

Connectivity Expert Panel – Terms of Reference

1. Background

Water flowing across connected catchments supports essential human and ecological needs. The Barwon-Darling system relies on flows from 5 NSW valleys (Border Rivers, Gwydir, Namoi, Macquarie and the Intersecting Streams), as well as number of Queensland Rivers.

Analyses undertaken by NSW Department of Planning and Environment – Water (the department), previous independent reviews and legal requirements have suggested that the following actions should be considered as part of water sharing plan rule changes to improve water flowing across connected catchments at important times:

- implementing rules to protect the first flush of water after an extended drought in water sharing plans (critical dry condition triggers)
- finalising the review of the North-West Flow Plan to identify the best way to support algal suppression and fish migration. Some water sharing plans currently contain interim flow targets for algal suppression and fish migration.

The department is considering actions to improve water flowing across connected catchments in north-western NSW as part of the remake of the Barwon-Darling Water Sharing Plan, which must occur by June 2025.

Implementing these changes may require amendments to water sharing plans flow targets for supplementary and floodplain harvesting access licences for the Border Rivers, Gwydir, Namoi and Macquarie valleys.

The *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021* (clause 73) requires the Minister to seek and consider recommendations from an independent expert panel on the adequacy of assessments undertaken by the department before making any changes to water sharing plan flow targets that aim to improve downstream outcomes. Ministerial discretion is being used apply this requirement to all proposed critical dry condition trigger and North-West Flow Plan water sharing plan amendments for the Barwon-Darling and tributary valleys.

In addition, the water sharing plans for the NSW Border Rivers, Gwydir, Macquarie, Barwon-Darling and Namoi (in draft) catchments require that the Minister seeks independent expert advice on the adequacy of the Menindee Lakes and in-valley triggers for floodplain harvesting access by 1 July 2025.

The Office of Chief Scientist and Engineer's Independent review into the 2023 fish deaths in the Darling-Baaka River at Menindee¹ recommended that the newly established independent connectivity expert panel also examine the adequacy of rules in all northern Basin water sharing plans (regulated and unregulated) in contributing to hydrological connectivity with the Lower Darling-Baaka and southern Basin.

¹ The report can be accessed at [Menindee Fish Deaths | Chief Scientist \(nsw.gov.au\)](#)

2. Mandate of the Connectivity Expert Panel

The Connectivity Expert Panel is established under water sharing plan provisions² to provide independent expert advice to the Minister for Water on the adequacy of:

- the assessment already carried out by the department and the proposed amendments to flow targets in water sharing plans that aim to restrict supplementary, A-Class, B-Class, C-Class and floodplain harvesting licences in order to improve flows for downstream connectivity outcomes, including during critical dry conditions.
- of floodplain harvesting access rules in enabling environmental and human needs to be met.

The Connectivity Expert Panel will provide a high-level assessment of:

Critical dry condition triggers and North-West Flow Plan targets

- any changes to flow targets in the Barwon-Darling and northern tributaries (Border Rivers, Gwydir, Namoi and Macquarie) required so as not to jeopardise the critical needs of the environment, basic landholder rights, domestic and stock access licence holders and water utility licence holders in the Barwon-Darling River and the water source
- the adequacy of the department's assessment of the following in relation to the proposed changes:
 - the critical needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility access licence holders in the Barwon-Darling River and the water source
 - the adequacy of the existing flow targets to meet those needs
 - any changes to the flow targets that would be required to meet those needs, and
 - the impact of those changes to flow targets on the long-term average annual total amount of water able to be extracted under:
 - supplementary water access licences in the water source
 - floodplain harvesting access licences in the water source
 - unregulated river access licences in the Gwydir and Macquarie valleys.

Floodplain harvesting access rules

- adequacy of the access rules for floodplain harvesting including:
 - the needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility licence holders,
 - the adequacy of the existing flow targets and volumes to meet those needs,
 - any changes to the flow target and volume that would be required to meet those needs, and
 - the impact of those changes to the flow target and volumes on the long-term average annual total amount of water able to be extracted under floodplain harvesting (regulated river) access license in the water source.

² The relevant water sharing plan provisions are outlined in appendices A and B

The Connectivity Expert Panel is to specifically provide advice on:

Critical dry condition triggers and North-West Flow Plan targets

- algal suppression and fish migration flow targets in the Interim Unregulated Flow Management Plan for the North-West (North-West Flow Plan)³
- whether the riparian flows in the North-West Flow Plan should be replaced with triggers to protect water after extended dry periods to meet critical human, cultural and environmental outcomes.

Floodplain harvesting access rules

- the adequacy of local in-valley targets for lifting restrictions on the taking of water under floodplain harvesting access licences in the Border Rivers, Gwydir, Macquarie, Barwon-Darling and Namoi (draft) valleys while Menindee targets apply.

The panel will also be asked to provide advice on:

- appropriate in-valley and Menindee Lakes triggers needed to restrict, supplementary, A-Class, B-Class, C-Class and floodplain harvesting licences access in order to protect the first flush of water after an extended dry period.

The panel is to examine the adequacy of rules in the Northern Basin water sharing plans, which in the panel's view may materially impact on hydrological connectivity between valleys⁴. At a minimum this should include consideration of:

- end of system flow rules and supplementary access rules for the regulated Border Rivers, Gwydir, Namoi and Macquarie valleys
- access rules in the unregulated water sources in the western portions the Northern valleys:
 - Border Rivers: Whallan and Croppa Creek
 - Gwydir: Mehi, Millie, Thalaba, Gil, Carole, Gwydir
 - Namoi: Baradine, Lower Namoi, Brigalow, Bundook, Coghill, Pian
 - Macquarie: Lower Bogan, Lower Macquarie, Marra, Castlereagh below Coonamble.

The panel is to have reference to analysis undertaken by the department to date, relevant reports commissioned by the department and feedback from stakeholders, including relevant government agencies.

In making its recommendations to the Minister, the panel is to provide advice on:

- how the principles and objectives of the *Water Management Act 2000* have been considered, applied and balanced consistent with Act requirements,
- how effective the proposed interventions are at meeting their intended objectives, and
- the resources, processes or systems that are needed to implement the recommendations

³ The North-West Flow Plan was developed in 1992 following mass algal blooms in the Barwon–Darling River. The intent of the North-West Flow Plan is to limit access to lower priority water licences upstream to enable certain flows and targets to be met in the Barwon–Darling River. The plan is reflected in existing water sharing plans through rules which aim to restrict access to supplementary water flows in the northern valleys (Border Rivers, Gwydir and Namoi) when riparian, algal suppression and fish migration flow targets in the Barwon–Darling have not been met.

⁴ The panel's Terms of Reference was amended in February 2024 to include this task in response to recommendation 1.1 from the Office of Chief Scientist and Engineer's *Independent review into the 2032 fish deaths in the Darling–Baaka River at Menindee*.

- potential Aboriginal cultural implications of the recommendations.

In order to undertake this analysis, the panel will be required to agree on key definitions such as connectivity, critical needs, critical dry conditions.

3. Governance and deliverables

The Connectivity Expert Panel has an advisory role and will:

- be convened in September 2023
- meet at least three (3) times – meetings will be either be face-to-face in Sydney, or via video conference
- be provided with relevant background information to review prior to the first meeting
- may be required to participate in public consultation associated with the panel’s findings
- provide a draft report to the Minister by March 2024 – timing to be determined by modelling report availability. The draft and final reports will be publicly available.

The department will seek the views of stakeholders, relevant government agencies and other community members on the draft findings and recommendations of the panel.

4. Roles, responsibilities and operating protocols

Roles and responsibilities

Term

The Connectivity Expert Panel is constituted from the date this terms of reference is approved and continues until the final report is published.

If required, the panel may be reconvened to provide advice on other connectivity actions in the future.

Role of Chair

The Chair of the Connectivity Expert Panel will:

- ensure the panel operates within the terms of reference
- conduct meetings in a timely manner and in accordance with an agenda
- ensure the panel’s report addresses all aspects of the terms of reference
- lead drafting of the report and coordination of feedback from members to ensure report is delivered in a timely way reflecting the views of members.

Role of Members

All Connectivity Expert Panel members (including the Chair) commit to:

- attending all scheduled meetings
- preparing for meetings by reading and familiarising themselves with any pre-reading material
- providing timely apologies to the Chair and Secretariat if unable to attend a scheduled meeting so the meeting can be rescheduled

- actively participating in panel meetings, discussions and contributing to the recommendations and report from the panel
- declaring any situation which may give rise to any perceived, potential, or actual conflicts of interest in relation to any matter under consideration by the panel.

All Connectivity Expert Panel members (including the Chair) can expect:

- to be issued any required pre-reading material or reports at least three (3) days before the scheduled panel meeting
- open and honest discussions
- to be notified by the secretariat of any risks and issues that could impact the project/timeline.

Role of Secretariat

The department will provide the Connectivity Expert Panel with secretariat support. The secretariat of the Expert Panel will:

- schedule meetings and set meeting agendas in agreement with Chair
- arrange meeting facilities and travel where needed
- provide additional information as requested by the panel
- ensure actions are recorded and completed. Ensure meeting minutes are stored in the department's official, electronic, record-keeping system
- assist the panel as directed to develop draft and final reports.

Payments

The panel will be procured in accordance with the NSW Government's procurement guidelines.

5. Obligations of Connectivity Expert Panel Members

Confidentiality

- All information in whatever form which is considered by the panel is typically classified as SENSITIVE or OFFICIAL⁵ and must be treated as OFFICIAL unless labelled otherwise.
- A panel member tabling a document may identify the relevant dissemination limiting marker⁶. Where the document is commercial in confidence it should be labelled as SENSITIVE. Where the document is readily available in the public domain it should be labelled UNOFFICIAL.
- Information available to panel members must not be used to obtain any advantage, whether direct or indirect, for themselves or for any other person or body.
- Some of the information provided to the panel or the panel's recommendation could be market sensitive and where noted must not be discussed until the relevant information/recommendation is in the public domain or is no longer deemed market sensitive.

⁵ DCS-2020-07 NSW Government Information Classification, Labelling and Handling Guidelines

⁶ Dissemination limiting markers (DLMs) are labels used by the NSW Government to define sensitive information and data, both physical and digital.

- Confidential information available to panel members is to be used only for the official purposes of the panel and may only be used in ways that are consistent with the obligations of panel members to act impartially, with integrity and in the public interest.
- Where confidential information is provided to panel members, care must be taken to ensure that the information is kept secure, and that numbers of copies are kept to the minimum necessary. If such information is to be disposed of by a panel member, it must be physically destroyed.
- Panel members should avoid investments or business activities in relation to which they might reasonably be perceived to have access to confidential information which might give them an unfair or improper advantage over other persons.
- Panel members engaged in discussions or communications outside the Expert Panel meetings, may only refer to the outcomes of the meetings that have been published online.
- Panel members cannot comment publicly on behalf of the panel unless they have been nominated and authorised by the Chair as a nominated spokesperson and such communication has been agreed to by the panel. This includes any comments made via social media or other channels.

Conflict of interest

Connectivity Expert panel members should perform their functions in good faith, honestly and impartially and avoid situations that may compromise their integrity or lead to conflicts of interests.

Any situation which may give rise to an actual, perceived and potential conflicts of interest must be identified, disclosed and managed in a transparent way. Panel members are not empowered to determine whether any specific situation constitutes a conflict of interest. Panel members are required to disclose any situation which may give rise to a conflict of interest to any matter being considered by the panel as soon as they become aware.

Probity advice

To ensure independence, the processes for the selection and operation of the Connectivity Expert Panel have been informed by probity advice from an independent probity advisor. The role of the probity advisor includes assisting the panel in developing justified defensible outcomes in an open and transparent environment. Panel members may contact the probity advisor at any time. Communications with the probity advisor are confidential unless agreed otherwise.

Appendix A – Requirement for Minister to seek independent advice on of changes to flow targets

Excerpt from *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021*⁷

73 Schedules

- (1) The Minister may amend Schedule 1 to add, modify or remove flow targets as reasonably necessary to ensure the taking of water under supplementary water access licences does not jeopardise the critical needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility access licence holders in the Barwon-Darling River.
- (2) Before making any amendment under subclause (1) and before 1 July 2023, the Minister will:
 - (a) undertake an assessment of:
 - (i) the critical needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility access licence holders in the Barwon-Darling River,
 - (ii) the adequacy of the existing flow targets to meet those needs,
 - (iii) any changes to the flow targets that would be required to meet those needs, and
 - (iv) the impact of those changes to flow targets on the long-term average annual total amount of water able to be extracted under supplementary water access licences in the water source,
 - (b) seek and consider recommendations from an independent expert panel on:
 - (i) the adequacy of the assessment in (a), and
 - (ii) any changes to the flow targets in (a)(iii) required to meet the critical needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility access licence holders in the Barwon-Darling River, and
 - (c) consider the views of stakeholders and other community members on the expert panel's recommendations.
- (3) Action under subclause (1) must not substantially alter the long-term average annual total amount of water able to be extracted under supplementary water access licences in the water source.

Note. If satisfied that it is in the public interest to do so, the Minister may amend this clause under s.45 (1) (a) of the Act to such an extent that it substantially alters the long-term average annual amount of water able to be extracted under water access licences. If this occurs, compensation may be payable under chapter 3 Part 2 Division 9 of the Act.

⁷ NSW legislation - [Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021](#) – section 73

Appendix B – Requirement for Minister to seek independent advice on floodplain harvesting triggers

Excerpt from *Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021 (NB equivalent requirements exist in other water sharing plans that licence floodplain harvesting)*⁸

43B Taking of water under floodplain harvesting (regulated river) access licences

- (1) For the purpose of the clause *Menindee Lakes Storage* has the same meaning as it does under the Murray-Darling Basin agreement.
- (2) The taking of water under a floodplain harvesting (regulated river) access licence, other than in accordance with Clause 43A, may only occur if the Minister has announced that the taking of overland flow is permitted.
- (3) The Minister must not announce that the taking of overland flow water is permitted if the volume of water stored in Menindee Lakes Storage is less than 195 gigalitres.
- (4) Subclause (3) does not apply during periods for which, in the Ministers opinion, the flow in the Barwon River at Mungindi gauge (416 001) will remain at or above 3,000 ML/day.

70 Amendments relating to floodplain harvesting

- (5) This Plan may be amended to add, remove or modify rules in clause 43B.
- (6) Before making any amendment under subclause (5) and before 1 July 2025, the Minister will:
 - (a) seek, consider and publish independent expert advice on the adequacy of rules in clause 43B including:
 - (i) the needs of the environment, basic landholder rights, domestic and stock access licence holders and local water utility licence holders,
 - (ii) the adequacy of the existing flow targets and volumes to meet those needs,
 - (iii) any changes to the flow target and volume that would be required to meet those needs, and
 - (iv) the impact of those changes to the flow target and volume on the long-term average annual total amount of water able to be extracted under floodplain harvesting (regulated river) access licences in the water source.
 - b) Consider the views of stakeholders and other community members on the independent expert advice

⁸ Water Sharing Plan requirements for Minister to seek independent advice on floodplain harvesting triggers

[NSW legislation - Water Sharing Plan for the NSW Border Rivers Regulated River Water Source 2021 – section 70](#)

[NSW legislation - Water Sharing Plan for the Gwydir Regulated River Water Source 2016 – section 80](#)

[NSW legislation - Water Sharing Plan for the Macquarie and Cudgegong Regulated Rivers Water Source 2016 – section 99](#)

[NSW legislation - Water Sharing Plan for the Barwon-Darling Unregulated River Water Source 2012 – section 84](#)