

Submission  
No 75

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

**Organisation:** Wiradjuri Council of Elders

**Date Received:** 21 September 2020

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This submission is specifically in relation to the enlargement of the Wyangala Dam within the Lachlan River catchment.

The submission is directed at the relevant points in the Terms of Reference.

1. (a) Historical allocation of water and consideration of other options for ensuring water security.

Historical allocation of water:

- What will be the impact of the enlargement of Wyangala Dam on the Lachlan Regulated River Water Sharing Plan and has this been considered in the planning process?
- As the enlarged dam is a redistribution of water resources away from environmental assets in the lower region of the Lachlan into extractive industries, has compensation for the redistribution of this asset been considered and factored into the total project cost?

Consideration of other options:

- Given the scarcity of water resources have all water efficiency projects for the Lachlan Valley been researched and considered?
- Has a cost benefit analysis for all water efficiency and storage projects been completed?

1. (b) Economic Rationale and Business Case:

Business Case

- We request the Business Case for Wyangala Dam enlargement be made public.
- Given there has been no Business case released, from the information we have gathered the following assumptions have been made:
- The Wyangala expansion is expected to yield an additional 21,000 ML per year of general security water to industry with a total cost of \$650 million. This represents a cost per ML of \$31,000; and
- Given the current market value of general security water in the Lachlan River is \$1,200/ML, is the cost of \$31,000/ML justifiable? What does the cost recovery model for this level of investment look like for consumptive users and the broader community?

1. (c) Environmental, cultural, social and economic impact:

Environmental Impact Statement (EIS)

- We request the EIS be made public with full community consultation with all communities and environmental stakeholders in the entire Lachlan Valley.
- Why has the proposed EIS only been given scope for the areas of inundation by the enlarged dam and not all areas that will be affected by the project downstream of the dam?
- Our major concern is the enlarged Wyangala Dam will redirect 650 GL from major flooding events away from the downstream environmental assets and place this water in storage for use by industry.

Bird Breeding events in the Lower Lachlan Wetlands

- For major bird breeding events to take place in the Lower Lachlan Wetlands a number of environmental events are required including depth, duration and lateral spread of river flood water.
- Driver et al. (2005) and Brandis (2016) research concludes that the probability of breeding occurring were maximised when there was ~100 days of flows >2,500 ML (per day at Booligal) or when total flow volumes were 500 GL.

- Given that major dam spill flood events are the only way these types of flows can be delivered to this region, we believe the enlargement of Wyangala Dam will severely impact water bird breeding events in the Lower Lachlan wetlands.
- Groundwater Recharge
- Sustainable groundwater recharge downstream of Wyangala Dam requires major flood events including depth, duration and lateral spread of river flood water.
- Reliable groundwater/aquifers are required by consumptive users including grazing, irrigation and critical needs (towns). Groundwater systems are relied upon in times of drought and without adequate recharge these systems will not provide this critical service.
- Reliable groundwater/aquifers are required to support Groundwater Dependent Ecosystems (GDE) throughout the extent of the Lachlan Valley. The existence of these GDE's will be further compromised with any reduction in major flood events.

1. (d) Impact of Climate Change:

- Has the hydrological modelling been completed for the enlarged Wyangala Dam?
- If it has can this document be made public?
- Has the hydrological modelling factored in increased evaporation in a larger dam due to increased temperatures under climate change conditions?

1. (e) Water Infrastructure Technologies:

- Have water management technologies such as Total Channel Control (TCC) been considered to improve efficiencies in the Lachlan Valley.
- This technology has been successfully installed in the Coleambally Irrigation Area and could be used to improve efficiencies in the Jemalong Irrigation district and/or across the entire valley if adopted by Water NSW.
- We believe valley wide water efficiency projects like this would provide better environmental, economic and social outcomes for the Lachlan Valley. It would also be a more responsible use of public funds.