

Water Connections

Celebrating the Queensland Water Directorate's First Decade





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The State as Regulator

The first decade of the new millennium was a turbulent and uncertain time for the State Government. In the new role of regulator, the Queensland Government started with a base of well-established legislation but proceeded to introduce a raft of, often duplicative, statutory plans. These included Strategic Asset Management Plans (2000), Customer Service Standards (2000), Drought Management Plans (2005), System Leakage Management Plans (2005), Outdoor Water Use Conservation Plans (2008), Recycled Water Management Plans (2008), Drinking Water Quality Management Plans (2008), Local Government Asset Management Plans (under *Local Government Act 2009*), Total Water Cycle Management Plans and Trade Waste Management Plans (under the *Environmental Protection Policy Water 2009*), Sewage Overflow Abatement Plans and Integrated Environmental Management Systems for large sewage pumping stations (*EPP Water 2009*).

Many of these regulatory approaches (e.g. a drinking water quality framework) were long overdue, but it is hard not to interpret this period as a State Government unsure of its role and in search of its appropriate place in the new world it had itself created.

During the same period the State Department responsible for urban water changed names no less than six times (see figure timeline), no doubt creating

a mini-boom for the printers of business cards and State signage. While some of these changes were fairly cosmetic, others involved significant restructures. At the time of writing the State was considering repealing many of the legislative requirements created over the previous decade.

One of the key drivers of the State's rapidly changing role was the 'millennium drought' which lasted from 1997 to 2009 (see Chapter 3). Many townships including a large proportion of the capital city were in real threat of running out of water. The response of the State and of Local Governments was slower than might be expected of structures more than familiar with droughts and flooding rains. The State's response, when it did come, was autocratic and tinged with a hint of panic. In the circumstances, this was not necessarily uncalled for.

As well as the legislative ferment, the State's response included unprecedented expenditure on urban water and restructuring of the industry in South East Queensland (SEQ). Unfortunately in the haste and fear, the State's response did not take on advice of the industry itself which could have prevented some of the unnecessary excess.

The institutional changes in SEQ commenced with the creation of a Water Commission in 2006 and proceeded with Local Government Amalgamations in March 2008 which reduced 17 council water service providers to 10, each with water and sewerage responsibilities and many also managing bulk water supplies. Then, in July of the same year, all bulk water assets were mandatorily transferred to three new state-owned statutory authorities (Seqwater, LinkWater and Water Secure) and the entity known as the SEQ Grid Manager was also created.

“ A man or an organisation, even a society, capable of profound, internal panic is able to recognise when he or it is on the wrong track and perhaps to identify the error by giving in to the need for complete re-evaluation. Out of that re-evaluation may come the right track. ”

Ralston Saul, 1992

After much debate and several false starts, in 2010 three joint council-owned statutory authorities (Unitywater, Queensland Urban Utilities and Allconnex Water) were created to take over all distribution and retail services in three sub-regions of SEQ.

During this period the State invested heavily in urban water infrastructure in SEQ, including a desalination plant, three advanced wastewater treatment plants, new and expanded water storages and 200 km of bulk water pipelines to transfer water around the region. The largest centre of population in the State, rightly concerned about water scarcity, dramatically reduced household water use and was treated to front page headlines in the region's Courier Mail for three years which boasted the latest expenditure on drought-proofing SEQ. Elsewhere in the state many communities watched with concern as the seat of power faced drought conditions well known in the arid parts of the State but often better managed because of the smaller populations.

The response, judged by many industry commentators at the time as being excessive, was certainly welcomed by much of the community. Unfortunately, haste does make waste and many expensive mistakes were made.

The institutional changes were largely reversed within a few years of their creation. In July 2011, Water Secure was merged into Seqwater and LinkWater followed in 2012.

Through a series of political decisions, in 2011 one of the three urban retail and distribution entities, Allconnex in the south of the region was returned to its three owner councils. The organisation had been in existence for less than two years. The functions of the Water Commission and Grid Manager were reabsorbed into the State Government and its authorities and even council amalgamations have been partially reversed in four areas across the State including Noosa in SEQ.

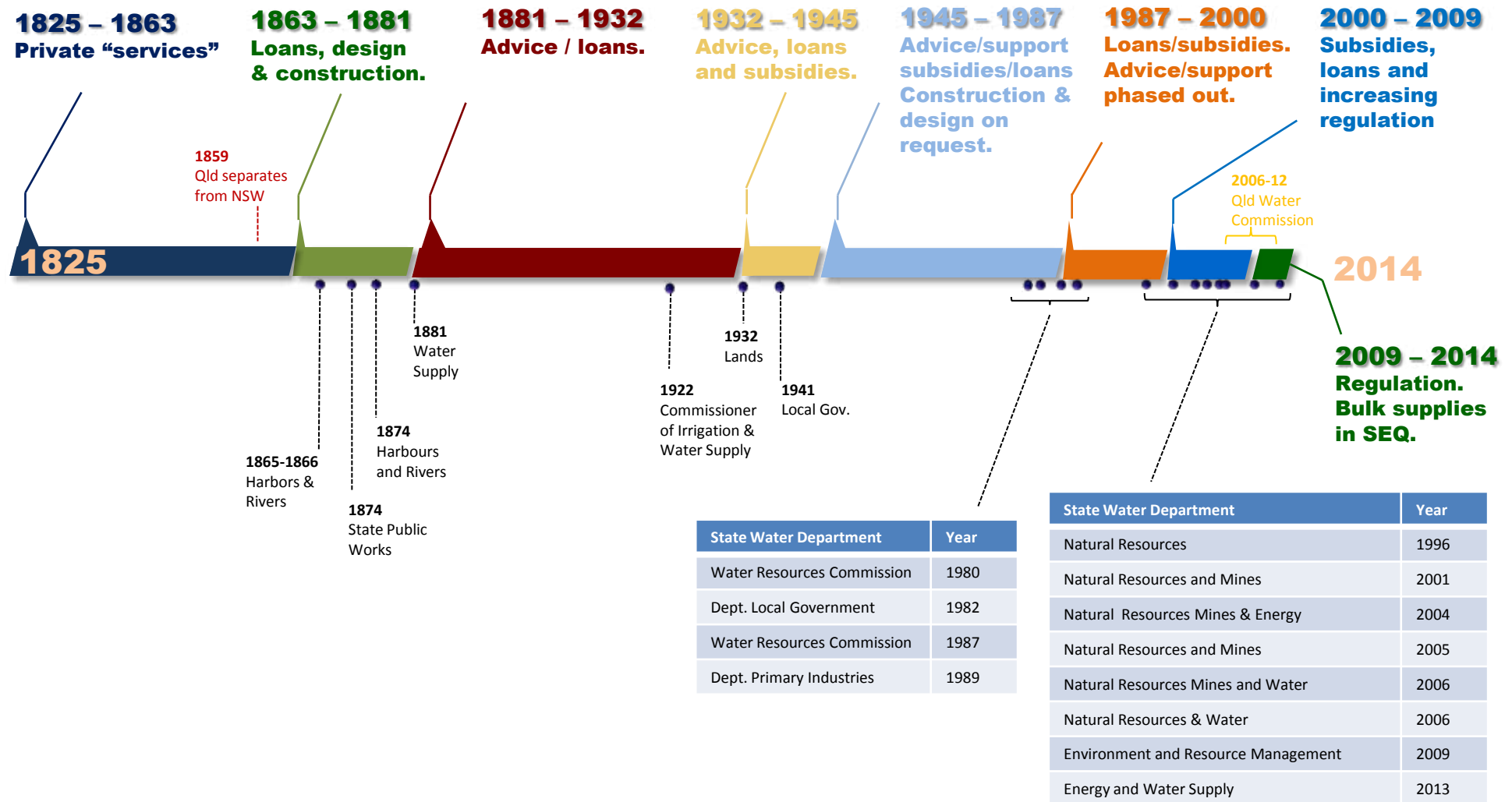
At the time of writing the desalination and advanced wastewater treatment plants, once welcomed as drought-busting breakthroughs, were being mothballed and heavily criticised as "white elephants." Despite the overly hasty and excessive manner in which these plants were created, there is no doubt they will be used in the future and welcomed by a thirsty community as the drought-flood cycle continues to impact on Queensland's growing and forgetful population.

The incredible expenditure on infrastructure in time of drought now has to be repaid and the pressures of increasing water prices on the cost of living have now replaced the sensational drought-busting headlines in the Courier Mail.

*Right: The Tugun Desalination Plant.
Photo courtesy Seqwater.*



Timeline of major periods in the cooperation of State and Local Government on urban water services. Changes in the State agency responsible for urban water are indicated by points on the timeline.





This page - Copperlode Falls Dam supplying water to Cairns - images taken during IPWEAQ State Conference technical tour October 2013

Bundaberg

The one-day average rainfall over the Burnett catchment was nearly 70% higher than the previous record! As flood waters rose and infrastructure was inundated, water supply was conserved in some areas. The Gin Gin Water Treatment Plant was non-operational for a day but existing storage capacity allowed for limited supply until the plant was restored, despite the peaking flood.

“Through adversity is where I have seen humanity at its finest with sacrifices by many to maintain essential services to the community.”

Jeff Rohdman, Bundaberg Regional Council

Early notice of the flood had allowed water managers to ensure reservoirs were well prepared. Similarly, pump failures resulted in limited water pressure for residents in the Gooburrum and Zorzan Estate area but were remedied within 24 hours.

Unfounded rumours circulated that Bundaberg's water supply was being “cut-off” and the Council rushed to assure their community that the rumours were false.

On 29 January 2013 at 3pm the Burnett River peaked at 9.53m AHD at the Bundaberg gauge, the largest flood in recorded history.

Damage occurred across the Bundaberg Regional Council area with 80% of the impact focussed on the Burnett River catchment. Evacuations were required, particularly from houses in the northern part of the city where damage included multiple breaks to water supply infrastructure as well as severe damage and loss of complete sections of sewerage lines.

Nearly 4,000 flood damaged houses were inspected with 38 destroyed, 356 severely damaged and 784 having floodwaters rising above power points.

Millbank Wastewater Treatment Plant was extensively inundated and damaged from the flood event, with Council having to establish a sewerage bypass, rebuilding the main electrical switchboard, sub-boards and equipment and establishing a temporary chlorine facility after removing the remains of the existing chlorine dosing building. The existing sludge drying beds had to be removed and replaced and more resilient access roads and retaining walls built.

In the week following the floods, residents in several zones of the Council's complex water supply system were requested to use water for essential purposes and boil water notices were issued for some parts of the reticulation system as a precautionary measure.

Council undertook extensive testing of the water supply using their own well-established facilities and sent confirmation samples to the Queensland Health Forensic and Scientific Services to be sure.

Services were fully restored, even in the hardest hit areas, within a fortnight.



The Service Provider's resilience in the face of this unprecedented event reflects both the commitment of the staff and local community but also the preparedness honed through many small events in the past.

Above: Clean-up of Millbank WWTP – Barra anyone?

Right: Millbank and East Wastewater Treatment Plants suffered a lot of damage. Images courtesy Bundaberg Regional Council.

Innovation Doesn't Always Mean "Whizz-bang"

Tried and true technology does not necessarily mean an absence of innovation and there is much to merit in smart, simple, fit for purpose designs.

For example, the use of evaporation from oxidation ponds in dry western communities is a good example of innovatively aligning natural conditions with community needs. The patchy and low volume rainfall in the region means that treated sewage discharges to waterways are uncommon. This simple process is cost effective with minimal environmental impact and an optimal outcome with respect to power consumption and greenhouse gas emission. Imhoff tanks are also commonly used with the digested sludge dried on sand drying beds assisted by wind and solar energy compared to dewatering by centrifuge or belt filter press which requires chemicals with embodied energy and electrical power.

Right: An oxidation pond in Quilpie, drying bed including obligatory vegetables!

“The definition of insanity is doing the same thing over and over again and expecting different results.”

Albert Einstein (attributed)



Change is a constant for the Queensland water industry, and it's no more evident than in the political arena. The last 10 years in urban water in Queensland has been undeniably tumultuous, characterised by lurching reform.

Urban water has become over-regulated and, heading towards 2014, risks becoming under-regulated in some areas with the pre-2012 drive for “green tape” reduction becoming consumed by a whole-of-State-Government imperative for reduced regulation.

“Empowerment” of Local Government in 2012/13 has actually seen a number of politically unpalatable decisions delegated to Local Government, and whether intended or not, significant cost shifting as part of a systemic approach to cost cutting by the State Government.

Here's a quick snapshot of significant events, followed by a closer look at the effects of these changes on the industry as a whole.

A is for Amalgamations

Shortly after *qldwater* began operations, in March 2005, the Local Government Association of Queensland (LGAQ) released the Size, Shape and Sustainability of Queensland Local Government discussion paper outlining the drivers of change for Local Government. These included increasing community expectations, changes in standards and legislative requirements, reduced financial assistance with a higher dependence on financial assistance grants and under-funding of infrastructure replacement. In essence, it was clear that many communities were struggling and the paper explored collaborative options to improve this situation.

LGAQ suggested different models for consideration, stating that sustainability must consider not only financial issues, but must also include community factors and growth management. A strong, common community of interest is an indicator of a sustainable Local Government area, helping to enable a representative and effective council.

LGAQ then presented a framework for the review of structural reform options by two or more councils based on four specific stages:

- exploring options and partners
- gathering information, research and analysis
- community engagement, and
- council determination of structural change options.

The LGAQ believed that any amalgamation would require a public referendum with majority support in each council area regardless of whether each council had determined this as the best option to address issues.

The consultative process undertaken under the auspices of a Sustainability Reform Advisory Group consisting of senior level representatives from LGAQ, the Department of Local Government, Planning, Sport & Recreation, the Queensland Treasury Corporation, the Local Government Managers Association (Queensland) as well as the Queensland University of Technology had been in train for some time when then Premier Peter Beattie announced on 17 April 2007 that Queensland's 157 councils, with more than 1,100 elected Councillors, would undergo “their first sweeping reform in more than a century.” The number of councils would be reduced by more than half, from 156 to 73, and more than 700 Councillors would lose their jobs. The unanticipated announcement caused public controversy, but the proud and fierce protests that raged for months had little impact.

Premier Beattie's 2007 announcement established a Local Government Reform Commission (LGRC) to make recommendations, in less than four months, on the most appropriate structure and boundaries for all Queensland Local Government councils, except Brisbane City Council, which was excluded.

Cressbrook Dam, Toowoomba



Lake Samsonvale. Photo courtesy Michael Lever



*Perseverance Dam, Toowoomba during the 2013 **qldwater** SWQ Regional Conference and Dams Tour*

