Report of the Controller and Auditor-General, Managing the supply of and demand for drinking water

Report of the Governance and Administration Committee

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Contents

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Chairperson

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Recommendation

The Governance and Administration Committee has considered the report of the Controller and Auditor-General, "Managing the supply of and demand for drinking water", and recommends that the House take note of its report.

Auditing councils' supply of drinking water

Public assets, such as the infrastructure that provides us with drinking water, are important to the quality of life of all New Zealanders. Currently, 67 councils are responsible for public drinking water in New Zealand and ensuring that they have enough for all their domestic, civic, commercial, and industrial consumers.

The Auditor-General audited three district councils (Horowhenua District Council, Kāpiti Coast District Council, and Manawatu District Council) and one city council (Palmerston North City Council) to understand the challenges they face in supplying drinking water to their communities. The audit sought to identify any sector-level issues that, if addressed, could enable public drinking water supplies to be delivered more effectively and efficiently throughout the country.

The audit focussed on the reliability and sustainability of the drinking water. The Auditor-General did not audit the quality of drinking water or compliance with drinking water standards.

We observed that the councils chosen for audit are close geographically, and differ from many South Island councils where districts tend to be more remote and distinct. We asked the Auditor-General's office for assurance that the issues faced by the councils chosen were representative of the issues faced across New Zealand. The office told us that it chose these councils to audit because they were broadly representative in size. The councils also have different kinds of water supplies: limited, plentiful, concentrated, or spread throughout the district. The office told us that it chose adjacent councils to lessen the influence of local conditions on how councils manage drinking water supply. This let it focus on councils' management.

Two strategies: managing demand or supply

Unless there is limited access to water, the Auditor-General reported that councils have few incentives to prioritise water efficiency or water conservation. Councils that opt for a supply management focus tend to prioritise capital spending on asset renewals and developing new water sources to meet demand.

A demand management approach, on the other hand, requires significant capital investment to improve water efficiency. Examples are investment in leak detection and repair, increasing

pipe renewals, and reducing water pressures. These investments can compete with other funding priorities.

Additionally, the Auditor-General observed that there are no national outcomes or requirements that support prudent water use. For example, building regulations do not require the installation of water-efficient fittings and fixtures.

Reducing demand

Kāpiti Coast District Council plans to secure drinking water supplies within a demand reduction framework. Looking ahead 100 years and more, the council is focussing on water conservation as well as improving the natural environment around water sources and reducing its carbon footprint for supplying drinking water.

Kāpiti Coast District Council's approach differs from the other councils, which have plentiful water supplies. In the late 1990s and early 2000s, Kāpiti Coast District Council exceeded its assigned water take. It sought to expand its supply, but its initial application was refused. This motivated the council to prepare a comprehensive water strategy that would optimise demand and supply and provide a long-term solution. The council's strategy has been implemented in phases over 15 years.

Meeting supply

The other three councils are taking a more traditional supply management approach. They operate in a region that is considered to have plentiful water and they expect that it will be possible to meet increased demand with increased supply.

These councils do provide a limited number of demand management methods, including water-saving tips and pressure management. However, the councils said that a demand management focus will not become a priority until population demand approaches the councils' existing resource consents.

Ways of reducing water use

Influencing how people use water can reduce demand, but other methods can be effective as well. They include detecting and repairing leaks and establishing alternative water supplies for non-potable water.

Horowhenua, Palmerston North, and Manawatu Councils used strategies like publishing water-saving tips and applying summer water restrictions.

Kāpiti Coast District Council uses a mix of financial and non-financial methods to reduce demand for drinking water. They include:

- introducing water-conservation regulations which require new buildings in urban areas to have alternative water supplies for non-potable uses
- providing water conservation advice, an online plumbing directory, and video tutorials to show people how to find their water toby, read a water meter, repair dripping taps, and find leaks

- providing a retro-fit service, including financial support, to install alternative sources for non-potable use and water conservation measures
- employing specialist staff to work with the community, including a water meter field officer, water education officer, green gardener, and eco-designer.

Separate supply of non-drinkable water

We were interested to hear that, of the four audited councils, Kāpiti Coast District Council was the only council that required new buildings in urban areas to have alternative water supplies for non-potable uses. At the time of the publication of this report, it was the only council in New Zealand with this requirement. However, the office told us that across New Zealand, other councils are increasingly encouraging and supporting this approach.

Public education campaigns

We observed that some councils in our electorates ran public campaigns that encouraged people to reduce their water usage. The office told us that water conservation education is not very effective on its own as it produces only short-term behaviour changes. A more comprehensive approach, such as used by Kāpiti Coast District Council, reinforces water conservation principles using a variety of different methods, and is much more likely to generate long-term change.

Universal water metering

Kāpiti Coast District Council implemented universal water metering about four years ago. Consumers pay for drinking water on a separate rates bill, with fixed and volumetric charges.

The office told us that it assumed universal water metering was implemented to influence consumer demand. However, the main benefit of the metering is that it identifies leaks and provides a strong motivation for consumers to fix them to avoid high bills. The council enables consumers to claim back the value of water loss from a repaired leak. This recognises that the whole community benefits when leaks in one part of the network are fixed. Council officers also contact consumers with unusually high water use to check whether this is from a leak or a change of use.

Some of us are concerned that introducing universal water metering could encourage privatisation of the supply of drinking water. Universal water metering and subsequent privatisation might also introduce costs that would be unaffordable for some people. The office told us that the regulations governing water supply require that it be a publicly-retained asset. Councils could not privatise the supply of drinking water without legislative changes.

The office also told us that water supply costs are currently part of every ratepayer's bill. Universal water metering removes that cost from the rate, and bills it as a separate charge. In the case of Kāpiti Coast District Council, 75 percent of people pay less since universal water metering was introduced than they would have done otherwise. The council provides financial support if people are experiencing hardship and are having difficulty paying water bills. We were pleased to hear that the metering costs are regularly reviewed to ensure that the settings are fair.

Although the office recognises the benefits of universal water metering, it does not necessarily advocate it. It believes that councils have a range of tools available for demand management which might or might not include universal water metering, with or without separate charging for water supply.

Estimating the benefits of reducing demand

Kāpiti Coast District Council estimates that its approach to reducing demand has reaped a number of benefits:

- Increasing the use of alternative water supplies (such as grey water and rain water) has reduced residential consumers' drinking water use by about 30 percent. Using alternative water supplies has also increased the community's resilience when an emergency affects the usual drinking water supply.
- Peak daily water use decreased by about 25 percent in the two years after universal metering was implemented. Most of this has been from leaks being fixed, and some from consumers using less water.
- Because peak daily water use has decreased, so has the need for costly capacity upgrades in the drinking water supply system. The council reports that reducing demand for drinking water has deferred the need for a new dam by about 40 years.
- Overall, water use has reduced on average by 21 percent.

Considerations in managing supply and demand

Working with iwi

It is important that councils recognise the cultural value of water to mana whenua when setting their strategies. Kāpiti Coast District Council has worked closely with iwi to prepare and implement its water strategy. The other councils are in the early stages of establishing effective working relationships with iwi for water management, including drinking water.

Completeness and reliability of data

The Auditor-General observed that councils which adopt a demand reduction approach require more detailed data than for a traditional supply management approach. They tend to invest more heavily in information technology. Improving the quality of data will inevitably improve the quality of the councils' decision-making and ability to plan.

Staff capability and capacity

All four of the councils reported challenges around staff capability and capacity, particularly in succession planning, recruiting, and retaining staff. We were pleased to note that councils are working with education providers to attract school leavers to be trained on the job and supported in attaining water qualifications. However, it is unclear whether these recruits remain in the public sector. We support the Auditor-General's encouragement for councils to work together to find ways to achieve economies of scale that could help address capability and capacity issues.

Under-delivery of planned capital spending

The Auditor-General reported that councils typically do not complete their planned capital work for drinking water infrastructure. This can be because of poor planning, inefficient procurement practices, staff vacancies, lack of capability and capacity, limited interest from private firms in competing for work, and weak management and governance accountability. The Auditor-General observed improvements after chief executives put more focus on completing planned capital work on time.

Regulating to improve the management of drinking water

Introducing regulations has standardised some processes and practices across all councils. They must now produce 10-year long-term plans and report separately on each of the three waters (drinking water, wastewater, and stormwater) in their annual reports.

The Auditor-General suggests that additional regulation may be necessary if all public water suppliers are to achieve any nation-wide goals.

Introducing regulations could:

- help prioritise funding for drinking water infrastructure
- better support a sustainable approach to supplying drinking water
- help councils have more meaningful conversations with their communities about how they will face future challenges in supplying drinking water.

The Auditor-General also observed that the system is fragmented when it comes to ensuring the sustainability and standard of service delivery for drinking water. Gaps in the system include:

- setting national outcomes, priorities, and standards for drinking water supply
- requiring councils to take a consistent approach to preparing planning documents and to the type of data they use for asset information
- independently reviewing councils' business cases for expanding water supply or significantly changing infrastructure.

The Department of Internal Affairs water supply indicators

The Department of Internal Affairs collects a limited range of data about how drinking water supplies and infrastructure assets are managed. This data is intended to help the public compare service levels and decide whether a better or lesser level of service is needed. However, because of inconsistency in how councils collect and report the information, the Auditor-General found the data incomplete and difficult to compare.

We also heard that the department has not yet publicly reported any of the data. The audited councils had strongly resisted a previous attempt to publish the data because they considered it unreliable and misleading.

The Auditor-General's office told us that it had spoken to the department about the consistency of the measures it uses. The department acknowledged that it needs to review

its approach, but this has been a lower priority for the department until after the Three Waters Review has been completed. (The Three Waters Review is a cross-agency initiative currently in progress that aims to improve the regulation and supply arrangements of the "three waters": drinking water, wastewater and stormwater.)

Water New Zealand's benchmarking survey

The Auditor-General reported that some councils participate in Water New Zealand's benchmarking survey. However, participation is voluntary, and although councils recognise the value of benchmarking, many councils have limited resources, staff capacity, or data-collection systems to do the survey.

The audited councils reported that benchmarking could be improved if the reliability of datasets was assured, and if councils had real-time access to other councils' asset data to support decision-making.

Conclusion

We thank the Office of the Auditor-General for its work in producing this useful report. Although many regions in New Zealand benefit from a plentiful water supply, it is vital to protect this precious taonga. The benefits of doing so are many. Our quality of life, the resilience of our communities, and the health of our people and environment all depend on our careful stewardship of water. Managing water wisely also demonstrates our commitment to the values of the Treaty of Waitangi, and our ability to face future challenges from climate change and population growth.

We accept that councils need autonomy and flexibility to meet and serve the needs of their community in the way they think best. However, there are standardisation gaps that concern us and that require further investigation. We particularly note that councils vary in their ability to collect data about the supply and use of drinking water. Because of this, water measure indicators are inconsistent and unreliable. We also note that there are few incentives for councils to adopt a demand reduction or more comprehensive approach to water supply, or to require new buildings to have demand-reduction features.

We hope that councils will make use of the Auditor-General's findings, and that the Department of Internal Affairs will consider them as part of the Three Waters Review now in progress.

Appendix

Committee procedure

We met between 28 November 2018 and 25 September 2019 to consider the report of the Controller and Auditor-General. We heard oral evidence from the Office of the Auditor-General on 22 May 2019.

Committee members

Dr Jian Yang (Chairperson)
Ginny Andersen
Kanwaljit Singh Bakshi
Hon Jacqui Dean
Paul Eagle
Hon Peeni Henare
Jamie Strange
Lawrence Yule