



Productivity Commission National Water Reform Inquiry – Response to Issues Paper submission

August 2020

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Submitted via: <https://www.pc.gov.au/inquiries/current/water-reform-2020/make-submission#lodge>

21 August 2020

1. Summary

The National Water Initiative can claim to have contributed to many instances of improved stewardship of this valuable resource.

The Queensland Water Directorate (*qldwater's*) interest and expertise is focussed on urban water and sewerage services. The Productivity Commission Inquiry Report into Australia's Urban Water Sector (2011) and National Water Reform Report (2018) provided insights into challenges facing the sector in Queensland. Overall, the sector has seen incremental improvements in policy and regulation in our state, however the abolishment of the National Water Commission and general lack of drive to support the NWI since has meant a missed opportunity to address further improvement required.

qldwater believes:

- the National Water Commission, or similar custodian should be reinstated to steer a reinvigorated National Water Initiative and support states and territories in its implementation;
- the new NWI should include a specific focus on urban water and sewerage services and the challenges of maintaining levels of service with the growing pressure of ageing infrastructure;
- the new NWI should further focus on small and unsustainable regional and remote services – regionally-specific studies dealing with minimum standards of service for all Australians, and the challenges of population decline.

2. Background

The Queensland Water Directorate (*qldwater*) is the central advisory and advocacy body within Queensland's urban water industry representing the majority of the State's Water Service Providers, from small local governments up to major utilities including Queensland Urban Utilities and Unitywater. *qldwater* works with its members to provide safe, secure and sustainable urban water services to Queensland communities.

In 2019-20 *qldwater* had a total of 72 full members, which included:

- 2 of 2 Torres Strait Island Council Service Providers
- 15 of 15 Aboriginal Councils
- 52 of 52 Non-Indigenous Councils
- 2 of 2 council-owned Statutory Authorities in SEQ (Unitywater, Urban Utilities)
- 1 of 2 state government-owned Statutory Authorities (Gladstone Area Water Board)

Our subscription programs involve some other utilities and we have 11 Affiliate (Industry and Government) partners.

3. Consultation Approach

This submission is collated from a number of past consultation activities including events held from 2018 onwards, webinars and personal interviews, as well as feedback the **qldwater** Strategic Priorities Group and other reference groups.

Consensus among such a diverse and geographically spread membership is impossible to achieve. The opinions expressed herein are **qldwater's** alone. Similarly, we do not have the expertise to respond to all Information Requests detailed in the Issues Paper.

4. Responses to Information Requests

INFORMATION REQUEST 1

The Commission welcomes feedback on:

- *whether the signatories to the NWI are achieving the agreed objectives and outcomes of the agreement*
- *which elements of the NWI have seen slow progress*
- *whether there are cases where jurisdictions have moved away from the actions, outcomes and objectives of the NWI*
- *any other data and information sources that might be useful for assessing progress.*

The NWI aimed to achieve the following:

- i) clear and nationally-compatible characteristics for secure water access entitlements;
- ii) transparent, statutory-based water planning;
- iii) statutory provision for environmental and other public benefit outcomes, and improved environmental management practices;
- iv) complete the return of all currently overallocated or overused systems to environmentally-sustainable levels of extraction;
- v) progressive removal of barriers to trade in water and meeting other requirements to facilitate the broadening and deepening of the water market, with an open trading market to be in place;
- vi) clarity around the assignment of risk arising from future changes in the availability of water for the consumptive pool;
- vii) water accounting which is able to meet the information needs of different water systems in respect to planning, monitoring, trading, environmental management and on-farm management;
- viii) policy settings which facilitate water use efficiency and innovation in urban and rural areas;
- ix) addressing future adjustment issues that may impact on water users and communities; and

- x) recognition of the connectivity between surface and groundwater resources and connected systems managed as a single resource.

This response is focussed on the impacts of the NWI on urban water and sewerage services in Queensland and does not address national and state water planning, trading and allocations. In so far as the NWI seeks to address urban services, there has often been slow or no progress.

Water security underpins the NWI. In Queensland, despite heavy investment in drought management in some areas (particularly South East Queensland), many regional urban communities are still faced with severe to critical shortages during cyclical droughts. Often, investments have been reactive and independent of water efficiency measures. There is still no clear plan to drought-proof all large communities nor to provide affordable contingency arrangements for many small towns (See Information Request 4 below).

Innovation in **water sourcing, trading and opportunities** for recycling (including potable reuse) has progressed little beyond the development of the Bulk Water Opportunities Statement and the investment in bulk water delivery assets in parts of the state (see Information Request 4). Plans for water security in many regions are reduced to political arguments over the affordability and utility of new dams with no clear infrastructure plan to ensure future water security or the certainty of communities and investors in Queensland's regions. WSAA has promoted an "all options on the table" concept for decisions about water sources which includes new approaches to stormwater and sewage management. **qldwater** supports the concept, however it is difficult to see pathways to adoption with Queensland's current political appetite and institutional issues. **qldwater** strongly advocates for "fit for purpose" infrastructure solutions – cost-effective and strongly aligning water needs with end uses over a long-term planning horizon.

Water quality for urban uses is an implicit requirement of the NWI objectives and has formed an element of previous triennial reviews. Introduction of mandatory Drinking Water Quality Management Plans in Queensland have improved services for many communities but there are still small towns that do not consistently receive water that meets ADWG standards. Around one third of regional communities receive water with only disinfection or no treatment at all. The risks for some of these communities are reflected in regular annual spikes in seasonally-driven water quality incidents (see Information Request 10).

Water accounting and reporting has been a strong focus in recent years. Significant investment in BoM and NPR reporting has resulted in clear improvements in the quality of data over time, but there is little evidence that e.g. urban water use has changed in any meaningful way in response to this reporting and the information is rarely presented in a way which improves public understanding. Reporting mechanisms have been largely ineffective and yet regular reviews recommend minor changes to the systems and processes. There is no clear vision for how monitoring and assessment can lead to greater competition by comparisons and improve outcomes for urban communities (See Information Request 10).

In spite of agreed **pricing principles**, pricing practices for urban water have changed little in the past ten years outside of major cities. Pricing of regional urban services are seldom cost-reflective or transparent to customers. In the smallest communities, services are typically locally unsustainable with cross-subsidisation and community service obligations hidden within complex funding models, local government accounts and state and commonwealth government grants schemes. Where pricing oversight has been introduced in South East Queensland it has been heavy-handed, expensive and lacking any clear direction on the net benefit to customers and the community (see Information Request 8).

Competition reforms saw some restructuring and transparent reporting for larger service providers across the state but most water and sewerage services are embedded in councils with limited transparency around service costs (See Information Request 8). Competition by comparison is hampered despite mandatory annual reporting of performance indicators and state and national levels. There is little competition and no reporting or monitoring of the performance of state regulators (either between or within states) meaning that Queensland regulators have had to repeatedly adopt new regulatory approaches reactively and without evidence of learning from other jurisdictions either nationally or overseas. This results in substantial waste for the regulators and the industry.

In terms of the elements of the NWI, the general progress for urban water and sewerage services in Queensland could be summarised as follows:

Element	PROGRESS (urban water)	
	SEQ	Regional
1. Water Access Entitlements and Planning Framework	Minor	Minor
2. Water Markets and Trading	Minor	Minor
3. Best Practice Water Pricing and Institutional Arrangements	Desultory	Minor
4. Integrated Management of Water for Environmental and Other Public Benefit Outcomes	Moderate	Minor
5. Water Resource Accounting	Moderate	Minor
6. Urban Water Reform	Significant	Minor
7. Community Partnerships and Adjustment.	Moderate	Moderate
8. Knowledge and Capacity Building	Significant	Moderate

INFORMATION REQUEST 2

- *Is the NWI adequate to help Governments address the identified challenges?*
- *Are there any other current or emerging water management challenges where the NWI could be strengthened?*

The focus on urban water and sewerage must be strengthened in the NWI. In 2004, there was little formal recognition of the infrastructure investment deficit facing our sector.

It could be argued that **skilling** is a significant industry issue which is inadequately considered in the NWI. There are two key current components:

1. A recognised shortage, especially of operators.

The 2018 Local Government Workforce and Future Skills Report published by the Local Government Association of Queensland showed that Queensland councils identified Wastewater and Water Treatment Operators as their top two skills shortages with 28.3% of councils reporting a shortage of Wastewater Treatment Operators. 13.2% reported that as a result of the shortage, they had been forced to recruit less skilled applicants and 35.8% flagged the job role as a future shortage. Similarly, 22.6% of councils reported a shortage of Water Treatment Operators with 9.4% having recruited less skilled applicants and 30.2% highlighting the job role as a future shortage.

The shortage of operators is not isolated to Queensland water service providers. The 2019 Water Industry Skills Forecast published by Australian Industry Standards reported Water and Wastewater Treatment Operators at the top of the list of skills shortages for the water industry nationally, ahead of Maintenance, Engineers and Water Quality Managers. Reasons identified for the shortage include:

- Low salaries/wages
- Competition from other organisations
- Geographic location of vacancies
- Ageing workforce
- Poor image of the industry and roles.

2. A thin, and weakening training supply market, with particularly acute issues in NSW, but ultimately impacting the sector nationally. There are various advocacy activities underway to attempt to address this and a number of contributing factors, but several Registered Training Organisations have left the market, typically citing commercial viability and an increased bureaucratic burden due to VET quality requirements.

It should be noted that no Australian jurisdiction has a minimum mandatory training standard for drinking water operators. In **qldwater's** view, this is at odds with community expectations.

The industry has known for a long time that skilled workers and a culture of troubleshooting and mentoring is fundamental to providing safe and sustainable services. Water Research Australia has supported this through a robust “Value of Operator Competency” research program. The investment required to gradually implement a mandated framework across Queensland is a small fraction of the current infrastructure deficit.

While a minimum standard should not be an excuse for trying to stimulate a training supply market, a change in regulation would have an effect which would likely be positive in the longer term but need to be carefully managed in the short term.

qldwater strongly supports a solution that includes competency mapping to plant processes, continuing professional development and independent validation, which the current National Operator Certification program delivers on a voluntary basis.

INFORMATION REQUEST 3

- *The Commission welcomes feedback on the matters that should be considered for inclusion in a renewed NWI.*

A renewed NWI should have a specific and independent focus on urban water and sewerage addressed in terms of integrated water cycle management (including the nexus with stormwater and rural water). This could include the following elements:

1. A national focus on improved management of the assets managed by the urban sector. This should include the human assets (see discussion of skills needs at Information Request 2) and also infrastructure management and planning.
2. In the absence of effective competition by comparison, national systems for sharing information on best practice infrastructure investment and planning, standards and operational performance monitoring need to be strengthened. This would assist in reducing waste and build efficiencies for all utilities, particularly in states like Queensland where there are a large number and many lack scale.
3. To ensure continuous improvement, a refreshed NWI should include annual performance reporting and operational monitoring of each states’ performance in implementing agreed actions. This could also go part of the way towards improving information sharing, efficiency and effectiveness of state regulators (see Information Request 1).
4. Establishing typical levels of service and minimum standards for different communities and mechanisms for improving customer understanding of costs and pricing structures for urban services. This form of information sharing, although subject to inconsistencies

and variation across the country, is essential at a national scale to inform affordability and pricing decisions (see Information Request 9).

INFORMATION REQUEST 4

- *How effective are water plans at managing extreme events such as severe drought?*
- *Are NWI principles being applied at these times?*
- *What steps have been undertaken — or should be undertaken — to plan for long term changes in climate?*
- *What lessons have recent extreme events (bushfires and COVID 19) provided for planning?*

Attention spans of governments are typically short, with planning and investment trailing climatic impacts. Examples include the closure of the National Water Commission and the failure of the National Centre of Excellence in Desalination and Australian Water Recycling Centre of Excellence to secure ongoing support once dams were full at the end of their 5-year funded terms.

While the approach and institutional models chosen for South-East Queensland can be debated, industry reform in South-East Queensland has had a positive impact on the region's water security and the delivery of a number of services as the organisations have matured. It is clear that local government amalgamations have improved the sustainability of a number of regions, while not addressing issues in others.

The Queensland Government has undertaken a body of work in developing the Queensland Bulk Water Opportunities Statement and many individual Regional Water Supply Security Strategies. At the time of writing, new processes had been implemented to improve water security reporting by councils, with the Department of Natural Resources and Mines and Energy collaborating with **qldwater** on integration of the reporting in the SWIM system.

The Department has also re-invigorated a Water Educators Network focussing on water efficiency messages and resources. There is not a process for implementing water efficiency targets with incentives/ penalties for vulnerable communities, and the grant or emergency response funding approaches do not promote these behaviours.

Both major political parties have publicised versions of the Bradfield Scheme as their only tangible water policy leading into the current state election. While **qldwater** will not venture an opinion on the viability of such proposals, the focus is clearly on economic development and irrigation for agriculture rather than other urban uses.

Thus the interest and investment in water security planning and efficiency measures has been cyclical, trailing water scarcity, and with increased reporting, planning, and some communities resorting to state-supported water carting and other redundancy measures, we appear to be at the start of an upward trend.

Other climate change impacts, including the increased frequency of extreme events, remain a critical priority. Most Queensland utilities impacted by floods and cyclones have a continuous improvement approach to disaster management, and informal support networks are effective in complementing state and federal recovery frameworks. The critical role of local governments in disaster management and integration of water and sewerage services with most, is advantageous.

More recently, the Water Services Sector Group has embarked on a review of national Mutual Aid Guidelines, working in concert with WSAA, Queensland, NSW and Victorian water directorates. This broadening of informal support networks is welcomed, and **qldwater** supports WSAA's broader national COVID recovery advocacy, including digital technologies to support regional and remote operations.

The Queensland Government acted quickly in March to convene a COVID taskforce involving representatives from key agencies and industry stakeholders. Each service provider was contacted – either by **qldwater**, the drinking water regulator, the Department of Local Government, Racing and Multicultural Affairs, or all three to determine critical risks and promote information sharing. Emergency capacity was identified through a number of sources including the private sector, and the **qldwater** membership responded extremely well, sharing business continuity planning experience and ideas to support continued services in the event of an outbreak.

The taskforce ceased to meet after a number of weeks, reconvening occasionally to discuss border restrictions.

qldwater promoted several risks identified during consultation including many “highly vulnerable” councils where there was little or no redundancy in essential skills; e.g. drinking water operators. These risks existed before COVID (and are symptoms of the broader institutional and investment issues described elsewhere in this submission). We remain hopeful that that there will be an opportunity to progress.

COVID has led to enhanced collaboration – particularly among **qldwater**, WSAA and the NSW and Victorian Water Directorates. There should be an expectation of consistency in recommendations around key issues as a result, especially impacting regional and remote Australia.

INFORMATION REQUEST 7

- *What progress are States and Territories making on including Indigenous cultural values in water plans, and how are they reporting progress?*
- *How could a refreshed NWI help Indigenous Australians realise their aspirations for access to water, including cultural and economic uses?*

qldwater strongly supports the need to recognise needs and values of Indigenous people in water planning and management. We support Indigenous-specific consultation by the Productivity Commission and would assist as possible with contact with 15 Aboriginal and 2

Torres Strait Island council members of *qldwater* and several other small councils with significant populations of first nations people.

This would be a significant undertaking because of the small and remote nature of many of these communities and current disruption of communications by COVID-19. Discussion of specific indigenous values in water planning and decisions impacting cultural heritage is beyond our expertise and there was insufficient time to survey responses from our members for this response.

In considering how a refreshed NWI could be more relevant to urban water and sewerage services for indigenous Australians, it should be noted that the majority of these services in Queensland are provided through discrete councils. Many are designated Aboriginal and Torres Strait Island Councils but there are also recognised indigenous communities that form part of, and are serviced by, larger councils. Other councils have significant indigenous populations but aren't classified as indigenous because they fall below a recognised threshold.

The high indigenous involvement in local government creates an opportunity – many councils can be well-placed to assist in recognising local and cultural values and provides a central point of communication to reach different sub-groups of the communities including traditional owners.

All of these councils share two challenges with respect to urban water services, regardless of the size of their indigenous populations. The first is that councils, by definition, address multiple complex issues for the communities they serve, and water and sewerage issues are typically de-prioritised until a significant problem (e.g. drought, water quality incidents, asset failures) arises. This means planning and long-term investment decisions are difficult and often reactive.

The second challenge that is common to indigenous and other small communities is that their revenue base is insufficient to provide modern services and thus requires cross-subsidies. Non-transparent subsidies in small communities erodes the nexus between customers and the services they receive, and this link is at best vague, even for large city customers. In many Aboriginal councils where rates are not levied, there is a further disconnect.

Both of these challenges mean that the W&S expectations and values of small communities must be balanced with affordability and the opportunity cost for other community services. For small communities in regional Queensland, achievement of Sustainable Development Goal 6, which sets the expectations for clean water and sanitation for all, ultimately reduces to a question of affordability for nearly 200 potable schemes with fewer than 700 connections (and a combined network length exceeding 2500 km). This includes all indigenous councils and many others with large first nations populations.

The number and remoteness of small communities mean that capital and operational expenses must be optimised state-wide or they will be unaffordable for the communities and subsidy providers. At present, capital expenses are subsidised through *ad hoc* State grants while operations are managed at a local scale. Neither approach is optimised for financial sustainability and local management is plagued by a lack of access to necessary skills. For these reasons many national reviews have argued that regional services must be transferred to large State, or privately-owned utilities. While this suggestion would provide economies of scale, it is unlikely to respect local and cultural values, particularly for indigenous communities.

Other options may be more sustainable. The PC enquiry and NWI review could be informed by the success of other approaches in Queensland indigenous councils including

coordinated funding for skills-development, contracting operations to third parties, and recent Queensland Health mentoring and capability programs (see Box 1).

Unfortunately, these solutions are not embedded and guaranteed ongoing programs, and all are expensive because of the time of staff from agencies and third-party service providers. Another alternative is extensive mentoring. There are a small number of regionally-based companies that provide regular visits to small councils, reviewing operations,

providing advice, and troubleshooting with phone support the rest of the time. In many cases neighbouring councils provide a similar service. QWRAP also encourages regional support for small councils with three QWRAP regions including Aboriginal councils or communities. QWRAP encourages voluntary regionalisation of W&S management while maintaining council ownership of assets. Whatever solution is adopted, two key features are transparency and recognition of local needs and cultural factors.

Box 1. Safe Drinking Water in the Torres Strait

The Torres Strait Island Regional Council (TSIRC) operates 15 WTPs across 14 islands including several desalination plants. A number of initiatives were commenced jointly by the Council and Queensland Government following a review in 2016 including the 'Safe and Healthy Drinking Water in Indigenous Local Government Areas Project'. This project was a joint initiative by TSIRC and Tropical Public Health Services in Cairns and was highly successful in improving water quality management because of:

- Co-design of projects and initiatives - best outcomes came from cooperatively building training, systems, design, processes from the ground up.
- Appropriate technology - rather than prioritise latest-technology upgrades, the Project focussed on solutions that were reliable to operate and suitable for obtaining cost effective parts/spares/technicians to allow repairs.
- Mentoring and training using alternative delivery methods including experts working directly with staff on site.
- Cross agency collaboration - assisting with breaking down barriers across multiple state and federal departments.
- Operating funding (rather than solely supporting capital investment).

The discussions needed to define and achieve affordable levels of service for water and wastewater in small and remote communities are difficult and unlikely to occur at local, regional or state levels. Nationally, PC and NWI provide useful platforms to promote and support such discussions and encourage the necessary regional scale planning and management that is affordable but embraces recognition of local and cultural values and recognises broader needs for reconciliation and 'Closing the Gap' for indigenous communities. A renewed NWI should also include a framework for reporting on progress towards agreed goals over time to avoid flash-in-the-pan programs and investment.

INFORMATION REQUEST 8

- Are the institutional arrangements for metropolitan water service providers fit for purpose? Is there evidence of inefficient pricing or investment decisions?

qldwater held one webinar with its members on 23 July to take advantage of the technology to improve the level of participation in this submission, and conducted a number of direct interviews with those who elected to follow up after the event. Commission representatives kindly supported the webinar. There were 89 participants in the session with background material delivered and followed by 5 short polls, aimed at determining whether the proposed **qldwater** submission reflected member views. The topics did not directly mirror the Issues Paper but do represent items which have historically been contentious. In each instance, the majority of participants supported a stated position, but the next highest proportion of respondents favoured a more radical position, indicating a strong appetite for change, including institutional reform. The results are tabled below.

Topic	Summary of presented position	Too Conservative (%)	About Right (%)	Too Radical (%)
Institutional Models	Generally no promotion of reform, instead working towards best practice within existing structures – take advantage of economies of scale, better infrastructure planning and management, distinct strategies for struggling communities, objective decision making, link to national advocacy to drive state-wide improvement.	21	75	4
Independent Economic Regulation	Acceptance that an increased level of economic scrutiny is needed, however the industry needs significant work to be ready for it – there is not a viable existing regulator in Qld, utilities need to be of “sufficient scale,” utilities have a responsibility to improve their own practices including the use of independently validated costing/ pricing models.	36	64	0
Investment	Queensland’s funding model is broken and past PC recommendations include the cessation of grant programs and introduction of CSOs. The position presented again focussed on readiness for change – improved transparency, recognition of priority investment targets to meet clearly articulated minimum service standards for small communities, improved regional-scale capital planning, a clear and distinct focus on smarter solutions to service small communities.	37	59	4
Performance of Jurisdictions	This attempted to provide a high-level measure of Qld’s performance against NWI objectives for urban water and sewerage services. Each objective was considered with results from “no progress” to “some progress.” The presented position suggested a focus on performance monitoring, re-invigorating the NPR, continuous improvement of the state KPI framework, learnings from COVID and importantly, a means of monitoring and comparing progress of jurisdictions – regulators and policy makers, not just utilities.	50	50	0

Transparency, Public Reporting	The position included more transparency and public reporting, better communication of drinking water risks and means of implementing improvement actions, transparent price modelling and a critical evaluation of past investment (grant) programs and regulatory frameworks.	30	67	3
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The lack of transparency theme is strongly reflected throughout. On publicly available information, there is clear evidence of inefficient pricing and investment decisions, including:

- Capital investments supported by state and Commonwealth grants that are not fit for purpose;
- Inconsistency in pricing approaches state-wide; and
- Inefficient practices which are difficult to defend by any definition, e.g.

Further examples come from volumetric data.

- The statewide **median** for potable water supplied (per connection per annum) for 2018/19 was 555kL, which has not significantly changed in the last 7 years.
- The statewide **median** for real water losses (noting that for the reporting year **small service providers were not required to report** and leakage is extremely high in some locations) was 78.6L per person per day.

The *Local Government Act 2009* (S45) requires the identification of “significant business activities” including reporting on the application of principles of competitive neutrality – essentially by establishing a commercialised business unit or achieving full cost pricing for local governments with 10,000 or more connected water services.

- The choice of water connections was made to replace the previous annual revenue measure for determining a significant business activity, as it provides a more stable number for councils close to the threshold potentially dealing with annual fluctuations. However, there is no guarantee that full cost pricing based on TOTEX is achievable/ affordable for these councils and their customers.
- Anecdotally, some members report that while a commercialised business unit may or may not exist, the principles of competitive neutrality are routinely challenged with no compliance scrutiny of these regulatory provisions.

The Commission’s past recommendations around the replacement of capital grants with CSOs are welcomed, however the lack of guidance on how to manage a transition seems likely to be used as an ongoing excuse for inaction. Two ideas are put forward for consideration as interim steps:

- Regional-scale grant programs enabling regional-scale infrastructure and service solutions. These exist for other council services including roads, at a very small scale for programs like QWRAP, and have the potential to encourage mutual support, collaboration and peer review of investment decisions.
- A more comprehensive technology review in collaboration with experts, regulators and service providers. A recent program sponsored by the Office of the Great Barrier Reef in the Department of Environment and Science saw the critical

review of a range of wastewater treatment options (including offsets) with basic Life Cycle Analysis, and service providers in Reef catchments putting forward projects to suit preferred options. The resulting priority list for projects now awaits financial support, however it represents fit-for-purpose solutions with the support of all key stakeholders and independent assessment of proposed options.

Economic regulation

The topic is conspicuously absent from the Issues Paper but featured prominently in past reports. To expand on the webinar/ polling results:

- Independent price regulation has a place when it delivers a net benefit to customers. The choice of regulator is critical, and the QCA has failed to demonstrate this benefit in the past, maintaining a costly and impractical approach.
- A first principles approach should be used to determine whether regulation is needed and if so, the approach taken should be representative of the level of market power that can be exercised by the water business, countervailing market power of customers and competition.
- Service providers of suitable size and scale should be encouraged to embrace transparent costing and pricing principles and the use of tools including independent modelling.

Some form of regulatory alignment or harmonisation would assist in managing the reactive nature of State regulators. A generic lack of mechanisms for clear communication among State agencies in Queensland means that needs driven by regulators are not expressed in a holistic and transparent manner to agencies responsible for providing subsidies. This results in funding being provided for infrastructure that is not a regulatory priority and vice versa. An agreed and transparent prioritisation program would reduce the tendency for *ad hoc* funding and regulatory requirements that are contradictory or mis-aligned.

Similarly, regulatory action on issues of intense public interest can artificially shift costs to water and sewerage service providers with little thought for the sustainability of the sector. A recent example is the interest of regulators in PFAS contamination of both drinking water and wastewater discharges. Regulatory imperatives were rapidly introduced in both cases to seek to address the potential risk of this contaminant at high cost to the service providers. Regulatory action has continued with little evidence provided as to a cost-benefit assessment for communities served. More balanced regulatory action would be encouraged if there were clearer links among agencies and a greater level of transparency around the risk assessments underpinning regulatory action.

INFORMATION REQUEST 9

- *How can small regional providers best balance affordability with longer term service quality? Are there barriers to effective local planning?*
- *Is there scope for greater collaboration between small providers? When might government support be warranted, and how should it be provided?*

How can small regional providers best balance affordability with longer term service quality?

The concept of affordability is normative and varies across Queensland providers. Many council service providers argue that they service towns with majority low socio-economic communities so must keep W&S prices low. This assumption must be correct for some regional areas but there must be allowance for different community capacity and willingness to pay and the tendency for all most communities to consider W&S as over-priced.

The PC review and NWI would be well placed to investigate the impact of water and sewerage rates on household budgets and how they relate to SEIFA indices in regional Australia.

Determining typical and acceptable levels of affordability for these services is critical to determining the degree of market failure faced, and cross-subsidisation required by small communities. The NWI could assist in developing measures of affordability for different types of community and monitoring where they are achieved.

This would also necessitate defining a 'minimum level of service'. Defining appropriate levels of service can be difficult for W&S services because of their natural monopoly status, requirements for (often vague) regulatory service levels and traditional externalities such as public health and environmental protection. Developing agreed service levels is further complicated by public ignorance of cost drivers and the universal presumption that they are a public right. A national benchmark for levels of service that incorporate externalities, appropriate annuities and return on investment would help define minimum levels of service.

Large service providers tend to balance affordability with service quality based on multiple signals including interactions with customers, advocacy groups, governments at all three levels and industry bodies, regulators, industry experts, peers and similar industries both domestic and overseas. These signals allow for a broad range of formal and informal benchmarking and policy development. Large organisations also have access to internal expertise and staff and contractors with expertise in other W&S utilities and industries. Small regional providers have limited access to these information sources and are also more subject to political and ideological signalling due to their small size and isolation. More formalised competition by comparison among regional W&S providers would provide a mechanisms and incentive to develop better mechanisms for benchmarking.

Are their barriers to effective local planning?

There are significant barriers to effective infrastructure planning at local scales in the Queensland W&S sector because of the size and governance of service providers. A key issue is the relative magnitude of W&S investment for council service providers.

A new or upgraded water or sewage treatment plant will be one of the largest investment decisions a regional utility makes and is a rare occurrence not only in terms of political cycles but in the entire history of a council. The importance of good decision making is amplified greatly by the fact that initial capital costs represent only a small component of the total life-cycle cost of plant and equipment. The extent to which CAPEX drives ongoing annual costs for operation, depreciation and renewals is often overlooked by councils particularly when driven by *ad hoc* and competitive grant programs (see Box 2). The ratio of the size of the initial and ongoing investment to the wealth and income of a small provider intensifies barriers to planning including:

- limited access to experience and information - even when staff are dedicated to optimising planning, they have limited prospects for developing expertise equivalent to that of large utilities or the private providers promoting specific infrastructure solutions,
- large W&S investments being treated in a similar fashion as investments in buildings, fleet or roads, despite important differences, exacerbated by oversight by councillors with less relevant experience than an independent board of a water utility,
- limited information and interpretation skewed by short-term local or political interests (e.g. optimistic population growth projections to justify major investments),
- limited negotiating power and information asymmetries with regulators and private service providers who deal with large infrastructure investment on a regular basis,
- capital subsidy programs with perverse incentives for inadequate optioneering due to hasty timeframes, short-term objectives, and politically motivated requirements,
- regional needs and opportunities being commonly overlooked for short-term local benefits (e.g. one community may upgrade non-essential services before a neighbouring town of similar size has a safe water supply).
- resource regions provide unique challenges, with local governments left to manage over-sized assets after population decline, or unaffordable bulk water supply arrangements.

Box2: Grant funding for capital works in Queensland is dysfunctional

The funding model for Water and Sewerage services in Queensland, outside SEQ is broken. The Queensland and Commonwealth governments support a range of funding programs with varying degrees of competitiveness. It is an evolving space, and this summary may include errors, however the following are believed to have the option of supporting W&S activities:

- Works for Queensland (Qld) - \$200M allocated each year on a non-competitive basis for any capital projects (NB there is an additional \$200M allocated to support COVID economic recovery for 20/21). The smallest councils receive in the order of \$1M, with the largest allocation >\$13M).
- Building Better Regions (C'wealth) - \$841.6M. Four rounds funded to date, competitive.
- Building Our Regions (Qld) – \$365M focussed on job creating infrastructure, competitive.
- Local Government Grants and Subsidies Program (Qld) - \$58M over 2 years, competitive.
- Indigenous Councils Critical Infrastructure Program (Qld) - \$120M one-off, significant in that it is specifically focussed on water, wastewater and solid waste.
- Ad hoc allocations outside formal programs.

Competitive grants are often seen by funders as a way of ensuring rigour around proposals, however any advantages gained lead to losses in other areas. There is no mechanism for consistent review of chosen technologies or guaranteed involvement of regulatory agencies which may be managing water quality compliance and other issues. Even non-competitive grants are competitive within a council environment – inconspicuous/ hidden W&S infrastructure competes with other council services which may be more politically popular.

The Commission's preference for CSOs is understandable, and while it's clearly a matter for jurisdictions to consider how to adopt, some guidance on where best to start would support general advocacy.

The NWI could assist in reducing the impact of some of these barriers by encouraging economies of scale regulation of infrastructure planning and developing and monitoring standards that are relevant for small communities.

Is there scope for greater collaboration among small providers?

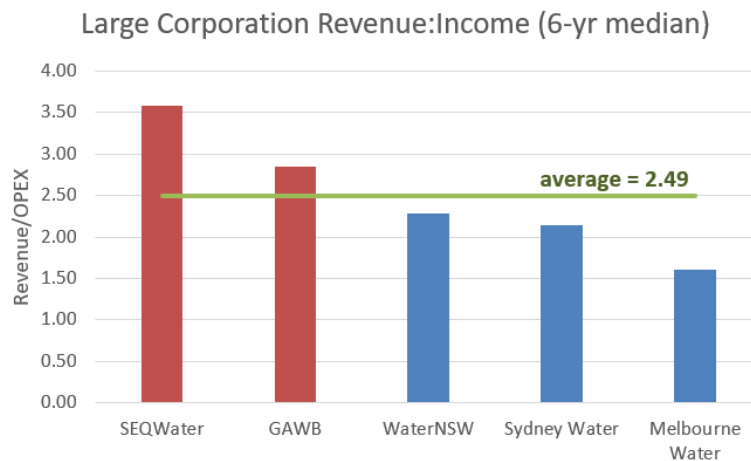
Yes, many of the above problems can be partially addressed (though not solved) through increasing scale through collaboration. Regionalisation is a common recommendation as it has been proven to yield efficiencies and helps mitigate the issues listed above. Greater scale efficiencies might also be achieved through a multi-regional or State-wide approach but this risks diseconomies of scale and distancing management and governance even further from the needs of the communities served. Regional approaches are more likely to be acceptable to communities and political palatable to governments and provide a mechanism for competition by comparison across and within regional entities. QWRAP has demonstrated that regionalisation can provide benefits to communities but also that it takes time to develop collaboration and relationships with appropriate levels of trust and risk appetite to undertake cooperation without external incentives.

When might government support be warranted, and how should it be provided?

Government (State and Commonwealth) support is essential where there is market failure and a need to support unsustainable communities. This likely covers the majority of communities up to a size where W&S rates become sufficient to provide minimum expected levels of service (see above). This leaves the question of the quantum of support provided for each and how to avoid moral hazard of poor performance to access increased subsidisation. This balance is difficult at regional and State scales but could be facilitated through national standards, case studies and incentives that select for improving practice.

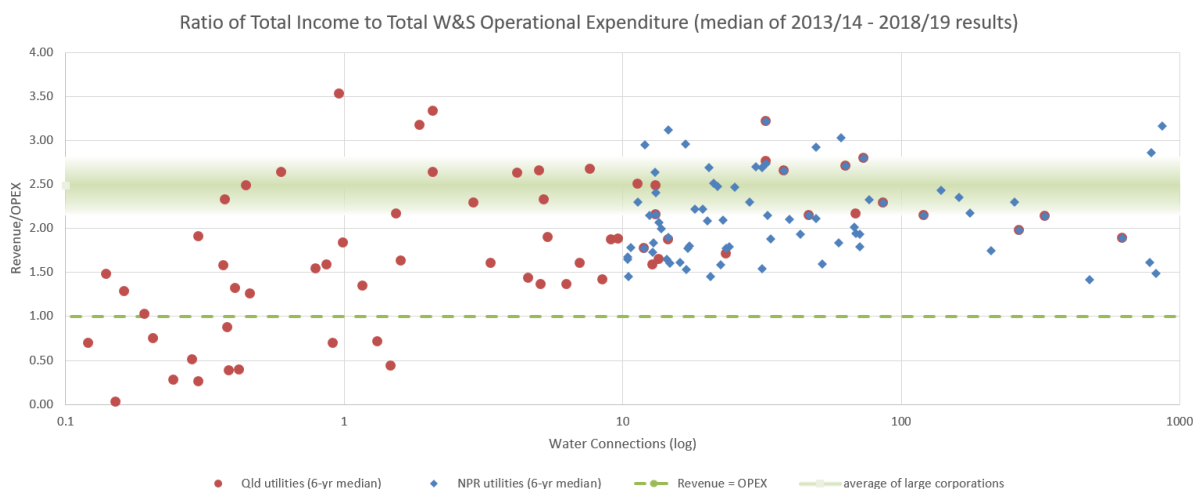
One way to judge the financial sustainability of regional Queensland council W&S services is to compare total revenue for these services with the amount spent on operations and maintenance (O&M). If annual expenditure is composed of O&M along with depreciation, finance expenses, dividends and the cost of renewals and new assets then total revenue must be a significant multiple of O&M expenses. The exact multiple will depend on the size and type of W&S assets managed and their age and while there is no ideal figure. However, a typical range might be inferred from comparisons of large national utilities as in the figure

below. There is a large range in the median (over the past six years) of the ratio of total Revenue to total O&M across some large state-owned corporations. These utilities are of mixed size and some provide only bulk water services so direct comparisons are unhelpful but it is clear that Revenue is general greater than 1.5 times O&M and on average 2.5 times higher.



Smaller utilities lack the economies of scale available to these corporations and often manage a larger scope of services (including sewerage). The following figure summarises the median ratios (over the past six years) for NPR (blue) and Queensland (red) utilities (with some larger utilities in both datasets represented by overlapping dots). The

shaded green zone represents a range around the average value from the large corporations. Some utilities in Queensland and nationally have higher median ratios, but many are lower with a number falling close to or below the dashed line that reflects where revenue suffices only to cover O&M expenses. This leaves other costs including depreciation, finance costs, renewals and any investments in new assets to be covered through other income sources. The thirteen councils that fall on or below this line are small and include eight indigenous councils (which may not levy full water and sewerage rates). Six additional Aboriginal Councils are not included in the plot because they reported no water and sewerage revenue.



This data highlights a number of issues.

- The absolute ratio of OPEX to Revenue varies across Australia and likely depends on a range of cost drivers including the age and condition of current assets so is not a good assessment of efficiency.
- Some small service providers have sufficient revenue to cover operational expenses in spite of their size but the very smallest do not, and are unlikely to be sustainable.
- Cross-subsidisation to is clearly taking place in these small service providers and must extend beyond capital grants.

INFORMATION REQUEST 10

- *Do water service providers supply high quality water services in regional and remote areas? Are there examples of poor water quality, service interruptions, or other issues? Have regional water service providers adequately planned for extreme events?*
- *Are there sources of data that could be used to benchmark smaller providers' water service levels (with fewer than 10 000 connections)?*

Population growth in major cities is of equal importance to consideration of population decline in regional Australia, and its prominence in the NWI could be more overt. Our basic analysis of state population forecast data suggests that 27 local government areas in Queensland can expect negative growth to 2041. The top two councils exceed 35%, and it is difficult to see a connection between this projected decline and capital support schemes.

It is a complex planning problem beyond water and sewerage services. It has been identified as a key priority for **qldwater** for some years, however COVID has postponed our scheduled event (in collaboration with the NSW Water Directorate and others including state agency representatives) designed to brainstorm realistic solutions.

Indigenous Water Use (and see also Information Request 7)

qldwater understands that Queensland's 17 indigenous councils and their management of water and sewerage services is largely unique to the state. These organisational structures carry inherent advantages to ensure appropriate community involvement in decision making around water resource issues. They provide local employment opportunities and support a strong community. However, the inability of most indigenous councils to charge for services, small size, geographic separation, water efficiency issues etc all contribute to significant sustainability challenges.

Levels of Service and service quality

Understanding quality is a challenge as there is a lack of transparency and critical review around e.g. drinking water incidents, and the implementation of improvement programs. There has historically been a clear increase in reported detections during wet seasons, and the regulator has implemented a "readiness" communication program over the last few years but it is difficult to determine whether reduced incidents can be attributed to the

program, or drought. There are concerns over the efficacy of monitoring programs including the management of network recontamination risks.

There are published and reviewed Community Service Standards for drinking water, with a requirement for service providers to engage with their communities in developing these standards. There is not a clear link to investment and improvement. Funding tends to follow incidents – i.e. repeated boiled water alerts, severely impacted water security – rather than evaluated risk and considerations of affordability.

Information sources

The SWIM system provides a single place for water service providers to lodge most compliance-related data for a range of regulators. Some of this information, e.g. the State's performance report KPI data, is publicly available while others is not. The treatment of <10,000 connections service providers has changed over time, with different state reporting requirements for different service provider types and sizes.

Consistency among regulators has also improved with the state generally working in concert with the National Performance Report, and other regulators including the Bureau of Meteorology (for Water Act requirements) and Australian Bureau of Statistics generally being cognisant of other indicators and the need to minimise duplication. There are some examples of useful indicators (including those applicable to <10,000 providers) being modified or removed without consultation.

There are a range of other studies which support improved benchmarking. **qldwater** has for many years produced an annual benchmarking report. WSAA operates a discrete operational benchmarking study for its members, which are larger service providers. **qldwater** members participate in ad hoc comparative activities.

The often-raised issue of a lack of transparency remains significant. There have been improvements in the development of KPIs, but the most common issue acting as an impediment to benchmarking is the granularity of reported information. With 370 water supply schemes and over 300 sewerage schemes, each with its own set of issues and major cost drivers (e.g. source water quality and the level of treatment required to achieve minimum standards), the inability to collate a suite of scheme level data including apportioned costs is complex to address, and arguably a significant reporting burden for many service providers for what might not be immediately obvious benefits.

The Department of Natural Resources, Mines and Energy has developed useful comparative reporting tools (in our view with the potential to stimulate productive debate) which have not been publicly released. Service providers typically question the value of reporting when aside from politically sensitive indicators (e.g. water security) there is little outward-facing evidence of how the information is used.

There is a lot of information collected (e.g. annual Drinking Water Quality Management Plan reports) which is not collated into a digestible format. We complain about the lack of public

awareness/ understanding of what drives our sector in costs and efficiency, but there is little in the public domain to help build that understanding, or for different service providers to learn from the experiences of others who've experienced incidents including near misses.

qldwater is a strong supporter of benchmarking at all levels as a means of driving efficiencies and ensuring accountability. While the National Performance Report has been under review for some time, we have been informally advised that state and territory governments are not providing strong support (financial or otherwise) for continuing the Report. While it will always be challenging to achieve agreement on individual measures for such differences in scopes of business and drivers, sustaining an underpinning national reporting framework is critical for all customers. There is little dispute that much mandatory reporting to date has been costly, without commensurate value being realised.

INFORMATION REQUEST 11

- *What steps have been undertaken to address the priority areas for urban water reform identified in 2017?*
- *Is further guidance on implementing an integrated water cycle management approach for delivering water supply, wastewater and stormwater management services required?*
- *How does jurisdictional urban water service planning interface with urban land use planning at different scales? Are the roles and responsibilities clearly set out?*
- *Is the role of water in delivering amenity and liveability outcomes clear? How are the trade offs with other NWI outcomes considered? Is it clear how the level and type of amenity delivered by urban water services will be funded?*

Environmental Water Management

There is little current appetite for implementing IWCM measures in most of the state, partly due to a chequered past regulatory and policy approach, but also because of institutional barriers. Even within councils, traditional water and sewerage services are more likely to be functionally grouped with solid waste than stormwater management. **Box 3** describes the most significant known current example of an integrated planning approach for Townsville City, supported by the CRC for Water Sensitive Cities.

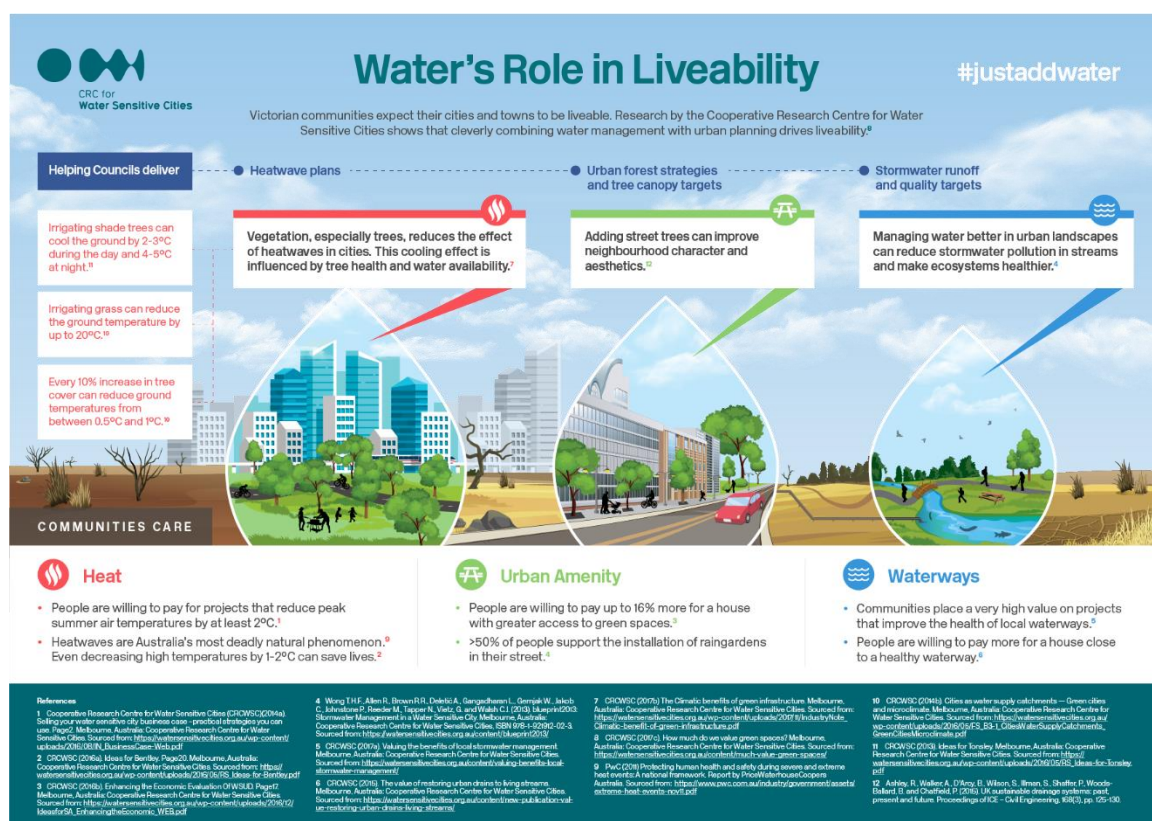
Box 3 The case for Integrated Urban Water Management: Townsville case study

Townsville is a regional city located in the coastal dry tropics region of Queensland, immediately adjacent to the world heritage listed Great Barrier Reef (GBR). Home to approximately 200,000 people, Townsville's population is projected to more than double by 2050. The Townsville community exhibits very high average per capita potable water usage. This can in part be explained by our climatic conditions, vegetation, soils and community expectations for a liveable Townsville. Townsville has also experienced severe drought and an unprecedented flood event in recent times.

The GBR and local waterways and wetlands are an asset to the community but also present challenges in ensuring environmental protection. These include increasing regulation and cost of treatment infrastructure, community expectations, and limited or competitive funding support. These factors combined create challenges for sustainably managing water. Townsville, like many other Australian cities

and towns, is facing these issues while continuing to play a vital role in the economy and supporting the lives of its residents.

Townsville City Council recognised the need to redefine how it manages the urban water cycle to achieve its aspirations of a more liveable, resilient, sustainable and productive community. In Townsville this meant looking for solutions that optimised the management of all urban water including waterways, wetlands, marine, groundwater, stormwater, potable, wastewater, and recycled water.



© Cooperative Research Centre for Water Sensitive Cities

Council partnered with the Cooperative Research Centre (CRC) for Water Sensitive Cities to leverage the experience of researchers, practitioners and communities from around Australia. The multifaceted water sensitive cities model developed by the CRCWSC has provided a template to guide the development of an approach that is relevant to Townsville's unique context, identity and circumstances. In partnership with the CRCWSC, Townsville has developed a vision and transition strategy, investigated opportunities for improving integration between land use and water servicing planning, and explored enhanced collaborative governance models.

This case study outlines Townsville's transition journey so far. It is still early days but already the IUWM or Water Sensitive Townsville approach is provoking new ways of thinking about urban water management in Townsville. Other insights include:

1. Highlighting the role of water in providing liveability, productivity, amenity and resilience outcomes by looking for the opportunities in the grey areas between the traditional urban water management silos.
2. Understanding context, drivers, and community attitudes and values is essential to create a shared vision, commitment and a long-term strategy to achieve desired outcomes in an increasingly complex urban water management environment.
3. Gaining and maintaining the support of key decision makers and politicians at local, regional and state scales is essential

These learnings are applicable to other metropolitan and regional cities and towns, and in particular how they also interrelate with their geographic region.

The Issues Paper outlines a range of initiatives including options for replacing environmental flows with treated effluent. The regulatory environment for treated sewage in Queensland is focussed on land disposal through irrigation and achieving a new licence to discharge is a major challenge. This acts as a disincentive to improving quality of discharges unless there is a regulatory imperative. In GBR catchments, stringent new regulations require no net increase in end of catchment loads meaning many STPs cannot increase their discharge volumes. This approach is necessary to protect the GBR but mechanism to allow population growth in communities that already have best-practice sewage treatment are yet to be tested.

There is an offsets policy which seeks to promote ways of avoiding/ deferring capital investment by undertaking other activities which lead to a greater net environmental benefit (e.g. riparian rehabilitation to reduce sediment/ nutrients entering waterways) but uptake has been slow. While **qldwater** is strongly supportive of the concept, the regulator has been cautious in its approach as have councils who are seeking greater certainty. Continuing changes to sometime contentious Reef Regulations and the Offset Policy have contributed to uncertainty and delays in uptake of water quality offsets. These issues further complicate investment in sewage treatment infrastructure which is already fraught with externalities.

Liveability and Amenity Value

Liveability is an important issue in much of Queensland where water utilities are owned and managed by local governments. Broad local government responsibilities can mean that essential investment in water and sewerage services can compete with more politically attractive investment, including community liveability and amenity. Water and sewerage infrastructure is typically hidden and not front-of-mind whereas community amenity needs can be highly politicised issues. This can result in investment skewed towards amenity even at cost to basic water and sewerage services. This issue can be exacerbated in towns with population decline where there is an incentive to invest in visible services rather than water and sewerage in an attempt to maintain population numbers.

In effect this means that the trade-offs among competing NWI aims such as water efficiency, water quality, town amenity, affordability and cost-reflective pricing are not clear. This is a political and demographic community issue that will not be much improved through provision of information or advice. Broader solutions are needed.

Our members report disconnects between planning and regulatory agencies with many case studies of areas declared for development without adequate consideration of water security and sewage reuse/ disposal. There are some celebrated successes including the recent Cedar Grove STP (Logan City Council) which has integrated innovative technology trials with community consultation and planning, however these are not the norm and dysfunction

across planning and regulatory agencies reportedly contributes to increased community costs.