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Northern Rivers

Regional

Organisation

of Councils inc

WATER IN THE NORTHERN RIVERS

RESPONSE TO INQUIRY INTO SECURE AND SUSTAINABLE
URBAN WATER AND SEWERAGE SERVICES FOR NON-
METROPOLITAN NSW

NOROC

APRIL 2008

**Mr Nathan Rees,
Minister for Water Utilities
Level 13, 55 Hunter Street,
SYDNEY NSW 2000**

DEAR MINISTER

The Councils of the Northern Rivers welcome the establishment of the *Inquiry into secure and sustainable urban water supply and sewerage services for non-metropolitan NSW*, and are confident that its central principles respect the need for the continued efficient and effective supply of water and sewerage services to local communities – while acknowledging the legitimate expectations within local communities that they continue to have effective control of such a vital and fundamental issue as their basic water supply.

Recently the Councils of the Northern Rivers discussed the terms of the Inquiry and were unanimous in their support for *demonstrable* beneficial change.

The Inquiry terms of reference has been discussed at length at a regional level in a variety of operational and representative fora, with a consensus emerging strongly in favour of continued local ownership and control of local water utility infrastructure, resources and planning.

The latest advice from our local water managers is that the region is facing an infrastructure task of some \$900m. for potable water, and some \$500m. for sewerage infrastructure provision over the next 30 years. Given that Councils are currently responsibly planning for this increased demand, it is envisaged that this demand will be largely met under existing forward planning and capital provisioning programmes.

However, it is true to say that significant backlog works amounting to in excess of \$200m. are currently in need of additional funding.

The Northern Rivers is one of the few areas in the State which, as a whole, was not drought-declared during 2007. The region has sufficient water supplies at present for the population it is currently carrying – and our local water utilities are exercising due diligence in planning for the population increases identified in the Far North Coast Regional Strategy – of some 60,500 persons by the year 2031.

In relation to the inquiry, NOROC makes the following broad points in relation to the present make-up of water and sewerage infrastructure and service provision in the Northern Rivers:

- That the current resource-sharing that is occurring in the Richmond and Brunswick Valleys via the vehicle of Rous Water County Council is a proven, efficient and evolving resource-sharing model that has stood the test of time and is well-placed to continue to provide this role into the future.
- The County Council model (Rous Water County Council) involves the Councils of Ballina, Byron, Lismore, Kyogle and Richmond Valley, and

provides water services for a population of over 50% of the population of the region.

- Clarence Valley Council, itself the result of a recent forced amalgamation of a number of smaller Councils, has resulted in the creation of North Coast Water, which provides merged water and sewerage services for 20% of the region's population.
- Clarence Valley Council and Coffs Harbour City Council have jointly invested in the off-stream storage at the Shannon Creek Dam, an example of inter-valley water-sharing and resource-sharing. The resultant authority (Mid North Coast Water), which is a wholly owned trading corporation of the two councils, is already operating successfully to construct infrastructure and shortly will be providing retail distribution to some 100,000 residents.
- Tweed Shire Council is the region's largest local government entity, and supplies integrated water and sewerage service to approximately 25% of the region's population.

Taken together, it can be seen that the Northern Rivers region currently enjoys a high level of integration, co-operation and resource-sharing across its four major river valleys (Tweed, Brunswick, Richmond and Clarence Valleys).

Councils of the Northern Rivers recently met and discussed the Inquiry in detail, *agreeing that, as a region, Councils support the exploration of alliance models to provide effective, viable and sustainable water and sewerage services to the community, subject to the ownership and control of water and sewer remaining with local government.*


Councils have elected to make individual submissions to the Inquiry.

Finally, let me re-iterate that Councils in the Northern Rivers are currently effectively providing water and sewerage services to our population using a time-honoured structure that has proven effective and resilient in the past.

These structures have a lot to recommend them, however, our Councils continue to support greater resource sharing and integration of water and sewerage provision functions, where a public benefit is clearly demonstrable before implementation.

I thank you for the opportunity to comment on the Inquiry.

Yours sincerely



Cr Ernie Bennett
Chair – Northern Rivers Regional Organisation of Councils

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EXECUTIVE SUMMARY

The Northern Rivers has been identified in the Far North Coast Regional Plan as one of the fastest growing areas of the state, with expected population increases of over 60,000 people in the next 25 years to 2031.

This increase in population will require a significant increase in essential public infrastructure such as water and sewer works.

The continuing high population growth is a cause for careful planning, especially as the burgeoning population growth of South-East Queensland has the potential to introduce new demands on Northern Rivers water supplies.

Councils therefore are moving towards the goal of an Integrated Regional Water Plan, in which essential infrastructure is identified and funding allocations progressively realised.

Councils advise that more than \$1 billion will be required over the next 10 years to fund the water and sewerage works currently being planned – most of these funds will be raised through loans, with the costs borne by current residents.

Over the next 30 years, some \$900m. will be required for water infrastructure, and some \$500m. will be required in the waste water resource sector.

It is noted that in excess of \$200m. of sewerage and water schemes have been affected by the State Government's review of the Country Towns Water and Sewerage Supply Programme. Councils therefore urge the restoration of funding in this scheme.

Councils bring to the attention the increasing cost of schemes caused by greater expectations for improvements in environmental quality, and therefore urge the creation of a new State Government funding source that can contribute to these outcomes.

WATER SUPPLY INFRASTRUCTURE

There are four water supply systems serving the Far North Coast: the Tweed River system, serving the Tweed and Murwillumbah as far south as Pottsville; the Rous system serving Lismore, Ballina and Byron council areas, and part of the Richmond Valley Shire; Casino and Kyogle, which draw water from the Richmond River; and Clarence Valley, which services the population of the Clarence Valley LGA.

TWEED RIVER WATER SUPPLY

The Tweed River Water Supply draws water from the Tweed River at its tidal limit about five kilometres upstream of Murwillumbah, at Bray Park. The average annual flow at Bray Park is about 290,000 ML/a. On-river storage is provided in the 16,200 ML Clarrie Hall Dam on Doon Doon Creek. Water is released from the Clarrie Hall Dam to Bray Park during periods of low river flow.

The yield of the existing system was evaluated in 1980 to be 27,500 ML/a. In this evaluation no provision was made for environmental flows. The yield is currently under review to provide for environmental flows and increases in demand, and a reduction in estimated yield of between 25% and 50% may result, i.e. to around 15,000 to 20,000 ML/a.

Notwithstanding, implementation of the BASIX scheme for all new buildings could constrain the increase in demand sufficiently so that the revised yield of the system is not exceeded before 2031, or even before 2051. With strong demand management, the need for additional system capacity could be deferred for some considerable time.

ROUS WATER

Rous Water is a regional scheme serving the urban centres of Lismore, Ballina and Byron Bay councils, and parts of Richmond River Shire. The principal source of supply is the 14,000 ML Rocky Creek Dam to the north of Lismore. A second dam on Emigrant Creek (820 ML) provides supplementary supply to Ballina and Lennox Head. The average annual flow at the river off-takes for these two dams is 230,000 ML/a. There also are some small local supplementary sources of supply that can be brought into service if needed.

The yield of the existing combined system is of the order of 15,000 ML/a before the application of environmental flows. The yield of the headworks system would be reduced by about 40%, i.e. from 15,000 ML/a to 9,000 ML/a, if environmental flows were applied to the Rocky Creek Dam. Rous Water has recently commissioned a new 30 ML/d river intake and water treatment plant on Wilsons Creek near Lismore ('The Lismore Source'), with around 5,900 ML/a capacity. The revised yield of Rocky Creek Dam together

with Wilsons Creek is approximately 14,900 ML/a. As for the Tweed system, implementing the BASIX scheme for all new buildings could constrain the increase in demand sufficiently such that the revised yield of the system is not exceeded before 2031, or even before 2051.

CASINO AND KYOGLE

Casino and Kyogle draw their water from the Richmond River. Casino is served from a weir on Richmond River near Casino. Water availability at the weir is normally good, however extractions by upstream irrigators could reduce river flows to unacceptably low levels. Natural flows into the weir can be supplemented by releases from Toonumbar Dam, an 11,000 ML irrigation storage to the northwest of Casino. At present, releases from Toonumbar Dam provide ample drought security. Toonumbar Dam currently is managed by State Water for irrigation purposes.

Kyogle water supply has approx 1,500 connections serving a population of approximately 3,000. The Kyogle water supply comes from the Richmond River as a run-of-river water source with only minimal storage (25ML) on-stream behind the Kyogle water supply weir. Kyogle Council has recently completed its Integrated Water Cycle Management Strategy for the town of Kyogle and now is implementing the outcomes of this strategy. One of the first measures was to expand its demand management programmes and implement a rebate program for initiatives such as rain water tanks and dual flush toilets to complement the existing drought management plan, water restrictions, and best-practice pricing already in place. The Kyogle water supply has been on continuous water restrictions for the most recent two years to 2007, with restrictions in place for more than 50% of the time over the last six years. Council is currently investigating sites for a proposed off-stream storage of around 200ML to serve the town of Kyogle.

CLARENCE VALLEY

In the Clarence catchment, a *Clarence Valley/Coffs Harbour Regional Water Supply Strategy* was adopted in 2000. It consists of two major objectives being:

- Protection of the Nymbodia and Orara River systems.
- Providing long-term water-supply security for the communities of Clarence Valley and Coffs Harbour.

These objectives are to be achieved by the construction of a regional water supply infrastructure and a comprehensive water efficiency programme designed to conserve water and reduce impacts on the environment.

Shannon Creek Storage - Construction of the 87 km pipeline linking the Clarence and Coffs Harbour communities commenced in 2002 with the final stage completed in 2005. Work on the 30,000 ML Shannon Creek storage facility located approximately 20 kilometres south of Grafton started in 2006 and has an anticipated completion date of December 2008.

WATER INFRASTRUCTURE VALUE

The current value of water infrastructure in the Northern Rivers is estimated by Council water managers as approximately \$742m., as at November 2007. It is estimated that approximately \$490m. will be spent on providing new infrastructure for growth or renewing existing water and sewer infrastructure over the next 10 years. This is significant as it will increase the overall asset value by 50%.

FUTURE REQUIREMENTS

Northern Rivers Councils will be contributing over \$1 billion toward water and sewerage infrastructure requirements over the next 10 years. These investments have the potential to significantly increase the cost for service to the communities being served.

Historically the State Government has contributed to these costs.

A summary of the infrastructure expenditure required is provided below:

FORECAST INFRASTRUCTURE REQUIREMENT NORTHERN RIVERS NSW 2008-218

Council	Water Infrastructure	Sewer infrastructure	Total
Tweed Shire Council	\$189.1 m.	\$103.3 m.	\$292.4 m.
Byron Shire Council	\$16.4 m.	\$49 m.	\$65.4 m.
Ballina Shire Council	\$11.7 m.	\$164 m.	\$175.7 m.
Rous Water	\$187 m.	n.a.	\$187 m.
Richmond Valley Council	\$4.6 m.	\$45.9 m.	\$50.5 m.
Lismore City Council	\$19.3 m.	\$60.4 m.	\$79.7 m.
Clarence Valley Council	\$50 m.	\$150 m.	\$200 m.
Kyogle Council	\$8.2 m.	\$4.4 m.	\$12.6 m.
Total	\$486.3 m.	\$577 m.	\$1,063.3 m.

SEWER INFRASTRUCTURE

Information from the region's Councils' Development Servicing Plans for the region outlines the required future works. The key infrastructure works are listed below:

- The West Byron Sewerage Treatment Works is overloaded and augmentation required (as of 2006)
- A major augmentation of the Hastings Point Sewerage Treatment Works is programmed (as of 2006)
- Kingscliff Sewerage Treatment Works (STW) – augmentation is programmed for after 2010
- Significant augmentation of the Evans Head Sewerage Treatment Works are anticipated in 2009 and 2010
- Major augmentation of the Banora Point Sewerage Treatment Works is programmed for 2020
- Significant augmentations of the Lennox Head and Ballina Treatment Plant are anticipated in 2008 and 2011
- Casino plant is at capacity, and augmentation is programmed for 2008
- Augmentation of the Lismore South Sewerage Treatment Works is anticipated after 2010

These works are included in the development plans for the various councils and its costs of the works are provided for in the various financial plans. Higher or lower rates of population growth will not alter the cost of the proposed works, but simply move the date at which the infrastructure is required.

It should also be noted that the planning approach adopted determines the ultimate population to be served by sewerage treatment works. For example the total capacity of the Tweed STWs is 194,000 equivalent persons, and includes an allowance for industry of around 10%.

THE PROVISION OF SEWER WORKS TO VILLAGES

For the purposes of this report, villages are considered to be urban areas with populations of up to 500 residents. Existing villages of this size generally cover an extensive area, perhaps extending over several kilometres, and the resultant cost of the provision of sewerage collection, treatment and disposal is therefore relatively high. The provision of sewerage to four such villages in the Bega Valley Sewerage Program was evaluated in 2004, and provide a useful guide to the Northern Rivers area. The EIS for these schemes (ERM, October 2004) provides the following information:

- The schemes are low-pressure sewerage schemes in which each lot is provided with a pumping well and grinder pump, which delivers to

a common rising main leading to a packaged sewage treatment plant, or, in some cases, to a transfer pumping station and then to a treatment plant

- The estimated capital cost of connecting each household is in the order of \$15,000 to \$20,000
- A capital contribution from each household is required in the sum of \$1,000 over 10 years (\$100 p.a.)
- The cost of each household connection is \$150 to \$300
- The cost of decommissioning existing septic tanks is \$200 to \$500
- The cost of electricity to run the grinder pump is approximately \$25 per year
- The annual council sewer charge is approximately \$490 per year, being the rate applicable to all households throughout the shire with reticulated sewerage services.

SEWER INFRASTRUCTURE VALUE

The current value of sewer infrastructure in the Northern Rivers is \$714m., as at November 2007. It is estimated that approximately \$580m. will be spent on providing new infrastructure for growth or renewing existing infrastructure over the next 10 years. This is significant, as it will increase the overall asset value by 50%.

The majority of this expenditure is treatment facility upgrades required for growth and higher environmental standard expectations.

Inevitably, Councils will borrow the majority of funds to finance this construction.

CONCLUSION

The continuing high population growth in the Northern Rivers is a cause for careful planning, especially as the effects of the burgeoning population growth of South-East Queensland has the potential to introduce new demands on Northern Rivers water supplies.

Councils therefore are moving towards the goal of an Integrated Regional Water Plan, in which infrastructure is identified and funding allocations identified.

Councils advise that more than \$1 billion will be required over the next 10 years to fund the water and sewerage works currently being planned – most of these funds will be raised through loans, with the costs borne by current residents.

The region is facing an infrastructure task of some \$900m. for potable water, and some \$500m. for sewerage infrastructure provision over the next 30 years. Given that Councils are currently responsibly planning for this increased demand, it is envisaged that this demand will be largely met under existing forward planning and capital provisioning programmes.

However, it is true to say that significant backlog works amounting to in excess of \$200m. are currently in need of additional funding.

Generally, Councils in the region are already highly integrated when it comes to provision of water and sewerage services. There is a high degree of support for the County Council model as an effective vehicle for resource sharing in the region, while Councils also support the exploration of alliance models to provide effective, viable and sustainable water and sewerage services to the community, subject to the ownership and control of water and sewer remaining with local government.