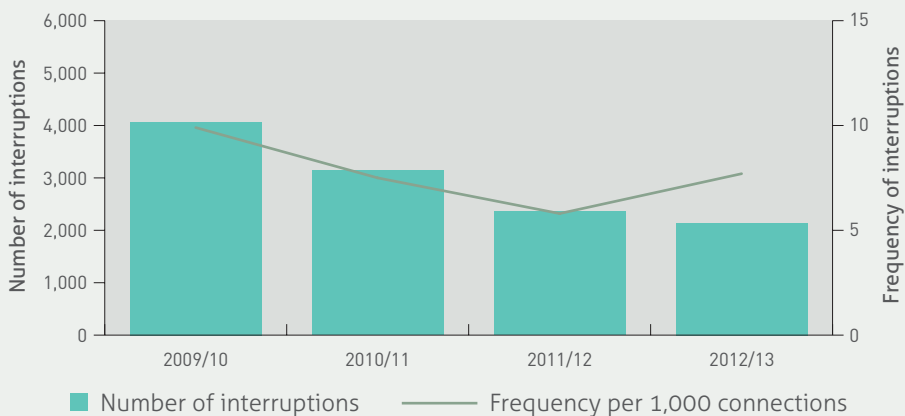
#### Customer 4: Water-quality complaints

	Total number of water-quality complaints	Complaints per 1,000 customers (annualised)
Jul 12	114	3.963
Aug 12	145	4.070
Sep 12	131	4.070
Oct 12	143	4.119
Nov 12	141	4.171
Dec 12	165	4.241
Jan 13	186	4.305
Feb 13	238	4.454
Mar 13	189	4.528
Apr 13	164	4.559
May 13	151	4.601
Jun 13	124	4.626
<b>Total</b>	<b>1,891</b>	<b>4.626</b>

Customers value their privacy and Watercare is conscious of its responsibilities in dealing with personal data. There have been no complaints regarding breaches of customer privacy or losses of customer data. Similarly, there have been no administrative or judicial sanctions levied against Watercare for failure to comply with laws or regulations concerning the provision of services.

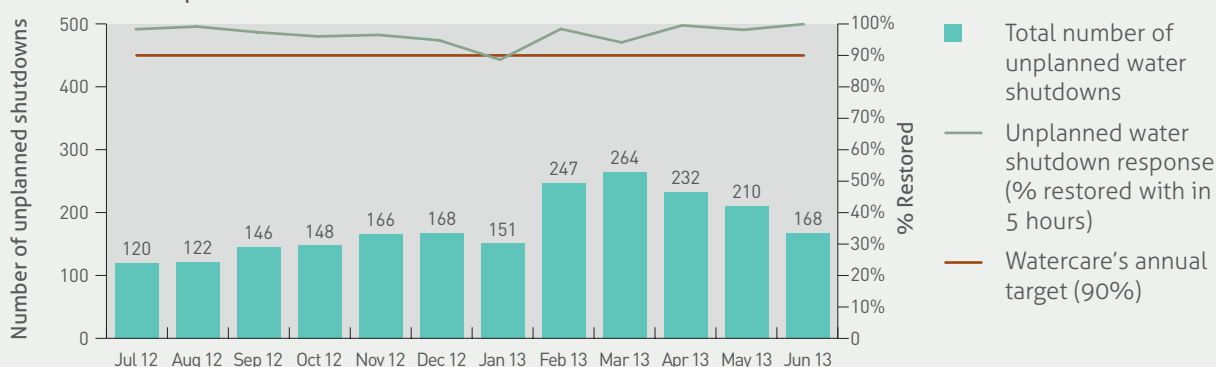
With water being a necessity of life, continuity of service is a key performance area. Unfortunately, water supply interruptions do occur. However, Watercare aims to keep these to a minimum and has an annual target of less than 10 interruptions per 1,000 households. Over the past year, there were 2,141 interruptions to the north and south of the region at an average of 7.7 interruptions per 1,000 households. As explained in Ruler 1H, data on the central area is not reported for 2012/13.

#### Customer 5: Frequency of water supply interruptions per 1,000 connections



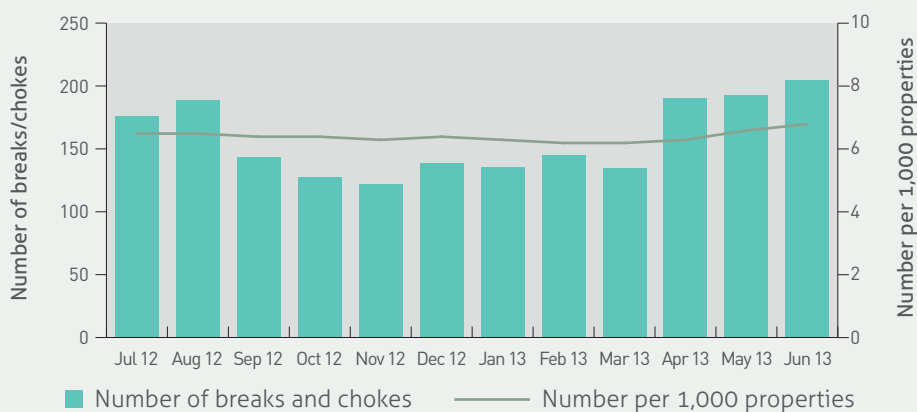
Where unplanned shutdowns occur, Watercare aims for service restoration within five hours in 95 per cent of the cases. Over the past year, 96.7 per cent of unplanned shutdowns were restored within five hours.

#### Customer 6: Unplanned water shutdowns



Sewer breaks and potential spills can significantly impact customers. Overall there were 1,903 recorded breaks and chokes over the past year, equating to approximately 6.76 breaks/chokes per 1,000 households.

#### Customer 7: Sewer breaks and chokes



Watercare's ability to respond to wastewater blockages within one hour of being reported is a key performance measure. Over the past year, of the 2,600 wastewater blockages, 97 per cent were responded to within one hour.

#### Customer 8: Wastewater blockages

Month	Number pass	Number fail	Total wastewater blockages	Wastewater blockages response % passing	Watercare's annual target
Jul 12	198	9	207	95.7%	98%
Aug 12	246	6	252	97.6%	98%
Sep 12	144	9	153	94.1%	98%
Oct 12	183	4	187	97.9%	98%
Nov 12	159	9	168	94.6%	98%
Dec 12	191	5	196	97.4%	98%
Jan 13	255	5	260	98.1%	98%
Feb 13	187	2	189	98.9%	98%
Mar 13	170	7	177	96.0%	98%
Apr 13	254	4	258	98.4%	98%
May 13	276	3	279	98.9%	98%
Jun 13	263	11	274	96.0%	98%
<b>Total</b>	<b>2,526</b>	<b>74</b>	<b>2,600</b>	<b>97.0%</b>	



Watercare's services must be provided at a cost that is affordable for customers, yet provides sufficient means to invest in delivering services effectively now, while providing for infrastructure developments in the future. Watercare measures the affordability of services with reference to the percentage of the average weekly household income. The agreed target is that the cost of Watercare services should not amount to more than 1.50 per cent of the average weekly household income. Watercare met the affordability target over the past year, with the average cost of its services to households equalling 0.86 per cent of the average household income across the region.

#### Customer 9: Affordability

Account area	FY13 YTD
	Principal total
Franklin	\$8,422,374.00
Manukau	\$91,907,242.00
Auckland City	\$116,401,976.00
North Shore	\$60,083,899.00
Rodney	\$17,274,607.00
Waitakere	\$47,332,051.00
<b>Total</b>	<b>\$341,422,149.00</b>

Account area	Number of billed days
Franklin	5,111,717
Manukau	38,511,174
Auckland City	47,625,922
North Shore	31,718,686
Rodney	10,488,342
Waitakere	27,915,826
<b>Total</b>	<b>161,371,667</b>

Account area	Principal total per day
Franklin	\$1.65
Manukau	\$2.39
Auckland City	\$2.44
North Shore	\$1.89
Rodney	\$1.65
Waitakere	\$1.70
<b>Average</b>	<b>\$2.12</b>

	% of average weekly income earnings
	0.67
	0.97
	0.99
	0.77
	0.67
	0.69
<b>Average</b>	<b>0.86</b>

Av. monthly billed	\$64.35
Av. weekly billed	\$14.81
Av. weekly income*	\$1,725
Med. weekly income*	\$1,411

\* Average and median income for Auckland region as per Statistics New Zealand

## WATER QUALITY AND DEMAND MANAGEMENT

### WHAT WATERCARE IS DOING

A highly material issue for Watercare and its stakeholders is the quality of supplied drinking water. The quality of drinking water is highly regulated by the Ministry of Health's Drinking-water Standards for New Zealand 2005 (Revised 2008) (DWSNZ) and all drinking water is regularly tested to ensure compliance. Water is tested and graded at the water treatment plants and throughout the distribution network.

Sampling and water-quality testing is contracted to Watercare Laboratory Services, a business unit of Watercare. The laboratory is Telarc-accredited, conforms to the New Zealand Code of Laboratory Management Practice and is approved by the Ministry of Health to undertake sampling for compliance purposes.

Watercare has implemented initiatives to manage the demand for water with a target of reducing per-capita demand by 15 per cent by 2025. These initiatives are drafted in the 2011 Auckland Regional Water Demand Management Plan which is available online. This plan will be updated in early 2014 to account for the improved understanding of Auckland water use as well as further initiatives which have been implemented and/or proposed.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance rulers in the annual report:

**1A, 1B, 1C, 1D, 1E, 1F, 1G** – Grading of drinking water, water treatment plants and water supply reticulation

**1J** – Unaccounted-for water loss

**7B** – Water conservation

**7C** – Per-capita consumption

Over the past year, Watercare complied with the Ministry of Health's Drinking Water Standards for New Zealand. The following table summarises the raw and treated composition of water from the metropolitan treatment plants during the year:

#### Customer 10: 2012/13 typical analysis of Auckland's drinking water

Determinands	Drinking Water Standards Guideline Value (treated water only)	Metropolitan water treatment plants									
		Ardmore		Huia		Waitakere		Onehunga		Waikato	
		Raw	Treated	Raw	Treated	Raw	Treated	Raw	Treated	Raw	Treated
Turbidity (NTU)	2.5 NTU	3.41	0.23	5.99	0.35	4.12	0.35	0.29	0.33	12.00	0.46
E. coli (number per 100ml)	< 1 in 100ml sample <sup>#</sup>	4	N/D	19	N/D	62	N/D	297	N/D	654	N/D
Aluminium (mg/L)	0.1 mg/L	0.19	0.03	0.89	0.03	0.64	0.03	0.01	0.03	0.86	0.07
Iron (mg/L)	0.2 mg/L	0.37	0.01	0.77	0.01	0.86	0.02	0.01	N/D	1.19	0.04
Manganese (mg/L)	0.4 mg/L	0.19	N/D	0.03	N/D	0.03	0.01	N/D	N/D	0.07	N/D
pH value	7.0 – 8.5	7.5	7.9	7.6	7.8	7.2	7.9	7.4	7.9	7.7	7.8
Total hardness (mg/L CaCO <sub>3</sub> )	200 mg/L	13.0	24.1	22.1	33.8	19.0	37.9	56.1	56.5	30.7	51.3

<sup>#</sup> Drinking Water Standards Maximum acceptable value (treated water only)

All graded water treatment plants and networks met Ministry of Health's 'Aa' grade standard with the exception of Warkworth network, which met an 'Ab' grade standard. Of the smaller non-metropolitan plants transferred to Watercare on integration, 10 remain ungraded. Of these, six will be closed in the coming year following the completion of a new watermain that will provide Franklin-based communities with water from the metropolitan system. Watercare is working to ensure all plants and networks are graded 'Aa' by 2020.

#### Customer 11: Water treatment and networks grading

Water Treatment Plant (WTP)	Percentage of 2012/13 annual production (%)	WTP Grade
Metropolitan WTPs	96.67	A
Muriwai	0.18	A
Huia Village	0.04	A
Warkworth	0.23	A
Snells/Algies	0.03	A
Helensville/Parakai	0.23	A
Wellsford	0.18	A
Bombay	0.04	U
Bucklands	0.06	U
Clarks Beach	0.04	U
Waiau Beach	0.04	U
Glenbrook Beach	0.02	U
Patumahoe	0.06	U
Waiuku (three treatment plants)	0.56	U
Pukekohe	1.62	U
	100%	

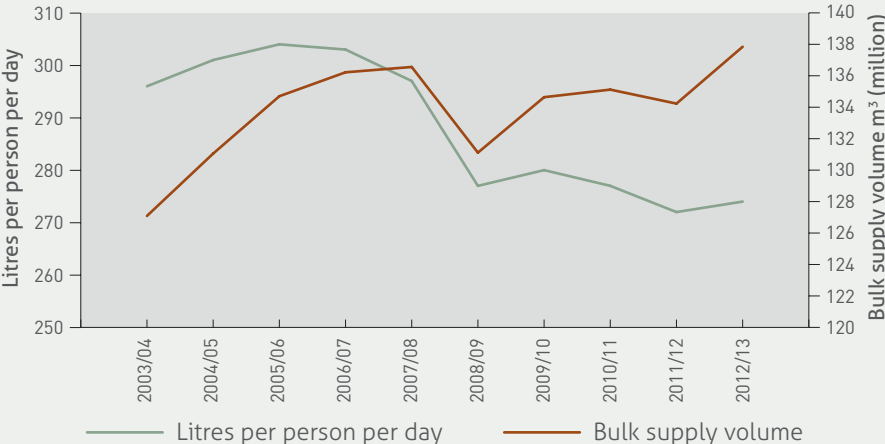
U = Ungraded

Network	Zone Grade
Metropolitan zones	A
Huia Village	A
Muriwai	A
Warkworth	B
Snells/Algies	A
Helensville/Parakai	A
Wellsford/Te Hana	A
Bombay	U
Bucklands	U
Clarks and Waiau	U
Waiau Beach	U
Glenbrook Beach	U
Patumahoe	U
Waiuku	U
Anzac/Hilltop Kitchener	U

U = Ungraded

The usage of water per person is a measure of how water-wise Aucklanders are. As illustrated, water use per person has been dropping over recent years. Over the past year, Watercare supplied 137.8 billion litres of water to 1.37 million consumers at an average usage of 274 litres per person, per day. This is a slight increase compared to the previous year's water use per person, and is attributed to a dry summer. Although the trend of per-capita usage has been dropping in recent years, the total volume of water supplied has been trending upwards. With expected population growth in Auckland, conserving water resources is all the more important.

**Customer 12: Water demand**



Watercare supports the EcoMatters Environment Trust which provides in-depth advice to residents on how to reduce their household water consumption. It does this over the telephone and by participating in events in Auckland. Over the past year, the Trust spoke to approximately 2,900 Aucklanders at events. In addition, they sold 250 water-efficient devices at events.

Watercare's ability to meet future demand will be affected by the effectiveness of the company's capital works programme. Over the next five years, Watercare plans to invest \$1.5 billion in the water (\$0.9 billion) and wastewater (\$0.6 billion) networks and supply improvements. Watercare's committed capital for the next year is included in the annual report on page 110. Further detail on the company's infrastructure performance is discussed in the 'Economy' section of this report.

# 04

## COMMUNITY

### THEMES:

Effective partnerships

Community well-being

### MATERIAL MATTERS:

Appropriate consultation on projects

Community health and safety

Programmes and actions towards communities

### WATERCARE'S APPROACH

Watercare's Statement of Intent lays out the activities to be undertaken by the company and sets specific economic, social and environmental objectives. This process inherently includes consideration of the impacts the business will have on the wider community.

Watercare aims to work in collaboration with communities in areas affected by projects. Examples of recent project engagement and collaboration are highlighted in the stakeholder relations section of the annual report. At a local level, Watercare fosters active relationships with affected communities through forums and individual relationships, and carries out impact assessments as part of the process of applying for resource consent approvals for all major projects. These principles of community consideration apply through all stages of the business, from the start of a new project or operation through to its conclusion.

As part of its community engagement, Watercare also funds community events, programmes or initiatives not only related to works but relevant to its activities. When needed, the company contributes to the development of changes in legislation and policy initiatives where they impact Watercare's operations.

## EFFECTIVE PARTNERSHIPS

### WHAT WATERCARE IS DOING

Following the integration of the Auckland water authorities, Watercare's interactions with the community increased as the company gained responsibility for local water and wastewater networks spread over a greater geographical area. Accordingly, the company has developed and maintained strong linkages with a wider range of communities and their representatives, including the local boards.

In May 2011, the company appointed a dedicated employee to manage relationships with local boards directly. An engagement plan was defined with the local boards in order to codify the nature of the engagement and detail the local projects where those communities will be impacted.

Project teams identify potential effects on communities and assess options to avoid, remedy or mitigate adverse effects. Information is gathered using a number of sources, including stakeholders identified through relevant legislation or by local authorities and iwi, and through local knowledge and advisory groups.

Over the past year, Watercare has undertaken public consultation on the proposed Central Interceptor project. Public consultation with iwi, community groups and local boards is ongoing.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance ruler in the annual report:

**5B** – Engaged communities

Details of consultation with communities are included in the stakeholder engagement section of Watercare's annual report.

Over the past year, a number of projects were instigated or were under way. Given the potential impact of Watercare's major projects on communities, the company undergoes rigorous assessment and consultation processes. Appropriate consultation is also a component of the statutory approvals process.

The Hunua No. 4 watermain project involves laying a 28-kilometre-long watermain from Redoubt North Reservoir in Manukau Heights to Campbell Crescent in Epsom, connecting to the existing local water supply network along the way. To manage the impact on local communities, Watercare has instigated a community liaison structure to ensure that members of the public are aware of the impacts of its work and to provide a mechanism for feedback. In addition, Watercare's scheduling recognises other infrastructure projects so there is not an undue burden on affected residents.

With regards to the proposed Central Interceptor project, Watercare undertook public consultation about a worksite in the Mt Albert War Memorial Reserve. The community provided feedback, via the local board, that its members were unhappy with the location of the worksite. The company responded by assessing alternative worksites and came up with a solution that was preferred by the community and endorsed by the local board.

## COMMUNITY WELL-BEING

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance rulers in the annual report:

5A – Engaged shareholder

6G – Midge complaints at wastewater treatment plants

6H – Odour complaints at wastewater treatment plants

In terms of community complaints associated with Watercare’s wastewater facilities, below is a table showing the number of midge, noise and odour complaints received over the past year. The reasons for the increase in odour complaints are highlighted in Ruler 6H in the annual report.

#### Community 1: 2012/13 Midge, noise and odour complaints

	Wastewater Treatment Plant	Complaints		
		Midge	Odour	Noise
METRO	Mangere	0	27	0
	Rosedale	0	0	0
	Army Bay	0	0	0
	<b>Subtotal: Metropolitan Wastewater Treatment Plants</b>	<b>0</b>	<b>27</b>	<b>0</b>
NON-METRO	Pukekohe	0	1	0
	Warkworth	0	0	1
	Omaha	0	0	1
	Helensville	0	0	0
	Wellsford	0	0	0
	Snells/Algies	0	0	0
	Waiwera	0	0	0
	Huapai/Kumeu	0	0	0
	Matakana	0	0	0
	Denehurst Drive	0	0	0
	Beachlands	0	0	0
	Owhanake	0	0	0
	Clarks Beach	0	0	0
	Waiuku	0	0	0
	Kingseat	0	2	0
	Bombay	0	0	0
<b>Subtotal: Non-Metropolitan Wastewater Treatment Plants</b>	<b>0</b>	<b>3</b>	<b>2</b>	
<b>Total 2012/13</b>	<b>0</b>	<b>30</b>	<b>2</b>	

Watercare partners with community organisations to contribute to a cleaner environment and to help customers in hardship and those wanting to save water.

A summary of community partnerships and investments is outlined below. These investments are made with due consideration to Watercare’s mandate of providing water and wastewater services at least cost to its customers (collectively).

### Community 2: Community investments

Programme	Nature of relationship	2012/13 funding
Rain Forest Express	Company operation	\$124,003
Adopt A Stream	Company operation	\$11,826
Water Utility Consumer Assistance Trust	Company funded	\$100,000
Trees for Survival	Sponsored	\$3,000
Watercare Harbour Clean-Up Trust	Sponsored	\$250,000
EcoMatters Environment Trust	Company funded	\$105,000
<b>Total</b>		<b>\$593,829</b>

One of Watercare’s most-enduring, community-focused operations is the Rain Forest Express tram line. The Rain Forest Express gives the public an opportunity to see a water supply dam, tunnels, glow worms, cave weta and natural flora. It runs on a six-kilometre tram line in the Waitakere Ranges. It is still used for the maintenance of the Upper Nihotupu Dam and is operated by Watercare staff.

### Community 3: Rain Forest Express



Adopt A Stream is a very successful education programme targeting schools. A full-time Watercare teacher delivers the programme. The most popular theme is freshwater ecology; one session is conducted in the classroom and promotes an understanding of freshwater ecology and water quality in streams, and the other is in the field to test the water quality of a nearby stream. Teaching material like water-testing kits is provided by Watercare.

The Water Utility Consumer Assistance Trust, which was established by Watercare in 2011, has the ability to grant remissions to residential customers who meet its eligibility criteria and are deemed to be struggling to manage their water costs. Over the last year, 301 customers registered with the Trust and, of these, 134 had hardship relief approved.

Trees for Survival is an environmental education programme which involves young people in growing and planting native trees to help landowners revegetate erosion-prone land, improve stream flow and water quality, and increase biodiversity. Watercare’s contribution is enabling the students at Ararimu, Ardmore, Clevedon, Hunua and Paparimu Schools to participate in the programme.



The Watercare Harbour Clean-Up Trust works to remove litter from the Waitematā Harbour and inner gulf islands. In addition to sponsoring the Trust, Watercare staff members are involved in its administration and governance.

EcoMatters Environment Trust delivers a sustainability programme to communities in Auckland. Watercare partners with EcoMatters to help households to be more water-wise. This involves delivering the Water Advice Line service described in the Sustainable Environment section of the annual report and attending events like the Auckland Home Show to give water-saving advice as well as selling water-saving devices. Watercare staff members are involved in the partnership, especially the Sustainability Manager and the Contact Centre staff who deliver the first step of the Water Advice Line before referring customers to EcoMatters for water audits. This involves regular training.

Where appropriate, Watercare works with other organisations in the development of public policy that is relevant to operations. Significant issues and public policy positions are summarised below:

#### Community 4: Public policy participation

	Watercare position
National level initiatives	
Building Amendment Bill No. 4	Watercare made a submission on the Building Amendment Bill No. 4 which focused on the dam safety scheme and issues around buildings that do not require consent. Following the hearing of submissions to the Bill, the Local Government and Environment Committee has released its report. Watercare is generally satisfied with the recommendations in the report that relate to matters on which it made its submissions.
Heritage New Zealand Pohuere Taonga Bill	Watercare submitted on the Heritage New Zealand Pohuere Taonga Bill on 21 June 2012. Subject to some amendments, Watercare supported the Bill proceeding on the basis that the Bill provides more effectively for the management of sites of cultural or historical significance in New Zealand.
Improving our Resource Management System Discussion Document	The discussion document proposes a series of changes to the Resource Management Act 1991 and opportunities to provide additional guidance to local government in order to improve the resource management system. Watercare provided comments and suggestions on aspects that immediately affected its business operations.
Land and Water Forum	Watercare is a plenary member of the Land and Water Forum. The Forum consists of representatives from various organisations with interests in fresh water. Its task, through a stakeholder-led process, is to recommend outcomes, goals and long-term strategies for fresh water in New Zealand to central government. Initially, the Forum reported to the Minister for the Environment and the Minister of Agriculture in August 2010. The Forum has completed a series of reports on a range of other subjects including Water Allocation and Governance.
New Zealand Standard Ecological Flows and Water Levels	Watercare lodged a submission to ensure appropriate standards are established with respect to its storage and takes of surface and aquifer water supply. The submission process has been completed. The Ministry has put this work on hold pending the outcomes from the work being undertaken by the Land and Water Forum. The Land and Water Forum report on limits has been released to the Government but, as yet, no final position has been adopted.
Freshwater Reform 2013 and Beyond	Watercare submitted on the Freshwater Reform 2013 and Beyond on 8 April 2013. Watercare expressed an interest in working closely with the Ministry for the Environment in developing a number of the reform packages identified and sharing its experience in managing municipal water and wastewater.
Resource Management (Restricted Duration of Certain Discharge Coastal Permits) Bill	Watercare objected to the Bill in its entirety. Watercare submitted that the Bill's proposal to reduce the maximum allowable consent term to five years is unnecessary and would arbitrarily limit the Act's existing provision for exceptional circumstances.

Watercare position	
Resource Management Reform Bill	On 5 December 2012, the Government introduced the Resource Management Act Reform Bill 2012. The Bill is intended to further streamline the consenting regime and facilitate the delivery of the Auckland Unitary Plan. Watercare made a submission on matters that affected Watercare as an applicant for resource consents.
Tāmaki Collective Claim on Volcanic Cones	On 8 September 2012, the Crown and Tāmaki Collective signed a Deed of Settlement. The settlement will vest 14 maunga (volcanic cones) in the Tāmaki Collective on the condition that they are held in trust for the iwi/hapū of the Tāmaki Collective and all other people of Auckland. The maunga will vest as reserves, and public access and existing third-party interests will be protected. Watercare has worked closely with the Crown and iwi to ensure that it is able to maintain and operate infrastructure located on the maunga.
<b>Auckland regional policy and planning initiatives</b>	
Auckland Council Operative Plan Changes	There are three main plan changes of significant interest to Watercare: Clevedon, Kingseat and Drury South. The key issue of concern is around proposed development and the availability of water and/or wastewater infrastructure.
Auckland Regional Policy Statement: Plan Change 8 – Outstanding Natural Landscapes	Watercare submitted on the initial version of the Auckland Regional Policy Statement: Plan Change 8 – Outstanding Natural Landscapes. Auckland Council has made amendments to the document that addressed all of Watercare’s concerns.
Auckland Regional Plans: Air, Land, and Water Plan and Coastal Plan	Watercare has been actively working with Auckland Council to resolve outstanding appeals. All but a few final matters have now been resolved.
Auckland Council Unitary Plan	Auckland Council is currently preparing a Unitary Plan which will replace the Auckland Regional Policy Statement, four regional plans and seven district plans. The Council is planning to publicly notify this plan at the end of 2013. Watercare has been providing feedback on objectives, policies and rules across a wide range of issues that affect Watercare’s activities.
<b>Waikato regional policy and planning initiatives</b>	
Waikato Regional Policy Statement (RPS)	The Waikato Regional Council released the notified version of the Proposed Waikato Regional Policy Statement in November 2010. Key issues for Watercare include matters related to the Mangatangi and Mangatāwhiri Dams, which are now located in the Waikato Region, and water takes from the Waikato River which relate to both water allocation and the protection of water quality. Watercare made a submission on the RPS in February 2011 and a further submission in July 2011. Watercare presented evidence to the hearing committee in two parts. The most fundamental issue to Watercare is the policy related to water allocation. Watercare joined with other municipal water authorities in the Waikato Region to present a joint case on this issue. Watercare focused its evidence on the management of the Mangatangi and Mangatāwhiri Dams. The decision version of the Proposed Regional Policy Statement has been released. In our view, the decision version does not satisfactorily address the matters that Watercare raised with respect to dams and water allocation. Watercare, along with other Waikato River Municipal Users Group (WRMUG) members, has appealed the decision version of the RPS and become a Section 74 party to a number of other appeals.
Waikato Regional Pest Management Plan	The Waikato Regional Council issued the draft Pest Management Plan for consultation. Notably, the plan did not mention the Hunua Ranges nor recognise water supply dams in this area. Watercare is working with Waikato Regional Council to resolve these matters.

# 05

## ECONOMY

### THEMES:

Financial returns

Asset funding and performance

### MATERIAL MATTERS:

Financial health of the organisation

Asset maintenance and upgrade programme

Debt levels and returns relative to funding

## WATERCARE'S APPROACH

Watercare's sole shareholder is Auckland Council – it does not receive funding from local or central government. The company has very clear guidelines and shareholder expectations in relation to financial performance. It is required under regulation to manage its operations efficiently, with a view to keeping the overall costs of water supply and wastewater services to its customers at the minimum levels whilst effectively maintaining the long-term integrity of its assets.

In order to meet these expectations, Watercare's budgets are set with due consideration for the service delivery expected by customers (as discussed in the 'Customer' section of this report), the planned and future capital commitments, and the relative affordability of service. Watercare carefully tracks budgeted and actual cost performance and investigates variances or potential future risks.

## FINANCIAL RETURNS

### WHAT WATERCARE IS DOING

As a large public utility, Watercare has many suppliers and works to ensure cost efficiencies from these suppliers. The company has been taking advantage of the all-of-government supplier contracts in areas such as IT, office consumables and fleet vehicles. Suppliers selected under these contracts must exercise due consideration for the environment and sustainable development.

Two other areas key to economic sustainability are the pricing of services and capital expenditures. Watercare's pricing reflects the cost of providing services and the cost of funding infrastructure developments. The company's capital expenditure programme is an appropriate mix of replacements of and improvements to existing facilities, and new infrastructure developments to meet future demand. All these considerations are moderated by the underlying requirement to keep costs to customers at a minimum.

## HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance rulers in the annual report:

8A – Minimum funds flow from operations (FFO) to interest cover before any price adjustment

8B – Procurement efficiency programme and savings

8C – Interest rate percentage

8D – Actual operating expense

Watercare's financial performance and position are detailed at length in Watercare's annual report. Both revenues and asset values have increased in comparison to the prior year, as has the cost base, as displayed below:

### Economy 1: Financial summary

	Annual turnover (\$000)		Asset value (\$000)	
	2012/13	2011/12	2012/13	2011/12
Water	164,226	149,891	3,437,508	3,313,687
Wastewater	318,394	292,059	4,801,625	4,585,199
<b>Total</b>	<b>482,620</b>	<b>441,950</b>	<b>8,239,133</b>	<b>7,898,886</b>

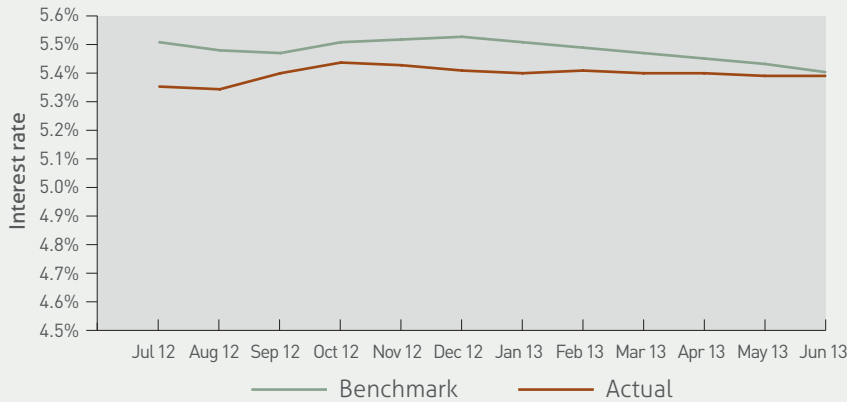
### Economy 2: Investment in staff

	2009/10	2010/11	2011/12	2012/13
	\$000	\$000	\$000	\$000
Total remuneration	29,713	46,480	55,575	59,621
Health-care expenditure	111	189	137	265
Life and disability insurance	300	417	543	600
<b>Total</b>	<b>30,662</b>	<b>47,587</b>	<b>56,859</b>	<b>61,232</b>

Watercare has retirement benefit contribution commitments in relation to the KiwiSaver defined contribution scheme.

### Economy 3: Taxation

	2010/11	2011/12	2012/13
	\$000	\$000	\$000
Income tax paid	–	–	–
GST collected	53,751	65,958	71,001
Accident Compensation Corporation levies	474	548	502
Local and regional council rates	6,494	1,208	1,178
<b>Total</b>	<b>60,719</b>	<b>67,714</b>	<b>72,681</b>

**Economy 4: Interest rate**

Given the scale of Watercare's operations and infrastructure projects, significant sums are paid to suppliers. Suppliers that have required more than \$1.0 million in payment from Watercare over the past year are displayed below:

**Economy 5: Major suppliers**

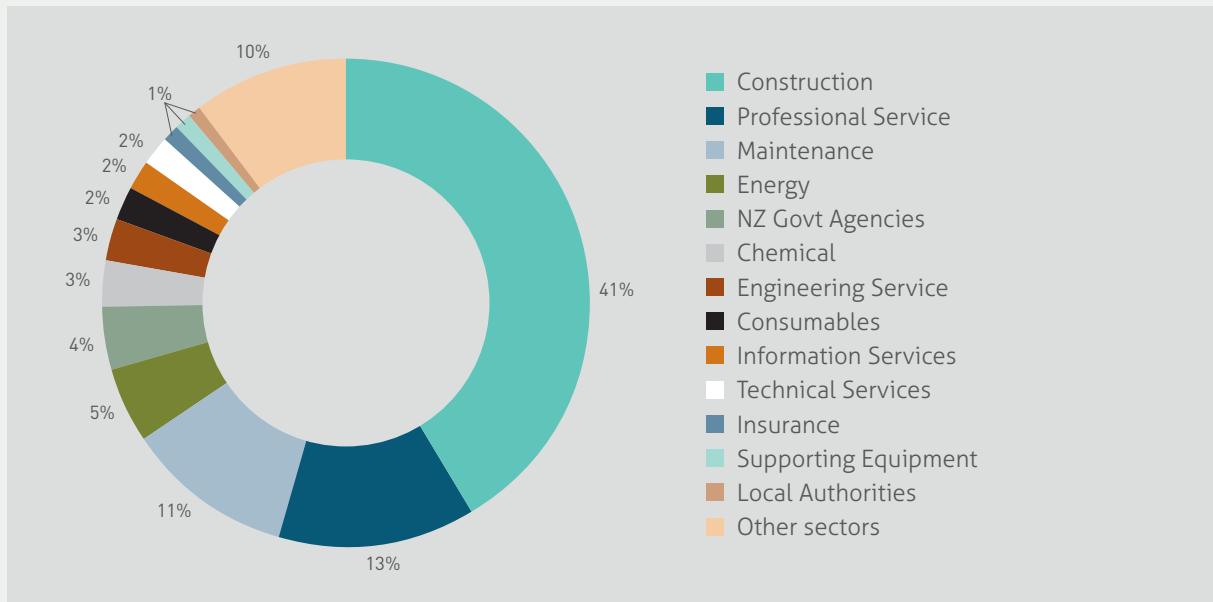
Supplier expenditure > \$1,000,000		
Supplier	Industry	% of total supplier expenditure 2012/13
FULTON HOGAN/JOHN HOLLAND	Construction	7.65%
LEND LEASE INFRASTRUCTURE SERVICES	Maintenance	5.63%
PIPELINE & CIVIL	Construction	4.80%
STEELPIPE LIMITED	Construction	4.16%
INLAND REVENUE DEPARTMENT	NZ Govt Agencies	3.54%
HEB CONSTRUCTION LIMITED	Construction	3.21%
CONTACT ENERGY (POWER)	Energy	2.81%
PIPEWORKS REHABILITATION SOLUT	Construction	2.66%
ORICA NEW ZEALAND LTD	Chemical	2.55%
CITY CARE	Maintenance	2.06%
BRIAN PERRY CIVIL	Construction	1.81%
HARKER UNDERGROUND CONSTRUCTION	Construction	1.77%
FLETCHER CONSTRUCTION CO LTD	Construction	1.55%
CH2M BECA LTD	Professional Service	1.53%
DOWNER EDI NEW ZEALAND LTD	Construction	1.38%
INTERFLOW (NZ) LIMITED	Construction	1.29%
DRILL TECH (1996) LIMITED	Construction	1.23%
MARCH CATO LTD	Construction	1.10%
SMYTHE CONTRACTORS LTD	Construction	1.03%
AECOM NEW ZEALAND LIMITED	Professional Service	1.00%
AUCKLAND COUNCIL	Local Authorities	0.99%
FULTON HOGAN AUCKLAND	Construction	0.95%
THIESS SERVICES LIMITED	Maintenance	0.87%
HAWKINS INFRASTRUCTURE	Construction	0.87%

Supplier expenditure > \$1,000,000		
Supplier	Industry	% of total supplier expenditure 2012/13
AON NEW ZEALAND	Insurance	0.86%
CANADIAN PACIFIC CONSTRUCTION	Construction	0.81%
OPUS INTERNTL CONSULTANTS LTD	Professional Service	0.80%
STOCKMAN GENERAL CONTRACTORS	Construction	0.67%
COAST DIGGER SERVICES	Construction	0.63%
URS NEW ZEALAND LTD	Professional Service	0.62%
VECTOR LTD	Energy	0.60%
HYNDS PIPE SYSTEMS LTD	Consumables	0.59%
GHD LTD	Professional Service	0.58%
CLARKE ENERGY AUSTRALIA P/L	Engineering Service	0.57%
SINCLAIR KNIGHT MERZ	Professional Service	0.57%
DATA COL NEW ZEALAND LTD	Technical Services	0.56%
REVERA LTD	Information Services	0.55%
NEW ZEALAND POST	Courier	0.53%
NZ TRANSPORT AGENCY	Professional Service	0.53%
GE BETZ PTY LTD	Supporting Equipment	0.52%
MEREDITH-CONNELL	Professional Service	0.51%
CITY CONTRACTORS CIVIL ENG	Construction	0.50%
GENESIS ENERGY	Energy	0.49%
HYDROTECH DRAINAGE & PLUMBING	Maintenance	0.49%
MWH NEW ZEALAND LTD	Professional Service	0.49%
MCDONALDS LIME LTD	Chemical	0.48%
CARDLINK SYSTEMS LTD	Vehicles	0.48%
SOLUTION DYNAMICS LIMITED	Technical Services	0.42%
XYLEM WATER SOLUTIONS NZ LIMITED	Elec & Mech Consumables	0.42%
SERVICE ENGINEERS LTD	Engineering Service	0.38%
MERIDIAN ENERGY LTD	Energy	0.36%
HARRISON GRIERSON CONSULT LTD	Professional Service	0.35%
RUSSELL MCVEAGH MCKENZIE BART	Professional Service	0.34%
ALL DRAINS LIMITED	Maintenance	0.34%
AWT NEW ZEALAND LTD	Professional Service	0.34%
MARSH LTD	Insurance	0.32%
CONSTRUCTION TECHNIQUES LTD	Construction	0.32%
DAMWATCH SERVICES LTD	Professional Service	0.32%
AUCKLAND TRANSPORT	Councils	0.32%
ENFIELD SERVICES GROUP LIMITED	Maintenance	0.31%
AUCKLAND SANDBLASTERS LTD	Maintenance	0.31%
INFOR GLOBAL SOLUTIONS NZ LTD	Information Services	0.28%
MICO PLUMBING & PIPELINES	Plumbing	0.27%
C R JOHNSON LIMITED	Construction	0.27%
ERGO CONSULTING LTD	Professional Service	0.26%
PENTAIR FLOW CONTROL PACIFIC LTD	Construction	0.26%

Supplier expenditure > \$1,000,000		
Supplier	Industry	% of total supplier expenditure 2012/13
TONKIN & TAYLOR LTD	Professional Service	0.26%
NOVA ENERGY RESIDENTIAL/COMMER	Energy	0.25%
TRANSPACIFIC INDUSTRIES (LANDFILL)	Waste Disposal	0.24%
KERRY DRAINAGE	Building	0.24%
ROHIT'S PLUMBING AND DRAINLAY	Plumbing	0.24%

The 13 major sectors of Watercare's expenditure are displayed below.

**Economy 6: Top 13 sectors of 2012/13 Watercare's expenditure**



## ASSET FUNDING AND PERFORMANCE

### WHAT WATERCARE IS DOING

Watercare's capital expenditure programme is planned to maintain the long-term integrity of its assets and manage the risk of unexpected operational or maintenance costs. It is also planned to ensure that new infrastructure is delivered in a timely manner to meet the needs of a growing population. Many projects are long term and require careful planning and management. Recent significant capital projects completed to address future population growth include the expansion of the Waikato Water Treatment Plant and the development of the Kumeu/Huapai/Riverhead wastewater network.

### HOW WATERCARE HAS PERFORMED

For further information, please refer to the following performance rulers in the annual report:

7A – Capital expenditure

7D – Maintenance development

Refer to Watercare's detailed disclosures on interest rate risks, borrowings and exposures in the annual report. The company also outlines its capital expenditure committed over the next financial year in the annual report.

Watercare has a capital programme totalling approximately \$5.25 billion (in 2013 dollars) over 10 years. The positive impacts of this investment include the support of population growth in the region and the associated improvement in standards of living for local communities, the maintenance of existing levels of service through replacement and renewal of old infrastructure, the provision of security of supply to businesses and local communities, and the improvements in levels of service to local communities such as improved water pressures and water quality.

Any impacts on communities and the environment related to the construction of individual projects are largely temporary or mitigated through community engagement and project planning.

Details of Watercare's planned capital expenditure programmes are summarised below. These are the total assessed costs for the next five years.



**Economy 7: Capital expenditure programmes**

	2013 expenditure	Future expenditure (next five-year period)
	(\$million)	(\$million)
<b>Water</b>		
Raw water network rehabilitation/replacement	1.89	14.58
Raw water network improvement	0.13	0.00
Energy and Control systems rehabilitation/replacement	0.56	3.70
Energy and Control systems improvement	0.96	7.61
Energy and Control systems expansion	0.00	0.00
Dam rehabilitation	3.48	30.08
Water sources improvement	0.19	1.76
Regulatory compliance – Water treatment plant	0.06	0.44
Water treatment plant rehabilitation/replacement	5.28	27.26
Water treatment plant improvement	1.87	180.62
Water treatment plant expansion	13.10	13.89
Regulatory compliance – Treated water	0.34	2.53
Treated water network rehabilitation/replacement	13.68	178.96
Treated water network improvement	3.15	54.85
Treated water network expansion	56.73	321.94
Hunua No. 4 water supply scheme	56.50	271.26
CBD storage	0.00	7.79
Water demolition	0.69	5.29
<b>Water total</b>	<b>158.60</b>	<b>1,122.56</b>

	2013 expenditure	Future expenditure (next five-year period)
	(\$million)	(\$million)
<b>Wastewater</b>		
Energy and Control systems rehabilitation/replacement	0.44	0.00
Energy and Control systems improvement	2.79	1.56
Energy and Control systems expansion	0.00	0.00
Collection system replacement	36.11	95.53
Collection system improvement	3.90	81.83
Collection system expansion	28.95	221.83
Regulatory compliance – Collection	1.31	0.79
Project Hobson	0.00	0.00
Project Waitemata	6.90	184.98
Trade Waste	0.01	0.83
Regulatory compliance – Wastewater treatment plant	0.00	1.32
Wastewater treatment plant rehabilitation/replacement	6.63	33.60
Wastewater treatment plant improvement	15.34	75.96
Wastewater treatment plant expansion	9.05	166.33
Wastewater Demolition	0.84	3.74
<b>Wastewater total</b>	<b>112.25</b>	<b>868.30</b>
<b>Shared services</b>		
Plant and equipment replacements	8.43	44.17
Process Improvement	3.38	47.55
Laboratory and Information Services	6.60	17.39
<b>Shared services total</b>	<b>18.41</b>	<b>109.11</b>

## GRI INDEX

GRI Ref	Description	Key areas	Reported	Report section	Comment
<b>1. Vision and Strategy</b>					
1.1	Sustainable development vision and strategy	Message from the chief executive Broader sustainability trends Achievements and challenges during the reporting period	F	AR, CE's report	
1.2	Description of key impacts, risks and opportunities	Summary of performance against targets Approach to defining and prioritising challenges and risks	F	AR, CE's report	
<b>2. Profile</b>					
2.1	Name of organisation		F		Watercare Services Limited
2.2	Primary services offered		F	AR, Company overview	
2.3	Operational structure	Main divisions, subsidiaries and joint ventures	F	AR, Financials	
2.4	Location of headquarters		F		Auckland, New Zealand
2.5	Operation locations		F		New Zealand
2.6	Nature of ownership		F		100% owned by Auckland Council
2.7	Nature of markets served	Geographic breakdown Sectors served Types of customers	F	GRI, Customer	
2.8	Scale of reporting organisation		F	AR, Inside cover	
2.9	Changes during reporting period	Number of employees Net sales Number of operations	F	GRI, People AR, Financials	
2.10	Awards received during reporting period		F	GRI, Back page	

**KEY:**

AR: Annual Report      CE: Chief executive      F: Fully reported      GRI: GRI Report      NA: Not applicable  
 N: Not reported      P: Partially reported

GRI Ref	Description	Key areas	Reported	Report section	Comment
<b>3. Report Parameters</b>					
3.1	Reporting period		F		Financial year ended 30 June 2013
3.2	Date of most-recent previous report		F		September 2012
3.3	Reporting cycle		F		Annual
3.4	Contact point for questions regarding content		F	GRI, Back page	
3.5	Process for defining content	Materiality process Prioritisation of topics within report Identification of stakeholders	F	AR, Inside cover GRI, About this report	
3.6	Boundary of report		F	GRI, About	
3.7	Limitations on scope or boundary		F	GRI, About	
3.8	Basis for reporting on extended organisation		F	GRI, About	
3.9	Data measurement techniques	Measurement techniques Bases of calculations Underlying assumptions applied	F	GRI, About	
3.10	Re-statements made from earlier reports		F	GRI, About	
3.11	Significant changes from previous reports	Includes boundary, scope and measurement methods applied	F	GRI, About	
3.12	GRI Index identifying disclosures and indicators		F	GRI, Index	
3.13	External assurance	Policy for external assurance Assurance statement	F	AR, Verification	
<b>4. Governance, Commitments and Engagement</b>					
4.1	Governance structure	Description of Watercare's governance composition Committees under highest governance body setting strategy or organisational oversight Mandate of such committees Governance body demographics	F	AR, Governance	
4.2	Indicate if chair of highest governance body is also executive officer		F	AR, Directors' profiles AR, Executives' profiles	

GRI INDEX

GRI Ref	Description	Key areas	Reported	Report section	Comment
4.3	Indicate if organisation has unitary board structure	Include demographic breakdown of unitary board	F	AR, Directors' profiles AR, Governance	
4.4	Mechanisms for shareholders to provide feedback to board	Shareholder to provide recommendations or direction to board	F	AR, Governance	
4.5	Linkage between compensation for Board, Executives, managers and performance	Linkage with respect to Watercare's performance (including social and environmental performance)	F	AR, Governance	
4.6	Processes in place to avoid conflicts of interest for highest governance body		F	AR, Governance	
4.7	Process for determining members of highest governance body	Process to determine qualifications, composition and expertise of highest governance body and committees	F	AR, Governance	
4.8	Internally developed statements and implementation status	Codes of conduct and principles relevant to economic, environmental and social performance	F	AR, Governance	
4.9	Procedures of highest governance body for overseeing performance and compliance within organisation	Economic, social and environmental performance and relevant risks and opportunities	F	AR, Governance AR, Statement of Service Performance	
4.10	Processes in place to measure highest governance body's own performance	With respect to economic, social and environmental performance	F	AR, CE's report	
4.11	Explanation if or how precautionary approach or principle is addressed by organisation		F	AR, Governance	
4.12	Externally developed economic, environmental and social charters or initiatives	Externally developed charters or principles to which Watercare subscribes or which Watercare endorses	F	GRI, Community	
4.13	Organisation's memberships in associations		F	GRI, Back page	

GRI Ref	Description	Key areas	Reported	Report section	Comment
4.14	List of stakeholder groups engaged by organisation		F	AR, Stakeholders and engagement	
4.15	Basis for identification of stakeholders	<ul style="list-style-type: none"> <li>Identification of stakeholders</li> <li>Selection of stakeholders with whom to engage</li> <li>Process for defining stakeholder groups</li> <li>Process to determine with whom and with whom not to engage</li> </ul>	F	AR, Stakeholders and engagement	
4.16	Approaches to stakeholder engagement	<ul style="list-style-type: none"> <li>Frequency of engagement by type</li> <li>Frequency of engagement by stakeholder group</li> </ul>	F	AR, Stakeholders and engagement	
4.17	Key topics and concerns raised through stakeholder engagement	<ul style="list-style-type: none"> <li>Key topics raised through stakeholder engagement</li> <li>How organisation responded to key topics and concerns</li> </ul>	P	AR, Stakeholders and engagement	
<b>Economic</b>					
EC1	Direct economic value	<ul style="list-style-type: none"> <li>Revenues</li> <li>Operating costs</li> <li>Employee wages and benefits</li> <li>Payments to providers of capital</li> <li>Payments to governments</li> <li>Community investments</li> <li>Economic value retained</li> </ul>	F	AR, Financials	
EC2	Financial implications due to climate change	How Watercare considers climate change and the risks and opportunities it represents	P	GRI, Environment	
EC3	Organisation's defined benefit plan	<ul style="list-style-type: none"> <li>Structure of retirement plans</li> <li>Aggregate totals of plan coverage</li> </ul>	P	GRI, Economy	
EC4	Significant financial assistance received from government		F	GRI, Economy	
EC5	Gender ratio of standard entry-level wage	Comparison to the minimum wage	F	GRI, People	

GRI Ref	Description	Key areas	Reported	Report section	Comment
EC6	Spending on local suppliers		F	GRI, Economy	The vast majority of Watercare's supplier spend is with local providers of construction, engineering/technical and professional services
EC7	Local hiring procedures for senior management-level positions		P	GRI, People	
EC8	Development and impact of services provided primarily for public benefit		F		The nature of Watercare's business is that all services are provided for public benefit
EC9	Describing significant indirect economic impacts	Explanation of work undertaken to understand indirect economic benefits  Examples of positive and negative indirect benefits	F	AR, Stakeholder relations	
<b>Environment</b>					
EN1	Materials used by weight or volume	Total of non-renewable materials  Total of direct materials used	F	GRI, Environment	
EN2	Percentage of recycled input materials used		N		Not calculated
EN3	Direct energy consumption by primary energy source		F	GRI, Environment	
EN4	Indirect energy consumption by primary source		N		Not calculated
EN5	Energy saved from conservation and efficiency improvements		F	GRI, Environment	
EN6	Initiatives to provide energy-efficient or renewable energy-based services		F	AR, Sustainable environment  GRI, Environment	
EN7	Initiatives to reduce indirect energy consumption		F	GRI, Environment	

GRI Ref	Description	Key areas	Reported	Report section	Comment
EN8	Total water withdrawal by source		F	GRI, Customer	
EN9	Water sources significantly affected by withdrawal of water	<p>Indicating if source designated as protected area</p> <p>Indicating if important water source for local communities</p> <p>Indicating biodiversity value</p>	F	GRI, Environment	
EN10	Percentage and total volume of water recycled and reused		N		Not included this year
EN11	Land in protected areas or with high biodiversity	Details of the biodiversity value and management of each site	F	GRI, Environment	
EN12	Description of significant impacts of activities and services on biodiversity in protected and non-protected areas	Nature of significant direct or indirect impacts on biodiversity	F	GRI, Environment	
EN13	Size and location of habitats protected or restored		F	GRI, Environment	
EN14	Managing biodiversity impacts	Strategies, current actions and future plans	F	GRI, Environment	
EN15	Number of IUCN Red list and national conservation list species in habitats affected by operations		N		Not known
EN16	Total direct and indirect greenhouse gas emissions by weight		F	GRI, Environment	
EN17	Other relevant indirect greenhouse gas emissions by weight	Including standard and methodology used to obtain data	F	GRI, Environment	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved as a result		F	GRI, Environment	
EN19	Emissions of ozone-depleting substances	Tonnes of CFC-11 equivalent	F	GRI, Environment	



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GRI Ref	Description	Key areas	Reported	Report section	Comment
EN20	NO <sub>x</sub> , SO <sub>x</sub> , and other significant air emissions by type and weight		P	GRI, Environment	
EN21	Water discharge by quality and destination	By destination By treatment method	F	GRI, Environment	
EN22	Weight of waste by type and disposal method	Including composting, reuse, recycling, recovery and landfill	F	GRI, Environment	
EN23	Significant spills		F	GRI, Customer	
EN24	Hazardous materials	Weight of hazardous materials	F	GRI, Environment	
EN25	Status and biodiversity value of habitats affected by discharge of water and run-off		F	GRI, Environment	
EN26	Initiatives to mitigate environmental impacts	Extent of impact mitigation in relation to materials use, water use, emissions, effluents, noise and waste	F	AR, Stakeholders and engagement GRI, Environment GRI, Community	
EN27	Reclaimed products		NA		Watercare provides water and wastewater services
EN28	Non-compliance fines	Total monetary value Number of cases, monetary and non-monetary	F	GRI, Environment	
EN29	Impacts of transporting	Environmental impact of transportation	NA		Transportation is not a material component of Watercare's impacts
EN30	Environmental protection expenditure	Sustainability accounting analysis	N		Partially calculated
<b>Social – Labour Practices</b>					
LA1	Workforce details	Workforce broken down by gender, employment contract and employment type	F	GRI, People	
LA2	Employee turnover	Voluntary turnover	F	GRI, People	
LA3	Employee benefits	Benefits that are provided to full-time employees	F	GRI, People	
LA15	Parental leave	Employees entitled to and taking parental leave Employees returning after parental leave	F	GRI, People	

GRI Ref	Description	Key areas	Reported	Report section	Comment
LA4	Collective bargaining agreements		F	GRI, People	
LA5	Minimum notice periods regarding significant operational changes		F	GRI, People	
LA6	Workforce represented in health and safety committees		F	GRI, People	
LA7	Health and safety	Rates of injury, occupational diseases, lost days, absenteeism and number of fatalities by gender	F	GRI, People	
LA8	Health and safety education and training	Education, counselling, prevention and treatment programmes in place for employees, their families and community members	F	GRI, People	
LA9	Health and safety topics	Covered in formal agreements with trade unions	F	GRI, People	
LA10	Training	Average hours per year training per employee	F	GRI, People	
LA11	Training for career development	Internal and external training courses to further educational qualifications of employees	F	GRI, People	
LA12	Performance reviews	Percentage of employees receiving formal appraisals and reviews	F	GRI, People	
LA13	Composition of governance bodies	Demographic breakdown, gender, age and minority group for employees and for governance	F	AR, Directors' profiles GRI, People	
LA14	Basic salary ratio		F	GRI, People	
<b>Social – Human Rights</b>					
HR1	Contracts with human rights clauses		NA		
HR2	Suppliers undergone human rights screening		NA		
HR3	Training in human rights		NA		
HR4	Discrimination incidents		F	GRI, People	No instances recorded

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GRI Ref	Description	Key areas	Reported	Report section	Comment
HR5	Suppliers not complying with freedom of associations		NA		
HR6	Child labour used by suppliers		NA		
HR7	Compulsory labour used by suppliers		NA		
HR8	Security personnel trained in human rights		NA		
HR9	Indigenous people violations		NA		
HR10	Operations under human rights review		NA		
HR11	Grievances related to human rights		NA		
<b>Social – Society</b>					
SO1	Operational impacts	Impact assessments and engagement with local communities	F	GRI, Community	
SO9	Negative impacts from operations	Location and potential of negative impacts	F	GRI, Community	
SO10	Mitigation of negative impacts		F	GRI, Community	
SO2	Corruption	Business units analysed for corruption	NA		
SO3	Anti-corruption	Employees trained in anti-corruption policies	NA		
SO4	Corruption incidents	Actions taken and results of defined incidents	F		No incidents
SO5	Public policy	Watercare's participation in public policy development	F	GRI, Community	
SO6	Political financial contributions		F		No financial contributions
SO7	Anti-competitive behaviour	Description of legal action taken against Watercare	F		No action taken
SO8	Non-compliance fines	Total monetary value Number of cases monetary and non-monetary	F	GRI, Environment	No fines for consent breaches

GRI Ref	Description	Key areas	Reported	Report section	Comment
<b>Social – Product Responsibility</b>					
PR1	Assessments for improvement	Various life-cycle stages in regard to service offering assessed for improvement	F	Throughout the reports	Fundamental to business model
PR2	Non-compliance incidents	Resulted in fine, penalty or warning	F	GRI, Environment	
PR3	Labelling information required		NA		
PR4	Non-compliance in information and labelling of service	Resulted in fine, penalty or warning	NA		
PR5	Customer satisfaction	Practices in place to assess and maintain Watercare’s customer satisfaction Results and key conclusions	F	GRI, Customer	
PR6	Codes and regulations in relation to product marketing		NA		
PR7	Non-compliance in product marketing regulations	Resulted in fine, penalty or warning	NA		
PR8	Privacy	Complaints in privacy breaches Total number of theft and data-loss incidents	F	GRI, Customer	No incidents reported
PR9	Non-compliance with laws of provision and use of service	Value of fines	F	GRI, Customer	No non-compliance reported

## AWARDS WON OVER THE REPORTING PERIOD:

### AUSTRALASIAN REPORTING AWARDS:

- Gold award
- Special award for Sustainability

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**MEMBERSHIPS TO SUSTAINABILITY-FOCUSED ORGANISATIONS:**

