



MDBA TECHNICAL WORKSHOP 28 JUNE 2018

NSW SDL adjustment projects - a teaser

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An overview of NSW projects

- Over 100 projects nominated by community and government were reviewed
- Feasibility of some explored, but set aside
- Some were re-scoped to enhance outcomes
- All projects have been subject to scrutiny by other governments, with independent advice sought on some.
- NSW is lead or co-proponent for 23 projects:
 - 7 rule change projects
 - 12 works projects
 - 4* constraints relaxation projects

Rules based projects

| Project | Key mechanism | Status |
|--|--|---------------|
| Snowy licence (RMIF)* | <ul style="list-style-type: none"> • New licence • Control over use of water for environmental outcomes | Draft rules |
| Barmah Millewah EWA | <ul style="list-style-type: none"> • Reduce unseasonal watering • Allows use of different sources of environmental water | Being trialed |
| Hume Dam airspace | <ul style="list-style-type: none"> • Reduces risk of unregulated spills • More flexibility in meeting environmental outcomes | Operational |
| Hume Dam 6 inch rule | <ul style="list-style-type: none"> • Reduce unseasonal watering • Water saved used at other times | Operational |
| Improved Regulation of River Murray | <ul style="list-style-type: none"> • Not modeled in 605GL • Recognises operational efficiencies | Scoping |
| CARM* | <ul style="list-style-type: none"> • New licence – operational water savings • Control over use of water | Being trialed |
| Enhanced Environmental water delivery | <ul style="list-style-type: none"> • Greater environmental outcomes via coordination of environmental releases with unregulated flows | Scoping |

Works based projects

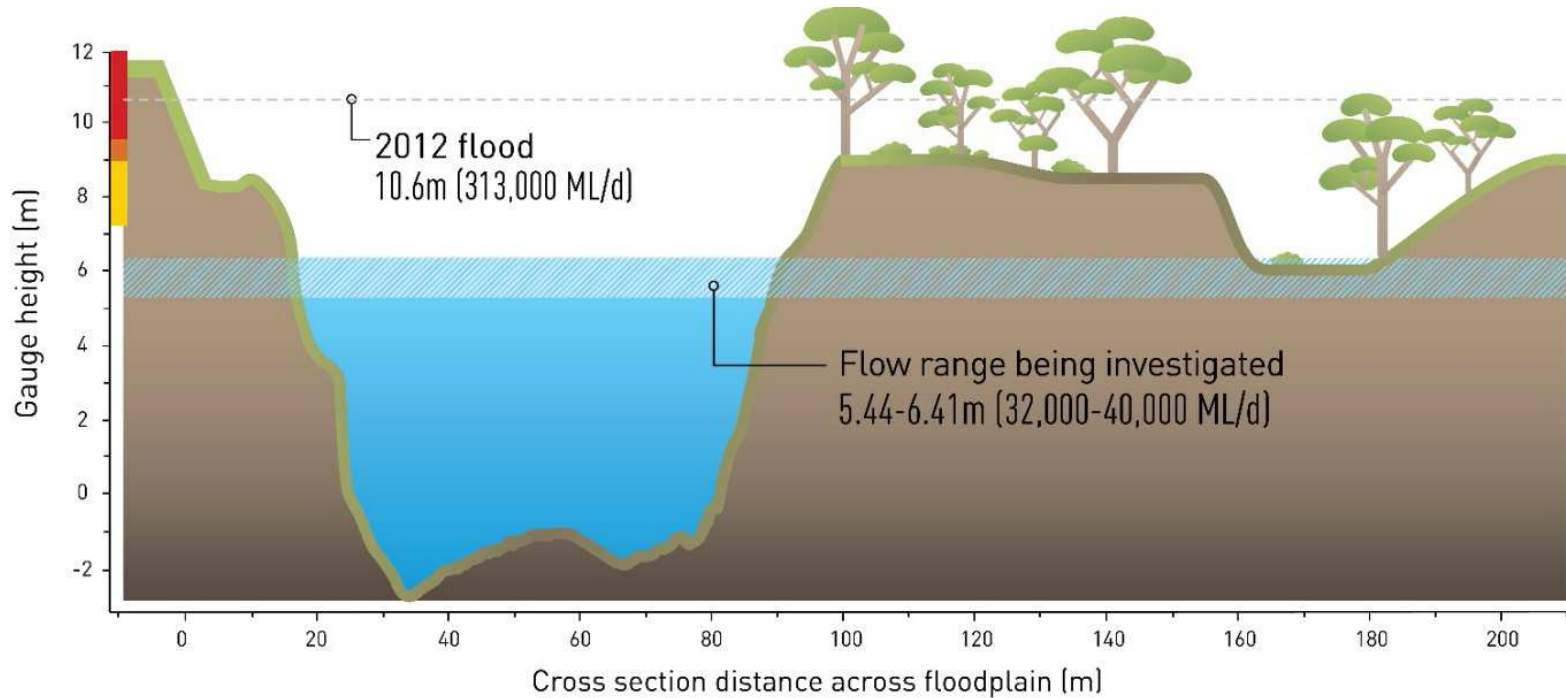
| Project | Key mechanism | Status |
|---|--|--------------------|
| Nimmie Caira | <ul style="list-style-type: none"> • Significant floodplain managed for environmental outcomes • Land and water purchased in 2012, implementation finalised 2019 | Under construction |
| National Parks – Murray & Murrumbidgee | <ul style="list-style-type: none"> • Increase in area, frequency and duration of flows to River Red gum forest and sedge land via Nimmie-Caira project • Operational flexibility via new / upgraded infrastructure • Reduce unseasonal overwatering | Concept design |
| Yanco effluent Creeks | <ul style="list-style-type: none"> • New licence -operational water savings based on more efficient delivery systems • Control over use of water for environmental outcomes | Concept design |
| Yanco Regulator | <ul style="list-style-type: none"> • New infrastructure increases operational control and flexibility to target environmental outcomes • Improve fish outcomes via new fish ladder | Concept design |
| Murray Weirs | <ul style="list-style-type: none"> • Weir pool manipulation • Enhanced fish outcomes via fish ladder and increased hydraulic diversity | Concept design |
| Menindee | <ul style="list-style-type: none"> • New environmental water arising from evaporative savings • Operational flexibility from new / modified infrastructure • Constraints relaxation in the Lower Darling | Concept design |
| 6 TLM projects | <ul style="list-style-type: none"> • Recognises improved environmental outcomes from infrastructure which improves environmental watering | Operational |

Constraints relaxation

- All targeted flows below minor flood level
- Flow for environmental purposes not broad operational delivery
- Based on MDBA inundation modelling
- Being updated / recalibrated following 2016 floods
- Will require infrastructure and landholder agreements to implement
- Coordinated approach along the Murray river

| Project | Target flows | Status |
|----------------------|--|---------|
| Hume to Yarrawonga | <ul style="list-style-type: none">• Up to 40,000 ML/day | Concept |
| Yarrawonga to Wakool | <ul style="list-style-type: none">• Up to 30,000 ML/day with buffer to 50,00 ML/day | Concept |
| Lower Darling* | <ul style="list-style-type: none">• Up to 14,000 ML/day | Concept |
| Murrumbidgee | <ul style="list-style-type: none">• Up to 40,000 ML/day with buffer to 44,000 ML/day | Concept |

Constraints conceptually – Murrumbidgee



| MINOR | MODERATE | MAJOR |
|--------|----------|-------|
| 7.3-9m | 9-9.6m | 9.6m+ |

Nimmie-Caira – a Basin Plan success story

- Whole scale landscape change, with purchase of land and water entitlements in 2012 by the Commonwealth government
- Water recover via purchase of entitlements and SDL adjustment via reconfiguration of landscape for environmental outcomes
- Final strategy based on
 - 3D hydraulic modelling developed to inform operating strategy and inundation patterns
 - Archeological and Aboriginal cultural surveys to inform Aboriginal cultural plan
 - Soil assessments
 - Infrastructure upgrades to accommodate increased flows
 - Modelling blackwater and freshwater dilution requirements to inform WQ mitigation
 - Modification of infrastructure and operational parameters to meet regulatory requirements (including soil and fish)
 - Solid governance with separate Aboriginal and local stakeholder advisory groups

Menindee – project with it all

The project seeks to achieve significant water savings by:

- allowing the operation of Lake Menindee independently of Lake Cawndilla, and ceasing to use Lake Cawndilla for water storage in all but the wettest years
- removing or reducing high security irrigation and most town water supply demands from the Lakes
- permitting faster drawdown of water in Lake Menindee, including providing access to residual water
- enlarging the outlet structure and constructing a drainage channel in the bed of Lake Menindee
- increasing flexibility of supply by preferentially retaining water in the more efficient Lakes Wetherell and Pamamaroo
- accommodating higher managed flows in the Lower Darling through works to:
 - limit breakouts onto the floodplain and into dry lakes and anabranches
 - protect private infrastructure from being impacted by higher flows, including changed operational rules to complement structural works.

Next steps

- Engagement and governance
- Funding
- Recruitment of staff
 - Engagement (including Aboriginal Cultural Officer)
 - Project team
- Development of implementation and procurement plan
- Detailed design
- Environmental assessment



Questions