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National Water Industry 2008 Report Card and Roadmap to 2020

Executive Summary

Acknowledgements

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NZ Council for Infrastructure Development
and undertaken by consultants
GHD Limited and **PricewaterhouseCoopers**.

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- **Fulton Hogan**
- **McConnell Dowell**

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Background

The New Zealand water industry plays a key role in ensuring the health and wellbeing of our people, the national economy and New Zealand's position as a developed nation. This study was commissioned by the New Zealand Council for Infrastructure Development (NZCID) in view of this critical role that the water infrastructure plays. The project was generously assisted with funding support from member organisations Downer EDI Works, Fulton Hogan and McConnell Dowell and the provision of professional services, in kind, by GHD and PricewaterhouseCoopers. The research and analysis was undertaken independently by GHD and PricewaterhouseCoopers. It provides an objective assessment of the state of the New Zealand water industry in order to identify opportunities for improved public policy from an infrastructure development perspective.

The analysis included research of existing literature from both New Zealand and overseas, an industry survey, combined with local research. Using the above as inputs, an assessment is made in a Report Card format for each of the three water industry functions (Three Waters) comprising water supply, wastewater and urban stormwater. The analysis has identified areas of good performance and areas where improvements could be made in relation to each of the assessment criteria; and the report proposes options to address each of the areas for improvement.

Comparison with international practice has shown there are considerable opportunities for improvement in infrastructure development, renewal, services, and standards that would result from improved institutional arrangements and the application of modern technologies and advanced contract management and financing techniques.

Key findings

State of industry

The overall state of the industry received a scorecard rating of "C", including a C+ for water supply, a "C" for waste water and a "C-" for storm water. Under the grading criteria, this generally means that the infrastructure is considered "adequate" but major changes are required in one or more of the infrastructure condition, committed investment, regulatory regime and planning processes to enable infrastructure to be fit for its anticipated purpose.

The assessment identified a number of areas of good performance across the industry, which include:

- Confidence levels in the projections contained within the LTCCP process;
- The community/customer consultation focus of the LTCCP process;
- National consistency and clear targets afforded by the development of the Drinking Water Standards; and
- Comprehensive risk management processes through Public Health Risk Management Plans (PHRMPs), water and sanitary service assessments and reported widespread development of risk registers and contingency plans.

The assessment has also identified five key areas to be addressed:

1 Industry Governance and Leadership

Central to the issues affecting the water infrastructure sector is the lack of overarching industry leadership and governance. The industry has fragmented responsibilities and accountabilities which leads to a lack of integration and duplication of effort, resulting in increased costs to consumers. Central government oversight of the water sector spans the Ministries for the Environment, Health, Local Government, Economic Development and Agriculture. The lack of central government oversight is matched by the wider industry which is characterised by highly decentralised institutional arrangements, ranging from extremely small to, in some cases, larger, more complex organisational structures.

2 Sustainable Management of Water

Suppliers estimate that nearly 20% of water produced is lost through water losses. However only two thirds of respondents have an active demand management and a water loss reduction programme in place. Allied to this is a lack of market mechanisms and pricing signals such as user pays charging to support the longer term sustainable management of water services. Research has also shown that per capita demand can be reduced significantly through the introduction of volumetric charging. However, less than 30% of respondents meter their water supplies, which creates a hurdle for sustainable demand management and the further adoption of utility pricing.

Finally, the first-in-first-served allocation of limited water resources as currently provided under the Resource Management Act, and the absence of a market based allocation model, enables continued uneconomic use of scarce water resources.

3 Financial Sustainability

$21 billion is allocated in the current LTCCPs for expenditure across the Three Waters, including $9 billion capital expenditure and $13 billion operating expenditure. While this is all theoretically funded through the combination of rates and user charges, there are questions about the affordability of the rates and price increases assumed within these "balanced" funding plans. Under current projections, capex spend declines significantly over the 10 years. This seems an unrealistic scenario given ongoing growth demands, increasing environmental expectations and qualitative standards, such as the new drinking water regulations. The decrease in capex if understated through the lack of accurate future predictions, would require rate funding or price increases not anticipated in the LTCCPs, which are already under rating increase pressure.

When considering financial sustainability on an individual entity basis, another key factor is expenditure distribution. Approximately 75% of the total Three Waters expenditure is attributable to 30% of the service providers, comprising mainly the larger cities. By way of contrast, small councils face disproportionate costs on a per capita basis, particularly those affected by the impacts of tourism and agriculture, and suffer from diseconomies of scale.

The ability to introduce innovative funding mechanisms commonly used internationally is also constrained. An example of this relates to Section 136 of the Local Government Act which specifically restricts water contracts to a maximum of fifteen years. This period is too short to encourage appropriate private sector involvement in assets that have very long lives.

4 Industry Standards

There is a lack of an overarching standards framework across the industry. The application of the drinking water standards has had a positive benefit in terms of standardising national water quality albeit there is some question whether the level of the standard is justified. However, there remains a lack of national standards for other areas such as wastewater discharges, which are the responsibility of Regional Councils. In addition, it appears the enforcement of discharge standards that do exist is variable.

The industry would also benefit as evidenced internationally from national benchmarking of overall service standards. Some benchmarking has been initiated such as within the Auckland region and through the New Zealand Water and Waste Association, but only on a voluntary basis.

5 Industry Configuration

By international standards, the industry is lacking in best practice utility models. Comparisons indicate there are too many entities managing water infrastructure, resulting in many smaller projects and poor utilisation of existing infrastructure assets across jurisdictional boundaries. Fragmentation also raises issues in relation to completing capital works programmes, which suffer from diseconomies of scale, limited capital budgets and delays, due to multiple approval and resource consent processes. This has a resulting flow-on effect on resources across the consulting and contracting industries which are themselves under pressure from competing demands.

Areas for Improvement

The table below summarises issues that the Report Card has identified as potential areas for general improvement across the industry:

Table 1 **Areas for improvement across the industry**

Issue	Water Supply	Wastewater	Stormwater
1 Inequities between cities and smaller towns relating to funding ability, technical and managerial resourcing ability, consent conditions and compliance levels	✓	✓	✓
2 The need to address the competing functions of Councils to better serve water industry interests	✓	✓	✓
3 The need for longer term capex projections beyond the first few years of the ten-year LTCCP period	✓	✓	✓
4 The need to address the implications of Climate Change	✓	✓	✓
5 The need to address funding gaps	✓	✓	✓
6 The need for pricing imperatives to better manage and value the resource	✓	✓	
7 The need to address industry resourcing and skill gaps	✓	✓	
8 The need to improve the application of the RMA process		✓	
9 The need for improved implementation of asset management practices			✓
10 The need to address differences in levels of service – wastewater overflows, discharge standards, etc.		✓	

Options for Sector Improvement

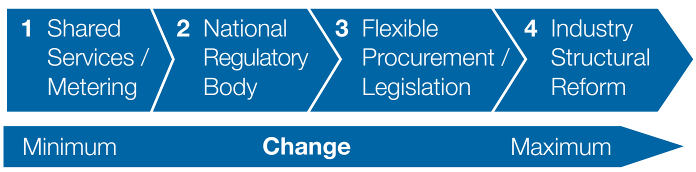
Given the improvement opportunities highlighted, there are a number of possible alternative ways of addressing these issues. These include – more shared services by territorial local authorities, joint contracting which can overcome economies of scale issues, commercial models (CCTOs - council controlled trading organisations), joint CCTOs providing capacity, and franchising, or concessions.

In addition a number of specific techniques and options relevant to water industry procurement are worthy of further consideration. These include: procuring professional services in a manner which provides greater integration and end-to-end project delivery; developing a programme approach whereby small projects, renewals and maintenance requirements are bundled; direct materials sourcing for larger projects; and enhancing contractor performance management.

There is also a clear need to establish an overarching controlling/ regulatory body across the industry. Such a body would need to be appropriately empowered to:

- Lead the development of industry benchmarks and standards;
- Develop and promote industry best practice;
- Develop commercial drivers to support sustainable management and delivery, and lift overall financial sustainability;
- Drive the application of improved procurement practices; and
- Oversee and promote training and professional development across the industry.

Initial improvement opportunities are able to be introduced immediately without legislative intervention. These opportunities have been structured within the report recommendations to reflect this voluntary starting point as represented by the Spectrum of Change as follows:



Roadmap

Central Government commit to enhancing the performance of the water industry through the following measures:

1 Institutional structure and governance change designed to address inequities and differences in standards, compliance with requirements and funding across the industry in New Zealand. Main components of this change process include the following:

- Establishment of a co-regulatory body that, across the water industry nationally:
  - Develops, administers and monitors compliance with common sets of standards;
  - Reviews and administers water industry-related components of AMPs and LTCCPs;
  - Develops, administers and manages a national benchmarking exercise, including related reporting requirements;
  - Develops and administers pricing controls on the provision of water and wastewater services to customers when these are billed on a volumetric basis; and
  - Administers and allocates resources available in any Central Government funding programmes.
- Wider implementation of the introduction of metering and user-pays as the basis for charging of water supply and waste-water for both domestic and business/commercial consumers as a means of conserving the resource, reducing demand and deferring necessary investment on growth-related infrastructure;
- Encouragement of the increased use of shared-services arrangements between Councils as a means of addressing "critical-mass" issues such as too thinly spreading appropriately qualified technical and management resources; and
- Permitting and encouraging more franchise agreements on a voluntary basis for the operations and maintenance of the water supply and wastewater services in order to further address "critical-mass" issues such as too thinly spreading appropriately qualified technical and management resources.

2 Reviewing the resulting improvements brought about by these measures after 2-3 years and after implementation of the findings of the Royal Commission into Governance in the Auckland region.

3 On the basis of the above review, assess the need for further reform of the industry through the formation of water-focused entities as either Council-Controlled Trading Organisations or independent water authorities with much larger customer bases serving regions and based in provincial cities in order to:

- Further address "critical mass" issues;
- Provide a core-business focus for the management and provision of water supply and wastewater services throughout New Zealand; and
- Minimise administrative costs so as to free up funds for investment in industry infrastructure that can otherwise not be funded.

4 Undertaking the necessary legislative changes to support the above structural changes in addition to:

- Streamlining the implementation processes of the Resource Management Act to make it easier for wastewater service providers to achieve their objectives, in particular reducing the ability for single minority objectors to slow and "derail" consenting processes; and
- Progressing ownership and prioritisation issues between competing water users who are granted water rights under the Resource Management Act.

5 Encouraging the use of a wider variety of procurement methods in order to further maximise the use of limited available funding resources.

6 Advocating for further Central Government funding for water and wastewater infrastructure only if the above reforms do not generate sufficient savings to address the current funding gaps identified during this study.