NATIONAL PERFORMANCE REVIEW

Snapshot
2015-2016

water NEW ZEALAND
The New Zealand Water & Wastes Association

Welcome to this snapshot of our ***National Performance Review 2015-16***; Water New Zealand's annual benchmarking exercise of District, City Council, and Council-Controlled Organisation performance in delivering drinking water, wastewater, and stormwater services.

The *Review* underscores the significance of our sector. In 2015/16, participants collectively employed 2,045 staff, were responsible for safe delivery of 231,350 Olympic pools worth of drinking water and safe disposal of 183,315 Olympic pools of wastewater, and maintaining a stormwater network of over 17,000 km. $1.7 billion in revenue was collected to operate and maintain these services, supported by assets worth $31 billion.

Comparative performance information is drawn together from 50 participants, whose jurisdictions cover over 90% of New Zealand's population. The purpose of this is to:

- Identify opportunities to **improve service delivery**
- Encourage learning opportunities by **showcasing good practice**
- Provide information to advance **informed decision-making**

The production of the Review is a collaborative effort between Water New Zealand staff members, the report's participants, and our central government and participant advisory group. Thank you to all who have contributed to its development.

John Pfahlert, CE, Water New Zealand

About Water New Zealand

Water New Zealand is a national not-for-profit sector organisation comprising approximately 1,500 corporate and individual members in New Zealand and overseas.

It is the principal voice for the water sector, focusing on the sustainable management and promotion of the water environment and encompassing the 3 Waters.

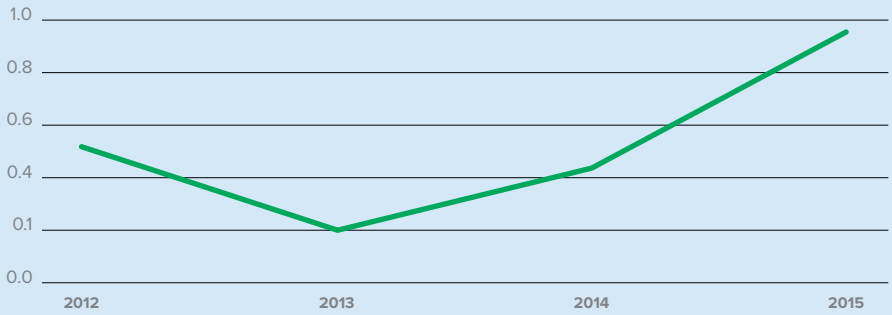
For a full set of data and case studies in the National Performance Review go to **www.waternz.org.nz**

Public health and environmental protection

The average number of dry weather wastewater overflows being recorded is increasing

Dry weather overflows result from power outages, equipment failures, or network blockages. Blockages can be caused by tree root intrusion or incorrect disposal of household items into the sewer.

Median dry weather wastewater overflows per 1000 properties



Nearly one in five wastewater treatment plants are operating on expired discharge consents

In 2015-16, 46 out of 252 wastewater treatment plants included in the review were operating under expired consents. This figure has increased from 2014-15, when one in seven (26 of 190 plants) reported operating under expired consents.

The majority of participants employ some form of stormwater treatment

Treatment devices in use include gross pollutant traps, vegetative filters, bio-filtration, rain gardens, infiltration and filtration, rainwater detention/retention tanks, wetlands, and water quality ponds. Only six participants did not have any of the aforementioned devices as part of their stormwater networks.

Customer focus

The collection of customer-focused data is increasing

The percentage of participants providing reliable or highly reliable response and attendance time data rose from 59% in 2014/15 to 85% in 2015/16. Complaints data associated with different drinking water, wastewater, and stormwater faults rose from 72% to 76% in the same period.

CASE STUDY: **Putting the customer back into the heart of business at Waikato District Council**

A journey to firmly embed a customer-centric philosophy in everything it does has started to pay dividends for the Waikato District Council. There has been a big improvement in response times and, as a result, customer satisfaction.

As part of the philosophy, the council set itself a challenge to have the "most engaged community in New Zealand by 2020".

General Manager, Service Delivery, Tim Harty says the first stage of the plan was to empower frontline staff so they could answer questions, and customers didn't feel they were getting the run-around. Streamlining processes and improving staff and contractor communication have followed.

The results have been positive. Feedback is showing an increase in customer satisfaction, and surveys show improved metrics around questions like how easy it is to do business with the council.

The highest proportion of income spent on 3 Waters services occurs amongst regions with the lowest incomes

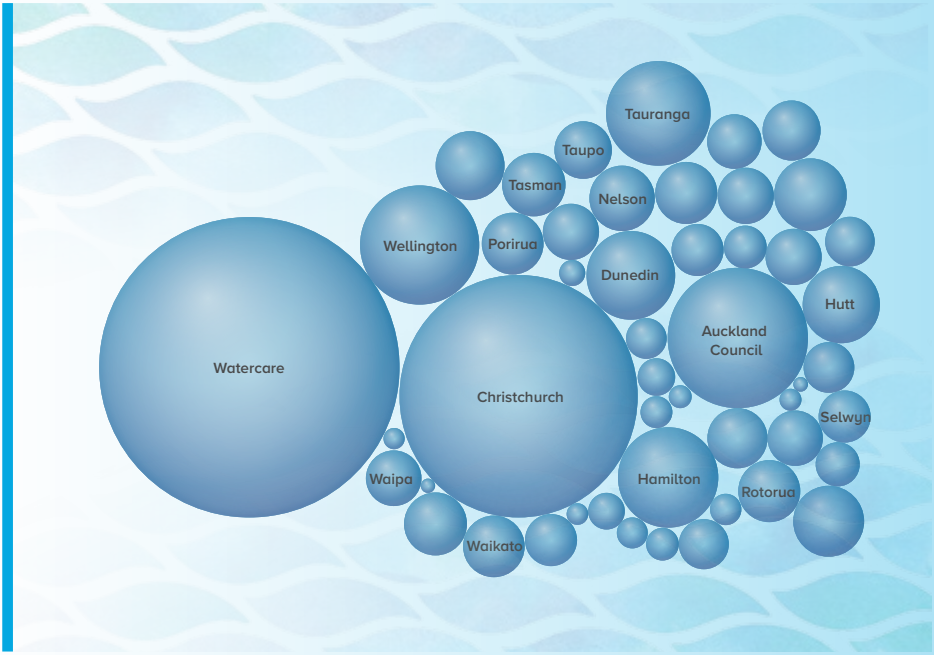
The three regions with the highest proportion of household incomes spent on 3 Waters services are amongst the four regions with the lowest average household income. The collective bill for water, wastewater, and stormwater services was greater than three percent of the average household income in these areas.

Economic sustainability

Cash flow related to 3 Waters assets is concentrated in the Auckland Region

Combined expenditure in the Auckland Region (at Auckland Council and Watercare) accounted for 45% of 3 Waters related expenditure, and 38% of revenue nationally.

Comparison of drinking water, wastewater, and stormwater expenditure (including capital expenditure, operating expenditure, and interest)



Operational expenditure on the 3 Waters has been gradually increasing

Since the 2011/12 reporting period, the operating expenditure per property has increased by 39% from $198.12 to $274.70 for water supply systems, 46% from $179.83 to $262.00 for wastewater systems, and 46% from $42.34 to $61.80 for stormwater networks.

Reliability

Condition grading approaches are too variable to make national comparisons or assessments of pipeline condition

Five different guidance documents were referred to for conducting pipeline gradings. These consisted of guidance material produced by IPWEA, Water New Zealand, and NAMS. Water New Zealand is currently working with IPWEA and the University of Canterbury Quake Centre to improve asset condition guidance material used for pipelines.

Only 14 participants provided data on Inflow and infiltration

Further definition guidance is required in the National Performance Review to provide comparative benchmarking figures for this metric. The Inflow and Infiltration Control Manual provides guidance for authorities wishing to undertake inflow and infiltration assessments, and is freely available at www.waternz.org.nz.

CASE STUDY: **Inflow and infiltration assessment helps clarify wet weather overflow issues at Far North District Council**

Inflow and infiltration (I&I) measures the amount of liquid (generally stormwater or groundwater) other than sewage entering the sewerage system. I&I adds to pumping and treatment costs, adversely impacts on wastewater treatment, and can cause or exacerbate wet weather wastewater overflows.

At the Far North District council, wet weather overflows in the district are of considerable concern, and have resulted in abatement notices from the regional council.

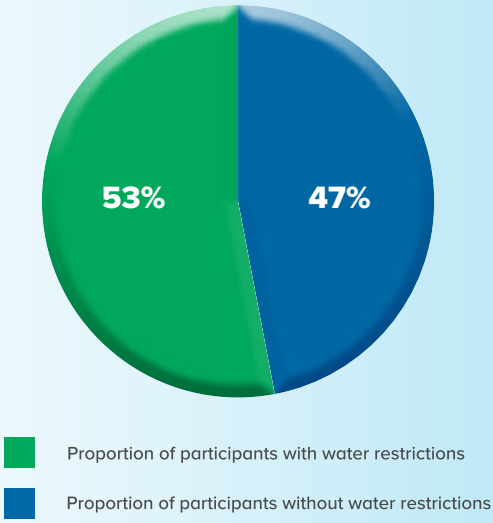
To quantify the contribution of I&I and determine which of the Council's 14 wastewater schemes were the worst performers, an internal investigation of each catchment was conducted by Barry Somers, the Council's 3 Waters Asset Manager. The benchmark has helped the Council make informed decisions about wet weather overflows, compare I&I across schemes, and prioritise reduction works accordingly.

Resource Efficiency

Water demand management is an issue in a number of districts

Fifty-three water takes were over-allocated, and 47% of participants had in place water restrictions at some time over 2015/16.

Percentage of participants utilising water restrictions



Full residential water metering correlates with lower water use

Where participants had 100% residential water metering, average daily residential water consumption was below 300L/person/day. There were 16 participants who had water use in excess of this.

There is room to improve water loss management

Ten participants did not supply data on water loss efficiency assessments. Of the 26 authorities who supplied infrastructure leakage data, six had high or very high leakage rates.

Resilience

Climate change is generally given consideration in the management of 3 Waters management, however approaches vary significantly

Thirty-six of the 50 respondents provided some account of how climate change considerations had been factored into 3 Waters management. Approaches and reported changes accounted for were different for each.

CASE STUDY: **Planning for climate change in Dunedin City Council**

Understanding the implications of climate change, how they will affect the three waters assets, and what to do about them has been the focus of a recent study by the Dunedin City Council.

Climate Change Asset Vulnerability Assessments were developed for areas where 3 Waters infrastructure is particularly vulnerable to climate change effects, such as coastal wastewater treatment plants. The assessments identified issues such as coastal inundation, storm surges, mean temperature rise, and flooding. Two climate change scenarios –2040 and 2090 – were looked at to identify the risk and impact, and develop short and long term mitigation and adaptation strategies.

Council Waste and Waste Services Asset Planner, Sarah Stewart, says the study gives greater certainty that Council's decisions today about asset renewal and new capital expenditure will not be undermined by changes to the climate over the practical lifespan of those assets.

Designed flooding standards are generally consistent across all participants

Eighteen of 36 participants who provided data on stormwater systems design primary networks to have an annual exceedance probability of 1%. A further 13 design for an exceedance probability of 2%. However there is currently no consistent approach to determining rainfall and runoff volumes, leading to large differences in the interpretation of design standards.

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