



Australian Government



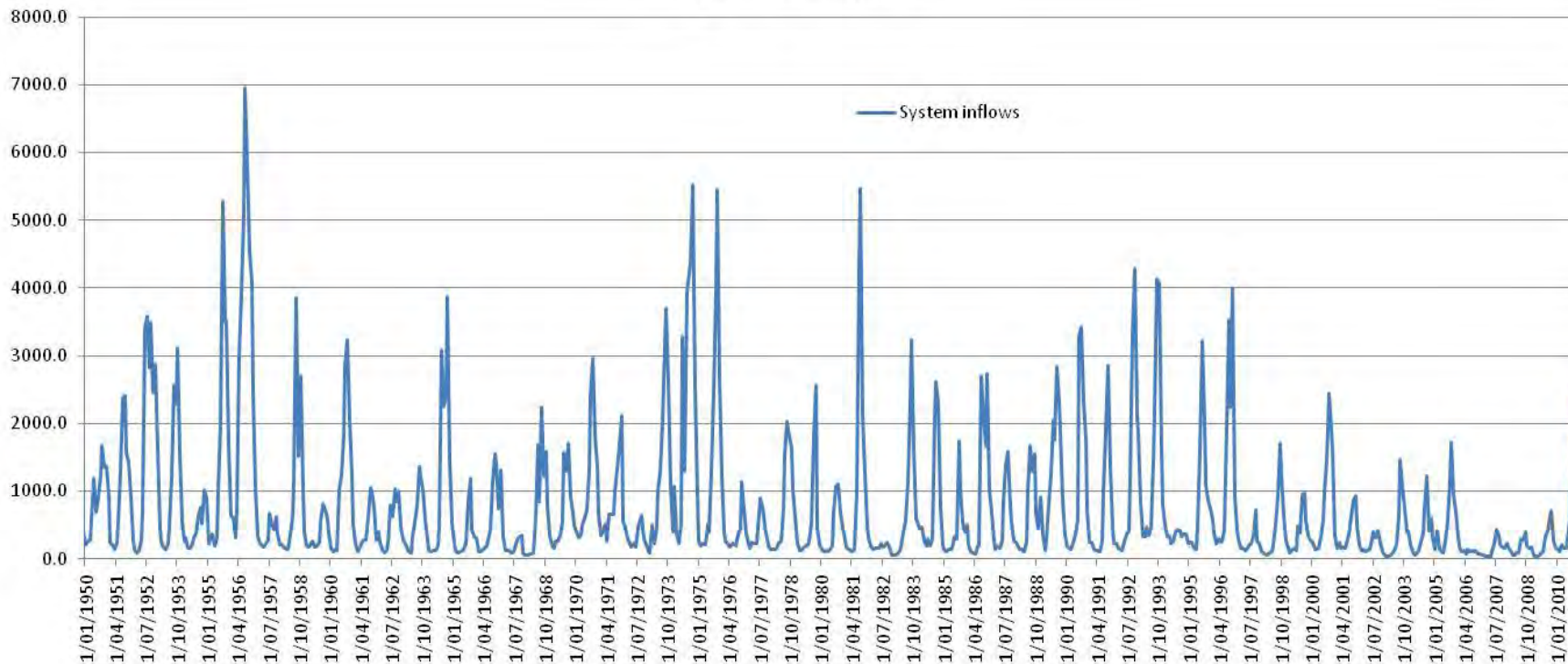
Environmental Flows in 2010-11

An operational perspective

September 2010

Murray System Inflows (excl Menindee and Snowy releases)

System inflows



Reasonable peak inflows.... but nothing spectacular

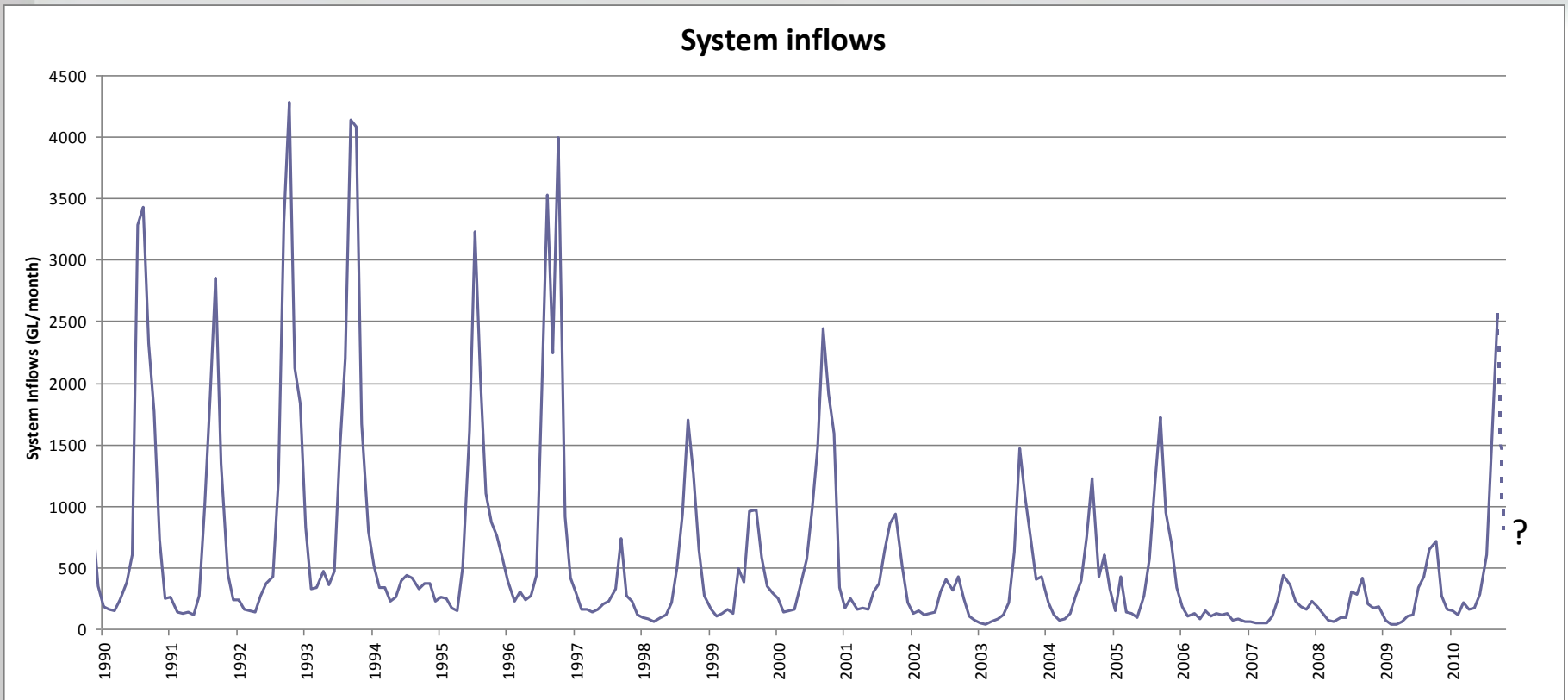


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Murray System Inflows

(excl Menindee and Snowy releases)



The location of inflows and duration (??) will drive flow peaks and the ecological responses downstream.



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Need another significant rain event to have a big impact



Environmental water availability in 2010-11

- Between TLM and CEWH there is >400 GL of environmental water available at present and this will grow as allocations increase.
- The most ecological and cost effective method of using such large volumes of water is to enhance a flow pulse that can provide overbank flooding in some sections of the river, similar to previous releases of the Barmah-Millewa EWA.
- Multiple site watering proposal by Living Murray
 - 100-300 GL release from Hume to enhance river flows and target Barmah-Millewa and Lower Lakes (has the flexibility to include other e-water holders and to target other sites if opportunities arise)
 - Needs jurisdictional approval of water accounting methodology
 - Tries to do what the Barmah-Millewa EWA does but using 'normal entitlements'
- Barmah-Millewa EWA
 - Potential for a further 411 GL release from Hume when repaid by NSW and Victoria
 - Full repayment will require further improvements in water availability
- Rules are there to fill dams and conserve resource.
- Need to have more rules that enable releases to piggy back on events .



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Murray River storage levels and flow data: Murray River System

Last updated: 06:05 16/09/2010



Interpreting the readings

The figures given for the weirs, Echuca Wharf, Swan Hill and Murray Bridge are water levels in metres AHD (Australian height datum). ('Metres AHD' refers to elevation above a standardised measure of mean sea level, which is taken to be zero.)

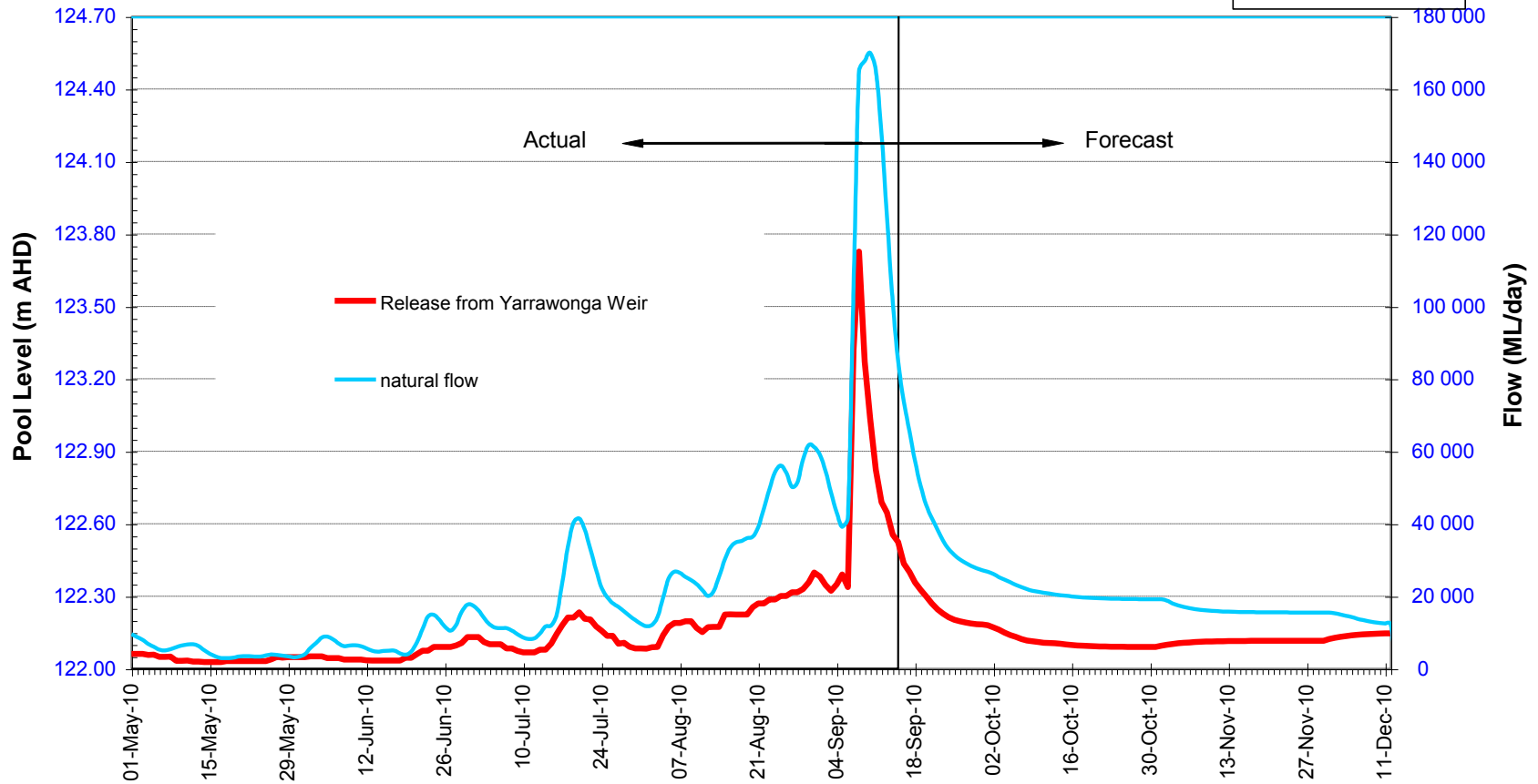
Dam storage values are in gigalitres (GL) and percentage of capacity.

All other site values are river flows in megalitres (ML) per day.

Scale:

Yarrowonga Weir: Forecast Operation (Assuming Dry Conditions)

Indicative only -
subject to change

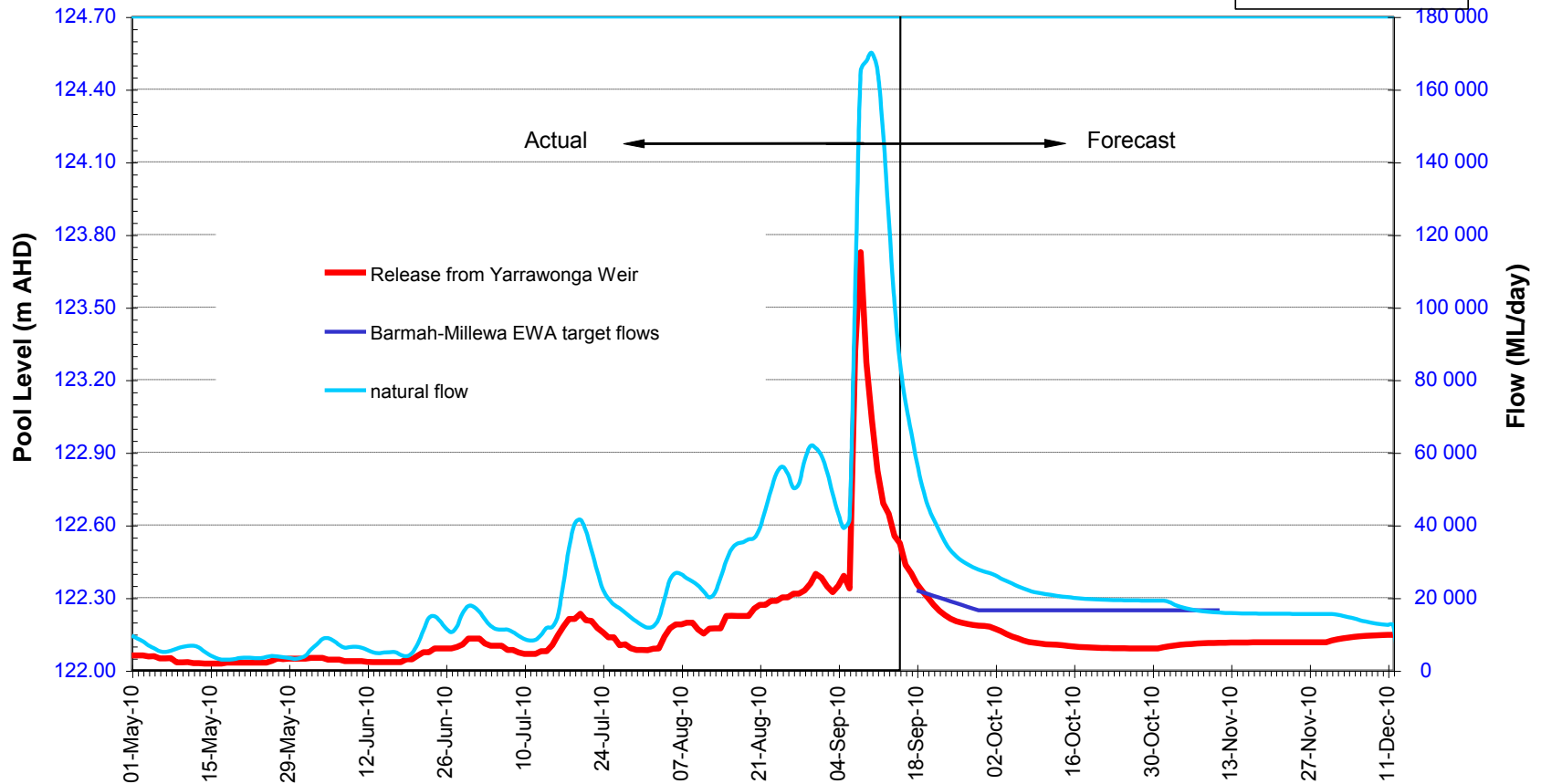


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Yarrowonga Weir: Forecast Operation (Assuming Dry Conditions)

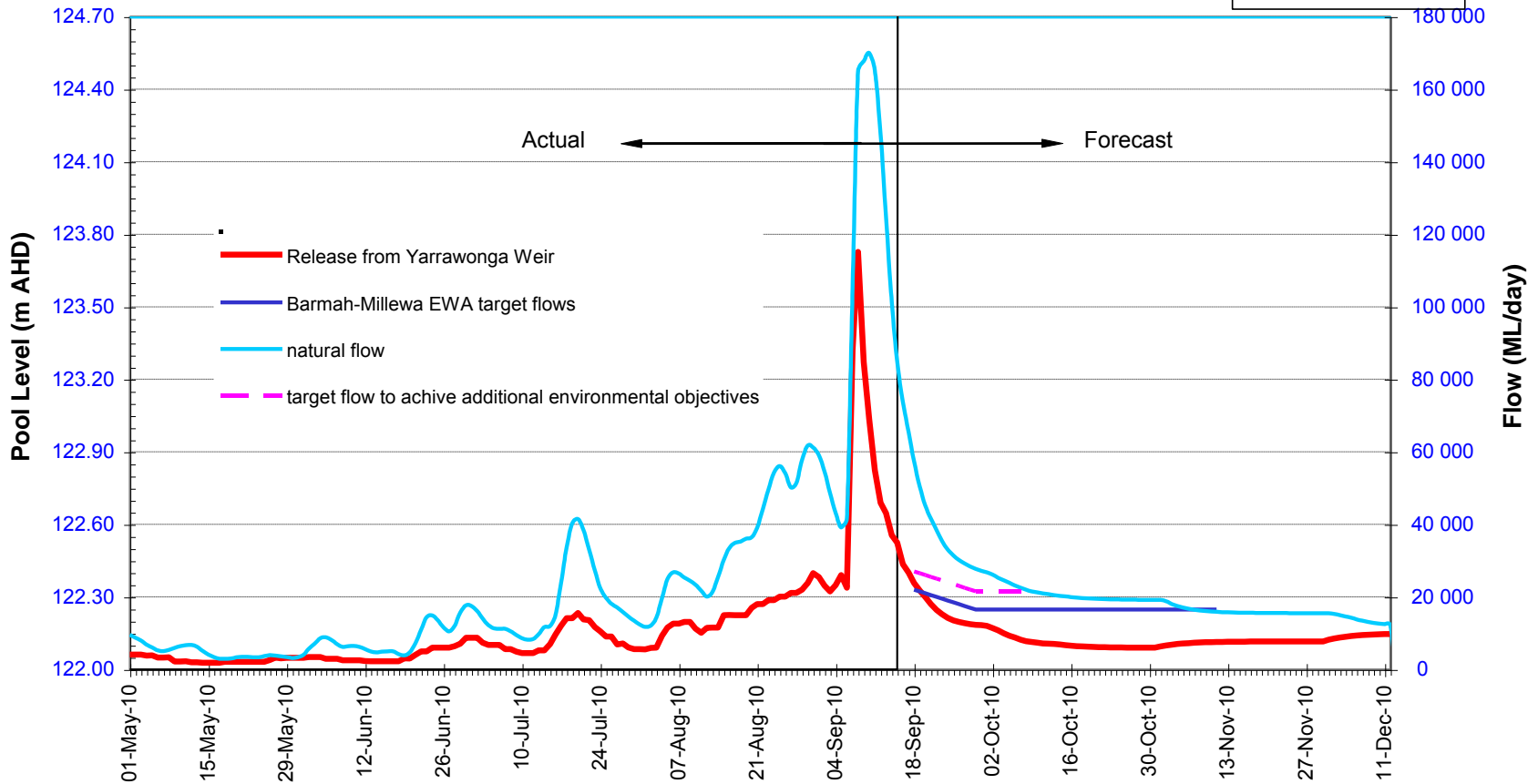
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650 GL extra release - good outcomes at Barmah-Millewa

Yarrowonga Weir: Forecast Operation (Assuming Dry Conditions)

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650 GL extra release - good outcomes at Barmah-Millewa

850 GL extra release - great outcomes at Barmah-Millewa

- plus good outcomes throughout Wakool System; and
- plus potential for good outcomes in Gunbower and Koondrook depending on Goulburn inflows

Neither scenario provides water to floodplains in SA

For SA need to coordinate with releases from Menindee Lakes and Lake Victoria

Murray River storage levels and flow data: Murray River System

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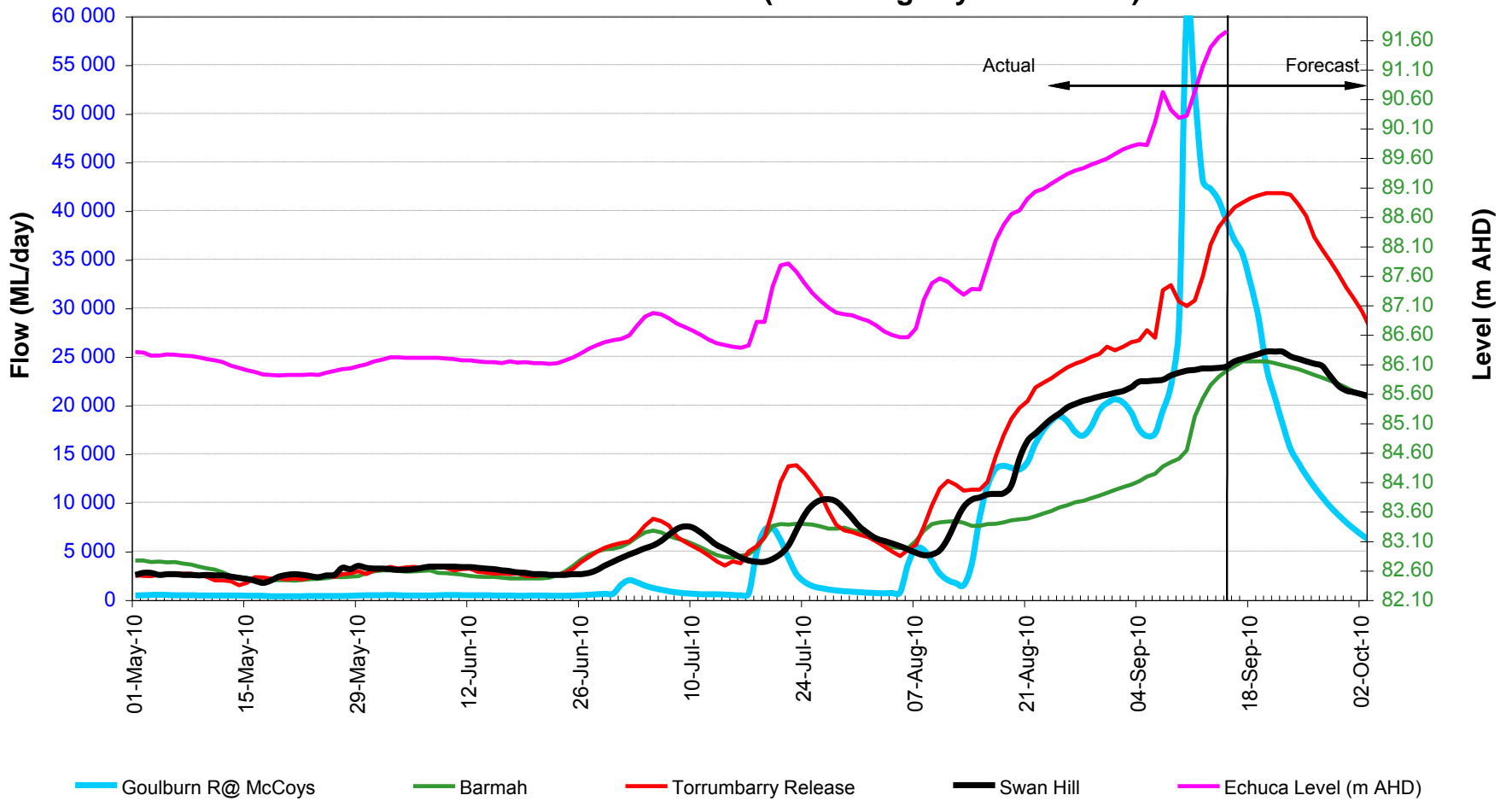
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Scale:

Torrumbarry Weir Actual & Forecast Behaviour (Assuming Dry Conditions)

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Subject to Review



Murray River storage levels and flow data: Murray River System

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Interpreting the readings

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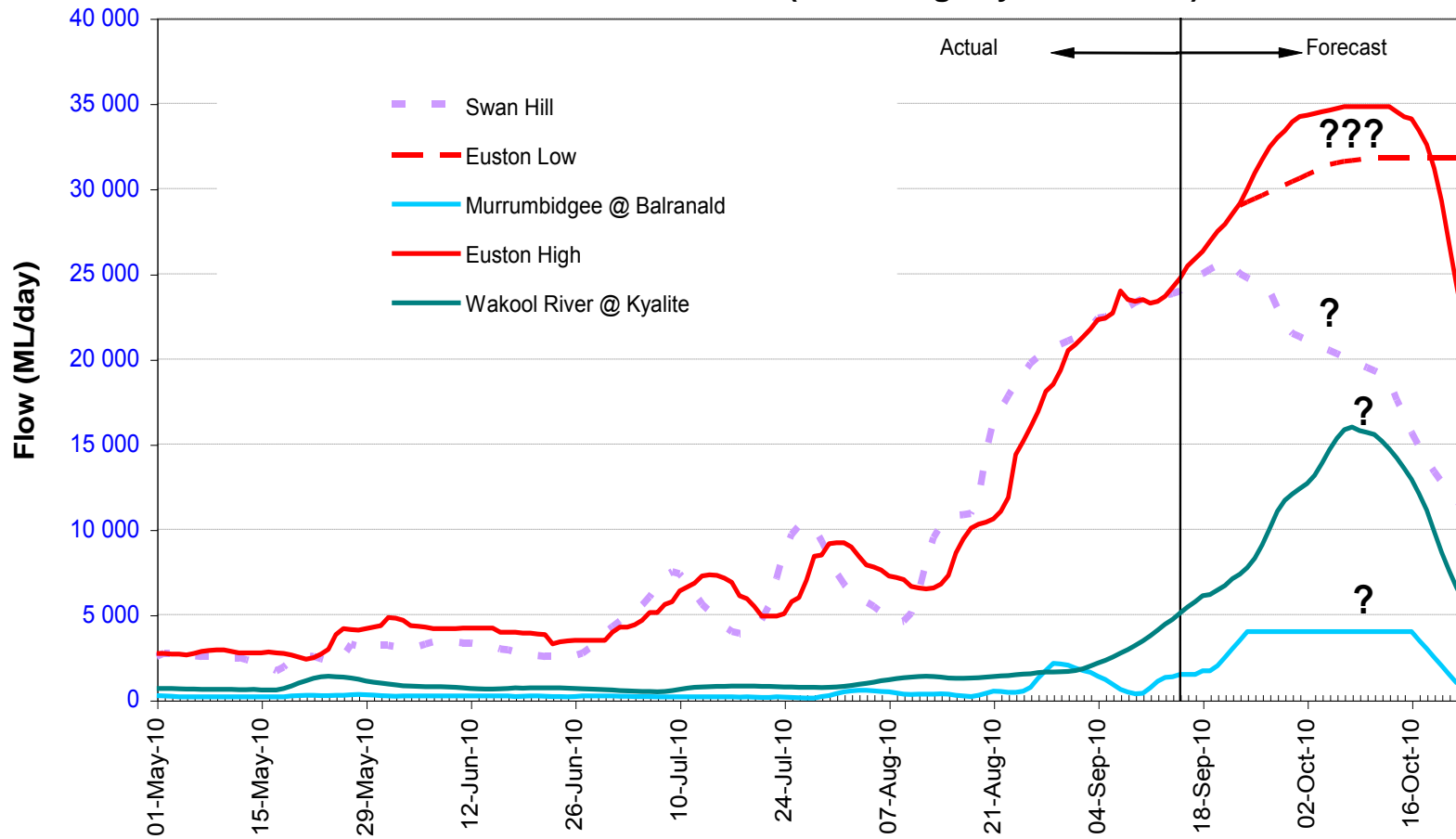
Dam storage values are in gigalitres (GL) and percentage of capacity.

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Scale:

Euston Weir Actual & Forecast Behaviour (Assuming Dry Conditions)

Indicative Only:
Subject to Review



Flow to South Australia

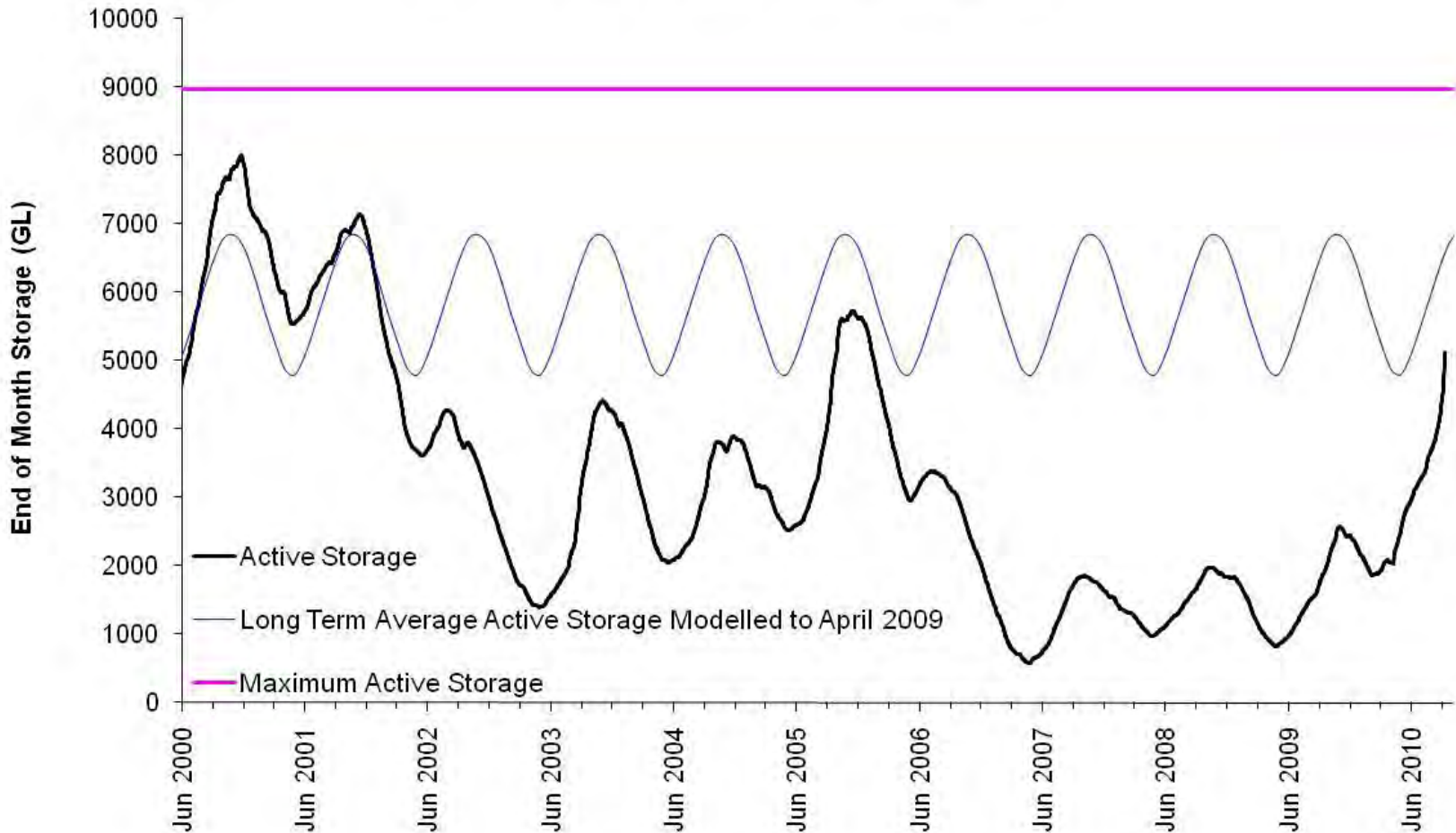
- Too early for accurate predictions given that it will be a month away (mid October)
 - at least low 20,000's ML/day, but could be higher depending on
 - peak at Euston;
 - river losses downstream of Euston; and
 - inlet capacity at Lake Victoria.
- Significant works program in SA that would be compromised if flows are higher
- But also examining options to 'boost' the flow across SA border with additional releases from Menindee Lakes and Lake Victoria (maybe add 15,000 ML/day).
- It would be good to have a 'rule' that we could simply implement;
- This 'boost' may not need 'environmental water' (as implemented in 2000).
- There will be flow through the barrages and into the Coorong - not sure how much just yet.



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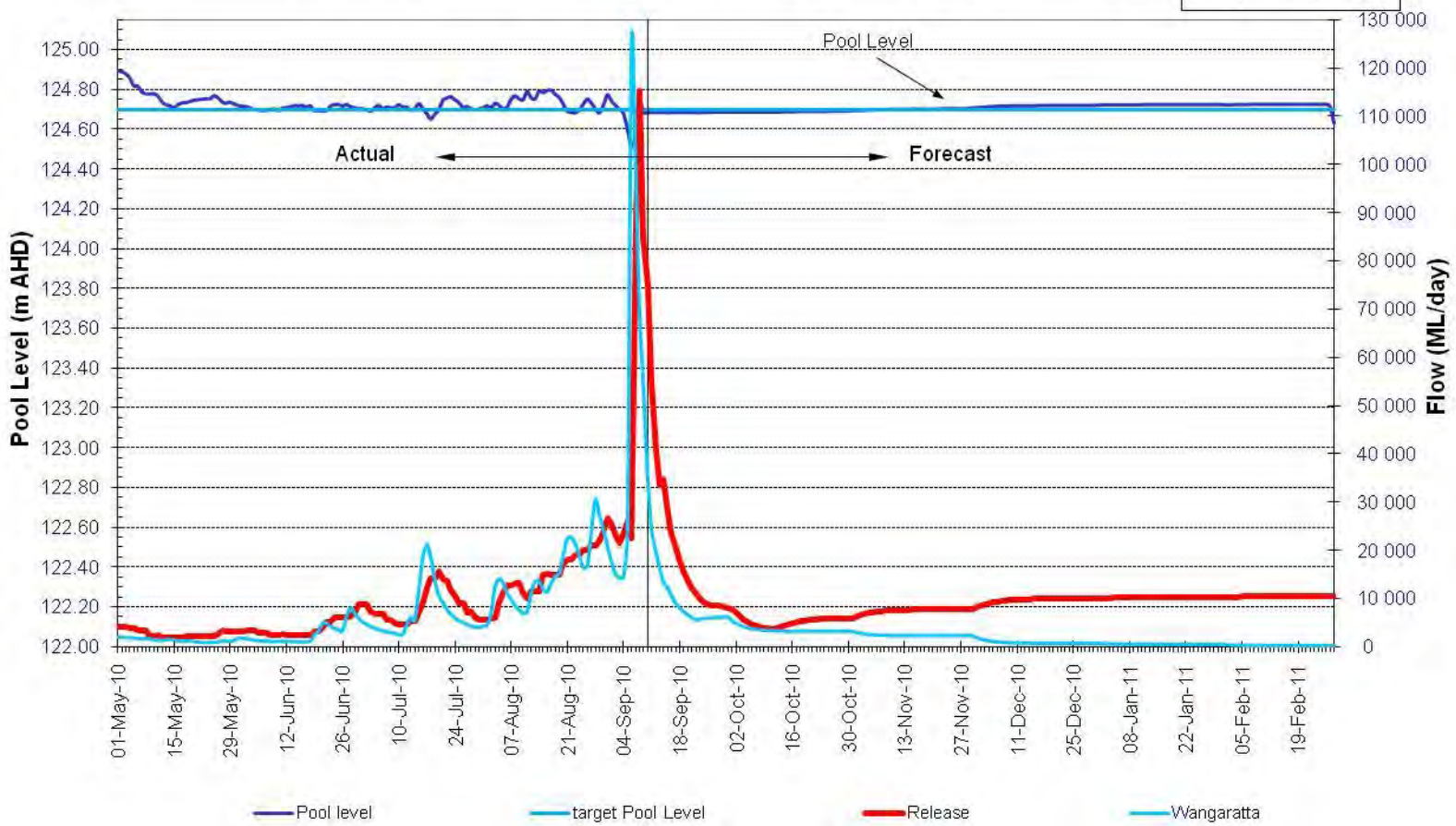
MDBA active storage

MDBA Active Storage : June 2000 to present



Yarrowonga Weir: Forecast Operation (Assuming Dry Conditions)

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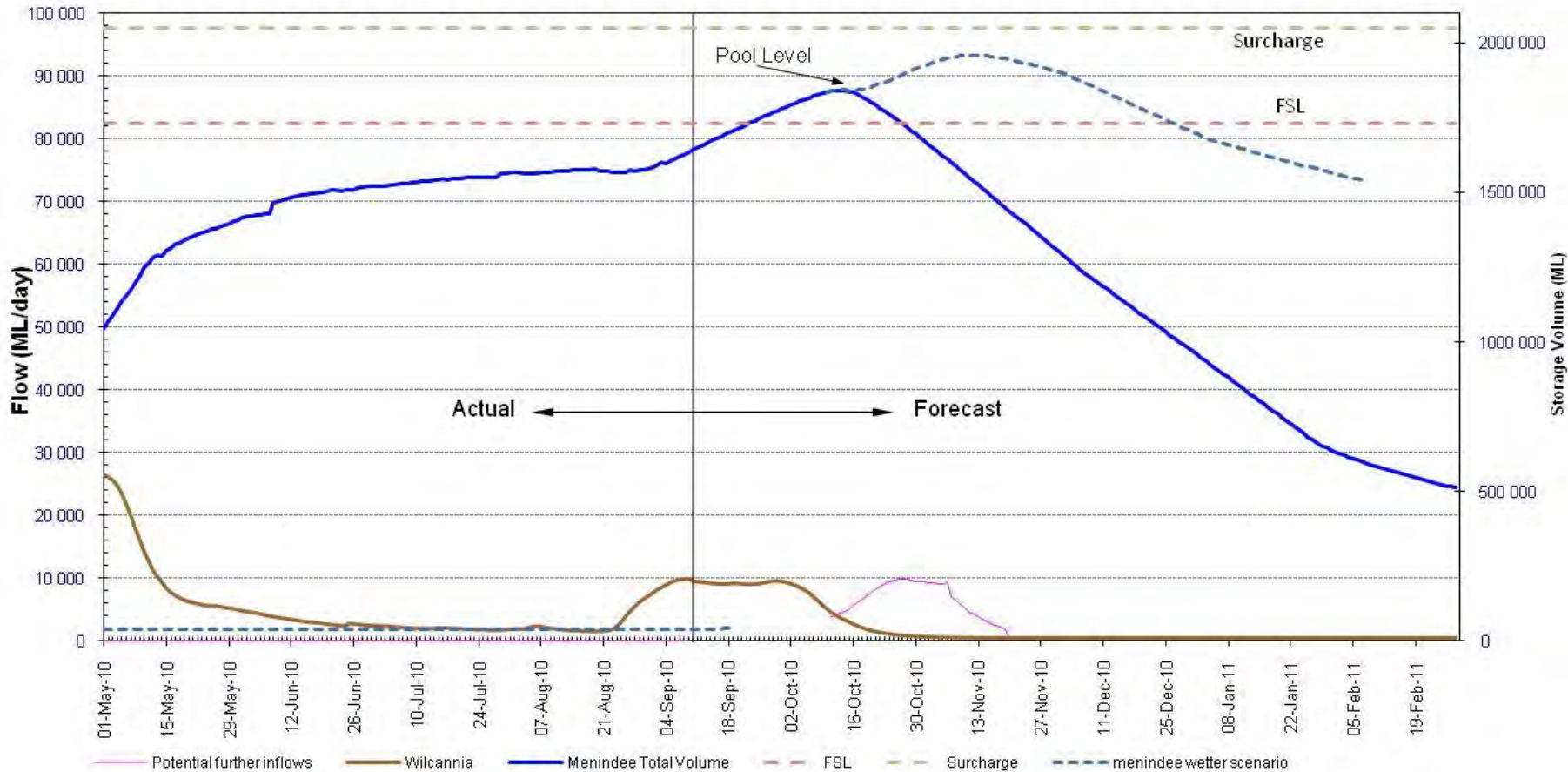


Peak will soon go low – what is needed is further pulses?

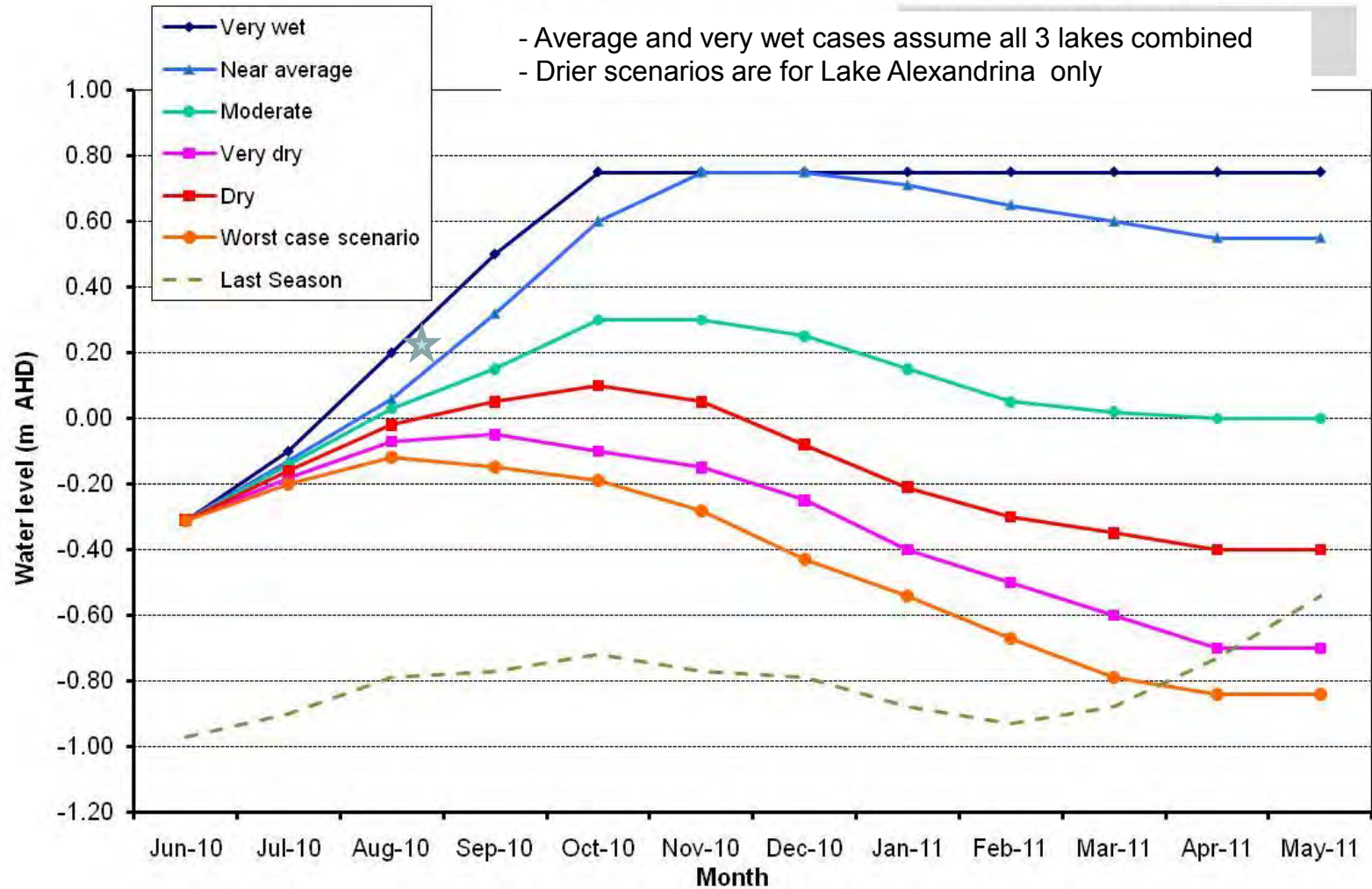
Menindee Lakes

Menindee Lakes: Forecast Operation Assuming Dry Conditions

Indicative only -
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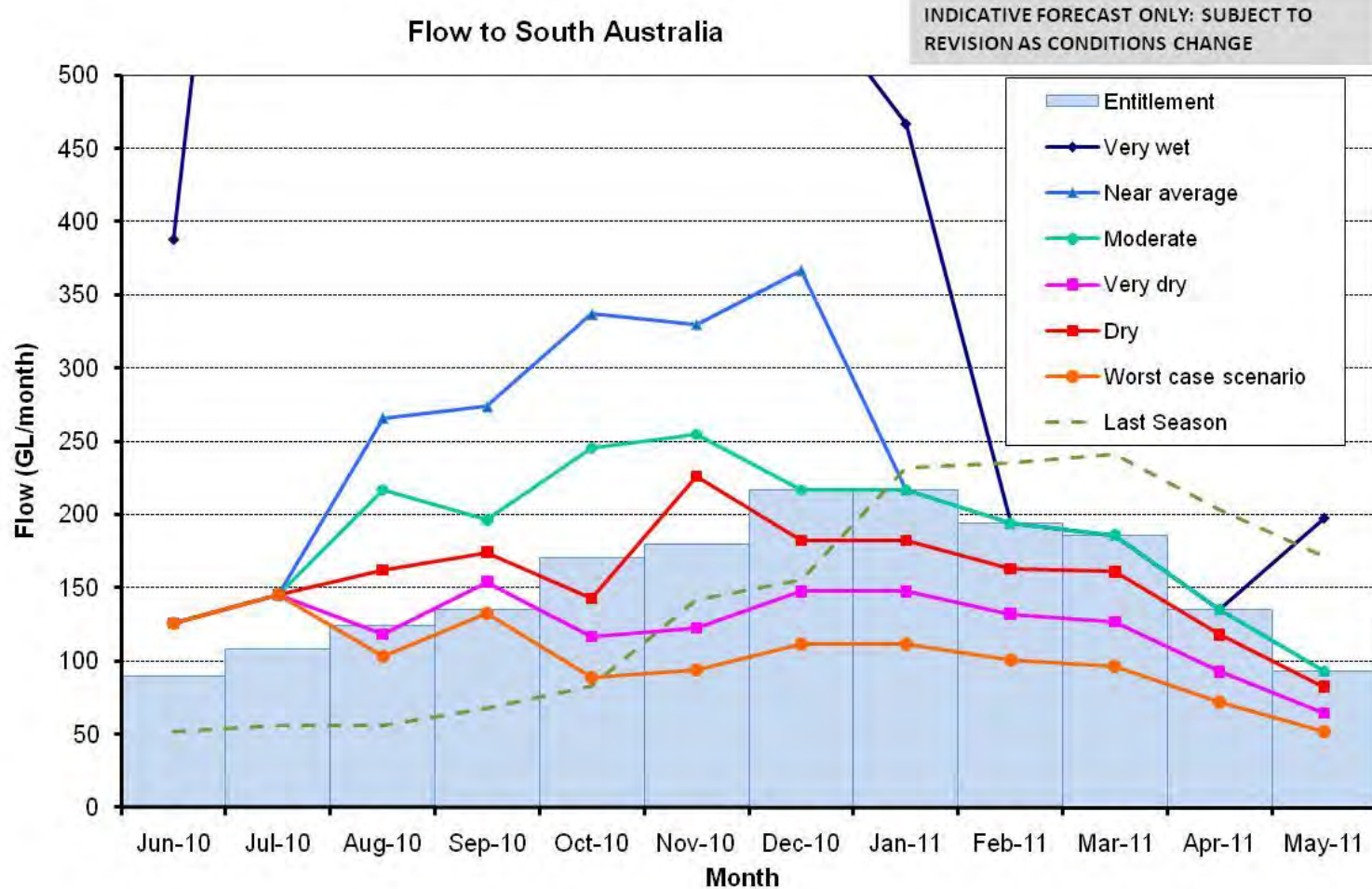


Lower Lakes, South Australia



ment

Forecast flow to SA



Currently tracking above moderate scenario with ADF to likely to continue until end December. Wetter cases assume delivery of environmental water during October and November

Barmah-Millewa Forest

- Flow Release from Yarrawonga peaked at 15,500 ML/day in late July (and exceeded channel capacity through the Barmah-Millewa Forest)
- Forest regulators were opened to help pass flow, for first time since 2005
- Recent 2nd days

