



Natural
Resources
Commission

Review of the Water Sharing Plan for the Castlereagh Unregulated Water Sources 2011

Report Summary

This slide pack provides an overview of findings and recommendations – the Commission’s full and official advice is available via our website –

<https://www.nrc.nsw.gov.au/wsp-reviews>

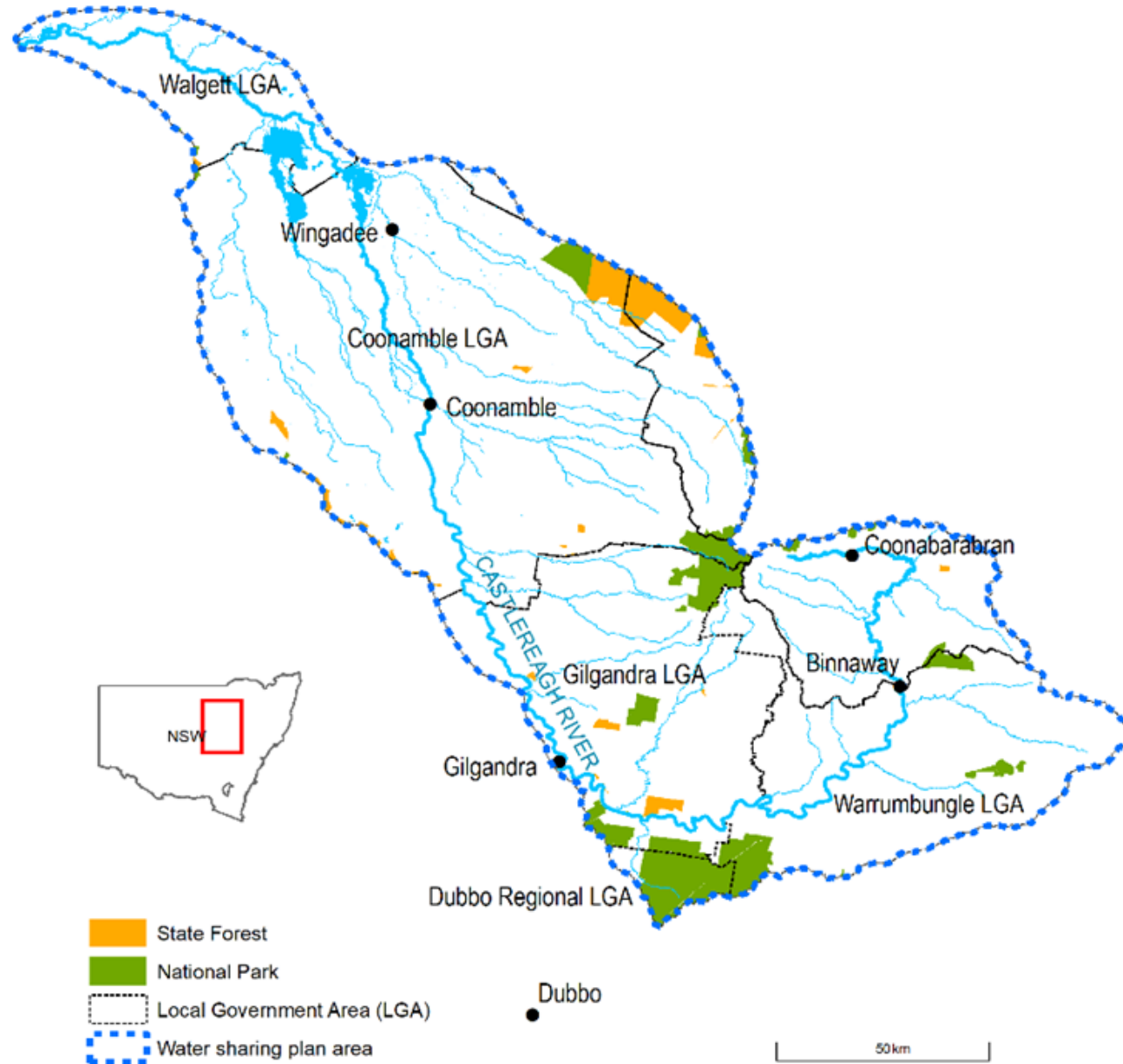
Acknowledgement of Country

- The Commission acknowledges and pays respect to the Traditional Owners past, present and future of lands and waters in the Plan area, the Wiradjuri, Gomeroi/Kamilaroi/Gamilaraay, Ngemba, Wailwan, and Ngiyampaa Traditional Owners, as well as other Aboriginal peoples for whom these waterways are significant
- Aboriginal peoples have a deep cultural, social, environmental, spiritual and economic connection to their lands and waters – we value and respect their knowledge in natural resource management and the contributions of many generations, including Elders, to this understanding and connection

Our review

- The Natural Resources Commission (the Commission) has a statutory role under s43A of the *Water Management Act 2000* (the Act) to review water sharing plans approaching expiry
- Our reviews consider if a plan's environmental, social, cultural and economic outcomes have been achieved, and what improvements can be made
- As part of our reviews, we recommend whether a plan should be extended or replaced
- Our reviews consider relevant data and documents, technical advice, stakeholder consultation and public submissions
- We acknowledge that critical Covid-19 outbreaks at the time of review impacted on the ability of organisations to participate in this review

Plan area



Plan area

- The Castlereagh River is a tributary of the Macquarie River and part of the Murray-Darling Basin
- The Plan comprises seven water sources within one extraction management unit
- A portion of the Barwon-Darling designated floodplain overlaps the Plan area in the Castlereagh River below Coonamble Water Source
- Flow in the Castlereagh River between Binnaway and Coonamble is largely subsurface through river sand beds, with many users heavily reliant on spearpoint access
- Water sources provide town water for several towns
- Heavily impacted by drought during the Plan period

Overall finding on Plan extension and replacement

- The Commission has identified several opportunities to improve outcomes that justify replacing the Plan
- The Commission recommends an extension of up to two years to the existing Plan to allow time to undertake required data collection and analysis, consultation, and development of amended provisions

Overview of key issues



New data available

- New information to inform Plan remake since the Plan was developed
- Includes water resource plan (withdrawn) risk assessments, a long-term water plan, and DPI-Fisheries' 'fish & flows' advice



Key risks

- Entitlement across Castlereagh and Macquarie catchments vastly exceeds the current estimate of the baseline diversion limit
- No compliance assessment against extraction limits creates high risks from overextraction
- No transparency around how floodplain harvesting is managed where the Plan area intersects the Barwon-Darling River designated floodplain
- Unclear that spearpoint users are included in the Plan, despite the Plan containing innovative spearpoint rules
- Inadequate protection of low flows and contribution to downstream flows is unclear
- Limited recognition and protection of wetlands providing critical drought refuge
- Ongoing risks to town water from climate change



Plan remake should:

- Set and assess compliance against sustainable, numeric long-term average annual extraction limits (LTAAELs), setting suitably precautionary available water determinations (AWDs) until this occurs
- Clarify how extraction of water from the Barwon-Darling floodplain considers the Plan area
- Strengthen environmental protections
- Better recognise surface-groundwater connectivity and subsurface flows through river sand beds
- Improve outcomes for Aboriginal people, recognise native title claims and protect known Aboriginal values
- Secure town water supply and manage risks from climate change and drought

Establishing sustainable extraction

Key issues

- The Plan lacks numerically defined LTAAELs based on sustainable extraction assessment
- Plan entitlement is higher than Basin Plan's estimated Baseline Diversion Limit
- LTAAEL compliance has not been undertaken and AWD has continued to be set at 100% for all users, creating significant risk that extraction limits are exceeded and planned environmental water is being extracted
- No clarity around relative AWD reductions for special additional high flow access licences
- Lack of transparency around how floodplain harvesting is managed makes it hard to manage sustainable extraction
- Growth in basic landholder rights and climate change may impact water availability

Key recommendations for DPE-Water

- Establish and assess compliance with sustainable, numeric LTAAELs based on best available information including ecological requirements, all forms of interception and extraction, and climate change
- Until this occurs, the Minister should consider setting an AWD equal to the ratio of LTAAEL to entitlement where there is a significant risk of exceeding the LTAAEL – this should apply for all unregulated river access licences (excluding local water utility and domestic and stock access licences)
- Clarify how floodplain harvesting is accounted for
- Include a separate management zone in the Castlereagh Below Coonamble Water Source where it overlaps the Barwon-Darling River designated floodplain
- Consider trade into high flows to manage climate change risks and protect low flows

Strengthening environmental protections

Key issues

- Lack of flow classes and reliance on 'no visible flow' rule means rules generally inadequate to protect low flows and connectivity
- Rules in the Castlereagh Above Binnaway Water Source have become less stringent since this water source was included in the Plan
- Limited monitoring of spearpoint impacts during no flow period between Binnaway and Coonamble
- Releases from Timor Dam not been made due to infrastructure issues and operating rules are not in the Plan
- No clarity around contributions to Barwon-Darling end-of-system flows
- Limited recognition and protection for wetlands providing critical drought refugia for the broader region

Key recommendations for DPE-Water

- Draw on significant new data from long term water plans, fish & flows framework, and instream values (HEVAE) mapping
- Review flow classes in Castlereagh Above Binnaway Water Source, and investigate options to protect low flows and first flush
- Include flow targets from the Castlereagh River for the Barwon-Darling
- Identify and assess risks to regionally significant wetlands
- Codify operating rules for Timor Dam in the Plan
- Clarify impacts on groundwater-dependent ecosystems, including from spearpoints

Managing connectivity and subsurface riverbed flows

Key issues

- Riverbed sediments not clearly recognised as being in the Plan, despite the Plan including rules for spearpoints
- The Plan contains innovative access rules for spearpoints based on a rostering system, but rules are not tied to monitoring
- No provisions to maintain linkages between alluvial and surface water sources
- Extraction under alluvial groundwater licences could impact surface flows in the Castlereagh River between Binnaway and Gilgandra

Key recommendations for DPE-Water

- Recognise the Plan includes riverbed sediments
- Install piezometers to inform spearpoint access rules
- Adopt linked access rules and rostering for alluvial groundwater bores under the *Water Sharing Plan for the Macquarie-Castlereagh Groundwater Sources 2020* and spearpoints
- Consider adopting spearpoint rostering system for connected systems in other water sharing plans

Improving outcomes for Aboriginal people

Key issues

- Limited consideration of values associated with native title claims and ILUAs
- Reoccurring, systemic state-wide issues including limited proactive engagement and barriers to use of water by Aboriginal people

Key recommendations for DPE-Water

- Include registered native title claims and ILUAs, engaging with Traditional Owners to identify and protect values
- Identify and protect other high value cultural sites and cultural water values
- Better support Aboriginal water access and use
- Prioritise allocations for cultural water use

Securing town water supply

Key issues

- While town water entitlements are adequate, many towns suffered water insecurity during major droughts (particularly Coonabarabran)
- Climate change and potential releases from Timor Dam may place pressure on town water
- Spearpoint access currently prioritised above local water utility in Mendooran

Key recommendations for DPE-Water

- Ensure town water security is considered when reviewing operating rules for Timor Dam
- Ensure access rules, including spearpoint setback distances, protect town water
- Ensure Plan reflects town water requirements for Coonamble and Gulargambone



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