

**Submission  
No 68**

## **INQUIRY INTO ADEQUACY OF WATER STORAGES IN NSW**

**Organisation:** Byrrill Creek Land Care Group and Save Byrrill Creek Group  
**Date received:** 3/08/2012

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## Submission to the Inquiry into the adequacy of water storages in NSW

On Behalf of the Byrriil Creek Land Care Group and the Save Byrriil Creek Group we would like to address the Committee on the following points within the Terms of Reference of the Inquiry:

### The capacity of existing water storages to meet agricultural, urban, industrial and environmental needs:

#### Urban Issues

Dams should not be viewed as the only solution, and should not be seen in isolation. Reports and recommendations from a variety of sources, such as the QLD Dept of Environment & Resource Management: "Towards a Water Sensitive Future" 2010 publication points out the need to decentralise and diversify water supply systems



#### > Diverse sources of supply

##### A shift away from

The traditional reliance on rainfall and surface storages as the sole source of water supply.



##### To

A diverse portfolio of supply sources such as dams and reservoirs, groundwater, urban stormwater, rainwater tanks, recycled wastewater, greywater reuse and desalinated water.

A mixture of centralised and decentralised systems.

#### The benefits

- Improves water security by reducing reliance on catchment rainfall as the sole source.
- A mix of centralised and decentralised systems builds greater resilience to short-term climate variability, long-term climate change and population growth.
- Reuse of previously wasted water can avoid the need for new, expensive water supply options.
- Greater energy efficiency leads to a reduced energy footprint and greenhouse emissions.
- The scale of infrastructure can be matched to the scale of need.
- Systems supply water to the quality needed for the use, e.g. no need to supply potable water for outdoor irrigation or toilet flushing if other sources are available.

Federal Initiatives in Urban Water Planning Principles also recommend looking at other diverse: methods of water supply and moving towards a more sustainable use of water in urban design. ie: National Water Initiative (NWI), National Water Security Plan for Cities and Towns, Stormwater Harvesting & Reuse, Green Precincts Program, Water Smart Australia, Water Sensitive Urban Design WSUD and COAG principles:

*"The COAG National Water Principle 4 requires that water in the urban context be managed on a whole-of-water cycle basis."*

Existing storages are adequate to meet current needs...however, they need to be complimented by 21<sup>st</sup> century water saving technologies and public education that aims to increase social acceptance of water recycling technologies. This will prevent the need to augment water supplies by increasing existing dams or building new ones and ensure NSW is encouraging sustainable solutions for the future.

At present this is not the case and for new large scale urban developments, the NSW Dept Planning is not mandating large scale water savings in their Development Approval process.

Specifically in new large urban growth areas NSW government legislation should unequivocally mandate :

1. Recycled water for toilets and outdoor garden use. ( Dual Reticulation)
2. Storm water harvesting
3. Water Sensitive Urban Design
4. Rain Water Tanks with a large enough capacity (eg 10,000lt)

An example of the failure of this process is in Tweed Shire Council with No Implementation of Water Sensitive design principles to the 2 newest largest greenfield developments in Tweed Shire. Expected populations in both are 23,000 people (Cobaki Lakes 10,464 - now mooted at 12,000 and Kings Forest 10,900) A voluntary 5,000lt tank is all that has been stipulated by Council, despite repeated community requests to Council and the NSW Dept of Planning to uphold the requirements stipulated within the North Coast Strategy Plan for reuse of water in new urban growth areas .

Instead of a planned dual reticulation system, and an ideal opportunity to harvest stormwater, and reducing polluted runoff to our estuaries, a new dam is proposed. This dam may be built in the highest conservation riparian area in the Tweed Shire, at Byrrill Creek, to cater for this new urban growth.

These type of decisions lack foresight into the future. Schemes for reuse of water such as the WRAMS Olympic Park project in Sydney save between 40-90% of potable water, Rous Hill, Sydney achieves 50% and Pimpama/Coomera Development in SE QLD, catering for a population of 120,000 lead the way in Australia for Water Sensitive Urban Design.

## **Environmental Issues**

Environmental factors are often not taken into account in the early planning stages of large dams and vast sums of public monies wasted: The Traveston dam in QLD, and the Tillegra Dam in NSW, both halted due to sensitive environmental issues are such examples. In Tweed Shire the Byrrill Creek Dam has been prohibited in the Tweed Water Sharing plan, due to conservation values, yet Councillors still push for this option.

Dams are not constructed to help the environment, but to cater for human use and abuse. The argument that a dam is necessary to supply water to critical habitats in times of drought ignores the entire meaning of 'natural system'. If the natural ecosystem is in decline, it is not because of natural variation but rather land clearance and the excessive extraction of water for human consumption over the past two centuries .Some systems need a drought as part of their cycle. Dams used as flood Mitigation can be as dangerous as the Wivenhoe incident and the subsequent Brisbane flooding last year.

Green House gas emissions in the construction of new dams and the clearing of thousands of hectares of land is a huge carbon footprint. Methane gases released by rotting vegetation flooded by new dams contribute to our carbon emissions and ultimately to the global warming crisis. Habitats are destroyed, localised fauna and flora species which cannot adapt are endangered or come to the brink of extinction. Whole riverine ecosystems are destroyed downstream of dams due to reduced flows. Dams severe crucial wildlife corridors, such as the Byrrill creek proposal which is a regionally significant wildlife corridor linking two World Heritage National Parks, with a high percentage of endangered species. Koalas can't swim, nor can the Giant Barred Frog breed in deep dams.

## **Agricultural**

There are a variety of established land management techniques that have been proven to work at increasing the water holding capacity of the land without the need of dams. P. A. Yeomans developed the keyline farming method in the 1950s which has been proven not only to increase on site soil moisture but actually increases soil fertility..

Such methods involve forming swales to slow water movement and planting appropriate plants to increase water filtration are a primary concept in the keyline method. Peter Andrews is a recent example of this methodology being applied successfully.

Over irrigation has been proven to increase salinity in soils and reduce fertility. Massive broadscale farming with vast dams like SE Qld cotton farms, disrupt the natural run off and environmental flows needed for good river health downstream

## **Industrial**

The use of dam water for industrial purposes is wasteful and inefficient. Existing industries have a poor record of water use, with vast amounts being wasted in industrial processes. Industries should be using recycled water not potable grade water.

Coal Seam Gas (CSG) mining is being implemented at a rapid rate, which threatens to utilise and pollute artesian and ground water, and no doubt uses dam water as well during part of the processing.

## **Models for determining water requirements for the agricultural, urban, industrial and environmental sectors,**

Models are by no means a fail- safe method of correct calculation. Models can be adjusted to reflect a required outcome. At least 2 different companies should be independently engaged to separately collect and analyse statistics . If the base statistics are inaccurate for population growth and consumption of water then models are useless.

This has been demonstrated locally in Tweed Shire. The Model (multi criteria analysis), used by MWH who were commissioned by Tweed Council to analyse the Demand Management Strategy, Tweeds Water Augmentation Options, and the Community Consultation process have been found to be inaccurate, misleading and final conclusions made do not reflect the data accrued.

Assumptions made during the process have since been invalidated and include.

- Claiming that 30 000 MI from a new dam is needed to provide for an estimated 3000MI deficit in existing water supplies
- The rate of population growth, The MCA assumes a faster population growth rate than is actually occurring. ID Consulting predicts a population reduction of 15,353 less residents than in the MCA ( also refer to recent Tweed link Issue 766 p.1 - 26/6/2012).
- Projected consumption figures have been reviewed by external experts and found to be overestimated by at least 5% and up to 14%
- Claiming NSW government BASIX regulations as council initiatives, and using baseline figures prior to BASIX as a comparison
- Failure to properly quantify prices of recycled water, and conclusions assuming that the costs are too expensive
- Costs of the Dam options outlined do not reflect the true cost to the rate payers using conservative CPI calculations

**Proposals for the construction and/or augmentation of water storages in NSW with regard to storage efficiency, engineering feasibility, safety, community support and cost benefit,**

In October 2009 Tweed Council applied to the former Office of Water, NSW Government to ensure a prohibition of the Byrrill Creek dam within the Draft Tweed Water Plan was removed. The prohibition was retained in the new Tweed Water Sharing Plan in December 2010, due to high conservation values of the area, and community lobbying.

Tweed Councillors still voted for the dam. With the change in government in February 2011 an enquiry into this decision was requested by Councillors to Minister Katrina Hodgkinson. Investigation found the recommendation was based on scientific facts and the prohibition was retained, however her Department suggested that approval for the dam may be applied for through different channels/ Government Departments.

At present our current Mayor has managed (with his extra casting vote) to declare a moratorium on the Byrrill Creek Dam for 20 years. With Council Elections looming in early September this may change.

If the Council and NSW Government approves a dam at Byrrill Creek there will be a huge public outcry, as demonstrated previously.(5,000 signatures on petitions to Parliament. 2,000 to Council & 100s of letters to politicians)

With 45 threatened fauna species, 26 flora species, and 2 Endangered Ecological Communities, recorded in the Byrrill creek locality , of which 24 are listed in the Federal EPBC Act,we would like to point out that the approval will be challenged every step of the way. In the end it will be thrown out by the Federal Government, just as the Traveston Dam was.

Tweed Shire already has one dam, Clarrie Hall, and it is quite sufficient for the next 20 years and beyond if new urban developments were encouraged/mandated to implement 21<sup>st</sup> century water saving technology by your Government

ATTACHED ARE 2 PDF POWER POINT PRESENTATIONS as part of this Submission:

1. The Case Against a Dam at Byrrill Creek
2. Water Options in the Tweed (Kings Forest Presentation)

For more information refer to website: [www.Byrrillcreek.org](http://www.Byrrillcreek.org)

Yours Sincerely,

Joanna Gardner

On behalf of the Byrrill Creek Land Care Group (Co ordinator)  
and the Save Byrrill Creek Group (Co ordinator)

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