
LOWER MACQUARIE
WATER UTILITIES ALLIANCE



SUBMISSION TO INFRASTRUCTURE AUSTRALIA

IN RESPONSE TO THE REPORT

REVIEW OF REGIONAL WATER QUALITY & SECURITY

(AECOM, OCTOBER 2010)

March 2011

Joint Submission by:

- **Lower Macquarie Water Utilities Alliance**
 - **Centroc Water Utilities Alliance**
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ATTACHMENT A: BEST PRACTICE COMPLIANCE (2010/11): CENTROC WATER UTILITIES ALLIANCE & LOWER MACQUARIE WATER UTILITIES ALLIANCE

ATTACHMENT B: CENTROC WATER UTILITIES ALLIANCE - DRINKING WATER MONITORING RESULTS

ATTACHMENT C: LOWER MACQUARIE WATER UTILITIES ALLIANCE - DRINKING WATER MONITORING RESULTS

1. INTRODUCTION

This is a joint submission on behalf of the Lower Macquarie Water Utilities Alliance (LMWUA) and the Centroc Water Utilities Alliance (CWUA), two operating and effective water utility alliances in New South Wales representing 24 local government owned water utilities, with respectively, 27,200 and 75,200 connected properties (a combined total of 102,400 connected properties) and a total regional population of approximately 300,000 people. These alliances were collaboratively conceived with voluntary participation, to proactively address the issues raised in the New South Wales non-metropolitan water utilities inquiry.

Our submission is in response to the AECOM Report “Review of Regional Water Quality and Security, October 2010”, which has been prepared for Infrastructure Australia (IA).

In short, we emphatically reject this Report and its recommendations – particularly the recommendation that the regional water businesses in NSW should be restructured to become State owned, Regional Water Corporations within two years.

Frankly, we are surprised, disappointed and somewhat appalled that Infrastructure Australia has supported such a biased, poorly researched and industry naïve report – to the extent that it has authorised its release for response.

We trust that before the Report is submitted to Government, it is substantially revamped and pays due regard to the reforms and achievements implemented and realised by local government owned water utilities in NSW.

This submission is intended to inform this review process and we request the opportunity to be involved in meaningful consultation regarding any finalisation of a submission by IA to government.

Employment of consultants and practitioners with a sound understanding of the water industry in NSW (and Australia, for that matter) in this review process would, we believe, assist this process and may obviate the clearly economic rationalist approach and bias of the current effort, which is akin to the lack of attention paid to socio-economic aspects in the recent MDBA planning process

2. ABOUT OUR ALLIANCES

2.1 The LMWUA

The LMWUA was originally formed in July 2008, as a collaborative Alliance of six Councils in the Lower Macquarie River Valley (the Macquarie River downstream of Burrendong Dam).

The Councils [Dubbo City, Bogan, Cobar, Narromine, Warren, and Wellington Shires] agreed, at a Workshop held in Nyngan in February 2008, to form such an Alliance (in response to the Water Inquiry being conducted in NSW); as a means of cooperatively developing resource sharing opportunities, implementing best practice water management for their communities and ensuring that the shortcomings identified by the NSW Water Inquiry were proactively investigated and, if necessary, addressed

Subsequently, in May 2009, Bourke Shire Council and Brewarrina Shire Council were admitted as member Councils.

The Alliance's Vision and Objectives are:

Vision

The member councils of the Lower Macquarie Water Utilities Alliance commit to provide a unified approach to the sustainable delivery of water supply and sewerage services, and to achieve and maintain gazetted Best Practice by the earliest feasible date.

Objectives

The initial objectives of the Lower Macquarie Water Utilities Alliance (LMWUA) are:

- (a) Resource and staff skill sharing;
- (b) Water resource sharing opportunities;
- (c) Peer review of performance and mentoring where appropriate;
- (d) Development of shared best practice strategies;
- (e) Funding of best practice strategies and goals.

The Alliance operates under Section 355 (d) of the NSW Local Government Act (1999) and is headed by a Board, comprising the Mayors and General Managers of each member Council.

The organisational structure is shown in the figure below.

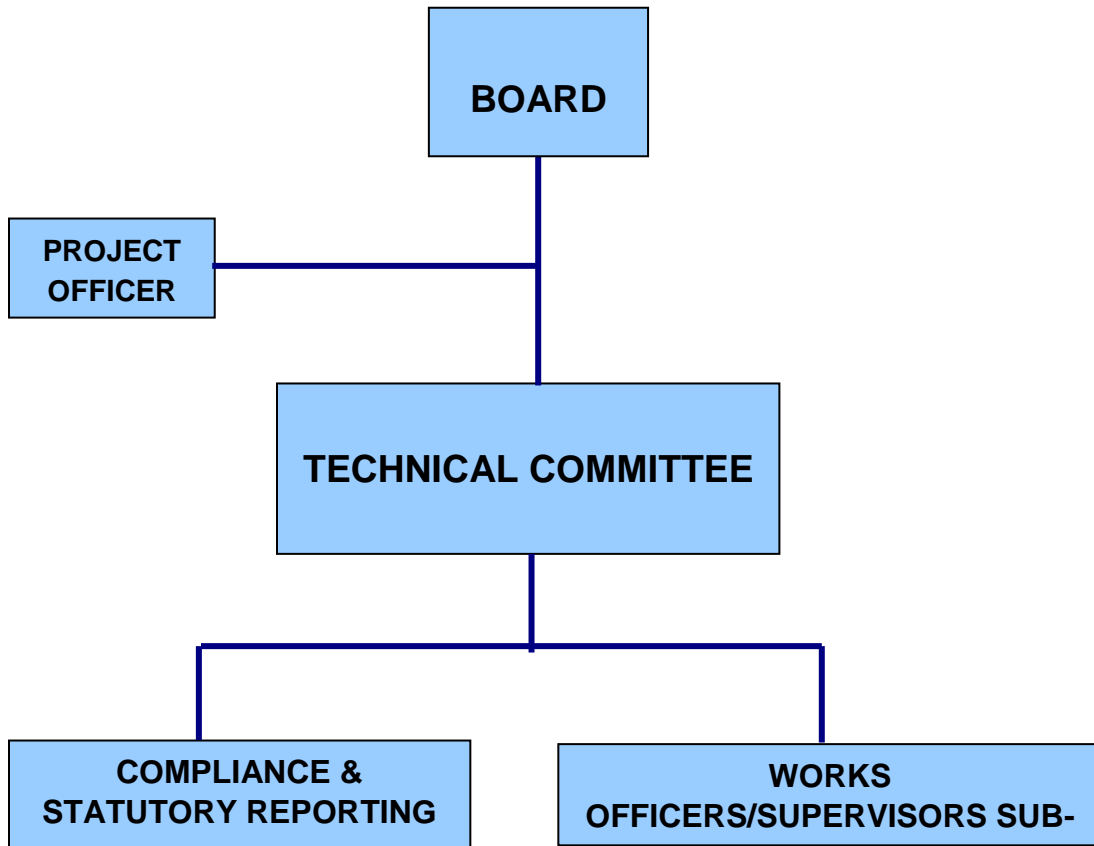


Figure 1: The Lower Macquarie Water Utilities Alliance: Organisational Structure

Our achievements to date include:

- Execution of the Deed of Agreement on 1 July 2008;
- Appointment of the Board of Management;
- Establishment of a Technical Committee;
- Development of two sub committees (“special interest” groups), namely a Works Officers and Supervisors Sub Group, and a Compliance and Statutory Reporting Sub Group;
- Development of secretariat and project management services;
- Resource sharing – some common operational standards have been adopted including uniformity in application of levels of water restrictions, and a specification has been developed for a regional reservoir cleaning contract;
- Best Practice compliance:
 - Identification of gaps in compliance by member Councils with Best Practice management & documentation to be completed;
 - Programs and time lines have been put in place to achieve Best Practice Management by all Councils;
 - Completion of the following **Regional** Best Practice Management Plans:

- Integrated Water Cycle Management Plan (Evaluation Study)
- Demand Management Strategy
- Drought Management Plan
- Water Quality Management Plan
- Stormwater Harvesting Strategy
- Formation of a Working Group to complete Trade Waste Policies for those Councils yet to comply with this best practice requirement.
- Formation and operation of two Special Interest Groups:
 - a Compliance and Statutory Reporting Group, whose primary function is to work together in developing annual performance reports and EPA licensing reports;
 - a Works Officers and Supervisors Group whose objectives are to develop strategies for:
 - Resource and staff skill sharing
 - Peer review of performance reports and appropriate mentoring
 - Input to the development of shared Best Practice strategies and goals
 - Input to strategies aimed at funding Best Practice objectives
 - Management and planning initiatives;
- The Technical Committee is developing policies for the joint procurement of materials and construction contracts.
- Processes for peer reviews of member Councils performance reports and pricing structures have been developed
- An operational budget has been prepared and adopted for the period 2010/11 to 2012/13.
- Mentoring: This is seen by the Board as an essential element for the success of the Alliance.

Best Practice Compliance

Over the last three years, compliance with NSW best practice management requirements, across the LMWUA's eight (8) Councils, has **improved from 63% overall compliance in 2006/07 to 87% compliance in 2009/10** (an improvement of 38%).

Year	Water Supply	Sewerage	Overall
2005/06	65%	51%	59%
2006/07	69%	55%	63%
2007/08	73%	57%	66%
2008/09	86%	72%	80%
2009/10	94%	80%	87%

As well as aiming to achieve full best practice compliance over the next 12 months, the Alliance also plans to develop the following major best practice initiatives over the next three years.

- a Regional Business Plan, incorporating a Financial Management Strategy & Business Continuity Plan (to augment and incorporate all 8 existing Strategic Business Plans);
- a Regional Asset Management Plan;
- a Regional Quality Management/Assurance Plan;
- a Regional Environmental Plan.

2.2 The CWUA

Centroc (Central NSW Regional Organisation of Councils) is an organization which represents 17 local government owned water utilities, namely:

- Bathurst Regional Council
- Blayney Shire Council
- Boorowa Shire Council
- Cabonne Shire Council
- Central Tablelands Water (County Council)
- Cowra Shire Council
- Forbes Shire Council
- Harden Shire Council
- Lachlan Shire Council
- Lithgow City Council
- Oberon Council
- Orange City Council
- Parkes Shire Council
- Upper Lachlan Shire Council
- Weddin Shire Council
- (Wellington Council – is also a member of LMWUA)
- Young Shire Council.

CWUA represents approximately 240,000 people and covers an area of 70,000 sq. kms.

Centroc Organisation and Structure

▪ **Vision**

Central NSW is recognized as vital to the sustainable future of New South Wales and Australia.

▪ **Mission**

Centroc is recognized as the lead organization advocating on agreed regional positions and priorities for Central NSW, whilst providing a forum for facilitating regional cooperation and sharing of knowledge, expertise and resources; effectively nurturing sustainable investment and infrastructure development.

▪ **Objectives**

- **Regional Sustainability** – Encourage and nurture suitable investment and infrastructure development throughout the region and support members in their actions to seek from Governments; financial assistance, legislative and/or policy changes and additional resources required by the Region. This objective will be principally actioned by the Board with the support of the General Managers Advisory Committee (GMAC) of member Councils.
- **Regional Cooperation and Resource Sharing** – Contribute to measurable improvement in the operational efficiency and effectiveness of Member Councils through facilitation of the sharing of knowledge, expertise and resources and, where appropriate, the aggregation of demand and buying power. This objective will be principally facilitated by GMAC with the guidance of the Board.

▪ **Centroc Board**

Two delegates, (the Mayor and General Manager) represent Councils on the Centroc Board.

▪ **Executive**

The Executive consists of ten office bearers, eight of whom are selected at the Annual General Meeting. It comprises a Chairperson, Immediate Past Chairperson, Deputy Chairperson, Secretary/Treasurer and two elected members of Constituent Councils. The General Manager or his/her nominee of the Council that the Chair represents is automatically appointed as Secretary/Treasurer. The General Managers of all Executive Councils are elected automatically from the remainder of the Executive.

▪ **General Managers Advisory Committee (GMAC)**

To assist the organization in the conduct of its activities, a General Managers' Advisory Committee was established in April 2002. GMAC meets four times per year and at the direction of the Board, advises on administrative, planning, policy and resourcing matters of Centroc. The Chair of GMAC is the Secretary/Treasurer of Centroc.

- **Staff**

Centroc has evolved as a small de-centralised organization. In 2009/10, nine employees were spread throughout the region at various Councils, including two days a week of administrative support at the Chair Council.

This structure allows all Councils the opportunity to employ Centroc staff and be involved in the various projects, effectively spreading the benefit across the region. Centroc staff include:

Executive Officer, Learning and Development Manager, Sustainability Program Manager, Finance Officer, That's a Good Idea! Project Officer, Compliance and Cost Savings Manager, Climate eXchange Project Officer, Training and Program Support Officer and Chair Council Support Officer.

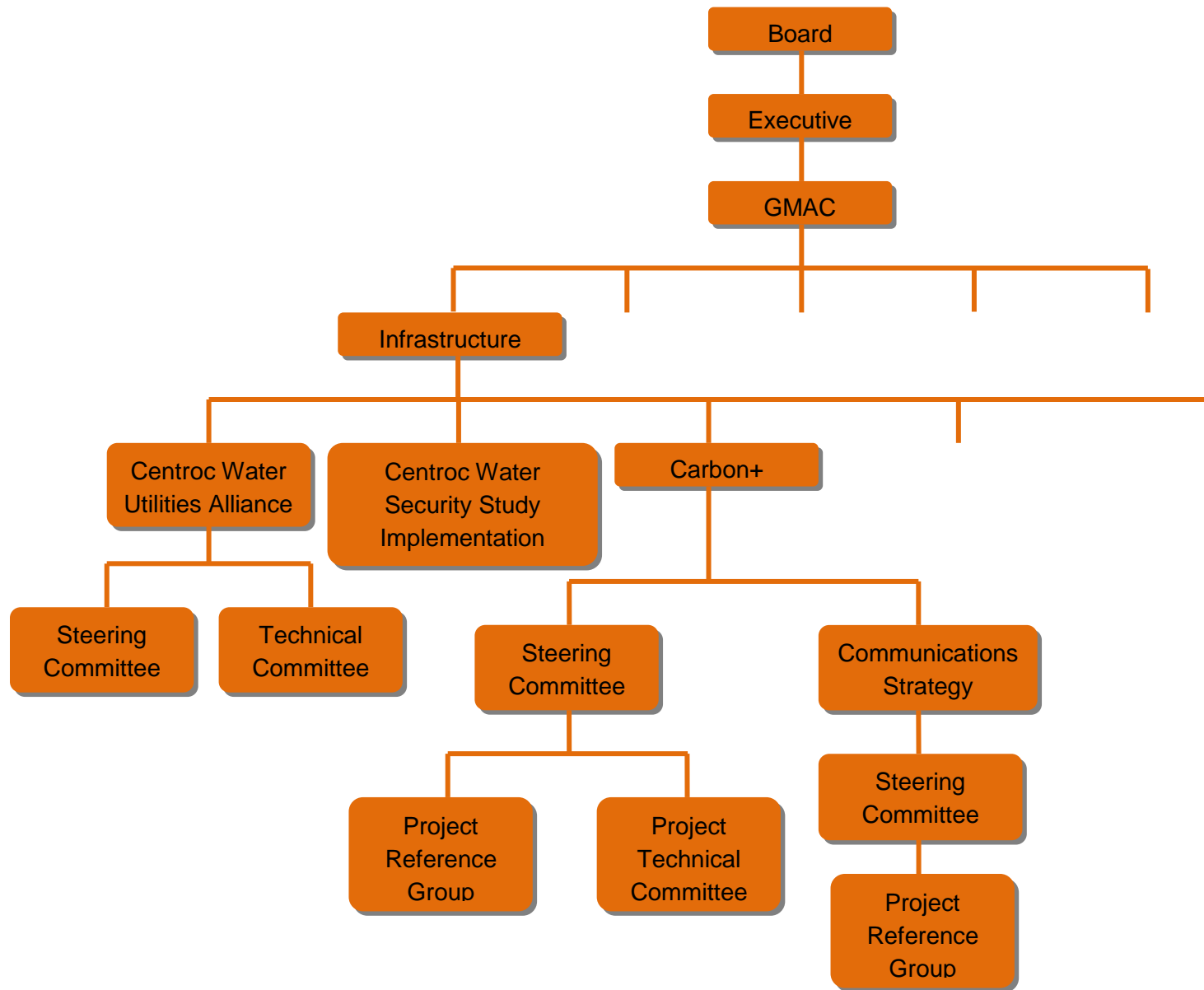
- **Project Teams**

Project Teams are an important component of Centroc's operation and vital to its success. Project Teams are formed to allow cross collaboration and the sharing of knowledge, expertise and resources. Teams are established on the recommendation of the Centroc Board (with a predetermined objective), participation is voluntary and reports are submitted quarterly to the Board and GMAC. Team Leaders are often appointed to Project Teams to assist the EO in the management of the Team, to set agendas and to advise GMAC on the activities of the Team.

- **Water Utilities Alliance**

The Centroc Water Utilities Alliance (CWUA) was established in 2010 along similar lines to the LMWUA.

The Alliance sits within the Infrastructure Group of Centroc and reports to the Board via the General Managers Advisory Committee and has been established under S 355(d) of the NSW Local Government Act (1993). The Structure of the Infrastructure Group is shown in the flow chart below, which demonstrates that Centroc water activities are embedded into the broader community as well as delivering results for member Councils.



Centroc Infrastructure Group Structure

As with LMWUA, the key objectives of CWUA include:

- * Resource and staff skill sharing;
- * Full compliance with Best Practice requirements;
- * Peer review of performance and mentoring where appropriate;
- * Development of regional best practice strategies;
- * Funding of best practice strategies and goals.

Achievements to date include:

A significant and nationally recognised achievement has been the successful completion of a Regional Water Security Study (the recipient of a number of state and national awards). The Centroc Water Security Study (CWSS) sought to investigate solutions to improve water supply security across the Centroc region. The study had two components:

- 1: An audit of existing infrastructure for bulk water supply; and
- 2: An options paper for improving water supply security.

The approach to the CWSS was built on extensive stakeholder engagement, analysis using triple bottom line principles and the integration of the management of water resources, recognising the need for holistic approaches to water management

As a result of this assessment, it was determined that over the chosen 50 year planning horizon, the following towns require water security improvements to cater for the new range of statistically generated extreme climatic events:

- Condobolin
- Bendick Murrell
- Mogongong
- Yeoval
- Tottenham
- Lake Cargelligo
- Lithgow
- Orange
- Peak Hill
- Mumbil
- Cowra
- Brundah
- Wattamondara
- Forbes
- Trundle
- Murrin Bridge
- Portland
- Clifton Grove
- Wellington
- Nanima
- Koorawatha
- Greenethorpe
- Cumnock
- Bogan Gate
- Tullamore
- Tullibigeal
- Oberon
- Parkes
- Geurie

The CWSS study also incorporated:

- water conservation & demand management aspects, including a recommendation for uniform levels of water restrictions across the region
- a major infrastructure augmentation program, involving:
 - Lake Rowlands Augmentation;
 - Lake Rowlands-Millthorpe Pipeline (CTW Trunk Mains D and F duplication) 2;
 - CTW-Orange Pipeline via Millthorpe;

- Lake Rowlands to Gooloogong Pipeline (CTW Trunk Mains P and C duplication);
 - Gooloogong-Forbes Pipeline (including connection to Parkes);
 - Woodstock-Cowra Pipeline (presently in planning);
 - Orange-Molong Creek Dam pipeline (lower priority action resulting from the level of surety around the security of Molong. There is an existing pipeline from Molong Creek
 - New minor storage and water treatment facilities at Cumnock;
 - New minor storage water treatment facilities at Yeoval;
 - New minor storage at Condobolin (off-stream from Lachlan River);
 - New pipeline replacing existing channel and minor storage at Lake Cargelligo;
 - Burrendong-Wellington Pipeline;
 - Chifley-Bathurst Pipeline;
 - Chifley-Oberon Pipeline; and
 - Belubula Creek-Cadia Hill pipeline (already available).
- A continuation of best practice implementation
 - Consideration of climate change impacts
 - Benefits to other sectors (eg. partnering with towns with local irrigation operations)
 - Solutions to minimise carbon impacts associated with the infrastructure program

Other significant achievements include:

- * Funding procured for the “Carbon Plus” project aimed at limiting the carbon footprint of the Regional Water Security Study (which is nearing completion)
 - * Creation of working groups and sub-committees;
 - * Over \$1m in funded environmental programs;
 - * Budgets and an Action Plan have been developed;
 - * Work has begun on best practice in water supply management in the region where members have contributed over \$50,000 to instigate a best practice program which also has over \$50,000 of State and Federal funding to progress.
- Centroc has also commenced seeking funding from both the State and Federal Governments for the infrastructure components.
- * Consulting Briefs have been developed to secure the following Regional Best Practice Plans & Strategies;
 - Regional Integrated Water Cycle Management Plan;
 - Regional Demand Management Strategy;
 - Regional Drought Management Plan.

These strategic initiatives will be completed in 2011/12.

- * Operator and staff training programs are currently being developed. Funding has been obtained under the Strengthening Basin Communities Program to develop a Centroc Regional Resourcing, Mentoring and Training Program. The Program will involve:
 - Identifying machinery and equipment that can be shared across councils in water utility management (for example pipe cameras, sewer cleaning equipment and other specialised equipment).
 - Identifying mentors in the region to support an informal network of practitioners.
 - Developing a formal mentoring program for the region based on gaps in skills in water utilities' management of existing staff.
 - Identifying training needs in the region with a view to collective purchase of these services within the region and developing water training packages with national accreditation.
 - Providing advice to workforce plans of member Councils regarding water utilities staff
 - Providing direction for the sharing of apprentices in the region to ensure they experience the best and broadest experiences on offer.

2.3 Summary Data ¹

- combined population served by LMWUA and CWUA is approximately 300,000;
- total number of connected (customers): 102,400;
- total asset value (replacement value): \$1,500 million (2008/09);
- economic real rate of return (average across 22 of the 24 water utilities): 0.65% (2008/09);
- area served: approximately 120,000 sq. kms;
- annual revenue (2008/09): \$124 million.

¹ Source: NSW Office of Water, Performance Monitoring Report, 2008/09

3. SOME FACTS ABOUT WATER MANAGEMENT IN NSW

The following is a summary of the achievements of non-metropolitan (regional) local government owned water utilities in NSW (as published by the NSW Office of Water)²:

- Annual performance reporting and monitoring since 1986;
- Strategic business planning since 1993;
- **Overall compliance** with requirements of *Best Practice Management of Water Supply and Sewerage Guidelines* – **82%**;
- **Full cost recovery** is now being achieved by **96%** of NSW local water utilities (LWUs) for water supply;
- State-wide median '**average annual residential water supplied**' is 175kL/connected property, which has **fallen by 47%** over the past 18 years. The strong pricing signals provided have enabled NSW LWUs to **avoid over \$1 billion in capital expenditure** over the last decade for augmenting water supply headworks and treatment capacity and the associated increases in their typical residential bills;
- Results for key performance indicators from the National Performance Report 2008/09 for Urban Water Utilities indicate:
 - For 'average annual residential water supplied' per connected property (NWI indicator W12), 12 NSW non-metropolitan utilities are among the lowest 25 utilities reporting in the *National Performance Report 2008/09 for Urban Water Utilities*.
 - The NSW utilities are national leaders in providing strong pricing signals to encourage efficient water use:
 - The State-wide median residential water usage charge has increased from 79c/kL to 150c/kL (2009/10 \$) over the past 11 years. For this indicator (NWI Indicator P1.3), 13 NSW non-metropolitan utilities are among the highest 20 utilities reporting in the *National Performance Report 2008/09*.
 - The State-wide median residential **revenue from water usage charge** has increased from 25% to **73%** over the past 11 years. For this indicator (NWI Indicator F4), 14 NSW non-metropolitan utilities are among the highest 19 utilities reporting in the *National Performance Report 2008/09*.
 - However, the real State-wide median water supply Typical Residential Bill (**TRB**) has **increased by only 5%** over this period (from \$410 to \$430 in 2009/10\$), as shown on page 5 of the *2008/09 NSW Performance Monitoring Report*.
- *National Performance Report for Urban Water Utilities* – all eligible NSW LWUs have reported annually since 2005/06, with 29 utilities reporting in the *2009/10 National Performance Report*.

² Source: NSW Office of Water; web site:

http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_performance_nsw_performance_monitoring_report_2008_09.pdf.aspx.

- Drinking water quality – 2008/09 compliance with ADWG 2004 by NSW LWUs:
 - **Microbiological – 88%** of LWUs complied
 - **Chemical – 96%** of LWUs complied
 - **Physical – 98%** of LWUs complied.
- In 2008/09, the water supply for over **99% of** the urban **population** in non-metropolitan NSW **complied** with ADWG for both microbiological and chemical water quality.

4. STRENGTHS OF LWUs IN NSW

There are a number of advantages and strengths associated with local government ownership and management of water utilities in regional NSW.

These are briefly summarized below:

i) Importance to Councils and their communities

Provision of water supply and sewerage services by Councils is a significant aspect of every regional Council's overall undertakings, often making up **a quarter or more of annual budgets and employing a significant number of the workforce.**

Many staff in regional Councils are **multi-skilled** and are able to work in diverse areas like roads, drainage, water supply and sewerage, thereby effecting **economies of scale and enhanced efficiencies.**

Water supply and sewerage services are also an important element of the community's understanding of and involvement in Local Government as a **"one stop shop"** to access essential services and deal with local issues. Local water utilities also have **significant flow on effects on local and regional economies and employment.**

ii) Proven success in delivering safe and secure water supply and sewerage services to the community.

This is demonstrated by the **achievements in implementing best practice** as well as the outcomes of the NSW Government's Inquiry into Local Water Utilities³, including:

- compliance with Best Practice criteria
- high rate of achievement with full cost recovery
- an almost 50% reduction in annual residential water supplied over the past 18 years
- typical residential bills have increased by only 5% over the past 11 years
- **NSW non-metropolitan water utilities are among the highest rated performers in the Annual National Performance Report.**

iii) Integrated Water Cycle Management

The concepts of integrated water cycle management and water sensitive urban design are essential to minimize the impacts of urban development on the overall water cycle.

Local Government in regional NSW, because of the integration it provides to strategic water supply planning, water supply and sewerage provision, stormwater and drainage management, strategic urban planning and land use development control; is **best placed to put these concepts into reality.**

³ Reference:

http://www.water.nsw.gov.au/ArticleDocuments/36/utilities_performance_nsw_performance_monitoring_report_2008_09.pdf.aspx

Institutional models that result in the removal of water supply and sewerage functions from councils have the potential to severely disrupt the integration that currently exists, inevitably leading to reduced capacity to implement integrated water cycle management and water sensitive urban design.

iv) Economies of Scope and Scale

Council owned and operated water utilities afford **technical and managerial synergies** across their organizations via the **integration of engineering, asset management and corporate planning systems for water supply and sewerage, roads and transport, communication, waste management and recreational services**. Economies of scope also arise from the ability to effectively and efficiently **coordinate strategic land use planning and land use development control with infrastructure intensive services such as water supply and sewerage services as well as private commercial and residential related investments into water solutions**. Also the broad range of services provided by general purpose councils, affords the range of responsibilities required to attract highly professional staff and benefit from their skills and knowledge which would otherwise not be available.

In administrative terms, economies of scope arise from the **integration of information technology services** including the ability to provide one billing and customer service system for all community services (the “one stop shop”).

Large stand alone water supply and sewerage providers may well achieve some economies of scale but cannot capture the above listed economics of scope. Benefits commonly associated with water utilities covering larger regional areas; such as catchment based regional strategic water supply and demand planning and infrastructure delivery, can be readily achieved through **regional alliances of councils** without losing the economies of scope associated with the integration of water supply and sewerage functions and general purpose functions.

There is also the benefit of optimising the whole-of-town energy and greenhouse gas footprint, including transportation and other systems serving the urban form – optimising water and sewerage provision in isolation can be perversely sub-optimal in the broader context of a particular urban fabric.

v) Community Accountability

Local government in NSW provides a very clear framework for accountability.

Democratically elected councillors are effectively “Board” members and are responsible for the setting of strategic direction to achieve desired whole-of-community outcomes; including outcomes related to water supply and sewerage provision. Maintaining water supply and sewerage services as visible and accessible local operations within Local Government also contributes to accountability within the community and provides incentives for the provision of reliable customer service and serviceability.

Structural models that remove responsibility for water supply and sewerage services from Local Government and thus from elected local representatives, must necessarily address how decision makers would be accountable to the communities that are to benefit from and fund the provision of water supply and sewerage services. It is questionable whether such models can provide the appropriate incentives to ensure that decision makers integrate water supply and sewerage objectives into broader whole-of-community and sustainability outcomes.

5. FACTUAL ERRORS IN THE AECOM REPORT

In reviewing the AECOM Report we have noted a number of inaccuracies and factual errors which we believe must be redressed.

These are clarified and discussed below:

i) Executive Summary:

“17 of the 106 utilities (in NSW) failed to comply with Australia’s water quality standards, while only half of the very small utilities had water conservation and demand management plans in place”.

Response:

This is old information and has been accessed from the NSW Water Inquiry Report prepared by Ian Armstrong and Colin Gellatly in December 2008⁴.

This is an example of the very poor research applied to the AECOM Report.

Up to date information on water quality compliance can be obtained from NSW Health and up to date compliance with best practice can be obtained from the NSW Office of Water.

No data has been presented on compliance with water quality or best practice for the corporatised Victorian Water Authorities. Compliance with quality standards can be readily obtained via the Annual Report on Drinking Water Quality in Victoria.

A cursory review of that Report will quickly demonstrate that Victoria has an arguably poorer record than NSW in achieving compliance with drinking water standards.

So, it is quite scurrilous to suggest that local government owned water utilities are not capable of achieving satisfactory water quality standards; whilst the corporatised entities are efficient in this regard.

This is simply not true and needs to be rectified in the report.

For your information, we have attached recent (2009 to 2011) water quality results for microbiological compliance for member councils of LMWUA and Centroc WUA⁵.

As you will see, the results are very impressive in terms of microbiological compliance (99.1% overall) and we challenge you to compare these with the results for Victorian (and other) water authorities, across Australia.

We would also point out that New South Wales has a much better record of providing water and sewerage services to small communities (<1000 people), which is another aspect of poor performance of State owned corporations when compared to the service provision provided by Council owned (**community**) utilities.

⁴ Reference: <http://www.water.nsw.gov.au/>

⁵ Source: NSW Health web site: http://www.health.nsw.gov.au/publichealth/water/drinkwater_nsw.asp

If, “in Victoria, evidence that the small water utilities in that State were unable to consistently supply high quality drinking water was a Key Driver for sweeping water reform in the latter half of the 1990s” was true, then **why is the performance still relatively poor?**

Perhaps the key driver was more likely an identified opportunity for the, then, State government to extract a dividend (or disguised tax) rather than any altruistic aim to improve living standards for regional Victorians!

In terms of water conservation and demand management plans, again, we contend that the information is out of date and that many water utilities have either complied or are currently working towards compliance.

In the case of the 8 Councils in LMWUA, all have complied via a Regional Demand Management Strategy and in the case of CWUA, the 16 utilities are cooperatively proceeding with same and this will be completed later this year.

Again, for information, we would refer you to Attachment A⁶, which summarises compliance with best practice management for our 24 member utilities. Please seek similar summaries from other jurisdictions, especially Victoria, before judging the merits of and the relative (meaningful) compliance rates of those states.

We would point out that these conclusions, derived from inadequate research and naïve assumptions, do nothing to validate this particular consultants report.

We would also suggest that any review of service provision in relation to water supply and sewerage should also consider those communities of less than 1000; perhaps down to 200, as occurs in NSW Performance Monitoring; or was this selected because other States, particularly Victoria, provide very little to these smaller communities.

ii) Key Finding a):

“Less than full cost recovery is a common feature of water utilities servicing regional areas”.

Response:

This is an extraordinary statement and simply not true.

As outlined in Section 3 above, full cost recovery is achieved by 96% of NSW local government owned water utilities. Where else is this the case?

⁶ Source: NSW Office of Water; Performance Monitoring Report, 2008/09

Some Councils (for example, Shoalhaven) have elected to derive a dividend from the operations of their water utilities. This is a dividend to Council, not the State Government.

There are only three (3) such Councils in NSW (in 2008/09) with most preferring not to charge higher prices for water supply and sewerage services in order to fund other areas of Council's operations.

iii) Key Finding b):

"... many utilities servicing regional towns are not recouping the costs of supplying water, let alone providing for capital improvements".

Response:

This is simply not true and demonstrates, again, the lack of research undertaken in preparing this Report.

The NSW Office of Water has been requiring LWU's to prepare Strategic Business Plans (SBPs) and Financial Plans to a specified format since 1993. These SBP's require, and ensure, that NSW LWU's DO recover all costs, including those required for current and future recurrent capital expenditures (renewals, improved standards and growth).

At least a 20 year forward projection of capital requirements and operating costs is required but "preferably out to 30 years" is recommended, and generally achieved by LWU's in their published SBP's. In many instances lower prices in LWU's reflect greater efficiency of operation.

It should also be noted that NSW has been at the forefront of business planning for water utilities, and we would recommend that the model established in partnership with the NSW Office of Water should be adopted nation wide.

iv) Key Finding c):

"water utilities servicing regional communities struggle to implement and comply with the Australia Drinking Water Guidelines; this is particularly so for smaller water utilities".

Response:

As discussed above, this assertion is based on out-of-date data and has selectively reviewed data from only 18 water utilities in NSW and a similar number in Victoria.

Of these, only 3 water utilities in LMWUA and 2 in CWUA (out of a total of 24) were considered (not assessed!).

As stated above, a more accurate appraisal of the recent performance of our water utilities with respect to microbiological compliance is included as Attachments B and C which, we contend, demonstrates **an excellent, arguably unmatched record of compliance, when compared to other States; and, we provide these services to some very small communities.**

Much is made of Boil Water notices by AECOM.

Again, this is very poor research leading to erroneous conclusions and unsubstantiated recommendations.

A review of the record of boil water notices and non-compliant microbiological results in Victoria⁷ (readily available from the Victorian Health authorities) may cause Infrastructure Australia to reconsider these outlandish assertions.

The fact that some data was recorded in the Armstrong/Gellatly report should not be damning on NSW water utilities when no such data has been gleaned from other States.

You may care to review the record for Victorian towns like Myrtleford (where a seasonal boil water alert applies), Wangaratta, Wandiligong, Eildon, Porepunkah, Bright, etc⁸.

Again, this information is readily available and can be obtained from a simple internet search if the authors are too constrained by time or budget to contact the water authorities directly.

We believe it would be a good initiative if all State Health agencies published this information and made it readily available to customers of water utilities. This might lead to some improvements in the management of water supplies and the security of public health in some of these State owned entities!

We would also like to point out that the Alliance models being adopted in NSW (like our LMWUA and CWUA; as well as initiatives in the Upper Hunter, Noroc and Ramroc regions, comprising more than 50 local government owned water utilities (or nearly 50%) in NSW) are leading the way in the implementation of Water Quality Management Plans (which have now been registered as mandatory requirements by NSW Health).

LMWUA completed a Regional Water Quality Management Plan to ADWG 2004 requirements in 2010, covering 8 Councils; and the 16 Councils of Centroc are moving to achieve the same outcome.

v) Key Finding d):

“A key reason for non-compliance is the absence of the necessary skills, experience and knowledge in water in many regional communities”.

Response:

Again, this is not true.

There is a national shortage of skills, experience and knowledge, not just in regional areas and this, we believe, has been recognized not only by peak bodies like the Australian Water Association, but also the Federal Government.

⁷ Reference: Annual Report on Drinking Water Quality in Victoria; 2008/09

⁸ Sources: <http://www.gwmwater.org.au/>; www.bordermail.com.au/news/ ; www.abc.net.au/local/audio/2010/09/09/; www.nerwa.vic.gov.au/

In regional areas, the situation is much better, because the water supply and sewerage functions are managed by local government. The benefits of local government ownership are:

- **multi-skilling:** staff are trained and capable of efficient performance across a range of municipal activities, including water supply and sewerage, with the added benefit of efficiencies of scope.
- **resource sharing:** this has occurred across local government in regional areas of NSW for a long time and is being developed and enhanced under the Alliance model to which we subscribe.
- the **retention of these skills in regional areas retains employment**, but just as importantly, it means that these communities (some of these are very isolated communities) obtain a local service; something they would not get if the functions were centralised.

We would strongly encourage liaison with “remote” communities in regional Victoria to see what they think of the service provided by their centralised water authority; say communities in the north east or south west of the State!

Perhaps your consultant might have undertaken a newspaper article search of these Victorian regional municipalities or simply contacted the Council in those areas.

We would also like to point out that LMWUA and CWUA are:

- developing regional training programs, specifically for water supply and sewerage operators. These programs will be nationally accredited training modules;
- developing protocols and processes for skills and resource sharing.

The statement that “treatment plant operators working in regional areas do not receive access to the same level of training provided in the larger metropolitan areas” is absurd and simplistic and bears no relationship to the overall contention that centralisation of water utilities is the panacea.

Again, some research and some enquiries would have alerted the authors, not only to the above mentioned initiatives, but that the Office of Water conducts nationally accredited, regional, training courses for water supply and sewerage operators, as well as in Trade Waste regulation. **Does this occur annually in other States as it does in NSW?**

To the best of our knowledge, we know of no water utility in regional NSW which does not take advantage of these programs.

vi) Key Finding e):

We agree with the finding that “improving training and wider compliance with ADWG could deliver significant benefits”.

This fits well with our philosophy of continuous improvement and is an area which could benefit from an injection of government funds and facilities.

However, the claim that "reducing water related illness in the community will increase workforce productivity due to fewer sick days....." is a somewhat trite contribution to the debate. Is there epidemiological evidence or examples of multiple illnesses, typical of water borne infection/contamination - we believe not!

vii) Key Finding f):

It is not true that achieving water security is more complex in regional areas. The fact that towns share the same water source is of little consequence. On regulated streams in particular, towns use only 2% of the resource and, in NSW at least, they are guaranteed priority access under the Water Act. There is no substantive "conflict" involved. The flows involved are minor and the Water Sharing Plans in place, make it very clear that irrigators and other non-urban users expect to have their allocations reduced to ensure security of supply to towns.

The NSW Security of Supply basis (commonly referred to as the '5/10/10 rule') has been demonstrated to be a sound and robust basis for sizing of urban water supply headworks in non-metropolitan NSW.

viii) Key Finding g):

There is more than sufficient water planning at a catchment level now in NSW. It is a Best Practice requirement for LWU's to prepare Integrated Water Cycle Management Plans (IWCMP's) which are at least the equal of anything prepared in other States. The standard recipe automatically requires a Council, or its consultants, to rigorously investigate the boundaries of the water system, detailed whole-of-catchment information, all catchment related targets and requirements, all legislative obligations, and climate change in both a global and a NSW context. It is disappointing that AECOM, who has no doubt prepared IWCMP's for LWU's in NSW, would then choose to "ignore" this background knowledge when preparing the current study for Infrastructure Australia.

More broadly Water Sharing Plans in NSW were some of the first developed in Australia. The report itself (page 27 of Volume 1) highlights the NSW approach as presumably best practice within Australia. Local Government is well represented on the various Catchment management Authorities and the valley-based Customer Service Committees of State Water, the bulk water provider for most of inland NSW. Alliances of Local Water Utilities have now evolved covering much of the Lachlan and Macquarie Valleys which serve as inter-town planning bodies for water resource management (eg the recently lauded Centroc Water Security Study). LWU's in NSW are already closely networked with each other, Government agencies dealing with catchment-wide issues, and other community stakeholders. To suggest otherwise is simply incorrect.

There is no logic in the assertion that every town in a catchment should be on the same level of restrictions. Every town would be dragged down to the level of the least secure supply at great social and economic cost to the majority, yet for no benefit to the catchment as a whole. It is a reasonable suggestion that all towns in a particular valley share the same regime of water restrictions, as in the definition of what each Level of Restriction means, and this is now certainly the case in the Macquarie Valley, for example, where by consensus Bathurst, Orange, Dubbo, Wellington, Narromine, Warren, Bogan, Cobar, Brewarrina and Bourke have now adopted exactly the same definitions of water restrictions for their water supply schemes.

There are also considerable temporal variations within catchment areas which will, potentially, significantly influence the need to apply water restrictions. For example, from Orange to Condobolin, maximum temperatures vary by 8°C (38°C to 46°C) and a variation in evaporation exceedance of almost 1000mm⁹

The fact that NSW and Qld might be considered “oddities in Australia’s water resource management framework” does not then “prove” that the rest of Australia is right.

The continued integration of water and sewerage services within the control of Local Government is actually seen as a great advantage in those States over the disintegrated approach evident elsewhere where numerous economies of scope and continued integration of the whole water cycle have been lost in pursuing a faulty reductionist paradigm from the previous century.

It is a furphy to claim that water and sewerage utilities MUST be catchment based, as is evidenced by the highly effective way Councils in the Macquarie Valley have co-operated in the matter of water restrictions.

Why are SA and WA not viewed as “oddities” when compared to say, Victoria?

It is also not true that “in NSW the regulator reserves the right to overrule water restriction decisions made by water utilities to protect the overall security of the water resource”.

The power to apply water restrictions (under the Local Government Act, 1993) rests entirely with Councils. The State can reduce allocations (as it did in 2008 and 2009) which, provides a fairly clear trigger for Councils to introduce water restrictions, which they generally did. This applied to some (not all) of the regulated river systems in the State, principally in the Murray and Murrumbidgee systems.

As stated so many times, it is very disappointing to have to continually discredit these assertions by your consultant, particularly since this is not rocket science and the information is readily available.

Again, this reinforces our view that the conclusions preceded any meaningful consideration of the real issues confronting water business management across Australia.

⁹ Australian Bureau of Meteorology (<http://www.bom.gov.au/climate/averages>, at 28 April 2008)

ix) Key Finding h):

We agree that water business reporting should be aligned across Australia and we would recommend that the performance model pioneered by the NSW Office of Water (and its predecessors) be adopted and implemented nationally.

However, a national approach to planning and management of water businesses is not a sensible suggestion; unless of course you wish to go beyond the recommendations and nationalise the industry!

Water planning and management across Australia is diverse and complex and is best left to the respective jurisdictions. A national set of guidelines would be helpful and again, we would recommend the NSW Best Practice Management of Water Supply and Sewerage Guidelines 2007 as developed by the NSW Office of Water and implemented by local government owned water utilities in NSW, be adopted as the national model.

x) Key Finding i):

“If water governance arrangements for water utilities in NSW and Queensland were on a catchment basis, as is the case in Victoria, significant benefits could be achieved”.

This is a conclusion which, we believe, was decided before any investigations were undertaken.

We dispute this assertion, as outlined above and in the next section, and as summarised below:

- no benefits have been substantially developed or presented;
- there has been no real attempt to quantify any benefits based on acceptable research findings; quite the reverse;
- we would contend that governance arrangements in Victoria are not strictly catchment based;
- what about SA, WA and Tasmania?
- we are not convinced by the logic of “efficiency gains” by centralised organisations and this report provides no real research to validate such claims. In fact, we contend that the Alliance model being developed in NSW, and demonstrated by the results achieved to date by LMWUA and CWUA, demonstrate more appropriate gains in a state the size and diversity of New South Wales.

The statement that “action is required now to address the institutional barriers to smaller water utilities delivering healthy water quality and security, as the costs of inaction will only continue to grow” takes no account of the significant gains made by alliances like LMWUA and CWUA and incorrectly asserts that Victoria is achieving better water quality and water security results; **this is again, simply not true and the evidence does not support the conclusions.**

xi) Other Factual Errors:

- “.....strategic decisions regarding maintenance and capital expenditure would no longer be made by local Council General Managers”. (Key Recommendation 5)

Does AECOM have any understanding at all of water management in NSW?

This is an absurd statement.

Firstly, annual budgets prepared by staff, based on the Council and state government approved Strategic Business Plans and Financial Plans are resolved and adopted by Council, not the General Manager; after an extensive exhibition and public consultation phase.

This transparent and community driven approach is much advanced on the process adopted in Victoria where there is little or no transparency, no community input and oversight only by the State Essential Services Commission.

We think the Victorian approach is far too autocratic for adoption nation wide. Instead, involvement of the community and implementation of community wishes and needs, within the regulatory framework set down by NSW Health, the EPA (DECCW) and the Office of Water, must surely be a more democratic way of delivering these services.

- “historical data shows (that) larger water utilities service their regional communities at relatively lower cost, with the annual water bill in Victoria being approximately 20% cheaper than the annual bill in regional NSW”

Where is the evidence for this statement?

Reference to the 2008/09 Water Supply & Sewerage Performance Monitoring Report shows:

- **average operating cost for water in Victoria: \$389/connected property; compared with \$330/connected property in NSW**
 - **average operating cost for water supply & sewerage combined in Victoria: \$710/connected property; compared with \$670/connected property in NSW**
 - **median ERRR for Victorian regional utilities: 0.4%; compared with 0.6% in regional NSW**
- “Water utilities that are operated as part of the local government structure experience rate pegging, reducing their ability to recover the cost of supplying water to consumers” (s 2.2.1, page 9 Volume 1).

This is another example of the authors’ ignorance of the way Local Government operates in NSW. Councils which provide water supply and sewerage services operate 3 independent financial systems or Funds – a General Fund, a Water Fund and a Sewerage Fund. The General Fund **is** subject to rate pegging by the State Government, but the Water and Sewer Funds **ARE NOT** subject to any rate pegging.

- Volume 2: Page B4. The objectives of the stakeholder workshops, as set out on this page and what eventuated on the ground with respect to the workshop itself, involving representatives of the NSW Office of Water and the NSW Water Directorate, were two different things entirely. The solutions that were suggested from NSW were obviously ignored by the authors in the Final Report.
- Much of the data collected in the Appendices with respect to individual towns is incomplete, out of date, irrelevant to urban water quality and very often wrong. The researcher(s) used were clearly young, inexperienced and often unable to differentiate between applicable local facts and generic non-information (eg an answer to one question about Dungog in the Upper Hunter Valley was that it was relevant to the whole of the Hunter Water customer set, even though it related to Newcastle, Maitland, Lake Macquarie, Port Stephens; in another example aquifer salination at Wellington was flagged as an issue when that town draws its supply entirely from the Macquarie River which does NOT have a salinity issue; in another example Bourke's water rates from 2001/02 are reported, as if that could possibly be relevant in 2011. Similarly, Bourke is incorrectly credited with state average water consumption. It is, in fact, one of the highest users!).
- Volume 1; Page 1, "Snapshot of Water in Regional Towns" - "...many regional areas receive no water filtration, or comparatively less sophisticated treatment." This is simply not true in regional NSW. For many decades (most of the 20th century) the NSW Government's Public Works Department subsidised, and for the most part, built water filtration plants for towns and villages down to populations of 200, or less in some localities, where such treatment was warranted.. Surface water supplies in regional NSW receive comprehensive multi-barrier water treatment at the level of sophistication needed to assure a high quality potable water supply. Where source water quality is high and does not require filtration, it is not sensible to burden customers with the high cost of providing filtration, an approach in keeping with that of the risk-based management framework enshrined within ADWG 2004. Victoria, on the other hand, seems to have a much larger number of towns without filtration (53 localities relying on surface water supplies, according to page 11 of the AECOM report), because of a poorer history of investment by that State Government than in NSW. However, the statement on page 1 of the AECOM report equally tarnishes the excellent reputation of the NSW Government in the provision of high quality systems for the vast majority of its regional towns and villages, when it is most unfair of the report to have done so.
- Volume 1; Page 2, "...the way in which individual Councils or utilities return treated wastewater to the environment is not well controlled." This statement is simply not true. Wastewater discharges in regional NSW are HIGHLY regulated and controlled by DECCW, after having been subjected to the scrutiny of a catchment wide IWCM Plan, a development application process through the Environmental Planning and Assessment Act, a licensing process courtesy of the EPA (part of DECCW), and then a Section 60 approval process through the Local Government Act, administered by the Office of Water. The statement made is, yet again, a naïve and inaccurate one which should not have been made with respect to the State of NSW.

- Volume 1; Page 2, Table 1 - it is incorrect to say that water prices in regional NSW are “Not Regulated”. LWU’s are required to comply with Best Practice Management Guidelines, as issued by the NSW Office of Water in 2004 and updated in 2007.
- Volume 1; Page 5, “Selection of water utilities” - We find it highly damning of the AECOM Report and its authors that they would choose towns for the study “for their known or likely water quality and/or security issues. Therefore it should be noted that the towns investigated are not a standard sample and, as such, the data may be statistically skewed. The information was gathered to provide an indication of the largest risks to water quality and security, rather than the likelihood of those risks.” Statistically skewed are hardly the words we would use to describe the results of this study and the “data” those results are supposedly based on. We would use instead terms such as “misleading”, “inaccurate”, “biased” and “scurrilous” to better characterise what has been done to the reputation of LWU’s in NSW.
- Volume 1; Page 6, “Stages two and three...” It is completely incorrect with respect to regional water utilities in NSW, to claim that “there is little consistent, publicly available performance information on towns that fell within the target population range”. Whilst the data the authors sought may have been “comparatively limited” in other States, the 2008/09 NSW Office of Water Performance Monitoring Report for NSW Water Supply and Sewerage ran to 77 pages of intra-State and inter-State statistics, whilst the Benchmarking Report for NSW Water Supply and Sewerage ran to a further 263 pages containing, in part, 66 graphs and 24 densely packed Tables of Data⁷, including extensive reporting of microbiological and chemical quality performance reporting on water quality. EVERY LWU in NSW is required to report annually to the Office of Water on more than 130 performance criteria; and these are ALL included in the Performance Monitoring Report and each LWU is ranked against all others in the Triple Bottom Line report which is forwarded to EVERY LWU ANNUALLY. Both reports can be readily down-loaded from the Office of Water web-site⁵. A key to this reporting was, in turn, the detailed NSW Health Department’s water quality monitoring reports for EACH LWU which could have been easily accessed by the authors by direct request to Paul Byleveld and Sandy Leask, two of the “key stakeholders” actually interviewed by AECOM during Stage Three of their consultancy. The “local knowledge” that such sources of readily accessed data was available for NSW was clearly lacking in the AECOM team which undertook this consultancy, or else they would not have embarked on their own more expensive and less reliable quest to gather data on an anecdotal, hit-and-miss basis from other sources on the internet such as Council Annual Reports, Regional SoE Reports and NSW Health “summary spreadsheets”.
It is important to note that unlike other states, all 27 eligible non-metropolitan utilities have consistently reported their performance and met the rigorous auditing requirements of the National Performance Report for Urban Water Utilities.
- Volume 1; Page 8, the first so-called “Key Finding” - “Less than full cost recovery is a common feature of water utilities servicing regional areas.” This is simply not true in NSW, as has been addressed above. It is nothing more than a preconceived hypothesis which the authors have been unable to follow up with evidence, because it doesn’t exist.

Also, on Page 8, "...safe and reliable water supplies are not fully achieved in any State." Agreed, but with 99% of all microbiological tests passing in both NSW and Victoria, the latter conclusion that NSW needs to be restructured to mirror what now occurs in Victoria is NOT an evidence based one. Just a few lines further on, the report adds that "poor water quality and water security planning are still evident in some parts of (Victoria)". Therefore, the "evidence" suggests that the new structure has not proved any more capable of "solving" the problems than the old. Why was this not reflected in the summary of Key Findings and the Recommendations?

Again, on Page 8, "...over 370 water service providers (in Victoria) were amalgamated to 12 in 1994." This statistic is more a terrible condemnation of the fragmented state of the water industry in Victoria at that time than anything else. NSW is 3.5 times the size of Victoria, yet even at that time had only about 120 LWU's. Today the number is 106. Were 1994 Victoria to be translated across the border into NSW today, on a pro rata area basis, we would have 1,295 water service providers in NSW. Of course Victoria needed to be restructured at that time – it would have been largely dysfunctional in many regional areas with so many small scale, independent, utilities extant across the State.

- Volume 1; Page 9, "...many small towns are without water treatment because the increase in residential bills to recover the cost would be substantial." This is simply not true in NSW (see above). The statement in the report confirms that the primary authors are fundamentally ignorant of the true state of the water industry in regional NSW. Also, on Page 9, "Water pricing can play a significant role in raising revenue and reducing water consumption." Apart from being so obvious that it is almost trite to make such a statement, NSW LWU's have been applying these principles in an exemplary fashion for more than a decade now. Pay-for-use pricing was introduced in NSW in 1996/97. Since 1991 pricing and other demand management measures have achieved a 47% reduction in residential water supplied per connected property, yet the Typical Residential Bill has been maintained broadly unchanged (\$410 in 1999/2000 compared to \$430 in 2009/10)¹⁰, thus maintaining a strong and sustainable revenue flow for NSW LWU's. Perhaps, the rest of Australia can learn from NSW on the issue of revenue raising versus reduced consumption.

The report also seriously criticises its own recommended structure (State owned regional corporations): "...under current pricing practices, funds are transferred from utilities to the government, often at the expense of new infrastructure, repair and replacement." This is certainly not the case in regional NSW, because the revenue raised stays with the LWU.

¹⁰ Source: NSW Office of Water; Performance Monitoring Report, 2008/09

- Volume 1; Page 11, "...few States regulate adherence to the risk based framework set out in the ADWG." This is no longer true in NSW. From 2010, the Public Health Act was amended to mandate such compliance.
- Volume 1; Page 15, two anecdotes from NSW, from August 2009, are used to "prove" that water quality results from LWU's in NSW as a whole are substandard – namely, Jindabyne and Smiggin Holes. One of these (Smiggin Holes) is not even a Council run facility, but a privately run ski resort within a National Park. The former was a sewage spill of about 0.8 megalitres into a very large lake (Lake Jindabyne), with a volume, when full, of 690,000 megalitres, from which the town draws its water. No E. coli were recorded in the town reticulation during the period of the spill, but a boil water alert was issued as a precaution. The alert was cancelled three days later as there had still been nil instances of E. coli being recorded. These anecdotes may make for "good press", but in reality NEITHER example reflects poorly on the water quality provided to its customers by LWU's in NSW, and it is disappointing that the authors should seek to denigrate the industry as a whole with such flimsy so-called evidence. Please refer to the attachments for an accurate portrayal of microbiological results for the 24 LWUs in LMWUA and CWUA

6. RESPONSES TO RECOMMENDATIONS IN THE AECOM REPORT

6.1 General

Much of our response to this significantly inadequate report has already been provided above.

However, there are further issues and comments we wish to make and these are outlined below.

6.2 Recommendation 1: Mandating compliance with ADWG

The NSW Government and LWUs themselves are already ahead of most other jurisdictions in moving to this very outcome. As a result of the NSW Water Reform process begun in 2007, the industry responded to the Independent Armstrong/Gellatly Inquiry by requesting that not only compliance with ADWG be made mandatory, but the gazetted NSW Best Practice Management Guidelines be made mandatory as well. It should be noted that the NSW Best Practice Guidelines and ADWG compliance were substantively voluntary in the past, thus to now use them as a measure as if they were mandatory is unfair. Despite them being voluntary, there has been the general compliance outlined above, which was accelerated by the Alliances

Although progress with the water reform at Cabinet level has been slow, the NSW Department of Health has already legislated (during 2010) to require compliance with ADWG by all water utilities in NSW, including LWU's, the first such definite move within Australia that we are aware of. Again the AECOM report is written to make it seem that the NSW industry opposes such a move, when in fact we welcome it and are only awaiting the gazettal of detailed Regulations under the Public Health Act to be able to implement same. Notwithstanding, increasing numbers of LWU's have already prepared Water Quality Management Plans [including all eight members of the Lower Macquarie Water Utilities Alliance, a group which includes some of the smallest and most remote LWU's in NSW (eg Bourke, Brewarrina, Cobar)], utilising the 12 element framework within ADWG 2004.

6.3 Recommendation 2: Nationally consistent best practice framework

We couldn't agree more. NSW already operates under the most advanced Framework in Australia, in the form of the gazetted NSW Best Practice Management Guidelines which were first gazetted in 2004. The Office of Water has gone to great pains to ensure the Guidelines comply with all NWI Urban Water Planning Principles, NWI Pricing Principles, the National Wastewater Source Management Framework 2008 and, of course, the IPART Pricing Principles.

It is ignorant indeed for AECOM and Infrastructure Australia to assume that NSW LWU's do NOT operate under a well-established and highly credible Best Practice Framework already.

6.4 Recommendation 3: Improving pricing

We reject the assumption that pricing reform is required in regional NSW. LWU's in this State operate under Best Practice Management Guidelines handed down from the Office of Water, and it is misguided and anecdotal to assert otherwise. These Pricing Guidelines were first published seven years ago in 2004 with the imprimatur of the NSW Independent Pricing and Regulatory

Tribunal. There is no evidence presented in the report at all that individual Councils are failing in any way to implement this State's adopted water pricing principles and practices. The report simply asserts there are problems and recommends that NWC should do a study.

Are pricing mechanisms adopted by water authorities in Victoria any more effective than those already in place in NSW?

The evidence doesn't support this.

The involvement of the Essential Services Commission (ESC) could be seen as a serious impediment to appropriate pricing.

An example of this is the effective removal of Developer Charges in Victoria by the ESC¹¹.

This has created a border anomaly between NSW practice and this general customer subsidised system in Victoria.

Removal of Developer Charges is a clear breach of transparency, customer rights and the philosophy of user pays; not to mention the artificially adopted benefit to developers; obviously in an effort to attract development to Victoria, at the expense of NSW and the ratepayers in Victoria!

Is this appropriate? Is this best practice? Is this an example of good governance?

We think not and we would encourage Infrastructure Australia to investigate and take action to have this clear and unfair anomaly addressed.

It also fails to comply with NWI Principle 2.

6.5 Recommendation 4: More highly skilled workforce

As outlined above, our water utility alliances are already working towards developing "a more highly skilled workforce to operate and maintain" our water supply and sewerage facilities. We are developing our training programs such that they will be nationally accredited.

It should also be noted that the NSW Water Directorate¹³ prepares and provides to member LWUs (95 of the 103 local government owned water utilities in NSW) a range of Guidelines, including:

- Operations & Maintenance Manuals for Service Reservoirs, Water Treatment Plants, Water Pumping Stations, Sewage Pumping Stations, Water Reticulation, Sewer Reticulation, Chlorination Installations and Sewage Treatment Plants
- Mechanical & Electrical Infrastructure
- Backflow & Cross Connection Prevention
- Blue-Green Algae Management
- Odour Management

¹¹ ESC Victoria web site: <http://www.esc.vic.gov.au/>

Note ¹² : The Water Directorate was formed in 1998 to fill the void left in the management of the water industry in NSW when the NSW Public Works Department was segmented and part corporatised into the Commerce Department in 1995.

- STP Buffer Zone Planning Guidelines
- Overview of ADWG 2004
- Cutting, Handling & Disposal of AC Pipes
- Meter Reading
- Drought Management
- Reuse of Sludge & Wastewater at WTPs
- Effluent & Biosolids Reuse

These are widely regarded as **industry standard** and serve to keep Councils fully apprised in a number of areas of best practice.

We do, however, concur with the view that there is a need for nationally consistent trade qualifications. This is something our operator committees have asked us to achieve.

6.6 Recommendation 5: Catchment based Regional Water Corporations

We emphatically reject this recommendation.

As outlined above, there is absolutely no evidence to support the Report's contention that "the larger corporate structure is likely to give rise to increased efficiency". Quite the contrary.

We believe that in the rebuttal of the key findings of the Report, we have clearly demonstrated that the only "benefit" of the Victorian water authorities is that they generate and pay a dividend to State Government, which we would define as a disbenefit tax, to their communities.

Further,

- there is no evidence of better water quality or reduced numbers of boil water notices in Victoria; in fact, if researched properly, you would find the reverse is probably the case.
- there is no evidence of improved services to small communities; in fact, again, quite the reverse.
- there is no evidence of a better, more qualified or better trained water utility workforce in Victoria. Our alliance model is a demonstrated better alternative to achieving better, more efficient, utilisation of staff and other resources by the implementation of staff and resource sharing and development of regional training processes, with national accreditation.
- provision of service by local government owned water utilities is more effective, more transparent and more community focussed than the autocratic approach adopted in Victoria, particularly since a true (economic rationalist) approach of user pays is clearly flouted with regard to appropriate implementation of developer charges.

"The larger corporate structure is likely to give rise to increased efficiency" – we disagree. In 2008/09 the Operating Cost per connected property for Water Supply in regional Victoria was higher than for regional NSW, Qld, WA and the ACT. For NSW the figure was \$330, for Victoria \$389. The Operating Cost per connected property for Water Supply and Sewerage Combined was \$670 for

NSW and \$710 for Victoria (page 59). Likewise the median Economic Real Rate of Return for Water Supply and Sewerage in 2008/09 was 0.6% in regional NSW versus 0.4% in regional Victoria.

The authors have failed, or neglected, to explain why prices are set to increase 30-60% in Victoria to fund “necessary capital works”¹³

Is this a demonstration of the efficiency gains of corporatisation, similar to those seen in the NSW electricity industry?

If so, then NSW should avoid going down this path at all costs!

Further, community resilience relies on communities. We would argue that any amalgamation agenda should carefully consider the need for regional Australians to have a sense of control and ownership over decision making, particularly around something as critical as water supply and management.

There is an unchallenged assumption throughout the report that stand-alone Regional Water Corporations managing water supply and sewerage services are unarguably a superior governance structure to any other. This is not a reasonable position to take in 21st century Australia. In 2007 NSW began a process of urban water reform that is still playing out through the Cabinet process.

The Reform Strategy proposed by AECOM is not worthy of comment because it is underpinned by the major flaws in the Key Findings and the Recommendations (outlined above). These flaws MUST be addressed by Infrastructure Australia and a proper, validated comparison of models made - if that is shown to be necessary.

¹³ Sources: ESC Victoria web site: <http://www.esc.vic.gov.au/>; <http://www.theage.com.au/news/national/waterpricesset-to-rise/2007/08/14>; <http://www.abc.net.au/2011/03/07>; <http://www.abc.net.au/news/stories/2009/04/21>; <http://www.theplanningboardroom.net/victoriasbillsstingsettodeepen/>; <http://nerwa.vic.gov.au/>; <http://www.sewl.com.au/>; <http://www.heraldsun.com.au/news/victoria/foods-future-is-drier-and-dearer/story>; <http://www.theage.com.au/environment/water-issues/water-use-slashed-but-bills-up-95percent>

7. GENERAL COMMENTS

As pointed out above (consistently), we are appalled at the unprofessional and superficial way this report has been structured and presented.

The lack of research, the lack of even the most rudimentary understanding of the water industry in Australia (and in particular, in NSW) and the clearly evident bias and naivety in the AECOM Report, should be embarrassing to Infrastructure Australia, just as it has been embarrassing and insulting to local government owned water utilities in NSW.

We could not be more insulted by the assertions made; particularly given the factual errors, the lack of any reasonable research and the total absence of appropriate consultation, which, as earlier mentioned, are akin to the recent Murray Darling Basin Plan debacle.

Why would Infrastructure Australia embark on a sham of a report, and pay (we assume) a high fee to AECOM to try (inadequately) to demonstrate the need for the clearly troubled model adopted in Victoria by the Kennett Government to be implemented in NSW and Queensland. We can only assume that subsequent governments in Victoria have chosen not to reform this flawed model because they are reliant on the dividends that ordinary Victorians are forced to pay.

We are also concerned that the Report has not in any way addressed the public health and environmental impacts associated with the management of wastewater (sewerage).

The anomalies that exist between NSW and Victoria should, we believe, be addressed and should form an integral part of any review of the governance arrangements in various States.

Some of these anomalies and issues are:

- continued discharge of effluent to “sensitive waters” (like the Murray River) by Victorian water authorities, with the blessing, apparently, of the Victorian EPA;
- acceptance of overflows of raw sewage to drainage systems;
- the abolition of developer charges in Victoria

The recent floods have highlighted the public health and environmental impacts of uncontrolled discharge of raw sewage to drains, waterways and, in some cases, residential properties (for example Reservoir and Melbourne)¹⁴, with the apparent consent of the Victorian EPA.

Regional NSW was also affected by flooding, without the same impacts; because local government in regional NSW is responsible for both the management of sewerage and the management of the drainage systems; and, the NSW EPA does not allow overflows from sewerage systems.

Is this an issue that Infrastructure Australia should consider?

- the lack of sewerage facilities in a plethora of small towns (less than 1000 population) in Victoria.

¹⁴ : <http://www.northcoteleader.wherilive.com.au>; <http://barwonwater.vic.au/about/rain-strains-sewerage-system/>; <http://www.theage.com.au/news/bacteriariddled-river-22-times-over-safe-level/2005/01/14>; <http://bordermail/news/rain-pours-sewage-into-backyards/2011/02/18>.

Victorian authorities (DSE) have recognised this deficiency and have, under their Country Towns Water Supply & Sewerage Program, been trying to address this (somewhat ineffectively we understand) with Victorian Water Authorities.

This is a situation that NSW addressed successfully many years ago.

The ill-founded notion that state owned, water corporations, are the panacea to providing effective, healthy and environmentally acceptable management of water supply (and sewerage) is simply unfounded and, indeed, ludicrous.

A further deficiency in the AECOM report is the total absence of any cost/benefit assessment of the recommendations put forward. There has been no attempt to quantify the costs and disbenefits associated with the creation of regional water authorities in NSW. These costs would, we believe, be significant.

Who will be expected to cover these costs?

Why would NSW local government agree to a model (like the Victorian model) which is demonstrably flawed?

Why would Infrastructure Australia countenance such ludicrous assertions without exploring the benefits of the model developed and developing in NSW; **the Alliance Model?**

And Why would we countenance proposals that simply shift the problems rather than solve them?

These are questions we would like answers to.

We would expect, at the very least, that Infrastructure Australia would grant us the opportunity to discuss these matters in face to face discussions, before this highly inappropriate AECOM report is submitted to Government.

Given the lack of research, the obvious factual errors and the clear bias of the AECOM Report, this courtesy of informed exchange should be a given.

8. SUMMARY

In summary, to say that we are appalled with the Key Findings, Recommendations and proposed Strategy contained in the AECOM Report would be a huge understatement.

We have detailed a plethora of flaws and factual errors in the Report.

We believe that we have demonstrated that the alternative model being developed in NSW (the NSW Alliance model), as successfully implemented by LMWUA and CWUA is, if not a more advanced and efficient governance model than the state owned, corporate model operating in Victoria, at the very least, it's equal.

We believe that the Victorian model is seriously flawed, particularly in terms of transparency, customer service and community input. It is an autocratic, dated model, in serious need of review in terms of equity, standards and consultation.

We suggest that Infrastructure Australia critique the issues we have regarding the flaws in the Victorian model. This critique should also consider the adverse impacts this model had on community resilience, local government and its effectiveness in Victoria.

The strengths of local government ownership of the water supply and sewerage functions, under the alliance model, are many, including:

- **the ability to effectively implement full and thorough integrated water cycle management and water sensitive urban design;**
- **the management of the linked services of stormwater drainage, flood management, parks and gardens, in efficient and integrated delivery of services with water supply and sewerage management services;**
- **proven success in the delivery of safe and secure water supply and sewerage services to our communities (despite the ill-informed conclusions made by AECOM);**
- **implementation of Water Quality Management Plans, as mandated by NSW Health;**
- **compliance with the stand-out best practice criteria developed by the NSW Office of Water;**
- **a 96% (of LWUs), state-wide achievement of full cost recovery, serving 98% of the NSW regional customer base;**
- **significant reductions in annual residential water consumption (47% reduction over 18 years);**
- **an average water supply residential bill increase of only 5% over the past 11 years;**
- **the economies of scope afforded by the development of multi-skilling in our workforce;**
- **community accountability, equity and involvement in decision making, compared to the autocratic, non-consultative approach operating in Victoria;**
- **outstanding environmental improvements and outcomes as a result of our partnerships with the NSW DECCW (EPA);**

- **pricing policies which, while achieving almost across the board (96%) achievement of full cost recovery, are transparent, community endorsed, based on sound strategic business planning, are equitable (without artificially imposed subsidies to, say, developers; as they are in Victoria) and return (in the case of LMWUA and CWUA) a positive ERRR of 0.7%, without the need to impose an unpopular and unacceptable community tax, or dividend, to State Government;**
- **demonstrated and proven success in asset management. For LMWUA and CWUA this well managed asset base has an impressive replacement value of \$1,442 million;**
- **the most extensive and relevant annual performance monitoring process in Australia.**

In support of our case and to refute the lack of research evident in the AECOM Report, we have attached the record of compliance for microbiological analyses and boil water notices (applying to LMWUA and CWUA for 2009/10 and 2010/11) and best practice compliance (in accordance with the most advanced best practice management criteria in Australia) for our alliances.

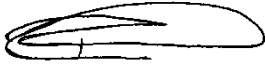
We challenge any other water supply and sewerage management model in Australia to match the performance of our two alliances and we commend our model to Infrastructure Australia as the most appropriate, community owned and driven model in Australia.

Overall, we believe that a primary objective of the Commonwealth Government **should be** to strengthen local government; not weaken it – and, this is no where more important than in New South Wales and Queensland because of their size, population densities in regional areas and such diversities in topography, demography and climate; as well their importance in the Murray Darling Basin.

9. RECOMMENDATIONS

Our recommendations to Infrastructure Australia, in terms of reviewing appropriate water management options in Australia, are:

- i) that Terms of Reference be developed in liaison with all stakeholders before further analysis is completed, including the methodology to be used to assess impacts. Quadruple bottom line analysis is now an accepted norm.
- ii) that a total review of the AECOM Report be undertaken in accordance with the Terms of Reference, demonstrating thorough research and assessment, without bias; and utilising consultants with a thorough knowledge of the water industry
- iii) that a revised report be issued for discussion, following thorough consultation with all stakeholders and an objective assessment made of the evidence
- iv) that Infrastructure Australia recognise the beneficial changes brought about by the Inquiry into the governance of water supply and sewerage services in NSW; in particular, the benefits and achievements demonstrated and the opportunities offered by the alliance models which are being implemented across the State
- v) that the health and environmental impacts of poor sewerage management practices in other States (particularly in Victoria) be assessed as part of this review
- vi) that we be given the opportunity and courtesy of presenting our case to Infrastructure Australia in face-to-face discussions, before any further decisions are taken in terms of advancing recommended management models to Government.



Cr Phyllis Miller, OAM

Chair of Centroc

Mayor of Forbes Shire Council



Cr Rex Wilson, OAM

Chair of Lower Macquarie Water Utilities Alliance

Mayor of Warren Shire Council

ATTACHMENTS

A. BEST PRACTICE COMPLIANCE (2010/11): CENTROC WATER UTILITIES ALLIANCE & LOWER MACQUARIE WATER UTILITIES ALLIANCE

B. CENTROC WATER UTILITIES ALLIANCE - DRINKING WATER MONITORING RESULTS

C. LOWER MACQUARIE WATER UTILITIES ALLIANCE - DRINKING WATER MONITORING RESULTS

Attachment A

BEST PRACTICE COMPLIANCE (2010/11): CENTROC WATER UTILITIES ALLIANCE & LOWER MACQUARIE WATER UTILITIES ALLIANCE

Water Utility	Water Supply Best Practice Compliance	Sewerage Best Practice Compliance	Comments
CENTROC WUA			
Bathurst	100%	100%	Non-compliances: Nil
Blayney	NA	89%	Not a water supplier: Water by CTW Non-compliances: <ul style="list-style-type: none"> - Developer Servicing Plan (Liquid Trade Waste Policy requires updating in accordance with new Office of Water Guidelines)
Boorowa	70%	67%	Non-compliances: <ul style="list-style-type: none"> - Strategic Business Plans for WS & S - Water conservation strategy - IWCM - Complying non-residential charges
Cabonne	100%	89%	Non-compliances: <ul style="list-style-type: none"> - Developer Servicing Plan for Sewerage
Cowra	70%	78%	Non-compliances: <ul style="list-style-type: none"> - full cost recovery - residential usage charges for WS - IWCM - Complying non-residential charges for sewerage
Forbes	100%	100%	Non-compliances: Nil
Harden	80%	44%	Non-compliances: <ul style="list-style-type: none"> - Drought Management Plan - IWCM

			<ul style="list-style-type: none"> - Trade waste Policy & TW charges - Developer Servicing Plan for Sewerage
Lachlan	80%	67%	<p>Non-compliances:</p> <ul style="list-style-type: none"> - Developer Servicing Plans for WS & S - IWCM - Complying non-residential charges for sewerage
Lithgow	70%	78%	<p>Non-compliances:</p> <ul style="list-style-type: none"> - residential usage charges for WS - Developer Servicing Plans for WS & S - Performance report for 2008/09
Oberon	70%	56%	<p>Non-compliances:</p> <ul style="list-style-type: none"> - Strategic Business Plans for WS & S - Drought Management Plan - IWCM - Trade waste Policy & TW charges
Orange	100%	100%	<p>Non-compliances: Nil</p> <p>(SBPs, water conservation plan & drought management plan currently under review)</p>
Parkes	100%	100%	Non-compliances: Nil
Upper Lachlan	80%	67%	<p>Non-compliances:</p> <ul style="list-style-type: none"> - residential usage charges for WS - IWCM - Trade waste Policy & TW charges
Weddin	NA	67%	<p>Not a water supplier: Water by CTW</p> <ul style="list-style-type: none"> - complying residential charges for sewerage - complying non-residential charges for sewerage - Trade waste Policy & TW charges
Wellington	100%	100%	Included in LMWUA below

Young	90%	78%	Non-compliances: Nil
Central Tablelands Water	100%	100%	Non-compliances: Nil (Water conservation plan being updated)
Overall CENTROC Group	86%	81%	
LOWER MACQUARIE WUA			
Bogan	100%	78%	Non-compliances: - Trade waste Policy & TW charges
Bourke	100%	67%	Non-compliances: - complying residential charges for sewerage - complying non-residential charges for sewerage - complying trade waste charges
Brewarrina	60%	50%	Non-compliances: - full cost recovery for WS & S - complying residential charges for WS & S - complying residential usage charges for WS - complying non-residential charges for WS & S - Trade waste Policy & TW charges
Cobar	90%	78%	Non-compliances: - Developer Servicing Plans for WS & S - complying residential charges for S - complying non-residential charges for S
Dubbo	100%	100%	Non-compliances: Nil
Narromine	100%	100%	Non-compliances: Nil

Warren	100%	67%	Non-compliances: <ul style="list-style-type: none"> - complying non-residential charges for S - complying trade waste fees & charges - Developer Servicing Plans for S
Wellington	100%	100%	Non-compliances: Nil
Overall LMWUA	94%	80%	
Combined Centroc & LMWUA	90%	81%	

Notes: 1. Elements of Best Practice in NSW (19 No.):

Water Supply:

- Strategic Business Plan & Financial Management Plan
- Full cost recovery
- Complying residential charges
- Residential usage charges raise >75% of water business revenue; >50% if <4000 connections
- Complying non-residential usage charges
- Developer Servicing Plan with commercial developer charges
- Water conservation plan implemented
- Drought management plan
- Integrated water cycle management plan
- Annual performance reporting (audited for those LWUs with > 10,000 connections)

Sewerage:

- Strategic Business Plan & Financial Management Plan
- Full cost recovery
- Complying residential charges
- Complying non-residential usage charges
- Complying trade waste fees & charges
- Developer Servicing Plan with commercial developer charges
- Liquid trade waste approvals & policy
- Integrated water cycle management plan
- Annual performance reporting (audited for those LWUs with > 10,000 connections).

2. LMWUA has completed the following regional plans and strategies:

- Regional Integrated Water Cycle Management Plan
- Regional Drought Management Plan
- Regional Demand Management Strategy
- Regional Water Quality Management Plan
- Regional Stormwater Harvesting Strategy

3. Centroc is proceeding to complete the following regional plans & strategies:

- Regional Integrated Water Cycle Management Plan
- Regional Drought Management Plan
- Regional Demand Management Strategy.

ATTACHMENT B

CENTROC WATER UTILITIES ALLIANCE DRINKING WATER MONITORING RESULTS

LWU	Micro. Results				Comments
	No. Samples	2009/10	No. Samples	2010/11	
Bathurst	179	1	103	2	98.9% compliance
Blayney	NA	-	NA	-	Water supply by CTW
Boorowa	52	0	32	1	98.8% compliance
Cabonne					
- Molong	54	0	32	0	100.0% compliance
Cowra	109	0	74	0	100% compliance
Forbes	68	0	39	0	100% compliance
Harden	71	0	52	1	99.2% compliance
Lachlan					
- Condoblin	47	0	46	0	
- Tottenham	37	1	21	0	
- Lake Cargelligo	43	0	38	0	98.5% compliance
Lithgow					
- Lithgow	77	0	50	0	
- Fish River	107	0	72	0	100% compliance
Oberon	122	0	71	0	100% compliance
Orange					
- Orange	146	0	87	0	
- Lucknow	53	0	35	0	100% compliance
Parkes					
- Parkes	120	0	76	0	
- Trundle	24	3	20	0	98.8% compliance
Upper Lachlan					
- Crookwell	53	0	36	0	
- Dalton	28	0	17	0	
- Gunning	32	0	32	0	
- Taralga	17	1	17	0	99.6% compliance

Weddin	NA	-	NA	-	Water supply by CTW
Wellington	77	0	51	0	100% compliance
Young	77	0	31	0	100% compliance
CTW	293	0	99	0	100% compliance
Totals	1886	6	1131	4	Overall compliance rate: 99.7%

Notes:

1. NA = not applicable
2. Most positive E.coli recordings resulted from sampling errors, with, generally no failures on repeat, replicate tests.
3. Cowra has implemented a boil water alert for supply to Koorawatha, a small village of 260 people. The supply is chlorinated but supply is via a long (30 km) main without re-chlorination. Council is rectifying this situation.
4. There are other minor exceptions in the NSW Health monitoring reports, but most of these relate to fluoride concentrations. They are not listed because all supplies are not required to test for fluoride. The NSW Health requirements are for monitoring of:
 - Fluoride (field result WSA)
 - Fluoride ratio
 - Fluoride (daily WSA)
 - Fluoride (weekly WSA)

The result which records the most exceptions is the daily result. Maintaining fluoride residuals in water supply where the raw water inflow to the treatment is variable on a daily basis (often on an hourly basis) is extremely difficult.

There have been some instances of aluminium exceedances at those plants using alum for coagulation and settlement

For the full range of testing required by NSW Health there have been **no** notices by NSW Health to correct.

5. **Note:** Combined Centroc & LMWUA microbiological compliance = 99.1%. Excluding the non-potable water supply results for Bourke, the overall compliance of the other 23 LWUs was 99.6%.

ATTACHMENT C

LOWER MACQUARIE WATER UTILITIES ALLIANCE DRINKING WATER MONITORING RESULTS

LWU	Micro. Results				Comments
	No. Samples	2009/10	No. Samples	2010/11	
Bogan	54	1	29	0	100% compliance
Bourke	60	9	70	8	87% compliance
Brewarrina					
- Brewarrina	41	0	37	1	99% compliance
- Goodooga	26	1	11	0	97% compliance
Cobar	31	0	30	0	100% compliance
Dubbo	107	1	94	0	99.5% compliance
Narromine					
- Narromine	53	0	31	0	100% compliance
- Trangie	53	0	31	0	100% compliance
Warren	52	2	20	1	96% compliance
Wellington	63	0	42	0	100% compliance
Totals	540	14	395	10	Overall compliance rate: (97.4%)

Notes:

1. Total number of samples: 540/full year (2009/10)
2. Most positive E.coli recordings resulted from sampling errors, with, generally no failures on repeat, replicate tests.
3. **There was one boil water notice issued by NSW Health in the 2 year period – namely at Warren which was determined to be due to poor sampling. The situation has now been addressed.** Excluding Bourke, compliance for the other 7 Councils was 99.1%. Bourke has a standing Boil Water alert for a **non-potable** (non disinfected supply) to the small communities of Byrock, Fordsbridge, Enngonia, Wanaaring & Louth– as a public health safeguard.

4. There are other minor exceptions in the NSW Health monitoring reports, but most of these relate to fluoride concentrations. They are not listed because all supplies are not required to test for fluoride. The NSW Health requirements are for monitoring of:

- Fluoride (field result WSA)
- Fluoride ratio
- Fluoride (daily WSA)
- Fluoride (weekly WSA)

The result which records the most exceptions is the daily result. Maintaining fluoride residuals in water supply where the raw water inflow to the treatment is variable on a daily basis (often on an hourly basis) is extremely difficult.

There have been some instances of aluminium exceedances at those plants using alum for coagulation and settlement

For the full range of testing required by NSW Health there have been **no** notices by NSW Health to correct.

5. There are other minor exceptions in the NSW Health monitoring reports, but most of these relate to fluoride concentrations. They are not listed because all supplies are not required to test for fluoride. The NSW Health requirements are for monitoring of:

- Fluoride (field result WSA)
- Fluoride ratio
- Fluoride (daily WSA)
- Fluoride (weekly WSA)

The result which records the most exceptions is the daily result. Maintaining fluoride residuals in water supply where the raw water inflow to the treatment is variable on a daily basis (often on an hourly basis) is extremely difficult.

There have been some instances of aluminium exceedances at those plants using alum for coagulation and settlement

For the full range of testing required by NSW Health there have been **no** notices by NSW Health to correct.

6. **Note:** Combined Centroc & LMWUA microbiological compliance = 99.1%. Excluding the non-potable water supply results for Bourke, the overall compliance of the other 23 LWUs was 99.6%.