

Ms Rachel Strachan, member, Lower Darling Horticulture Group made a number of suggestions in her evidence to the committee (page ten to eighteen of the transcript) that were aimed at better managing the Menindee Lake System. Can you please respond to the following:

Are there any difficulties in maintaining the drought reserves in Lakes Wetherell and Pamamaroo?

Yes. There are a number of issues that make it difficult to ensure that a larger proportion of the water reserve is held in the upper lakes when the lakes revert to NSW control at 480GL.

When the lakes are above the reserves and in MDBA control, the MDBA demand often exceeds the Menindee outlet capacity (4,500ML/d). The release flow capacity from the Menindee Lake also reduces as the lake is drawdown. This leads to higher releases from the upper lakes to meet this demand even though there is water still in the lower lakes (Menindee and Cawndilla lakes). An enlarged Menindee outlet regulator and channel would reduce this constraint.

The large amount of water in Cawndilla that cannot be released to the Darling River will form a significant component of the 480GL. When water is stored in the lower lakes there is around 250GL of water remaining in these lakes that cannot be released to the Lower Darling, most of this in Cawndilla. This means that if water has been stored in the lower lakes, then when MDBA releases draw the lakes down to 480GL over half of this reserve will not be accessible to customers in the Lower Darling or Broken Hill.

A levee and regulator between Menindee and Cawndilla could be used to exclude water from Cawndilla when inflows are not sufficient to fill both lakes. The use of these structures in these circumstances would mean that when the storage next falls to 480GL more of the water would be accessible, in the upper lakes, rather than in the dead storage in Cawndilla.

Is it possible to raise the full supply level of Lakes Menindee and Cawndilla by one metre? Has there been any modelling and costings on achieving this? If so, is it possible to provide a precis or overview to the committee?

The full supply levels were lowered due to concerns of wave erosion on sites of cultural heritage and structural integrity of the embankments. The raising of the full supply level is unlikely to be feasible but in any event WaterNSW has not modelled nor costed these proposals.

Has there been any investigations and costings for increasing the outlet capacity of Lake Menindee? If so, please provide a precis or overview for the committee?

These are part of the Menindee SDL project for which DPI Water has responsibility.

Has there been any investigations and costings for the construction of a regulator It is not clear which regulator this question refers to, however it is most likely referring to the Menindee SDL project proposals.

Can you take it on notice to provide us with the dates of those consultations, who was involved and how it was conducted, please?



WaterNSW held meetings in August with customers and the community in Buronga and Pooncarrie who had suffered significantly from the prolonged period of drought.

The first meeting was held on the 24 August which was with key industry group stakeholders in WaterNSW Buronga Office; and

The second meeting was held on the 25 August which was Community Information session for Lower Darling Customers in the Pooncarrie Town Hall.

The critical issue was that while flows were now passing through Weir 32 and block banks at Burtundy had been removed, the water quality issues were impacting on the use of the water for stock and domestic use, as well as irrigation of plantings at a critical time in the irrigation cycle.

There were also regular meetings with MDBA, DPI Water and OEHL during this period.

Following these targeted stakeholder and community meetings a weekly teleconference was held with with a Lower Darling Customer Reference group. These teleconferences occurred on the following dates: 5/9; 12/9; 19/9; 26/9; 4/10; 10/10; 17/10.

In terms of the annual operating costs of the system—sorry, I will say it this way: WaterNSW's costs of operating the system, I would have to take notice. In terms of the pipeline, I cannot answer that question. I do not have any of that information.

WaterNSW estimated annual operating costs of the Menindee Lakes scheme over the next three years set out below.

2016/17	2017/18	2018/19
<b>1,472,200</b>	<b>1,107,000</b>	<b>1,190,600</b>

This is the budget forecast for the next three years for the operations of Menindee Lakes. The average forecast cost is \$1,256,600.

Perhaps you can take this question on notice and answer it after you have had time to reflect. Could some flexibility be introduced into the system? What would be the impact on the rules that currently govern this change of water from Menindee Lakes, and should we be revisiting the rules as a result of a pipeline?

WaterNSW requires some flexibility in the rules to optimise outcomes. This also requires a clear description of the desired outcomes, which will change as the result of a pipeline. WaterNSW optimises the operation of the individual lakes at Menindee, and schedules releases from the lakes, and between the lakes to reduce total evaporation and reduce accumulated salinity levels. WaterNSW develops drought contingency plans to extend the security of supply from the lakes and downstream of the lakes.

Have you got any information on the potential storage capacities of the three smaller upper lakes, Tandure, Bijijie and Balaka?

No specific, detailed information has been collected. However, the following capacities have been estimated for operational purposes.



Tandure	88GL
Bijjije	20GL
Balaka	18GL
Malta	3GL

Can WaterNSW or any of its predecessors explain the rationale behind the increased releases Mr Whyte is talking about in his testimony? If not why not?

WaterNSW was not the operator of the system when these releases were made. These decisions were made by MDBA and NSW DPI Water. The water was on call by MDBA to meet customer demands in the Murray. DPI Water managed the releases and determined the way the water was released.

Can Water NSW please respond to the concerns Mr Whyte raises about pumping small flows from upstream of the Menindee Lake System? How is pumping of small flows managed by WaterNSW? Is this consistent with the water sharing plan? Has the water sharing plan always had this provision? If not, when did this amendment occur?

The access rules for pumping of flows in the Barwon Darling are outlined in the Water Sharing Plans. The Water Sharing Plan for the Barwon Darling unregulated and alluvial water sources commenced in October 2012. Under the new arrangements the size of the pump used to extract the small volumes of water available under "A Class" licences was removed resulting in higher daily extractions which impacts on total volume extracted during some events. This may impact on the total volume of water that reaches the Lakes during drier years.

The management and implementation of these rules were transferred to WaterNSW on the 1 July 2016. The rules allow water to be pumped for different customer classes based on daily flow volumes. Small volumes are available to "A Class" licences at low river flows, and "B Class" and "C Class" licences have access to large volumes at higher flows.

WaterNSW measures the flows along the river through its hydrometric network. The commence to pump, and cease to pump targets which are regulated through the water sharing plan are set based on flows at these gauging stations with the flow data at these sites available to customers online. Customers' water usage is metered on data loggers – which measure volume as well as time and date of pumping. These dataloggers are downloaded regularly to confirm compliance with the conditions relating to access rules.

If the arrangement is contained in the water sharing plan then please provide the provisions of the water sharing plan that makes this arrangement permissible.

Division 2 of the Barwon-Darling Unregulated and Alluvial Water Sources 2012 Water Sharing Plan outlines the Flow Classes and daily access rules.

Has there been any investigations and costings for increasing the outlet capacity of Lake Menindee? If so, please provide a precise or overview for the committee?

Has there been any investigations and costings for the construction of a regulator between Lakes Menindee and Cawndilla? If so please provide a precise or overview for the committee?



Both of these projects have been considered as part of the Menindee Lakes Sustainable Diversion Limit project.

The committee heard evidence that the proposed new pipeline should be available to all high priority users who currently rely upon the Menindee Lakes system. Who has been considered in developing the business case for the new pipeline? Will all current high priority users of the Menindee Lakes System have access to the new pipeline and if not what is the rationale behind the decision not to provide them with access?

The business case for the proposed new pipeline was prepared by DPI Water so these questions are best directed to them.

Can Water NSW please explain how the calibration were incorrect and what impacts this had upon the management of the Menindee Lake System and subsequent releases to the Lower Darling?

WaterNSW only started operating the Lakes from October 2014. Prior to this the Lakes were operated by NSW DPI Water. Our understanding is the lakes were resurveyed in 2003 and the estimate of water that can be held in the lakes was recalculated. This survey indicated that the Lake Wetherill held a lower volume of water than was originally estimated. This reduced the volume of water held in the upper lakes when the lakes returned to NSW control.