

**Submission
No 94**

INQUIRY INTO ADEQUACY OF WATER STORAGES IN NSW

Organisation: Namoi Water

Date received: 31/08/2012

Namoi Water

Submission to the Standing committee on state development on the Adequacy of Water Storages in NSW

August 2012



Photo : Lake Keepit

Namoi Water : Supporting sustainable water use in the Namoi Catchment and representing water users in the Peel, Upper and Lower Namoi Catchment Area

Executive Officer : Jon-Maree Baker

PO Box 548

Narrabri NSW 2390

PH: 02 67925222

EM: eo@namoiwater.com.au

Web: www.namoiwater.com.au

Background

Namoi Water appreciates the opportunity to make a submission to this Inquiry. Our Members support the development and growth of sustainable irrigated agriculture through a commitment to the ongoing management of our working rivers to ensure sustainable water use for the future of our communities for the long term.

The Committee's Terms of Reference are:

That the Standing Committee on State Development inquire into and report on the adequacy of water storages in NSW, and in particular:

- a) the capacity of existing water storages to meet agricultural, urban, industrial and environmental needs,*
- b) models for determining water requirements for the agricultural, urban, industrial and environmental sectors,*
- c) storage management practices to optimise water supply to the agricultural, urban, industrial and environmental sectors,*
- d) 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,*
- e) water storages and management practices in other Australian and international jurisdictions,*
- f) any other matter relating to the adequacy of water storages in NSW.*

There is a range of information that can feed into this review and we attach the Namoi ROC Water Working Group review of Menindee Lakes and the Wee Waa Drought Study which provides supporting evidence for our submission to address the committees terms of reference. In short the last large dam building project completed in NSW was here in the Namoi being Split Rock Dam. Which in the history since it's completion has only filled twice to capacity.

Population growth in the Namoi and agricultural trends are limited by the availability of water. Chaffey dam is a key consideration in this respect as the population of Tamworth grows placing increased pressure on the water available for agricultural use. The Namoi 2030 report commissioned by councils will provide a key plank of information that can be used to document current predictions of population growth and future development within the catchment. These are all premised on the current water storage available for consumptive and critical human needs being reduced as a result of climate change, add to this the basin plan impacts which must also be taken into consideration as they remove storage space in existing structures.

The agricultural area available for production and figures on the increase of water use efficiency and yield highlight how the industry is doing the heavy lifting in terms of making more with less water. Both Cotton Research and Development Corporation and Cotton CRC have completed numerous research projects in this area. This clearly supports the conclusion that the major limiting factor for our communities sustainability and profitability is water. Further to this the Namoi ROC Water Working Group obtained federal funding to determine the **value of water** in a full socio economic analysis which identified the flow on value of water in our communities. But also models what impacts occur as a result of less water being available in the catchment. This model is available to the committee upon request. This model shows the dire impacts of our current lack of planning and financial capacity to change our water balance and can be used to support the argument for the use of public funds to increase storage capacity generating long term economic growth, sustainable communities in regional Australia and securing our food producing capacity.

Models for determining water requirements must include research into the effectiveness of current reform processes and efficiency calculations of current storage and delivery mechanisms. The NSW Integrated Quantity Quality Model or in irrigators terms the "Impossible to Query or Quantify Model" is a tool that can and should only be used for the purpose for which it was designed and it is currently not a predictive model. Models must be firstly fit for purpose, the must also be able to be calibrated with accurate data and have function to allow regular updates. Today's telemetry technology allows for updates of water use every 5 or 15 minutes to be data logged and therefore run through programs to provide effective decision making tools to both the industry and the government.

Storage practices must reflect the intent for the storage construction ie: flood mitigation, industry development, critical human need supplies. Management practices can be improved, Menindee Lakes are a major area for ACTION, not further review it is estimated that some \$60 million dollars has been spent studying the Lakes to develop potential reform options however there has been little infrastructure improvements to the lakes in the last three decades. The supply of water to Broken Hill must be a priority, our request is that a purpose built storage be commissioned to ensure Broken Hill has a reliable backup water supply in dry climate sequences. This should reduce the need to limit water from Northern Valleys to be evaporated in the shallow lakes system. Some 1400 gigs of Northern Water is delivered to Menindee and in terms of supply for the Broken Hill township of 6 gigs there is a call of 250 gigs of water required in Menindee Lakes system.

One **proposal for the construction and augmentation** of water storages is highlighted in our submission to the MDBA as part of the Namoi ROC Water Working Group is a Weir in the Annabranche to improve efficiency of delivery during high flow events. The Murray Darling basin plan provides clear guidance regarding environmental watering requirements for instream assets. In the Namoi system this is being met from current stored water volumes. How the downstream requirement is met must be focused on using works and measures.

There is considerable private storage in the lower section of the catchment and this is typically shallow storage used in season for irrigation, however there may be potential for investigation of using storage in deeper systems at the headwaters providing a saving in evaporation and delivery efficiencies. To meet the basin plan requirements for the downstream value we should look to increase the storage volume in both regulated and unregulated streams to allow environmental water to be stored instream, rather than by reducing volume for irrigation in storage structures.

The environmental assets we now try to actively manage have many requirements (some hydrological and other NRM based). Best management is no longer about trying to mimic natural events as they occur, but trying to understand the needs of our assets and then have the tools to be able to deliver the volumes of water required at the right time.

Therefore, it is perceived by those unassociated with the practical running of rivers, that the water that is stored in regulated storages offers control in terms of timing and volume which is of greater value to the environment and hence the push to acquire this water away from irrigation use.

One of the limiting factors in delivery of environmental water is the valve capacity of the storage and in stream channel limitations within the regulated system. These need to be carefully considered in an integrated approach to delivery of environmental water. Lower storage structures in both regulated and unregulated systems through installation of weirs and other infrastructure needs to be considered in conjunction with the adequacy of up stream storages. What we do with the stored water and the priority in which it is used should be informing our considerations of storage requirements, its funding and also future management.

Other matters we wish to raise with the committee include that as we move forward our capacity to bridge the gap between water requirements and our effort to make efficiencies will only continue to highlight our inaction of planning to ensure ongoing water supply to meet needs.

Concluding our submission is that a key outcome from this inquiry is the start to collating information available, identifying data gaps, consider the timeframes and urgency of the issue and proposing a way forward to plan the security of NSW's water supplies in the future.