

**Supplementary  
Submission  
No 115a**

**INQUIRY INTO RATIONALE FOR, AND IMPACTS OF,  
NEW DAMS AND OTHER WATER INFRASTRUCTURE IN  
NSW**

**Name:** Professor Jamie Pittock

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19<sup>th</sup> October 2020

**Professor Jamie Pittock**  
Fenner School of Environment &  
Society  
The Australian National University

The Chair  
Portfolio Committee No.7 - Planning and Environment  
NSW Parliament House  
Macquarie Street  
Sydney NSW 2000  
By email: [portfoliocommittee7@parliament.nsw.gov.au](mailto:portfoliocommittee7@parliament.nsw.gov.au)

Dear Madam,

**Submission on the rationale for, and impacts of, new dams and other water infrastructure in NSW**

Further to our correspondence on 7-8<sup>th</sup> October, I write to provide a supplementary submission to Portfolio Committee # 7 inquiry that you chair into the “rationale for, and impacts of, new dams and other water infrastructure in NSW”.

I made a submission to your inquiry on 22nd September concerning the proposal to raise the Wyangala Dam to increase its storage capacity by 650 GL (54%) in order to supply an extra 21 GL/yr on average to water entitlement holders. I note that on 25th September, the NSW released the draft Lachlan Regional Water Strategy (and other regional strategies relevant to your inquiry) for public consultation: <https://www.industry.nsw.gov.au/water/plans-programs/regional-water-strategies/public-exhibition>

The draft Strategy outlines a number of cheaper and less damaging options that would obviate the need to raise the Wyangala Dam, and hence my request to make this supplementary submission.

*Alternative options: draft Lachlan Regional Water Strategy*

The draft Lachlan Regional Water Strategy includes 48 options, including the proposed raising of Wyangala Dam. A number of the options are environmentally appalling in that they focus on re-engineering major wetlands to reduce transmission and evaporative losses, which would be at the expense of the health of waterways and populations of flora and fauna (e.g. options #25, #26, #27 and #31). Many of the options represent common sense ways of enhancing the environment and local communities, for example, installing fish screens on pump offtakes (#18), and would enhance Indigenous peoples’ access to water and recognition of their rights.

What is most surprising are the options presented (or not) in relation to the purported benefits from raising Wyangala Dam:

- a) Town water supply

Town water supply is a tiny proportion of the surface water entitlements (694 ML/yr) and water stored in the existing Wyangala Dam (over 1,217 GL). Local utilities hold just 16 ML/yr, ~2% of

surface water entitlements). This means that better operating rules (e.g. debit rather than credit water releases) alone could secure water for towns along the river. Never the less, there are a number of very practical options suggested to improve town water security, including:

- #4, #5 and #6 – expanded and upgraded pipelines and regional interconnections;
- #7 – upgraded and new water treatment works;
- #8 and #10 – improved groundwater access and managed aquifer recharge;
- #9 – water recycling.

Raising Wyangala Dam is not needed to improve domestic water security.

b) Flood risk reduction

Despite WaterNSW's claim that flooding is a major problem in the valley, other than raising Wyangala Dam not a single option among the other 47 is presented to deal with flood damage. The NSW Government adopted Floodplain Management Plans for three sections of the Lachlan valley in 2005, 2011 and 2012. Yet nothing in this draft strategy reports on implementation of these plans or any inadequacies. It is hard to see how WaterNSW can claim that flooding is a major problem if they present no other options for management in their strategy.

c) Enhanced water supply for agriculture

Option #24, "Water efficiency projects (towns and industries)" is deceptively vague given that the water loss rate for irrigated agriculture in the Lachlan valley is regarded as being worse than any other valley in the NSW Murray-Darling Basin. Due to the early recovery of water for the environment in the Lachlan valley, irrigation farmers largely missed out of Murray-Darling Basin reform funding from the Commonwealth Government's On-Farm Irrigation Efficiency Program over the past decade. It has been reported that upgrading irrigation infrastructure in the Lachlan valley could conserve around 25 GL of water per year and was costed at around \$170 million in 2009. The lack of investment in on-farm water efficiency may result in farm business in the Lachlan valley being less productive than those in other regions.

*Key questions for WaterNSW*

Given that the NSW Government says that raising Wyangala Dam is required to increase town water supply, reduce flood risk and improve irrigation water supply, I suggest that the Portfolio Committee could usefully ask representatives of WaterNSW and other NSW Government agencies:

1. Why has the NSW Government decided to proceed with the Wyangala Dam raising before the options for enhanced water security outlined in the draft Lachlan Regional Water Strategy (2020) have been assessed?
2. In relation to town water supply, does WaterNSW agree that town water security can be adequately secured (local utilities hold just 15.545 ML, ~2% of surface water entitlements) by other options listed in the draft Lachlan Regional Water Strategy, including pipelines, greater waste water recycling, groundwater supply and managed aquifer recharge?
3. What proportion of the \$650 million cost of raising Wyangala Dam is WaterNSW assigning to the purported public benefit of increasing security of town water supplies?

4. Does WaterNSW have any reports on the implementation of the three adopted Lachlan Floodplain Management Plans from 2005, 2011 and 2012? Does WaterNSW have any reports detailing any inadequacies of the three adopted Lachlan Floodplain Management Plans?
5. Given that the NSW Government's Lachlan River Gooloogong to Jemalong Gap Floodplain Management Plan (2011) says that "A major restriction to flood flows is the Forbes/Stockinbingal Railway, has WaterNSW held discussions with the Australian Rail Track Corporation about upgrading this section of track as part of the inland rail project to reduce flood risk?
6. Given that Transport for NSW in its Newell Highway Corridor Strategy (2015) and subsequent projects<sup>1</sup> has not prioritised upgrades to this road where it traverses the Lachlan floodplain, would the NSW Government agree that reducing flood risk to this road on the Lachlan floodplain is not a priority?
7. What proportion of the \$650 million cost of raising Wyangala Dam is WaterNSW assigning to the purported public benefit of reducing flood risk?
8. Can WaterNSW detail the water loss rate for irrigated agriculture in the Lachlan valley compared to the rate in other valleys in the NSW Murray-Darling Basin?
9. Can WaterNSW confirm that upgrading irrigation infrastructure in the Lachlan valley could conserve around 25 GL of water per year and was costed at around \$170 million in 2009? Why has WaterNSW proceeded with the proposal to raise Wyangala Dam at a cost of \$650 million to supply an extra 21GL of water per year without more detailed evaluation of irrigation efficiency options?
10. Can WaterNSW advise how much charges for general security water entitlements will rise to pay for the private benefit component of the \$650 million cost of raising Wyangala Dam to supply an extra 21GL of water per year?
11. Given the direct threat posed by raising Wyangala Dam to the health of over 470,000 hectares of downstream floodplain wetlands, numerous threatened species and a threatened ecological community, can WaterNSW advise what the fees would be for this project under the Biodiversity Offsets Scheme as set out in the NSW Biodiversity Conservation Regulation 2017?
12. Has WaterNSW undertaken any assessment of the number, scale and cost of flood easements on private land and other works required for 'constraints relaxation', to enable any managed, overbank environmental flows to be released from a raised Wyangala Dam to conserve downstream wetlands?

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<sup>1</sup> <https://www.rms.nsw.gov.au/projects/newell-highway/index.html> including: Transport for NSW, 2015. Newell Highway Corridor Strategy May 2015, State of New South Wales, Sydney. ISBN: 978-1-922030-84-9. Quote "Forbes: The township of Forbes is subject to flooding from the Lachlan River. There are floodplains both to the north and south of Forbes where water covers large areas, however, the road is elevated at these locations" (pg. 117).

13. Has WaterNSW undertaken any assessment of the contribution of overbank flows to groundwater recharge in the Lachlan valley? Does WaterNSW have any plans to manage for or compensate those impacted by diminished groundwater recharge if beneficial flooding is diminished by raising Wyangala Dam?

Thank you for considering this supplementary submission. I would welcome an opportunity to elaborate on any of these points for members at any committee hearing.

Yours sincerely,

Professor Jamie Pittock