



Queensland
Water Regional Alliance Program

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Council Owned Water Services – Keeping Community Control

QWRAP Workshop Report

Council Owned Water Services – Keeping Community Control

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1 Purpose of Workshop

The workshop considered current and alternative models for urban water and sewerage services (WSS) in Queensland in light of recommendations in various national reviews for reform of the local government water sector. The day commenced with a brief review of institutional models across Queensland and other jurisdictions and moved on to consideration of drivers for and against change. The aim was to examine strengths and weaknesses of different models to inform future policy debate in Queensland.

Invitees included industry stakeholders from a range of backgrounds and experiences with the aim being to discuss the available options for future models, pros and cons and common principles that should guide future decision making about governance of WSS. It is acknowledged that Queensland's diversity means that there is not a single ideal model, and that economies of scale and other efficiencies can be achieved through a range of institutional arrangements.

This report represents the main workshop output. Other mechanisms for progressing the work, including policy/ advocacy pieces will be considered based on its content, with follow-up involving a range of stakeholders. Participants provided a range of useful feedback following the event including some important topics to consider but which were not discussed on the day. These topics will be included in future discussions.

2 Agenda

Time	Item	Leaders
9:30	Welcome, Introductions and Aims for the Day	Greg Hoffman
9:40	Background to QWRAP, common water and sewerage models and typical drivers for change.	Rob Fearon
9:50	Overview of some Qld council controlled entities (CCEs) and how they have changed over time.	Greg Hoffman
10:00	Panel discussion of benefits and strengths of current LG model in Qld and future options.	Panelists: Cr David Scheffe, Cr Nancy Somerfield, Jason Devitt, Cr Bruce Scott
10:45	Examples of water/sewerage CCEs in Qld and their relationship with local government	Panelists: Noel Playford, Ken Diehm
11:30	Morning Tea	
11:45	W&S models from other jurisdictions and learnings from past change.	Panelists: Jeff Rigby, Matt Dawson, Miles Hampton
12:30	Plenary/group discussion based on listed strengths, weaknesses and benefits of changing models for water and sewerage (and necessary incentives for change).	Facilitated by Greg Hoffman and Rob Fearon
1:00	Lunch	
1:30	DEWS on commentary on State experience with regionalisation (water/electricity).	Paul Simshauser
1:45	Discussion on appetite and drivers for water reform (in general).	Warren Mundy, Adam Sincock.
2:30	Constraints, costs, legislative mechanisms and barriers for change Queensland.	Panelists: Tim Fynes Clinton, David Spearritt, Greg Hoffman
3:15	Group discussion on key principles that ought to underpin any structural reform process of LG W&S in Queensland (regardless of ultimate mode).	Facilitated by Greg Hoffman

3 Attendees

Who	Title
David Scheffe	Cr Maranoa Regional Council (LGAQ WASAG Chair)
Nancy Sommerfield	Cr Toowoomba Regional Council (LGAQ WASAG Member)
Noel Playford	Former Mayor, Noosa Shire Council & LGAQ President
George Theo	CEO, Unity Water
Jason Devitt	Director ECL, Mackay RC
Ken Diehm	CEO, Fraser Coast Regional Council.
<i>Brad Cowan</i>	<i>Managing Principal - AQUA projects (apology)</i>
Warren Mundy	Managing Director, Bluestone Consulting, Former Productivity Commissioner
Matt Dawson	General Manager Business Development, Trility
Jeff Rigby	Managing Director, Coliban Water, Victoria.
Sacha Moege	Senior Policy Officer, Local Government NSW
Miles Hampton	Chair, TasWater
Tim Fynes Clinton	Executive Partner, King & Company Solicitors
Paul Simshauser	Director General, DEWS
David Spearritt	Director, ORION Consulting Network
Diana Lollato	Executive Director, QTC
Adam Sincock	Director, Urban Water and Competition Policy, Department of Agriculture and Water Resources
QIC Paul DeSouza	Partner, Global Infrastructure, QIC
Daniel Lambert ARUP	Principal, Australasia Water Business Leader
Simone Talbot	Manager Advocacy, Local Government Association of Queensland
Arron Hieatt	Principal Advisor, Advocacy, Local Government Association of Queensland
Rob Fearon	Director, Innovation Partnerships, <i>qldwater</i>
Dave Cameron	CEO, <i>qldwater</i>
Ryan Cosgrove	Project Coordinator/ Researcher, <i>qldwater</i>
Greg Hoffman	Facilitator, Grassroots Connections Australia Pty Ltd

4 Background

The Local Government Association of Queensland (LGAQ) and The Queensland Water Directorate (*qldwater*), along with elected representatives and staff from Councils, have been cooperating in developing regional collaboration in the Local Government water sector for several years. In 2011, the Queensland Water Regional Alliances Program (QWRAP) was developed as a council-led initiative to investigate alternative institutional models for urban water services in regional Queensland. QWRAP has received ongoing seed funding from the Queensland Government which has levered further investment from councils, LGAQ and *qldwater*.

Each QWRAP region (and there are currently 5) is required to:

- Investigate collaborative projects
- Investigate the costs and benefits of regional reform, including three different Institutional Models.

Currently in Queensland, WSS are provided predominantly by 68 local government Water Service Providers while in other Australian jurisdictions corporatisation is common and State/Territory Governments usually own and manage regional utilities. In 2011, three independent national reviews investigating the WSS sector across Australia each recommended reform for the urban water sector in regional Queensland and country New South Wales, the two remaining areas where individual local governments are responsible for WSS.

Reform of local government WSS is a worldwide trend. In many countries WSS have been owned and managed by local governments since the 19th century but have been undergoing ongoing institutional restructuring which peaked in intensity in the 1990s and 2000s. A survey of all OECD and G20 countries showed that local government ownership, and in many cases management, remains the most common model for WSS but with a number of modifications from traditional council ownership and management. The most common trends are regionalisation, corporatisation and greater partnership with private industry.

Regional aggregation of local government WSS has become increasingly adopted both in Australia and internationally and the benefits of economies of scale in the WSS sector have been well established. Aggregation of Queensland WSS has been recommended by the Productivity Commission, the National Water Commission, Infrastructure Australia in national reviews, but is complicated in Queensland where catchments are vast, communities dispersed and economies of scale can be achieved only at the expense of economies of density and scope. Successful regional approaches in other jurisdictions have generally been achieved over smaller areas with denser aggregations of population: the entire state of Victoria (where regionalisation has been highly successful) is only just over half the size of Queensland's first regional alliance in Western Queensland. Regionalisation in Queensland must be considered carefully along with a range of external environmental factors that are critical drivers for the industry.

Corporatisation and private sector participation can take a variety of forms including commercialised business units within councils, PPPs with private providers and externally governed but council owned entities. Some jurisdictions have opted for full privatisation including ownership of assets, but this has seldom been successful for water and sewerage sector. For the purposes of this workshop Council Controlled Entities were defined broadly to encompass any arrangement whereby councils own water and sewerage assets but manage them through processes distinct from general council operations. This definition encompasses commercialised business units (governed by council) separate corporate entities, PPPs and transitional arrangements such as design-build-own-operate-transfer contracts.

Further reading – QWRAP research reports:

[*Report 1: Parameters of the Review Program and Institutional Models*](#)

[*Report 2: Reform of Water and Sewerage Utilities: Review of Sustainable Models.*](#)

5 Discussion

5.1 Background to QWRAP, models and change drivers

National reviews of urban water and sewerage services have all challenged direct local government management of water and sewerage services. Preferred models differ, however the 2011 Productivity Commission review arguably undertook the most rigorous process, and the report was agnostic about ownership, instead focussing on how economies of scope and scale can be achieved. Internationally, there is a growing industry trend for regionalisation, corporatisation and increased public-private partnerships, with local government ownership retained in most places. In addition, most forays into private ownership have failed with “remunicipalisation” common. The reasons are complex but the most consistent theme has been privatisation being implemented in response to economic failure, in the hope that it will somehow fix deep-seated underlying problems including historical under-investment.

Queensland is significantly different from other Australian jurisdictions with greater than 370 schemes/ communities and over 50% of these having fewer than 500 people. Particular challenges include the large number of diverse communities west of the Great Dividing Range. If Mt Isa is ignored, the combined water and sewerage revenue of the remaining councils (servicing over 50% of the state geographically) is smaller than that of the smallest Victorian regional service provider.

Other pressures include increasing regulatory standards and an ad hoc/ poorly structured grant program with a lack of transparency around community service obligations and cross-subsidisation, as well as the “infrastructure cliff” with more than 25% of the buried infrastructure in the state likely to require replacement in the next 25 years.

QWRAP is working in five regions, with others in development. The strong preference for these relatively immature collectives is the alliance model, and *qldwater* believes that further change on a voluntary basis is unlikely in the short to medium term.

Workshop participants broadly agreed that there was no one aggregated service model appropriate for all Queensland service providers, and that there were potential merits to the status quo in many places.

5.2 Other Queensland CCEs

There are a number of mechanisms available to councils considering the establishment of regional-scale corporate structures for delivery of water and sewerage services, with more listed in appendices. The current legislation, particularly the *Local Government Act 2009*, recognises that economic, environmental and social factors traverse local government boundaries.

The “Joint Local Government” provisions of the Act allow councils to establish discrete legal entities operating under a Board which effectively act as the local government for the specified function for the combined area. The “Joint Action” provisions of the Act allow the establishment of contractual arrangements between councils, with a committee structure. “Joint Government Activity” provisions allow for the creation of entities which involve more than one tier of government.

To date, these provisions have not been used by any council. These entities would still be required to be audited by the Queensland Audit Office, do not require ministerial approval, and provide the advantage of being “off-balance-sheet.”

Examples of entities functioning in 1995 (under the prior Local Government Act) include library boards, aerodromes, health boards, saleyards, afforestation programs, marine facilities, sports complexes. The Caloundra-Maroochy Water Supply Board and Esk-Gatton-Laidley Water Board are examples of water-related entities. Most of these entities were extinguished by amalgamation/reform.

In 2016, there were 54 CCEs, all established as Pty Ltd or Ltd companies under the *Corporations Act 2001*. These included tourism, economic development, sport centres, CBD renewal functions etc. Wide Bay Water Corporation still existed, but was in the process of being “absorbed” into Fraser Coast Regional Council.

5.3 Comparative strengths and weaknesses of models

Table 5.3.1 - SWOT analysis of possible models considered during discussion

Model	Strength / Opportunities	Weaknesses / Risks
Private Ownership	Contracting arrangements can specify how services are provided if private providers are unable to continue to meet obligations (e.g. financial failure) Levels of service can be defined through contracting arrangements Regulation can manage quality, pricing, competition Can free funding for other capital investment	Not perpetual Profit driven, potential failure to address customer needs Cost of capital is higher for private enterprise
State Entity	Addresses broad state priorities	Loss of local focus and accountability to communities, planning challenges
Councils (general)	Alignment within a council view of infrastructure/ direction and planning (land use planning and strategic direction) Customer focus Can allow internal cross subsidisation Consistency of income Accountable to community (vs large orgs)	No State/ Fed Funding/ CSO – (inconsistent) Most reliant on state or Commonwealth funding rather than self-sufficient Having a business within a business (price paths etc.) Management systems (e.g. asset management, accreditation) (vanilla standards) Reliance on consulting engineers can be problematic if not well managed (which depends on capacity) Capacity to manage and oversee external contracts may be lacking from councils
Amalgamated Council	Economies of scale Subsidies for some smaller communities resulted in improved services Affordability of capacity and scale (council-wide and water business) Water security through regional sharing facilitates economic growth Meeting standards achieved across more communities Increased customer service due to shared rate base	Technical disruption can be difficult within councils Keeping business separate
SEQ entities	Subsidies for some smaller communities resulted in improved services	Loss of influence for some customers State investment withdrawn

LG Water Board	Arms-length and Board can be a foil for politically risky decisions Economies of scope applied across all levels of the region	Political water pricing and tariff-setting Use of same (vanilla) process applied throughout council
Public-private partnerships	Can bring technological innovation and improved efficiency Careful management can yield benefit for customers Application of a range of council sizes/ scales (subject to having appropriate management and contracting skills)	Poor risk sharing arrangements may lead to problems Transaction management costs can be prohibitive
Joint Board (Statutory Authority and Joint Local Government Owned Corporation)	Facilitate joint operations Council and independent board members Regional issues addressed Foil for council decisions – arms-length management As a JLOC dividends were returned to local community	Dividends to state and potential for debt loading as a Statutory Authority.
Victorian Regional Entities	Can outsource many portion of operations Board with powers and responsibilities equivalent to private sector Economies of scope across state Dividends to state (at Treasurer’s discretion)	Roles need to be carefully defined and quarantined Can be bureaucratic (need appropriate levels of scrutiny) No state funding
Tasmania	Managed on sustainable financial basis Forward savings 20% No state or federal funding Improved services and compliance Funding returned to local communities Debt + gearing moving to sustainable levels	Difficulty in pricing transition initially but was overcome Economic regulator sets prices but political pressure for state to be involved in this process Still prone to change forced by political pressures Because required to avoid price shocks, the process was extended.

Discussion (focussed on status quo vs potential future)

Advantages of current council-run water and sewerage services include:

- A very strong focus on customer and community service. Regional representatives noted that services had suffered with privatisation and restructuring of transport services, as well as other utilities including energy and telecommunications. There is some anecdotal evidence, from past CCEs and restructuring processes that customer perceptions can suffer for entities which become too large or “distant” from the communities they serve. Councils also fulfil core employment obligations for communities.
- Natural downward pressure on pricing. Regional Queensland faces cost of living pressures with additional transport costs affecting most services and more constrained markets. Low rates and charges helps attract people to the regions (noting the significant diversity in the true costs of these services depending on a number of factors).
- Economies of scale and scope already achieved through amalgamation in many regions. While local government would argue that the way amalgamation was implemented was unethical and the decisions made around boundaries were arbitrary and ill-informed in some instances, levels of service for small communities have improved in many areas through cross-subsidisation (naturally leading to under-investment for some of the larger communities).
- There is a great potential advantage in having water and sewerage services within the same organisation responsible for local infrastructure planning and land use planning. While not often exercised, councils can in some instances manage growth to align with water security, for example.
- With leadership, there are few impediments to what can be achieved within a council structure. A capital advisory board (where council respects its advice) can for example access many of the benefits of an independent corporate structure including a focus on understanding costs and driving efficiencies. Past and current public-private partnerships had also demonstrated significant efficiencies.
- For private sector partners, the ownership model and governance can be largely irrelevant. While challenges in servicing remote areas might be greater, what is required on-ground to operate W&S services does not substantially change. A well-defined understanding of risks, goals and respective roles is essential for a successful partnership.
- There were examples of sound and improving long term strategic financial and asset planning (noting that there are many councils not represented at the workshop which would still struggle with these). Councils can access favourable debt arrangements and feasibly have a reduced cost of capital, if managed appropriately.

Disadvantages/ challenges of council-run W&S (which could be address with other models) include:

- The challenge of being a business within a business:
 - o Differences between W&S price paths and broader rates price paths, where W&S pricing can be precise and based on recognised models and general rates (which are in effect a tax) apply to a large number of services making cost alignment difficult.
 - o W&S require specialised services including financial approaches and support systems. Being part of a council, where it is common to try to standardise approaches, can lead to “vanilla” or less than optimal outcomes.
- There is also no ongoing and reliable funding stream (like GST) to support longer term planning and no recognition of the gap between affordable rates and charges and costs to serve which impacts many councils. There is significant diversity in councils’ capacity to

meet the costs of W&S with some effectively subsidising the service through other income streams, and larger councils using a proportion W&S rates to offset other costs. This can be perceived as a failure of pricing structures across a council, sending inaccurate signals to the community about what “liveability” or other services really cost.

- The strength of local government’s connection to the community can also mean a level of political interference and the perceived “loss of control” of a significant revenue stream acts as an impediment to structural reform.
- There is often a lack of alignment between pricing/ tiering and costs. One example quoted was approximately 50/50 access charges vs consumption charges, with fixed vs variable costs 85/15.
- Larger entities created through reform processes have demonstrated improvements in skills, capabilities and expertise to drive efficiencies and generate improved value from contractual and partnership arrangements; and these improvements arguably represent a missed opportunity for councils.
- Transparent “dividends” where affordable. Distribution-Retail Entities in South-East Queensland pay a dividend in the form of tax equivalents, and interest on loans to shareholding councils on an agreed share basis. Unitywater paid \$133M last financial year. The process is transparent, cost-reflective and supports council planning. Discussions suggested that some councils declare a dividend or desired return each financial year which does not consider the costs of providing the service.
- There are different approaches to using debt, with councils represented reasonably conservative, either having inherited issues following amalgamations, a lack of growth or generally struggling to have the certainty to service debt.
- Cross-subsidisation through amalgamation has increased levels of service for many small communities, but also masked fundamental long-term sustainability problems.

5.4 Other learnings from other jurisdictions and industries

Discussion leaders identified many case studies to support the assertions detailed above. In addition:

- It should be noted that reform in other jurisdictions has been a protracted process in many cases. The “journey” for regional Victoria has been 40 years in the making with major changes driven by a response to National Competition Policy Challenges. While many of the international and national examples discussed are based on local government ownership, Victorian entities have always been state-owned which leads to different accountabilities. Political interference is limited at a micro level, instead driven by policy informing a rigorous regulatory environment. Bureaucratic “involvement” from state agencies is more acute. The model works well provided that respective roles are clearly understood.
- All businesses are effectively self-sustainable with no grant or subsidy programs existing beyond special projects. Pricing is not consistent among businesses, but the process for determining those prices is. Businesses are largely free to explore other revenue-generating activities, provided that competition rules monitored by the economic regulator are observed. Tensions can exist among health, environmental and economic regulators around what is prudent/ appropriate expenditure for the businesses.
- Scale and scope reform in Tasmania has led to clear efficiencies. With a relatively small customer base, the single entity model currently in place makes sense in context. While many councils did not support the reform agenda, TasWater has now achieved a level of maturity with its shareholders. TasWater is however highly vulnerable to state political agendas which may or may not be in the ultimate interest of W&S customers. Local

governments own TasWater, contributed the assets to establish it, however the dividend paid to owners is under threat.

- There are successful examples of “unpalatable” models which have evolved through different heritages and which have found innovative ways to address some of the perceived impediments. Privatisation in the UK has worked for a number of reasons, including having a single regulator which controls pricing as well as other cost drivers including levels of service for W&S (however the model has taken 30 years to evolve to a level of maturity with many early failures).
- Microeconomic reform in the electricity supply industry shows that there are mechanisms to correct issues for an industry which has historically been starved of capital. Any reform must be based on a clear understanding of the problem, considering efficiency:
 - o productive – cost minimisation
 - o allocative – right price/ cost reflective
 - o dynamic – an industry which expands or contracts as the market requiresvs
affordability
vs
resource adequacy.

All organisational models can work well, and all can have problems. Clear and well-designed roles for governance and management are crucial, while capital markets tend to deal with productive inefficiencies better than allocative/ dynamic.

Monopolies in energy cannot be effectively de-regulated – competition must be considered. Vertical integration is an organisational form of last resort – outsourcing makes sense, but it’s important to be mindful that something pulled apart might have to be put back together again.

The best (most efficient) government-owned entities can be better than most private entities, however those that are best have strong governance structures and tend to be exposed to strong competitive forces.

Total revenue is clearly important, however tariff structures are equally important with welfare implications when there is deviation from structures set through appropriate pricing models. Councils must understand costs and whether their pricing structures are adequate to meet future capital requirements. If, armed with that information, they choose to price on a different basis, that is their prerogative but it should also form the basis of decisions around investment from other tiers of government.

5.5 Other issues

- “Liveability” (including the relationship with stormwater) is a major consideration in other jurisdictions and has not been considered in the discussions, which have focussed on the now rather than what utilities of the future might need to look like.
- Water security is a fundamental factor underpinning economic development and growth.
- There is a Commonwealth urban water reform committee running in parallel to the current Productivity Commission process and looking at mechanisms to incentivise jurisdictions towards positive reform. The role of the Productivity Commission should be to call other regulators to account; for example economic regulators should solely be dealing with market power – anything else creates potential conflicts of interest.
- Economic regulation has not generally proven effective in encouraging competition and has historically been of mixed quality.
- Queensland is well-served by its local governments relative to some other jurisdictions, but the questions underpinning this discussion need to be broader than how W&S is managed, to consider local government’s role as a regulator.

- There are challenges beyond the industry impacting its ability to service customers, including energy prices.
 - In countries like Australia, it is inevitable that there will be communities which are unable to fund their own infrastructure. This needs to be accepted, with the debate shifted to what they want/ need (with an established minimum level of service*) and how to fairly and equitably pay for it. Aside from improving transparency in costing, the question of quality and levels of service can perhaps be addressed differently – by asking what the risk of failure is and how to value having service cease for a period.
- * Communities should for example expect a safe and reliable drinking water supply, however the sector can only plan effectively for small communities with transparent cost data. Innovations in technology may assist in reducing these costs in future, but more difficult decisions may be required taking into account broad factors including strategic regional planning.

5.6 The future, including governance

- Past examples of joint council entities have typically failed through reform triggers but most commonly because of failures in governance with the organisations not supported well. There are advantages to models in the current *Local Government Act* provisions which do not require state regulatory involvement. Joint arrangements, contractually based, are particularly attractive, with hybrid structures possible.
- Local governments have inherent advantages in their power to recover debt through the sale of property for example, and contracts still allow term provisions (extending over several electoral cycles) with penalties for early exit to assist with de-politicisation.

The themes detailed below were developed in an attempt to aggregate the key topics covered during discussion. The “principles” were not directly addressed during the workshop – instead participants were given the opportunity to review and comment prior to the publication of this report. Thus while consensus cannot be assumed and receptiveness to change will be a challenge for many local governments, the combination of themes and principles are intended to provide a broad framework to apply in the consideration of any future reform processes.

These ideas will be socialised with other key stakeholders to inform future planning and advocacy for QWRAP and to support *qldwater* and LGAQ members in their ongoing W&S service planning.

Table 5.6.1 - Themes and Principles to underpin future reform

Broad Category	Themes	Principles
Price & Costs	Appropriate cost recovery (debt, tax equivalents, depreciation, dividends, diverse regional cost drivers) which is developed independently of politics.	Full costing is required to transparently inform pricing, understand cross subsidies, CSO and grant funding requirements. The owner, operator, customer and stakeholders need better information to make informed, transparent, and accountable decisions.
	Avoid monopoly over-pricing	Private and public monopolies must be open to public scrutiny. Public scrutiny is inherent in local government, however local government will struggle to initiate governance reform without regulatory intervention or incentives. Private monopolies must be strictly regulated on price.
	Appropriate capital investment (over capitalising and underinvestment)	Capital investment must be transparent and fit for purpose and any grant programs must be structured to support this goal.
Sustainability	<p>Cross subsidisation</p> <ul style="list-style-type: none"> • across customers (postage stamp pricing) • internally (within councils/communities) • between local, state and commonwealth governments <p>Support for small communities which can't be sustainable (CSOs and state/fed subsidies)</p>	All cross subsidies must be transparent Basic levels of service should be defined for different sized communities with CSOs recognised and responsibility for addressing them accepted by all tiers of government.
	Affordability of changing standards	Standards must be set appropriately taking into account community risk tolerance and capacity to pay. Regulators must co-ordinate efforts effectively to ensure that risk is effectively

		balanced (e.g. financial sustainability, public health and environment).
Efficiency	Economies of scope across councils (versus fit-for-purpose systems for water & sewerage)	Local governments should consider operating models which seek to continually improve efficiency and affordability for the benefit of their communities. e.g. Design, build and operate and other outsourced operations should be objectively considered as an alternative to continued council delivery of services provided that other council needs are met and it is likely to lead to community benefit.
	Economies of scale	
	Attraction and retention of appropriate skills and leaders	
	Alignment of infrastructure investment with planning and strategic community needs	
Community & Customers	Council sustainability and regional employment (without water and sewerage)	Any change should address sustainability of small communities and all tiers of government need to understand broad economic impact.
	Accountability and responsiveness to local communities	Any change must seek continuous improvement in services and responsiveness to community needs.
	Ensuring appropriate levels of service and risk tolerance/management	Change must enable delivery of minimum levels of service.

6 Appendix A - Useful references

6.1 Summary of some properties of major institutional models for water service providers*.

	Model	Ownership	Legal Structure	Staff	Governance	Examples
1	Council owned and operated.	Single Council	Councils under LG Act.	Council staff.	LG Councillors.	Most Queensland and NSW regional councils. Most Canadian and NZ water services.
2	Council owned and operated with arms-length commercialisation of the water business.	Single Council	Councils under LG Act.	Council staff.	LG Councillors.	Larger Qld and NSW councils have differing degrees of separation.
3	Individual council-owned corporation	Single Council	Corporation.	Staff employed by corporation.	Board which is responsible to owner councillors.	Wide Bay Water.
4	Regional Alliance	Two or more councils	Individual councils under LG Act.	Employed across two or more councils.	LG Councillors.	Macquarie regional alliance & Centroc (NSW). ORWA, WIM and WBBROC Water Alliances (Qld)
5	Mandatory (binding) regional Alliance	Two or more councils	Councils under LG Act with additional contract, MoU, or legislative agreement.	Employed across two or more councils with some pooled resources.	LG Councillors.	No Water examples but Davis <i>et al.</i> (2008) name the 'Weight of Loads Groups' (NSW) as an example of a LG mandatory alliance.
6	County Council (with service provision only)	Two or more councils	Model under NSW LG Act.	Employed by county council.	Board of participating LG Councillors.	There are 4 water supply and one water and sewerage county councils in NSW.
7	County Council (including asset ownership)	Two or more councils via a county council.	Model under NSW LG Act.	Employed by county council.	Board of participating LG Councillors.	Former Midcoast Water (NSW). Regional Council model in NZ is similar (e.g. Wellington RC)
8	Joint Council-Owned Regional Corporation or Statutory Authority.	Two or more councils	Incorporation under the Cwth Corporations Act or State legislation.	Staff employed by corporation/ authority.	Board which may have appointments by State or local Government.	SEQ distribution and retail entities. Tasmanian water business. Former Gosford Wyong water utility.
9	State-owned Regional Water Authority.	State Government	Statutory Authority or Corporation	Employed by the water utility.	State-appointed Board often reporting to responsible Minister(s).	SEQ Water, Gladstone Area Water Board, Victorian Water Utilities, Sydney Water.
10	Single State-wide agency	State Government	Statutory Authority or Corporation	Employed by the water utility.	Independent Board often reporting to responsible Minister(s).	WA Water Corporation, SA Water, NT Power and Water.
11	Government owned with majority of functions outsourced to private contractors.*	Owner organisation.	As above but with contractual arrangements with private industry.	Mix of staff employed by owner and contractors.	Governance of owner-organisation plus contractual arrangements.	Linkwater (SEQ), SA Water for Adelaide, Water Corp WA for Perth.
12	Privatised water utilities.*	Varies – often a private entity owns the assets.	Varied – often contractual arrangements or charter with government.	Private industry staff.	Governance of private entity – usually a corporations law company.	European countries, UK. Australian electricity sector. ActewAGL is publically owned but has substantial private partnership.

* a degree of outsourcing to private industry is common to all of the listed models including all sizes of council water service providers

6.2 Selected properties of institutional models for water and sewerage service providers in OECD and G20 countries.

	Model	Governance	Owner(s)	Management (primary)	Operations/Staff (primary)	Outsourcing	Jurisdictions in which this model occurs. (Qld in bold)	Recommended for Qld?	
								IA	PC
1	Full public ownership and management	LG	Individual LG	LG	LG staff	None	India, Indonesia	✗	✗
2	LG service provider	LG Councillors.	Individual LG	LG	LG staff	Most capital design and construction. Outsourcing of operations and/or management via contract, lease or concession ranges from limited to extensive (e.g. Czech Republic, France)	Qld and NSW regional councils. Argentina, Canada, Czech Republic, Finland, France, Germany, Iceland, India, Indonesia, Italy, Japan, Mexico, New Zealand, Norway, Portugal, Spain, Slovenia, Sweden, & USA. Sewerage services in many countries	✗	✓ (only for councils that can be shown to be financially efficient)
3	Commercialised LG service provider.	LG Councillors or Advisory Board		LG	LG staff		Some large Qld and NSW councils have a degree of commercialisation and separation from council. The Netherlands		
4	LG-owned corporation	Board responsible to council		Corporation	Staff employed by corporation		Wide Bay Water , Denmark, Estonia, Japan, Johannesburg, Netherlands, Poland		
5	Regional Alliance of councils (voluntary)	LG Councillors or Advisory Board	Jointly by 2 or more LG	Management team from LGs	Employed by owner councils		Lower Macquarie Water Utilities Alliance, Centroc Water Alliance, CTM Alliance (N Qld), ORWA, WBBROC and WIM Alliances (Qld), Belgium	As an interim step	✓
6	Mandatory (binding) Regional Alliance				Employed across councils with pooled resources		France, Iceland, USA		
7	'County Council' (service provision only)	Board of LG Councillors	Two or more LG via a regional entity	County council	Employed by county council	Contracting out non-core services	Five county councils in NSW (only one also provides sewerage services)	not mentioned	✓
8	'County Council' (incl. asset ownership)	Board of LG Councillors					Former Midcoast Water (NSW). Regional Council model in NZ can be similar (e.g. Greater Wellington RC)		
9	Regional Utility (Joint LG ownership)	Board appointed by LGs	National or State/ Provincial government	Regional Utility	Staff employed by utility	Contract non-core services. Some leases or concessions for some/all management and Operations	SEQ entities , Tas Water, Belgium (Flanders), Denmark, Germany, Former Gosford-Wyong, Lithuania, Portugal, USA	✓	✓
10	Regional Utility (Central government ownership).	Independent Board – usu. reports to Minister(s)					China*, SEQ Water, Gladstone Area Water Board , India, Italy, Melbourne Water, Victorian Utilities, Sydney Water, Hunter Water, Brazil	✓	✓
11	Whole-jurisdiction public utility (Central Government)						ACT, WA, SA Water, NT, Northern Ireland, Scottish Water, Irish Water	✓	✗
13	Primary or full private ownership	Private entity Board	Private Company	Private Company	Private Company staf	Outsourcing non-core work or partnership with other businesses.	England & Wales, Chile, Saudi Arabia (major cities).	✗	✗

* There are some utilities with minority private ownership within jurisdictions marked (*). LG= Local Government; IA= Infrastructure Australia (see AECOM, 2010); PC = Productivity Commission (see PC, 2011a).
Source: Adapted from Seppala and Katko (2009) and Fearon (2012).

6.3 Favoured Institutional Models for Council Water Service Providers in “Recent” Reviews.

	Model	Productivity Commission (PC 2011a)	National Water Commission (NWC 2011a)	Infrastructure Australia (AECOM 2010)	NSW Review (Armstrong & Gellatly 2008)	Qld Taskforce (LGAQ & qldwater 2008)
1	Council owned and operated.	Existing structures to be retained if they are assessed to be the most efficient.	Council service providers considered inappropriate. No alternatives offered.	Council service providers considered inappropriate.	Some large council businesses or county councils to be retained.	3 broad models were assessed but not ranked. State regional entities were associated with the most disadvantages.
2	Council owned and operated with arms-length commercialisation of the water business.					
3	Individual council-owned corporation					
4	Regional Alliance					
5	Mandatory (binding) regional Alliance			As interim stage in transition to corporations.		
6	County Council (with service provision only)					
7	County Council (including asset ownership)				As above for councils.	
8	Joint Council-Owned Regional Corporation or Statutory Authority.	No differentiation between state or council ownership.			Corporation preferred.	
9	State-owned Regional Water Authority.					
10	Single State-wide agency			only outside SEQ, described as marginal		
11	Government owned with majority of functions outsourced to private contractors.					
12	Privatised water utilities.					

preferred option(s)	secondary option(s)	acceptable option(s)	unacceptable option(s)	not discussed
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6.4 Public versus private responsibility across different forms of outsourcing arrangements for water and sewerage services.

Source: Reproduced from OECD

(2003, p. 2).

	Setting Performance Standards	Asset Ownership	Capital Investment	Design & Build	Operation	User Fee Collection	Oversight of Performance and Fees
Fully Public Provision	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red	Dark Red
Passive Private Investment	Dark Red	Dark Red	Light Red	Dark Red	Dark Red	Dark Red	Dark Red
Design and Construct Contracts	Dark Red	Dark Red	Dark Red	White	Dark Red	Dark Red	Dark Red
Service Contracts	Dark Red	Dark Red	Dark Red	Dark Red	White	Dark Red	Dark Red
Joint Ventures	Dark Red	Light Red	Light Red	Light Red	Light Red	Light Red	Dark Red
Build, Operate, Transfer	Dark Red	Dark Red	White	White	White	Dark Red	Dark Red
Concession Contracts	Dark Red	Dark Red	White	White	White	White	Dark Red
Passive Public Investment	Dark Red	White	Light Red	White	White	White	Dark Red
Fully Private Provision	Dark Red	White	White	White	White	White	Dark Red

Key: Dark Red: public responsibility - Light red: shared public/private responsibility - White: private responsibility

7 Appendix B Models from other jurisdictions

All Australian water distribution and bulk supply utilities operate under one of the following institutional arrangements:

1. State or Territory owned corporations or statutory authorities
2. Local Government owned corporations or statutory authorities
3. Local government owned “Business Units”
4. Local government integrated service operating as a normal department of council

In most states and territories, provision of water and sewerage commenced with local government services. Reform in the 90s and first decade of this century resulted in the majority of states having state government-owned water corporations or statutory authorities.

7.1.1 The Australian Capital Territory

Icon Water is the sole provider of water and sewerage services in the Australian Capital Territory.

Governance and Legislative Framework

Icon Water Limited is an unlisted public company with assets and investments in water, sewerage and energy services and operations. Icon Water is owned by the ACT Government. The company’s voting shareholders are the Chief Minister and the Minister for the Environment and Heritage of the ACT. Icon Water has corporate reporting and compliance obligations under Corporations Law. Legislation governing the supply of water and sewerage services includes the Utilities Act 2000, Water Resources Act 2007, Environment Protection Act 1997, Water and Sewerage Act 2000 and the Public Health Act 1997.

Icon Water owns and manages the water and sewerage business and assets in the ACT and is a 50% owner of ActewAGL, a joint venture with AGL Energy Limited and Jemena Limited.

The Independent Competition and Regulatory Commission (ICRC) determines water and sewerage prices. Icon Water prepares detailed submissions to the ICRC on the anticipated operating costs and capital investment requirements for the forthcoming period. Based on a review of the information provided by Icon Water and input through public consultation, the ICRC sets the water and sewerage price direction, against which it annually sets prices.

Function

Icon Water provides the ACT with reticulated and bulk water supply, bulk storage and waste water collection and disposal services.

7.1.2 New South Wales (Metropolitan)

New South Wales has a range of different models for water service providers in the large metro centres which service around 70% of the State population:

- Sydney Water Corporation (State Owned)
- Hunter Water Corporation (State Owned)
- Gosford Water Supply Authority (Local Government Owned) and
- Wyong Water Supply Authority (Local Government Owned)

7.1.2.1 Sydney Water

Governance and Legislative Framework

Sydney Water is a statutory corporation, wholly owned by the New South Wales Government created under the Sydney Water Act in 1994 and governed by the State Owned Corporations Act 1989 (NSW). The Board is appointed by the NSW Government which may direct the Board under special circumstances. The Board may adopt policies of the NSW Government that otherwise do not apply to Sydney Water, provided that such policies are (1) relevant; and (2) beneficial, to Sydney Water. Under the legislation, the Board is responsible to the Shareholding and Portfolio Ministers.

The utility is licenced by the Independent Pricing and Regulatory Tribunal (IPART) which also determines water prices.

Function

Sydney Water is the largest water utility in Australia providing drinking water, recycled water, sewerage services and some stormwater services to more than four million people in Sydney, the Illawarra and the Blue Mountains. Water is sourced from a network of dams managed by the State-owned Sydney Catchment Authority (see below) and from a desalination plant owned by Sydney Desalination Plant Pty Ltd (a subsidiary of Sydney Water) and treated and distributed by Sydney Water. The majority of Sydney Water's capital expenditure and three quarters of operational expenditure is outsourced (see Table 5), a dramatic change from the large internal workforce of the organisation prior to the 1990s.

7.1.2.2 Sydney Catchment Authority

A state-owned bulk water supplier for the Sydney region. Bulk water prices are determined by the Independent Pricing and Regulatory Tribunal (IPART) which also licences the utility.

7.1.2.3 Hunter Water

Hunter Water provides water sewerage and stormwater services to the Newcastle and wider hunter region.

Governance and Legislative Framework

Hunter Water is a State-owned Corporation governed under the State Owned Corporations Act 1989 (NSW) and in 1992 the Hunter District Water Board was corporatised under the Hunter Water Act 1991 and began trading as the Hunter Water Corporation. The Board comprises nine members including the Managing Director together with a Chairperson and seven independent Directors appointed by the Voting Shareholders of the Corporation. The Corporation has two nominated shareholders, being the NSW State Government Treasurer and Premier of NSW. The Corporation is the parent entity in a group which includes a subsidiary – Hunter Water Australia (HWA) which is governed by an independent Board of Directors.

All Non-executive Directors are appointed for their expertise across a range of fields, with the Managing Director the only Non-independent Director, appointed in accordance with our Constitution and State Owned Corporation Act 1989 upon the recommendation of the Board. Pricing is determined by the Independent Pricing and Regulatory Tribunal (IPART)

Function

Hunter Water provides water and sewerage services to over half a million people in the lower Hunter region. Their total assets are valued at approximately \$3.5 billion across an area of 5,366km². A population of 560,603 is serviced in the local government areas of Cessnock, Lake Macquarie, Maitland, Newcastle, Port Stephens, Dungog and small parts of Singleton delivering on average 184 megalitres of water per day.

7.1.3 Regional NSW

Governance and Legislative Framework

Significant changes since the summary was first published not fully reflected here. For example the joint local government service provider servicing Gosford and Wyong has been divided and absorbed into each of the councils. The councils that jointly owned Mid Coast Water have amalgamated under an Administrator and absorbed the water functions into the new council. There are also a number of Water Alliances formed in NSW centred primarily on existing boundaries of Regional Organisations of councils.

Nearly 2 million people or approximately 30% of the population - receive water and sewerage services from Local Government. Some water operators are integrated parts of councils while others operate as independent business units which provide a measure of separation from the parent council. Water, sewerage and stormwater drainage services are provided by up to 106 local water utilities including:

- 'general purpose' local government councils,
- four water supply 'county councils', and
- water supply authorities

The obligations of council and county council owned water utilities are set out in the Local Government Act 1993 (NSW) while the obligations of water supply authorities are in the Water Management Act 2000. The Local Government Act establishes the operating areas of local water utilities with 106 utilities between 200 and 65,000 connections. Local water utilities are not subject to operating licences but strive to meet the NSW Government's Best-Practice Management of Water Supply and Sewerage Guidelines and must report on various state performance and health benchmarks to the state regulator.

Pricing is determined by the local governments informed by state guidelines. Drinking water quality is monitored by NSW Health as well as by the utilities which are encouraged to create risk-based water quality management plans under State guidelines which mention the National guidelines. Recycled Water schemes require Ministerial approval and are administered under a range of legislation.

NSW Institutional Review

In 2007/08 the NSW state government undertook an inquiry into sustainable urban water supply for non-metropolitan NSW. The unsatisfactory performance of some of the smaller utilities in meeting the standards of the guidelines and the high levels of investment required for future growth or capital replacement programs were two of the major drivers for reform.

Terms of Reference for the Enquiry were (Armstrong and Gellatly (2008, p. 7):

- *To identify the most effective institutional, regulatory and governance arrangements for the long term provision of water supply and sewerage services in country NSW; and*
- *Ensure these arrangements are cost-effective, financially viable, sustainable, optimise whole-of-community outcomes, and achieve integrated water cycle management.*

The enquiry found that under-performance by a number of local water utilities was a concern for economic, environmental and public health reasons and it contends that reform is necessary due to the following factors;

- *the difficulties in attracting and retaining skilled staff - many areas of NSW are unable to attract skilled staff owing to declining populations and the associated reduction in the provision of community services;*

- *lack of effective regulatory incentives and sanctions to achieve a high level of compliance with standards and guidelines and to encourage innovation and continuous improvement;*
- *an absence of functional separation – water supply and sewerage are two of many functions performed by councils and compete with other functions for attention and resources; and*
- *lack of commercial focus – the multifunctional structure of councils may tend to inhibit the establishment of commercially focused business units.*



Existing Local Government Areas in NSW.

The review concluded that larger utilities generally perform better in meeting performance benchmarks such as the National Water Initiative’s Best Practice Management of Water Supply and Sewerage Guidelines, and often were better able to access specialist skills and facilities compared with smaller utilities. Small and more remote service providers in particular struggled to attract and retain skilled staff

The report recommended two options for aggregation (1) amalgamate 104 existing water utilities into 32 regional “groups” or (2) aggregate the 104 utilities into 15 “groups” based on regional catchments. Option (1) was the preferred recommendation and best reflected submissions from NSW councils. Three potential organisation structures were recommended for further investigation:

1. Binding Alliance - individual councils retain ownership of assets and responsibility for service delivery under a compulsory Alliance ‘umbrella entity’ which directs asset management strategy and service levels. for the constituent councils in its “group”, or
2. County Council - aggregation based on County Councils to act as umbrella organisations with full transfer of ownership, or
3. Council-owned Regional Corporations

Importantly, the ‘status quo’ option was considered to be inappropriate.

Other recommendations from the report included the need for improving regulation, external price setting, increasing consumer protection and addressing skills shortages. The latter Productivity Commission Inquiry reviewed the NSW Report and agreed with all but two of the recommendations. The first exception was the need for price setting: PC (2011a) preferred location-dependent pricing with regulatory oversight. The second was the specific recommendation for the number of aggregated water service providers. In contrast PC (2011a) recommended a case by case assessment for all regions and councils based on the long-term costs and benefits of aggregation. The New South Wales Government is currently considering the results and recommendations of the Inquiry Report and will presumably be influenced by the later national reports including PC (2011a).

7.1.4 The Northern Territory

Power and Water Corporation is a government-owned corporation with the NT Treasurer as the single shareholder and the NT Minister for Essential services as the responsible Minister. Indigenous Essential Services Pty Ltd is a subsidiary of the corporation and supplies water and sewerage services in remote indigenous communities.

Water and sewerage prices are set by the NT Treasurer via an Order which is then monitored and enforced by the NT Utilities Commission. All water and sewerage services must be licenced under the Water Supply and Sewerage Services Act 2000 (NT) and this also includes service standards and drinking water quality. Minimum standards for drinking water quality are set by the Minister for Health to be the same as the Australian Guidelines along with reporting requirements. Recycled water schemes must be approved and is managed under at least two Acts.

The Power and Water Corporation provides water and sewerage services across the Northern Territory. Darwin is the only major population centre with a surface water impoundment providing supply. Other NT towns and communities rely primarily on bore water supply.

7.1.5 South Australia

Governance and Legislative Framework

The South Australian Water Corporation (SA Water) was established on 1 July 1995 under the SA Water Corporation Act 1994. SA Water is a statutory corporation subject to the provisions of the SA Public Corporations Act 1993. A Board of Directors reports to the responsible Minister and the Treasurer (the shareholders) who own the corporation on behalf of the people of South Australia. Some small local government provide services in remote areas of the state.

In 1996 the SA Government awarded United Water (made up of Veolia Water, 95% and Halliburton KBR, 5%) a fifteen year contract to manage and operate the metropolitan water and sewerage systems in Adelaide. In July 2011 the Allwater Joint Venture (made up of Transfield Services, 50%, Degremont, 25% and Suez Environment Australia, 25%) was awarded a 10-year contract for operations and maintenance of the metropolitan water and sewerage systems with KBR responsible for project management and procurement. A key competing alliance was 'Metroaqua' made up of United Utilities Australia, Acciona and Thiess Services.

Under these arrangements SA Water owns all infrastructure and remains responsible capital expenditure along with the collection of revenue, managing customer relationships, managing catchments and setting service standards.

In 1996, SA Government awarded Riverland Water a 27-year contract to finance, design, build and operate 10 new water treatment plants to service 90 rural communities with a total population of 100,000. The communities include Adelaide Hills, Barossa Valley, Mid-North, Upper South-East and the larger towns along the River Murray with plants at Barmera, Berri, Loxton, Mannum, Murray

Bridge, Renmark, Summit Storage, Swan Reach, Taillem Bend, Waikerie. In 2025 ownership of the plants will revert from Riverland Water to SA Water.

Function

SA Water provides water supply services across the State (1.5 million people) including reticulated (about 16,616 kilometres of water mains) and bulk supply, water treatment and water storage facilities. SA Water is also responsible for the collection and disposal of sewerage extending through country areas with 1321 kilometres of sewers, 23 sewerage treatment plants and collecting and treating 90 billion litres of sewage annually. In Adelaide, this system includes 8,900 kilometres of water mains as well as six treatment plants (including the large Christies Beach, Glenelg and Bolivar plants). Their work will also cover operations and maintenance of 7,200 kilometres of sewer mains, six sewerage treatment plants along with various recycled water schemes.

7.1.6 Tasmania

Tasmania introduced a regional water industry model in July 2009 with the aims of securing the long term sustainability of the State's water resources amid concerns over the state of assets and adverse public health and environmental outcomes coinciding with a need for major capital investment and predicted price increases. Twenty eight local governments and three bulk water authorities (Hobart Water, Esk Water and Cradle Coast Water) were aggregated into three local government-owned utilities covering the northern, north-western and southern areas of the State. A fourth corporation provided "common services" to the regional three corporations.

TasWater commenced operating on 1 July 2013 following the amalgamation of these four corporations.

Governance and Legislative Framework

The Water and Sewerage Corporations Act 2012 underpins the establishment and operation of TasWater.

7.1.7 Victoria

The current structure of the Victorian Water Industry resulted from micro economic reform undertaken by the Kennett Government in 1994. This saw the removal of water sewerage responsibilities and assets from 120 water boards and Local Governments across the state to four Metropolitan (City West Water, Yarra Valley Water and South East Water) and 13 state-owned regional urban water businesses. Prior to the reform metro water, sewerage and stormwater services were provided by a single, vertically integrated authority called Melbourne water which was state owned.

In regional Victoria, the reform process was underpinned by a decade of local government reform reducing the 400 council water authorities (in 1982) to 140 by 1993, which were then transferred to 15 state-owned entities in 1994. Three of these regional entities merged in 2005 leaving 13 regional urban water utilities.

Regional businesses may provide a range of services to their customers including urban (water and sewerage services to regional towns) or rural services (manage large headworks and/or bulk supplies to regional towns and farms). The amalgamation of urban and rural businesses in 2005 resulted in two businesses (Grampians Wimmera Mallee Water and Lower Murray Water) providing both urban and rural services.

<p>Urban Water Corporations</p> <p>Barwon Water Central Highlands Water Coliban Water East Gippsland Water Gippsland Water Goulburn Valley Water North East Water South Gippsland Water Wannon Water Westernport Water Western Water</p>	<p>Rural Water Corporations</p> <p>Goulburn-Murray Water Southern Rural Water</p> <p>Urban and Rural Water Corporations</p> <p>Grampians Wimmera Mallee Water Lower Murray Water</p>
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Governance and Legislative Framework

All Victorian water utilities are subsumed under the portfolio of the Minister for Water and are either statutory authorities or corporate entities. The Metropolitan water utilities are governed by a Board of Directors, and operate under the Corporations Act 2001 (Cth). The companies are state-owned and regulated and licenced under the Water Industry Act 1994.

Melbourne Water Corporation, established by Melbourne Water Corporation Act 1992, is owned by the Victorian Government. An independent Board of Directors is responsible for the governance of Melbourne Water Corporation and the responsible Minister is the Minister for Water.

The regional water utilities are each governed by skills-based Board of Directors, who are responsible to the State Minister for Water, and regulated under the Water Act 1989.

Performance regulation is administered through the State Government via the Essential Services Commission (ESC) which regulates both the water and electricity sectors on behalf of the Government of Victoria. Prices are also set by the ESC and the authorities pay dividends to the Victorian State Government. Drinking water quality is regulated by the Victorian Department of Health under the Safe Drinking Water Act 2003 (Vic) which also sets out requirements for water quality risk management plans which reference the national guidelines. Recycled water is regulated by the Victorian EPA under the Environment Protection Act 1970 (Vic).

Functions

The metropolitan water utilities provide water services to the Greater Melbourne Area. Melbourne Water manages the metro area water supply catchments, sewerage network and manage rivers and creeks and major drainage systems throughout the Port Phillip and Westernport region. They are responsible for managing \$8.4 billion in water supply, sewerage and drainage assets. The regional utilities may provide a mixture of urban and rural services which include water supply to urban areas and farms, sewerage services to towns and the management of head works and bulk water supplies.

7.1.8 Western Australia

Governance and Legislative Framework

The Water Corporation services the majority of the two million WA customers in over 300 towns and communities. Other industry participants include the Bunbury, Busselton, Rottneest Is state-owned water authorities. Sewerage services in many areas are provided by local government councils.

The regulatory framework including economic regulation, licencing and monitoring is governed by the Water Services Licensing Act 1995. Other regulatory agencies include the Department of Water and the Health Department. The Water Corporation is governed by a Board of Directors who report

to the shareholders - the responsible Minister and the Treasurer - who own the corporation on behalf of the people of Western Australia.

Functions

The Water Corporation is chartered to provide reticulated and bulk water supply, storage, drainage, and waste water collection and disposal services across the state of Western Australia (an area of 2.5 million square kilometres).

7.1.9 South East Queensland

Reform in South East Queensland has followed a complex path since the late 2000s when the severe drought and the large expenditure on infrastructure (e.g. Desalination plant, water grid) triggered reform of the water sector. Some of the key changes are summarised below.

Local government reform process completed in March 2008.

Amalgamation affected the seventeen existing SEQ council Water Service Providers to form ten water service providers within the ten new local governments. For bulk water, this structure was short lived (3 months).

Transfer of bulk water infrastructure in July 2008

Water retail and sewerage services remained with councils but all former bulk water functions were transferred mandatorily to the state. Nominal compensation for these assets was made by the State Government to Local Government, however strong concerns about the level of compensation were raised by local government at the time. The institutional reforms administered under the South East Queensland Water (Restructuring) Act 2007 and created four new State-owned Statutory Authorities:

- The Queensland Manufactured Water Authority (WaterSecure), a bulk water “manufacturer” managing the SEQ Desalination Plant and Western Corridor Recycled Water Project including advanced wastewater treatment plants.
- The Queensland Bulk Water Supply Authority (Seqwater), an entity that manages water sources (dams, weirs and aquifers) and water treatment.
- The Queensland Bulk Water Transport Authority (LinkWater) responsible for major transport infrastructure.
- The SEQ Water Grid Manager which manages contracts with the Bulk Supply and Transport Authorities and the retailers, and manages the flow of water around the SEQ Water Grid.

Establishment of an SEQ Distribution Entity and initiation of 3 retail entities in 2009.

While distribution and retail components of the reform framework continued to be delivered by the 10 new local governments in SEQ a single Distribution Entity, owned by the ten local governments was created to assume control of these functions on 1 July 2010. The organisation was very large relative to most national water utilities with assets in the order of \$10bn, annual revenues of \$1bn, and 2600 employees. Retail services were to be divided into three sub-regional entities owned by local governments.

State reverses decision on single entity and forms three distribution-retailers in 2010.

In May 2010 the state reversed its decision, disbanded the single entity and established (on 1 July 2010) three new local government-owned distributor-retailers, namely:

- Unitywater (servicing Sunshine Coast and Moreton local government areas)
- Queensland Urban Utilities (servicing Brisbane, Ipswich, Somerset, Lockyer Valley, Scenic Rim local government areas).
- Allconnex Water (servicing Gold Coast, Redlands, Logan local government areas).

State reverses decision on bulk water disaggregation and combines two bulk water entities in 2010.

In December 2010 the state announces its decision to merge two of the new bulk entities (WaterSecure and Seqwater) in July 2011 after only three years of operation.

State reverses decision on council-owned distributor retailers in 2011.

In April 2011 the State Government announced that legislation requiring local government distribution retail entities was to be repealed to allow councils to choose the ongoing structure of their water utilities. This resulted in July 2011 decision by council owners of QUU and Unity Water to continue with the new common water utilities. In contrast Allconnex owners decided to return to individual local government management of urban water services.

WaterSecure also merged with Seqwater around this time.

Additional SEQ bulk water reforms 2013.

The new Seqwater was formed on 1 January 2013 through a merger of the remaining State-owned water businesses - the SEQ Water Grid Manager, LinkWater and the former Seqwater.

Impact of pricing

The series of changes were underpinned by strong disagreements, media coverage and public attention over rising water prices in SEQ. This is summarised well by Cousins (2010, p. 43):

New infrastructure investment to drought proof the region had a cost which had to be paid for and this has meant significantly higher bulk water prices. Water pricing reform, which has been on the agendas of all governments in Australia for many years, has also suddenly become more urgent. Consumption and investment decisions need to be guided by efficient price signals to ensure the overall welfare of the community is maximized..... There has been a tendency for governments in SEQ to try to shift blame on to others rather than to work constructively together to ensure efficient pricing is implemented. Ultimately, whatever the perceived short term political gains from this blame game, it is likely that no party will benefit. Most importantly, the effect of this disputation will be to undermine community confidence and support for reforms to be maintained.

These disputes, the political reversals and the speed of the changes have been the subject of much commentary. Coe and Harris (2011) note that:

Hindering the success of the change programs in SEQ and Tasmania has been the management of the cost impact of reform on consumers. In both jurisdictions, the same change program – which aims to promote greater efficiency – has coincided with an upward step-change in price. Whilst justified in terms of expenditure – \$9 billion investment in supply security in SEQ – the cost to consumers is significant and ill-timed.....In both SEQ and Tasmania, the process of asset valuation and transfer has exposed a legacy of underinvestment by some local governments in their infrastructure, with corresponding upgrade programs needed to bring the asset base to a sustainable standard.

The complexities of rapid and sweeping reforms must be taken into account and weighed up with the costs and benefits, particularly in terms of impact on staff in an industry that is already struggling in attracting and retaining appropriate skills. “Major “overnight” changes to water prices would impose a considerable shock on individuals and businesses, which have only limited short-term capacity to change water-using behaviours” (PWC, 2010).

7.1.10 New Zealand

The majority of water and sewerage services in New Zealand are provided by Councils. Local Government in New Zealand is divided into regional and territorial (city or district) councils. Regional councils cover larger areas and may include several territorial councils within their boundaries. Regional Councils manage natural resources and their use because of they often cross local boundaries. In some areas, issues such as transport planning and regional strategies are also carried out by Regional Councils.

In terms of Governance, Councillors decide the overall policies while management decide how the activities should be carried out. Various Acts of Parliament such as the Local Government Act 2002 (NZ) and the Resource Management Act 1991 (NZ) provide the framework to enable Regional councils to undertake their activities.

City and district councils are responsible for essential community services within their own areas, such as road maintenance, land-use and subdivisions, community health, and community services (libraries, swimming pools and recreation areas). The Wellington Regional Council provides a good example of how the two levels of local government cooperate on water supply.

Most large communities are serviced by City and District Councils as shown in Table A3.2 which lists the entity responsible for water supplies for all communities with more than 10,000 people. This represents around three quarters of the New Zealand Population. Details of the three largest New Zealand Water Service providers are given below as they represent three important local government models.

Community	Local Authority	Population
Ashburton	Ashburton District Council	16,000
Auckland	Watercare Services Ltd	1,297,393
Papakura		47,216
Blenheim	Marlborough District Council	24,028
Cambridge	Waipa District Council	13,500
Te Awamutu & Pirongia		10,665
Christchurch Central	Christchurch City Council	311,000
Northwest Christchurch	Christchurch City Council	83,000
Dunedin City	Dunedin City Council	101,354
Mosgiel		10,176
Hamilton	Hamilton City Council	132,471
Feilding	Manawatu District Council	13,000
Gisborne City	Gisborne District Council	30,600
Hastings City	Hastings District Council	46,015
Havelock North		11,623
Invercargill	Invercargill City Council	50,456
Kaiapoi	Waimakariri District Council	10,843
Rangiora		13,346
Levin	Horowhenua District Council	20,000
Lower Hutt	The Hutt City Council	95,469
Masterton	Masterton District Council	19,000
Napier	Napier City Council	49,910

Nelson	Nelson City Council	43,000
New Plymouth	New Plymouth District Council	59,072
Oamaru	Waitaki District Council	11,919
Palmerston North City	Palmerston North City Council	67,653
Porirua	Porirua City Council	46,444
Queenstown	Queenstown Lakes Distr Council	18,000
Richmond	Tasman District Council	10,500
Rotorua Central	Rotorua District Council	42,500
Rotorua East		10,330
Taupo - Lake Terrace	Taupo District Council	17,105
Tauranga	Tauranga City Council	103,783
Te Puke Eastern Districts	Western Bay of Plenty D.C.	12,960
Timaru City	Timaru District Council	26,832
Tokoroa	South Waikato District Council	13,300
Upper Hutt	Upper Hutt City Council	34,650
Wellington Region Bulk Water	Upper Hutt City Council Water and Wellington Reg. Council	350,000
Waikanae/Paraparaumu/Raumati	Kapiti Coast District Council	35,800
Wanganui	Wanganui District Council	39,000
Wellington City	Wellington City Council	165,126
Whakatane	Whakatane District Council	21,020
Whangarei	Whangarei District Council	56,530

New Zealand water supply utilities servicing populations greater than 10,000 people supply water to more than 3.25 million people.

7.1.10.1 Auckland – Watercare

Governance and Legislative Framework

Watercare is a council organisation, wholly owned by the Auckland Council which appoints the company's board of directors. Before the current arrangements which commenced in 2010, Watercare existed but was responsible for bulk water supply to six territorial councils in the Auckland Region which provided retail services. Sewage collection, treatment and disposal was undertaken by Watercare in some areas and by councils in others. Aligned with local government realignment, Watercare was expanded to be a single, vertically-integrated water entity. Drivers for the need for reform included

- age and condition of network infrastructure,
- fragmented industry resulting in poor regional planning and decision-making,
- significant governance issues and failure to act on previous reviews,
- clear scope for improved cooperation and coordination.

Function

Watercare draws water from around 30 sources, treats it and delivers it to homes and businesses in six of Auckland's seven regions. In Papakura, the company provides bulk services to United Water who manages the local network and retails services to the local community. It also collects, treats and disposes of wastewater, including trade waste from industry. The company supplies around 370 million litres of drinking water to around 1.3 million people in the Auckland region and treats around 350 million litres of sewage and trade waste.

7.1.10.2 Wellington and Hutt Valley - Capacity Infrastructure Services

Governance and Legislative Framework

Capacity Infrastructure Services Limited (Capacity) was established in April 2004 to maintain water, sewerage and stormwater infrastructure for the Wellington and Hutt City Councils. It is managed on a not-for-profit basis and governed by a Board of independent Directors and Councillors. The organisation is a Council Controlled Trading Organisation.

Function

The organisation purchases water from the Greater Wellington Regional Council and maintains the reticulation network supplying over 165,000 people. The reticulation network includes 121 reservoirs and tanks, 5,086 km of pipes and 174 pumping stations. Water for Wellington, Porirua and most of the Hutt Valley comes from the headwaters of the Hutt River at Kaitoke and from the catchment east of Wainuiomata. The organisation also manages the sewerage network consisting of 1022km of pipes, 62 pump stations and 3 treatment plants with a total replacement value of \$580 million.

7.1.10.3 Greater Wellington Regional Council

Governance and Legislative Framework

Greater Wellington Regional Council is a statutory body made up of 13 regional councillors, representing six constituencies. The Council is responsible for developing policies that direct the activities of the Regional Council. Legislation including the Local Government Act 2002 (NZ) and the Resource Management Act 1991 (NZ) dictate what activities the Council should, or may, be involved with.

Function

Greater Wellington collects and treats all tap water used in Lower Hutt, Porirua, Upper Hutt and Wellington. Water is distributed to reservoirs owned by the four city councils, from where the water is distributed to customers. The council operates four water treatment plants, 15 pumping stations and just over 180 kilometres of large-diameter pipelines supplying around 150 million litres of water each day.

7.1.11 Canada

Regulation of water and sewerage systems in Canada is under provincial/territorial jurisdiction. Similar to Australia, under the Constitution Act, 1867 (Canada), Provinces "own" all water resources and have responsibilities and their own legislation for water resource management, supply and the environment. Service provision is the responsibility of about 4,000 municipalities which are equivalent to local governments. While municipalities provide water and sewerage services directly, some outsource to private or public companies. There are approximately 9,000 service providers with 2,500 of these, or nearly 90% of the population being urban areas serviced by municipalities.



Canadian provinces

7.1.12 Scotland – Scottish Water

Scottish Water was established in 2002 provides water and sewerage services as a publically owned company responsible to the Scotland parliament. Prior to establishment of the single entity these services had been provided by three central government-owned water authorities which had been established in 1996 to replace the previous 12 regional and island council service providers. In 2008 Scotland commenced the first water and sewerage retail market in the world to increase competition in an effort to lower prices. Five business entities are licensed to compete in the market which allows non-residential customers to negotiate for better prices and standards of service.

7.1.13 England and Wales

Water and sewerage services in England and Wales are provided by 11 water and sewerage companies and 11 water supply only companies. Performance targets and prices are highly regulated by the Water Services Regulation Authority (OFWAT), the Drinking Water Inspectorate (DWI) and the Environment Agency (EA). All companies are privately owned following full privatisation of the industry in 1989. Prior to this time, ten government owned regional water authorities provided total water total water cycle services some of which were outsourced to 28 privately owned, water supply only service providers since 1974.

This was the culmination of decades of amalgamations of 2,160 water undertakings and 1,370 and sewage treatment authorities. There had been under-investment in infrastructure with ageing leaking water distribution pipes, polluting discharges and out of date and overloaded wastewater treatment works. The rationale used by the Thatcher government supporting privatisation included:

- the private sector would be more efficient,
- private companies would be better able to finance the large investments needed , and
- privatisation would create competition.

The newly privatised water companies were initially unpopular with a reputation for increasing prices, high profits and poor performance. Profit margins were high by international standards, consumers who couldn't pay had their water cut off or pressure reduced and there were major staff redundancies with job losses and increased outsourcing. Between 1974 and 1989 the number of

employees was reduced from 80,000 to 50,000. In the 10 years after privatisation, employment fell by a further 40% to 31,000.

The privatised water companies were perceived poorly by the public and in the decade following privatisation, the industry was strongly subjected to the media spotlight, e.g.

- In 1992, a landslip of sewage sludge engulfed a sewage works at Huddersfield. Almost 20,000 tonnes of sewage slipped on to the plant. It completely blocked 150 m of the River Colne and forced closure of the nearby ICI manufacturing plant.
- In 1995, Sir Gordon Jones, the £189,000 a year chairman of Yorkshire Water quit after a year of drought which required water to be supplied by a convoy of up to 700 tankers with 3,500 deliveries per day which cost £3 million a week.
- In 1997, there was a serious outbreak of cryptosporidiosis in North London which affected about 400 consumers. As a consequence, the Three Valleys Water Company owned by Vivendi had to pay compensation to affected residents.
- Between 1989 and 1997 all water companies were heavily prosecuted for environmental offences and between 1997 and 1998 all ten water and sewerage companies were found guilty of a total of 260 water pollution offences.
- In 1998, the Drinking Water Inspectorate (DWI) reported that there were still weaknesses in companies' performance. Less than 80% of zones complied with five key parameters; nitrite, iron, lead, poly-aromatic hydrocarbons and pesticides. The number of 'serious incidents' did not decline in the first 6 years of privatisation.
- Yorkshire Water's largest fine, of £119,000 (reduced to £80,000 on appeal), with costs of £125,598, was received in December 2000 after pleading guilty to seventeen charges of supplying water unfit for human consumption.
- North West Water was required to invest £3bn from 2000 to 2005, mainly to reduce the number of sewer overflows with around 2,000 properties at risk of sewer flooding at least once every 10 years.

7.1.14 Ireland

The Irish Government commenced a program to integrate all water and sewerage services in 2012 (DECLG, 2012). It established Irish Water, a State company to take over the water investment and maintenance programmes of the 34 County and City Councils, characterised by a few large systems and many smaller, widely scattered ones. The key aim was to accelerate the pace of delivery of planned investments needed to upgrade the State's water and sewerage networks and to install water meters in households.

An independent assessment was undertaken with an assessment of the existing structures for the provision of water services and making recommendations in relation to how services might be modernised and re-structured. The current weaknesses were broadly categorised as:

- Variability of service – absence of consistent policies, processes and standards and variable performance standards
- Inability to realise economies of scale, duplication of management and absence of/limited industry standard IT and management information systems
- Long term under-investment in assets and limited asset data to support strategic planning

As part of the study, a range of key performance indicators from the Irish water sector were compared with the UK water companies, Northern Ireland Water and Scottish Water.

The evidence indicated that:

- An operating expenditure per connection up to two times more expensive than the UK,
- Leakage levels were double the UK average (41% as compared to 20%),
- The number of employees involved in water services is 25% higher than the UK median,

- The number of employees per water connection and per customer served are significantly higher than the UK median, and
- Scottish Water achieved operational savings of 40% over a five year period.

International models for water service provision were also reviewed to identify trends and lessons to be learned for water sector reform in Ireland. Relevant models for water service provision in a number of countries, including Scotland, England, Wales, Northern Ireland, Germany, France, Netherlands, South Africa and Australia were reviewed. The study showed that the fragmented nature of water service provision in most countries has been or is being addressed by the amalgamation of municipal water services, the creation of utilities or the use of inter-communal structures.

Irish Water was designed to have both a regional and local focus which will be achieved by organising operational regions based on river basin districts. In addition to the primary goal of ensuring compliance with statutory quality standards, other objectives are:

- Ensure security and quality of supply
- Consistent and transparent service quality
- More efficient cost base and lower unit cost of delivery
- Critical employment mass to attract key talent
- One decision making authority with a more coherent and integrated structure
- Clear lines of accountability, authority and responsibility
- Meeting the investment needs and rising operational costs.

From a staffing perspective, Irish Water was said to be able to present opportunities not otherwise available to staff who wish to pursue a career in water services. Increased specialisation will provide routes for career development as well as enhancing job satisfaction. An increased emphasis on training and development and the introduction of new systems at an accelerated pace will provide both challenges and opportunities.

7.1.15 USA

Public Water Systems in the USA are defined as those supplies having 15 or more connections or servicing at least 25 people for 60 days of the year. There are over 160,000 such systems, but the majority of the population (approximately 268 million) are serviced by 54,000 Community Water Systems (USEPA, 2009). Around 32% of these systems draw water from aquifers and the remainder rely on surface waters and the quality of drinking water is regulated nationally under the Safe Drinking Water Act 1974 (USA). The Act requires providers to report to their customers, State agencies and the USEPA on water quality, but in 2001, “one out of four systems did not conduct testing or report the results for all of the monitoring required” (USEPA, 2009, p. 3).

Water utilities may be publically or privately owned with private utilities involved in servicing around one quarter of the population (National Association of Water Companies website 2012). In most metro areas with populations greater than 100,000 people (nearly half of the population or 130 million people) services are provided by city or regional water and sanitation utilities that may be publically or privately owned. In fact 8% of the community water systems service over 82% of the population (USEPA, 2010). In regional areas most utilities are publically owned by a city or county level of local government or by utility cooperatives jointly owned by customers including local governments.